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**The**  
**Ethno-Botany of the Maya**

*By*

**RALPH L. ROYS**



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**THE DEPARTMENT OF MIDDLE AMERICAN RESEARCH**  
**THE TULANE UNIVERSITY OF LOUISIANA**

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President A. B. Dinwiddie,  
The Tulane University of Louisiana,  
New Orleans, La.

Dear Sir:

It gives me pleasure to submit to you the accompanying manuscript, by Mr. Ralph L. Roys, entitled: "The Ethno-Botany of the Maya," and to recommend its publication as the second issue of the Tulane University Middle American Research Series.

Day by day scientific and popular interest in matters relating to the Maya Civilization, foremost civilization of ancient America, is growing and even though a number of outstanding scientists have dedicated much time and study to Maya investigations, it is surprising to find that practically none of the ancient Maya texts, written in the Maya language, but in Latin characters have been translated and subjected to research.

The Ethno-Botany by Mr. Ralph L. Roys contains translations of Maya medical recipes, together with a classification of the herbs, trees and animals used. It is a most complete study, and one of great importance, which undoubtedly will be received with equal interest by ethnologists, archaeologists, botanists and students of pharmacopoeia.

Yours respectfully,

FRANS BLOM

Director

DEPARTMENT OF MIDDLE AMERICAN RESEARCH

## PREFACE

The study and observation of plants have always been considered of high importance by the Maya Indians of Yucatan; indeed this branch of their ancient culture is the one which has suffered least from several centuries of European domination. Essentially an agricultural people, they have turned to the forest to supplement their food supply in times of scarcity, and a large proportion of their medicinal remedies are prepared from wild plants.

The knowledge of those plants from which food, clothing and shelter were obtained was a part of the common heritage of every Maya farmer; but the study of medicinal plants and their properties was a specialized science confined to a priestly class which, since the Spanish conquest, has survived only in the persons of the native herb-doctors, or *yerbateros*, of today. Many of these men have been able to read and write their own language and have not depended entirely on word of mouth to transmit their knowledge from one generation to another. Consequently a considerable body of native Maya literature on the subject still exists in manuscript form, written in the European script adapted by the early missionaries to the special needs of the language of Yucatan.

It is the purpose of this volume to offer a survey of the botanical knowledge of the Maya Indians to the student of the life and customs of these people. The library of the Department of Middle American Research of the Tulane University of Louisiana contains a large and valuable collection of originals, photographic reproductions and copies of the manuscripts together with the few published works which comprise the literature of the subject, and it is on this collection that the present study is based.

Most of the Maya medical texts have been copied from photostats belonging to the Library at Tulane University of Louisiana and made by Mr. William E. Gates who has also loaned transcripts of some of this material. The style and vocabulary of these manuscripts plainly indicate that none of them is the work of a single writer; all are compilations from older works, and in many cases parallel passages are found.

I am especially indebted to Dr. Paul C. Standley, who has not only given generously of his time and labor in the identification of the Maya plant-names but also aided in the work by the loan of his

own unpublished material. The identification of most of the mammals mentioned in the medical texts is due to the kindness of Major E. A. Goldman. Mr. Juan Martínez Hernandez of Merida has frequently come to my aid in the elucidation of obscure words and phrases in addition to furnishing the ethnological data acknowledged elsewhere. Professor A. M. Tozzer, The Peabody Museum, the Field Museum of Natural History and the Library of the University of British Columbia have been generous in the loan of manuscripts, photostats and publications relating to the botany and zoology of Yucatan.

Finally, I wish to express my gratitude to Mr. Frans Blom, who has aided me throughout the preparation of this volume in searching out and obtaining necessary material and advising as to its method of presentation.

RALPH L. ROYS

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## INTRODUCTION

From the time of the Spanish conquest the medicinal plants of Yucatan have attracted the attention of the Europeans who came to the country. Already in the Sixteenth century the Spanish settlers and missionaries wrote accounts of the native medical lore, some of which have come down to us in the *Relaciones de Yucatan* and the *Motul dictionary of the Maya language*. In the former we read: "There is in this land a great quantity of medicinal plants of various properties; and if there were any person here who possessed a knowledge of them, it would be most useful and effective, for there is no disease to which the native Indians do not apply the plants. But when they are asked for an account of their properties, they can give none other than that they are cold or hot, and that they are accustomed to employ them to obtain the effect for which they apply them. However, as a matter of fact, there are many of great virtue for every sort of illness and as antidotes; and on the other hand there are those which are poisonous and deadly."<sup>1</sup> Today such a conception of medicine seems more sensible to us than many of the European doctrines of that time.

Yucatan is unique as being the only part of America where we find a considerable body of medical literature written by the Indians in their native language. Although this literature is written in European script and no hieroglyphic medical manuscripts have come down to us, it seems likely that such existed prior to the coming of the Spaniards. We know that they once wrote astronomical treatises, books of divination, chronicles, prophecies and incantations in hieroglyphic characters, and in the *Book of Chilam Balam of Kaua*, we find a drawing of a parrot holding a serpent in its claws which is stated to be the picture or symbol of a certain disease. So far as we know, none of the existing medical manuscripts are earlier than the eighteenth century, but there are indications that they are compiled from older sources. A comparison of this material with that contained in the *Relaciones de Yucatan* and the *Motul dictionary* shows that many of the prescriptions had altered little since the Sixteenth century, when Maya medicine was still unaffected by Spanish influence. While it is true that a number of European recipes were

<sup>1</sup> *Relaciones de Yucatan*, I, 62.

afterward translated into Maya and are to be found in these treatises, in most cases this material is superimposed on the native lore and has not greatly altered it. The European remedies are usually mentioned by their Spanish names. A few introduced plants, like the castor-bean and the orange, however, are usually called by their Maya names and appear to be incorporated in the native pharmacopoeia. Much of the genuine native lore is found in books containing only medical material; some of the Books of Chilam Balam, particularly the Ixil and Kaua, show more European influence in those passages which are devoted to medicine.

There are also a number of books written in Spanish which deal largely with native remedies. Some of these have been ascribed to a certain Ricardo Ossado and were called "The Book of the Jew." These became so popular that one or two of the Maya treatises were also given this title to enhance their prestige. This was the case with the Maya manuscript in the Peabody Museum which is entitled *Libro del Judío*. The *Judío* material proper, however, is written in Spanish, and much of it follows a certain set form. First the diseases are arranged in alphabetical order together with the remedies and treatment prescribed. In the second half of the book the plant names, mostly Maya, are also listed alphabetically, each with a brief description and summary of the uses of the plant. Sometimes a few animals and insects are included in the list. An outstanding example of this class is the manuscript entitled *Yerbas y Hechicerías del Yucatan* in the Library of the Department of Middle American Research at Tulane University, which is probably the original work of Ossado, "*alias el Judío*."

Among the ancient Mayas medicine was closely associated with religion and sorcery. Landa tells us that "In the month of Uo the priests, doctors and sorcerers, which was all the same, began to prepare with fasts and other things for another festival . . . First the priests celebrated their own (feast), which they called *Pocam*."<sup>1</sup> Later, we learn, "the doctors and sorcerers assembled at the house of one of them with their wives, and the priests cast out the devil. This accomplished, they opened their medicine-packs in which they carried many gewgaws, little idols of the goddess of medicine whom they called *Ix-chel*, and thus they named this festival *Ixcil-Ix-chel*,<sup>2</sup> and certain little stones with which they cast lots and which they called *am*.<sup>3</sup> Also they most devoutly invoked with prayers the gods of medicine who, they said, were *Itzamna*, *Cit-bolon-tun*<sup>4</sup> and *Ahau-chamahez*."<sup>5</sup>

1 *Poc-am*, literally, "scrub the spider."

2 Literally, "bath of *Ix-chel*;" it is given as *Ixcilixchel* in the text.

3 *Am* means spider. The spider and its web were associated with *Ix-chel*, who was the rainbow as well as being the goddess of medicine and childbirth.

4 *Yzamna* and *Citbolantum* in the text.

5 Landa, 1864, p. 284-288.

Incantations have always played an important part in Maya medicine. In one of the Sixteenth century reports there is an account of certain poisonous snakes, following which we read: "formerly, in the time when they were pagans, they attempted to cure themselves of this poisoning by means of spells and enchantments. There were great sorcerers, and they had their books for charming and enchanting them. With a few words which they recited they charmed and tamed poisonous serpents; they caught and held them in their hands without their doing them any injury."<sup>1</sup> The native doctors still employ incantations in connection with their remedies, but these are said to have suffered from European influence, and the names of saints are often substituted for those of the old gods. One old manuscript has survived and contains forty-six medical incantations in which there is little or no mention of anything Spanish or Christian. This is called the Ritual of the Bacabs and belongs to Mr. William Gates.<sup>2</sup>

The Maya doctors believed in curing like with like. An eruption of the skin resembling the sting of a wasp was treated with the crushed nests of wasps and other stinging insects. Certain vines thought to resemble a snake were considered a cure for snake-bites. Yellow plants or fruits were given for jaundice and biliousness, and red plants or fruits were considered efficacious for diseases characterized by vomiting blood and dysentery. Probably the most absurd length to which this theory was carried is found in the texts prescribing the burned feathers of certain red birds, as a remedy for yellow fever. Also, as might be expected of a people with a genius for mathematics, we find evidence of a Maya doctrine of number in the number of days or of times which a remedy is to be applied. Thirteen is usually associated with a man and nine, with a woman.

On the other hand we find a surprisingly large percentage of the Maya medical texts devoted to the treatment of symptoms and based on objective observations of the effects of certain plants on the human system. Maya medicine at least was not hampered by the theories of humors and distempers which so long continued to be the basis of European medical science. Even when the Maya doctor borrowed from the Spaniards, he usually adhered to his own methods and adopted their simple remedies rather than their pseudo-scientific theories. That this was due to inclination and not to any lack of capacity to learn, is shown by the readiness with which these Indians absorbed and translated into their own language the principles of European astrology. Maya methods of human sacrifice cannot but have resulted in a certain practical knowledge of anatomy among the priests and doctors, and this probably continued to be handed

<sup>1</sup> *Relaciones de Yucatan*, I, 66.

<sup>2</sup> *Tosner*, 1920, p. 196.

down from generation to generation for a long time after the Spanish conquest put an end to the practice. In the Maya medical texts some of the favorite remedies are plants found in the U. S. Dispensary, such as the *Euphorbia hirta*, L. (*Xanab-mucuy*) and the *Bursera simaruba* (L.) Sarg. (*Chacah*). Others, not so well known to European and American medicine, are vouched for by the Spanish Yucatec physicians and employed medicinally in other parts of Mexico, Central America and the West Indies. We even find a surprising anticipation of modern gland-therapy in cases where a nerve stimulant seems to be required.<sup>1</sup>

Long frowned upon by the Church and still prosecuted by the civil authorities from time to time, the *ah-men*, or *yerbatero* as he is called in Spanish, still finds his professional services in demand. Little study has been made of his methods, and we are indebted to the eminent Maya scholar, Juan Martínez, for the following account of the procedure of the Maya doctor.

The *yerbatero* keeps on hand a supply of medical plants, insects and the useful parts of animals and reptiles, particularly lizards, or *chopes*. Needless to say, the names of the plants and the nature of the other remedies employed are kept a close secret. If it is possible, the patient comes to the house of the doctor, who claims to know in advance the nature of the complaint. Strangely enough he is usually correct in his diagnosis, and the faith thus inspired is naturally an aid to the cure. As we have already noted, the incantations and prayers which accompany the treatment are invocations of both the ancient deities and Christian saints. In this connection a cross is employed which is always painted green. If the patient is unable to visit the *ah-men*, absent treatment may be given. A member of the family brings one of the patient's garments, and the doctor performs a ceremony over this, which is called *peɔ-nok*. The general attitude toward the *ah-men* today is that a regular physician should be called for some diseases, while others can be cured only by the native doctor. People say: "*no es cura de médicos, sino de yerbateros.*"

We also find specialists in Yucatan, particularly the *kax-bac*, or "bone-binder," who cures fractures, sprains, dislocations and contusions. When an accident occurs, the *kax-bac* is usually called in. Not only does he bandage the injured part, as his name would indicate, but he also aids the healing process by his expert massage and manipulation. This treatment is supplemented by poultices of leaves or roots. The *Ruellia albicaulis*, Bert., has been employed in this manner for centuries, and its Maya name is *ɔacal-bac*, or bone-remedy.

<sup>1</sup> Medical texts 211 and 216

Another specialist is the accoucheuse, who is called *x-alanzah* in Maya and *comadrona*, or *partera*, in Spanish. As with her colleague, the *ah-men*, suggestion plays an important part in her treatment. She predicts the day and hour of birth and even threatens to throw up the case if the child is not born promptly at the time she has indicated.<sup>1</sup> Candles are lighted and the patient is given a calabash into which she is instructed to blow with all her strength. After the child is born, the *comadrona* skilfully massages the patient and even binds the hips to restore the organs to their proper position.

In his double role of doctor and sorcerer the *ah-men* not only cures diseases, but also sometimes accepts a commission to cause them as well. In this capacity he is called *ah-pul-yaah*, or the "disease thrower." In the Sixteenth century such sorcerers had their own specialties for which they were named. *Ah-pul-auat-mo* caused children to scream, and the charms of *ah-pul-chub-chi* made them refuse the breast. *Ah-pul-holok-ta* caused strangury, *ah-pul-nok-ti-yit* "threw" tape-worms, and *ah-pul-xe-kik* brought yellow fever. Closely allied to medicine is the preparation of love-philters, which is also a branch of the profession. Two of the most popular ingredients of these are the glands of a crocodile and the heart of a humming-bird. Even today they may be purchased from unscrupulous pharmacists in Merida.

Little is known as to the extent to which this system of medicine has spread outside the Maya area. Only recently, according to press dispatches, four Maya medicine-men, well supplied with their own native drugs, established themselves in northern Mexico not far from the Rio Grande and were drawing clients from every direction for many miles around, much to the disgust of the local medical profession.

<sup>1</sup> See Medical texts 29-34 for other methods of suggestion.

## MAYA MEDICAL TEXTS AND TRANSLATIONS

### KEY TO THE PRONUNCIATION OF THE MAYA TEXTS

Consonants and vowels have approximately their Spanish sounds except as follows:

- b—when final becomes almost a surd.
- c—is the English k, but final c is sometimes so lightly pronounced that the Maya writer replaces it with h and writes zah for zac.
- ch—has its Spanish sound approximately; probably the German tsch, as in Tratsch, is closer to the Maya sound.
- ch̄—is ch explosive.
- h—is often more strongly aspirated than the Spanish h.
- k—is velar k.
- l—is almost silent when final.
- pp—is p explosive.
- th—is t explosive.
- tz—is the English ts.
- ɔ—is tz explosive.
- u—becomes the English w when it precedes another vowel and sometimes when final after i.
- x—is the English sh.
- z—is the English s and is often written s in the Maya texts. It has also been written ç.

The Maya texts are given as found in the manuscripts, except that s and ç have been uniformly replaced by z, which is the most common method of rendering this sound by the Maya writers.

## ACHES AND PAINS

### 1—*Chibal okol*

(Sotuta, f. 41 r.; Judío, p. 100).

Lic u chupil u cal u cuy uinic tumen uaix u pol u pix ua u kab xan lemaac yanile tumen ximbal u cah le kohanila, ca a cña unto zizal ca a ña ichil vinagre ca a uomantez catun a cici nabez he tuux citan yan ti uince bin utzac tumen.

*Pain all over the body.*

Where the ankles swell, or the knee-cap or the arm also, wherever it is, because there is a progression of the complaint. You take fresh grease and put it into vinegar and steam it. Then you anoint it thoroughly wherever it is on the body. He will recover by this means.

### 2—*Xma mukil, chibal bac y tulacal u uincil.*

(Sotuta, f. 41 r.; Judío, p. 85).

Cña u lee laal, u lee chalche, u lee xnabanche, chiople, naranjas yaax kutz, ca chacac u leob tulacal takan chacbil ca a ña yichinte ua canal yan ti lae ñabil u bajon t(i) yoc (u cña yoxou haa) tocbil u bacel coz ñabil u polvosil ich haa ua ich zaakuum yuk ah chibal bac ah chibal oc bin utzac tumen.

*Lack of strength, pain in the bones<sup>1</sup> and all over the body.*

Take the leaf of the *Urera microcarpa*, Wedd. (*Ortiga*), the leaf of the *Pluchea odorata*, L. (*Santa Maria*), the leaf of the *Bursera graveolens*, Tri. & Planch., the *Eupatorium aromatisans*, DC., the orange, green tobacco. Let the leaves of all of these be boiled thoroughly and administer the (liquor) as a bath. If he suffers from lassitude, put a basin (of the liquor) at his feet, so he will receive the steam from it. Burn the bones of a Crying Hawk (coz) and put the powder in water or in maize-paste for him to drink, (that is) anyone who has pain in the bones or pain in the foot. He will recover by this means.

<sup>1</sup> *Chibal bac* is also defined as buboes (Ixil, 65, v.)

## ASTHMA, COLDS, DISEASES OF THE LUNGS AND BREATHING PASSAGES

### 3—*Asma, coc tu thanob.*

(Mena, p. 126).

Cu tzayal pasmo cas ti oil cu oacic formuli bay xan cña le *pakunpak* chac y u tzucel uo chace y oæec anis ca a oæ yuke chochoco. Uamae cña oibil uo ca a cña u tzucel uo chace ca a oæ yuke cax utial cinbale bin utzac tumen uabin *huaxim*. Uamae cña hunppel kancab tok ca pul ychil kak ca uilic u chactale chac chobene ca pul ychil hae ziz ca oæ yuke le haile. Uamae u lee *pichi* chac ca á oæ yuke yoklal u kilkab tuzebal. Uamae *zactok* ma lob xan.

### *Asthma, coc, as they call it (in Maya).*

When convulsions occur, they may be cured by this formula: take the *Yerba de la golondrina* (*Euphorbia dioica*, H. B. K.?) and the belly of a frog. Boil with a little anis and give it to drink hot. Or else take a spotted frog. You take the belly of the frog, boil it and give (the liquor) to drink. Even though he is at the point of death, he will recover by this means. You might (employ) the *Leucaena glauca*, (L.) Benth. Or else take a yellowish red flint and throw it into the fire. When you see that it is red-hot, throw it into cold water, and give the water to drink. Or else (employ) the *Psidium guayava*, L. (Guava); boil it and give it to drink, so that he will immediately perspire. Or else the *Eupatorium albicaule*, Schl. (?) is not bad also.

### 4—*Coc.*

(Sotuta, f. 48 v.; Judío, p. 16; Mena, p. 11; Teabo No. 9).

Caxant *chacte coc*, *abilimcoc*, y *chacte huchibil* u boxel u pach *ppelawcuch* huchibil y hoppel *maxyc* kinkinal tune ca oabac yuk hatzcabil maili u kam u chie.

### *Asthma.*

Seek the *chacte-coc*, the *ix-bilim-coc*, the *Caesalpinia bijuga*, L. (*Brazil*), the exterior of the *Croton glabellus*, L., and five peppers of the *Capsicum frutescens*, L. (*Chile del monte*). Crush these, heat them, and administer them in a drink at dawn before breakfast.



5—*U sacal coc, yab tuba.*

(Judío, p. 110).

*Coc chee* u boxel u pach u cheel thululthul u lee u sacal zen coc utz ix huchbil ca holabac u cal uinic yanil coc utz ix yukul u kab yalil ææctacil taan kozen u le hach *coc che* yan mac alic *cancheeyl* xan u sacal coc y kokob y kux pol u xakinte u chucanob lay tu yax chun loe *kokobak*.

*The remedy for asthma.*

The Coc-che (*Conocarpus erecta*, L.?), its bark. Long and narrow is its leaf. As a remedy for coughing asthma, it is good, when crushed, to clear the throat of a man who has asthma. It is good also to drink frequently the leaf of the genuine coc-che. There are those who call it the can-che also. As a remedy for headache, mix what is written above with the kokob-ak (*Aristolochia odoratissima*, L.?).

6—*Coc zen y tuz ik.*

(Sotuta, f. 48 r.; Judío, p. 17; Mena, p. 9).

Le coc zen y u tuz ikile, ca a cña u enjundia xcax eek xcax tzahbil y zazac azucar, catun a ça yuk u mantecail kuxbil tu ppuppyul hatzcab cabin yuke cabin u kuxe maili u kam u chie.

*Asthma and difficulty in breathing (literally, false breath).*

For this asthma and difficulty in breathing you take the fat of a hen, a black hen, fried with white sugar. Then you put in his drink the fat. It is to be eaten in small bits at dawn; when he drinks this, when he eats this, is before he takes his breakfast.

7—*Etico.*

(Sotuta, f. 50 v.; Judío, p. 40; Mena, p. 16).

Lay etico tzemtzem cimil nichcoil u lak u kaba caxant *xucul* u lee y u motz paktei xan y u cheel huchbil (tun) y u maay zuzbil hxuul xakbil tune ca yeebtac cu zasztale ca nabzabac tulacal u uinclil y kukum ca yoxou u choquil lay kohane canppel kin tu pache ca xiic ti hunppel estancia ca yuk hun luch leche tu pache ca yuk hun luch ziz haa utial u xee, caix hubuc u nak zuo keyem tun bin yuke macbal u xee, u lee *xmuch nicté athuhuy nicté ya* (la) bale lay ti bin ppultabal u jarro tu man akab ppiz u haua' tumen.

*Consumption.*

This consumption is a disease of the chest. Marasmus is its other name. Seek the *Portulaca oleracea*, L. (*Verdolaga*), its leaf and root together with its stalk. Mash it with the powdered *ah-xuul* (a fish resembling a skate), and when mixed together, set it out in the dew until dawn. Then anoint it all over the body with a feather. Then steam the fever four days. At the same time let him go to a cattle-ranch and drink a gourd of milk. With it let him drink a gourd of cold water. Let him vomit and be purged with sour *posole* (or) anything to make him vomit. The leaf of the *Plumeria pudica*, Jacq. (*Flor de Mayo amarillo*), the *ix-thuhuy-nicte*, as it is also called, shall be burned in a jar so he will receive the smoke all night until (the complaint) shall cease by this means.

8—*Etico, asma, zeen, ya tzemil.*

(Sotuta, f. 50 r.; Judío, p. 38; Mena, p. 14).

U sacal asma, zeen, flema, pechuguera, toz mala, ya tzemil y zeen, etico chocuil ticin zeen, uchben zeen u sacal makbil u yitz *oa* ca yuk kinal haa tu pach bin tahac u zeen ua (ya)n tuzikile tu coc zeen u lee y u motz *tokzuuc* ca a chace kinkinal tune ca a sa yuke maili u kam u chie.

*Consumption, asthma, cough, pain in the chest.*

The cure for asthma, cough, phlegm, hoarseness, bad cough, pain in the chest, consumption, fever, dry cough, chronic cough, is the dissolved gum of the *Alicastrum Brownei*, Sw. (*Ramon*). Let him drink warm water at the same time. It will loosen his cough. If there is difficulty in breathing, (take) the leaf and the root of the *tok-zuuc*, (flint-grass). Boil it and give as a drink before breakfast.

9—*Hulneb, hul ik.*

(Judío, p. 36; Mena, p. 118; Nah No. 100).

Ua tu tzem ua tux yan ti u sacale *xnabanche xchyte* u le *chalche zizim* u le *chimtok* u le *zipche* u le *zulu(b)tok*, u le *payhul* chacbil tulacal chacau heuac uchac u mukuc u chuhul uaix ppoobil he tux cu kinam u hioba u chibal lay hul yk loe.

*A piercing pain when one draws a breath.*

Whether in the chest, or wherever it is, the remedy is the leaf of the *naban-che*, or *ix-chite*, (*Bursera graveolens*, Tri. & Planch.),

the leaf of the *Pluchea odorata*, L., the *Artemisia Mexicana*, Willd. (*Agenjo del pais*), the leaf of the chim-tok<sup>1</sup> (*Quiebra hacha*) the leaf of the *Bunchosia glandulosa*, Cav., the leaf of the *Bauhinia divaricata*, L. (*Calzoncillo*), the leaf of the *Phyllanthus conami*, Sw. (*Ciruelillo*). Boil them all and apply as hot as (the patient) can stand it. Also (employ as) a wash. It will end the piercing pain.

10—*Hun nek tu c̄halatel uinic.*

(Mena, p. 118).

Le hubul cu tzayal tu c̄halatel uinic, ca a c̄ha huntul nuxib thel y hun ppul yalil ua ualil y hun tzuc tab hunppel akab ca chacic cu zasztal ca a ɔa u hante ca yuk u kab uama ca a c̄ha u zac ta pek ca toc u tanile ca ɔa ich vino ca ɔa yokol le tux yan dolor cu hauzie u kinam. Uamae ca a c̄ha u motz *coles* ca hučhe ca tzahe y hunppel unto zizal y aceite. Uamae ca a ɔa le tux kiname. Uamae ca a chac u polvosil u bak puɔnab ich há ua ich za, uamae ca a ɔa ich u xulub puɔnab bin utzac tumen.

*Extreme pain in the ribs (pleurisy).*

This extreme pain attacks the ribs of a man. You take an old cock, a pot of water and a little salt. One night you boil it until dawn. Then you give it to him to eat and let him drink the broth. Or else you take the white excrement of a dog; burn it and put the ashes in wine. Apply this wherever the pain is to end it. Or else you take the roots of a cabbage and crush it; then fry it with unsalted grease and oil. Then you apply it where the pain is. Or else you boil the meat of a spike-horned deer in water or atole. Or else you administer the (powdered) horn of a spike-horned deer. He will recover by this means.

11—*Macal tu bel ich, romadizo.*

(Sotuta, f. 32 r.)

Ca a c̄ha ix cabal homtok, cocohtunte, catun a pak tu chi u lec y ca u uobente cu hauzie. Bay xan *xcambalhau* ca a ment u polvosil ca a ɔa yuke. Le yoyol ni *xchalche* chacbil ca a ɔa yuk max macal u cal ma lob utial, cabin xic chital, ma yukic ziz haa tumen ma u pasmartic u cal y u tzem.

<sup>1</sup> Chimtok. Lit. flint-capsule. Said to be a thick tree with dull-green leaves. The bark is an astringent. The wood is extremely hard and is said to be used for ship-building and other construction. Probably *Krugiodendron ferreum* (Vahl) Urban.

*Nasal catarrh.*

You take the ix-cabal-homtok; mash it with a stone. Then you poultice it on his brow and let him inhale it to stop it. Thus also the *Dorstenia contrajerva*, L. (*Contrayerba*), powder it and give it to drink. The tender tips of the *Pluchea odorata*, L., are to be boiled and given to drink to anyone whose throat is stopped up. It is not bad for it. Then let him go and lie down and not drink cold water lest it cause convulsions in the throat and chest.

12—*Ix nachbac coc.*

(Sotuta, f. 49 r.; Judío, p. 16; Mena, p. 11).

Čha u lee *xchalche*, *tokchichibe*, *pucyim*, *tzalam*, *zacloob*, *æzcaat*, *zutup*, *kanalzín*, *cocche*, y *hokab* u leob tulacal y u zuzil kaknab chacbil ca yichinte, kinkinal xanie ca yuke.

*Phthisis.*

Take the leaf of the *Pluchea odorata*, L., the ix-tok-chichibe (flint-chichibe), the *Colubrina Greggii*, Wats., the *Lysiloma latiliqua*, L., the *Eugenia mayana*, Standl., the *Luehea endopogon*, Loes., the *Ipomoea bona nox*, L. (*Nicua*), the *Lonchocarpus rugosus*, Benth. (or *Phaseolus elegans*, Piper?) the coc-che (*Conocarpus erecta*, L.?), the *Tecoma quinquefolia*. The leaves of all of these with sea-sand are to be boiled and put in (the patient's) bath. Let him drink it tepid also.

13—*Nachbacil, tizico.*

(Sotuta, f. 50 r.; Judío, p. 94; Mena, p. 15; Nah No. 83).

Le nachbacil cu tzayal ti uince chenbel u nachma u bacel. Caxan *æomohoch*, yx *nichlum* u lak u kaba, lalaci bay u lee *yaxnice* lay xiua matech u čihil niničha, hayalhay tu uich lum le tumen ca yalabal xane *xnachlumil* tumen ah *æacyahob*, y ca a čhaix *nachbacalche* u xaak yalil, cabin chacac lae u yichinte max yanil nachbac lae, bay xan licix u æumul chupul nabzabal tu pach lic u manzie yah hach tzayan hach yayax u uinicilob utial chocuilob lae lay æamchocuil lae y u *kanlecay* y hobnil haa cu chacal y *akabxiu* y u *æomohoch* yachbil u kabil catun ppopoc ah kohan y max yan nachbac ti lae y le æamchacuil bin hauac tumen u æac.

*Phthisis.*

This phthisis attacks the body only and weakens the bones. Seek the æom-mohoch, the nich-luum is its other name. It re-

sembles the leaf of the *Vitex Gaumeri*, Greenm., does this plant. It does not grow close to the ground and spread out on it. For this reason it is also called *x-nach-lumil* (that which is away from the ground) by the medicine-men. Then you take the *ix-nach-bacal-che* (phthisis-tree). Mix the liquor from these. Boil them and employ it as a bath for anyone who has phthisis. Thus also, for reducing a swelling, let it be anointed on it to take away the pain. It is a severe attack and turns the body green, does this high fever. Also the *Cuscuta Americana*, L., and "colored water" are to be boiled with the *Blechnum blechoides*, Sw., and the *oob-mohoch* is crushed for its juice. Then bathe the patient. In the case of anyone who has phthisis and this high fever, it will cease by means of this remedy.

14—*Ticin zeen*.

(Sotuta, f. 49 v.; Mena, p. 14).

He u *oacal ticin zeen*, *caxant u yitz zacnichte le ppoppoa u pache y u motz zacchacah huchbil catun oabac oecoc alumbre ichil ca hoyac u cal uinic yetel*. Cu *oocole ca a cha u yoyol nii taamaay chabile ca yuke, bin utzac tumen*.

*Dry cough, whooping cough.*

This is the remedy for dry cough: seek the gum of the *Plumeria alba*, L. (*Flor de Mayo blanco*), the leaf of the *Tragia nepetaefolia*, Cav. (*Ortiguilla*), the bark and root of the *Euphorbia mayana*, Millsp. Crush and add a little alum. Then swab the throat of the man with it. After that you take the tender tips of the *Zuelania Roussoviae*, Pittier, and boil them and let him drink. He will recover by this means.

15—*Ticin zeen*.

(Sotuta, f. 50 r.; Mena, p. 15).

Le tie *ticin zeen cu tzayal ti uince cha u motz zaccatzim yan ti tzeke kaaxe ca a huch y uacoit max yc y hunppel u co tab kinte ca hoyabac u cali(1) ca cabeh u hoyabal ti ppiz yubic u oamtale, canten cax kuchuc uacten bin hauac tumen*.

*Dry cough, whooping cough.*

This is the dry cough which attacks a man. Take the root of the *Mimosa hemiendyta*, Rose & Rob., which is in the rocky forest. Then you mash it with six peppers of the *Capsicum frutescens*, L.

(*Chile del monte*), and a crystal of salt. Warm it and swab his throat. Two days after it is swabbed he will perceive it has loosened. Four times and even six times (it is to be done) and it will cease by this means.

16—*Ticin zeen, coc.*

(Sotuta, f. 49 r.; Judío, p. 17; Mena, p. 11; Teabo No. 8).

Cña u boxel u pach *zacnicte*, chacbil y u kab naranja uaix u kab limones ichil yaalil bay can luche ðabil tun cab ichil, cabin yuk kinkinal. Uamae u motz *zacchacah* y yoyolni *taamaay* y ææec alumbre chacbil chocotune ca ðabac yuke le max yan ticin zeen tie. Uamae u lee *akabyoom*, *akab xiu* cheche hucñibil ca pukuc u kabil yuke bin u takmantez u zeen mankin manakab cax zazak calil cax u zeenil postema bin hauac tumen. Bay xan cheche yañibil y hunppel grano tab tibil utial ichil u ðac pakil y u pak holom.

*Dry cough, asthma, whooping cough.*

Take the bark of the *Plumeria alba*, L. (*Flor de Mayo blanco*). Boil it with orange-juice or lemon-juice in the liquid, say four gourds of it. Put honey in and let him drink it tepid. Or else the root of the *Aklema Mayana*, Millsp., and the tender tips of the *Zuelania Roussoviae*, Pittier, with a little alum. Boil and give it to drink hot to anyone who has dry cough. Or else the leaf of the *Blechum blechoides*, Sw. Mash it and let the juice steep for him to drink. It will loosen his cough, all day, all night, even an irritation of the throat, even a cough from an abscess. It will cease by this means. Thus also the same raw and crushed with a crystal of salt, tepid, as a remedy. Poultice it with the nest of the holom.<sup>1</sup>

17—*Ticin zeen, zac zeen.*

(Sotuta, f. 49 r.; Judío, p. 41; Mena, p. 13).

Man akab u zeen matan u tahal u zeene. Cici muxbil escurre *yc* y tab, ca a cña hunppel hee, citac u lubul yalan u xcaxil catun a pot lay hee hunten yukice ca a ða ichil ðacan le muxbil escurre *yc* bay bin xupbal hunppel hee le yukule le kohan lae, pachile catun yuk choco haa tu pach ca u pix u chii, y u nii, ma u hokol t(i) ik, oxten ua cantene bin tahac u zeen. Uamae cici kelbil arroz muxbil ca a ða ichil hunppel zutkabil hee utz xan u ðacal. Ua mat hauic cña hunbal yekil *kutz* y cançit escurre *yc* utial u ppultic u hol u cal le kohane bin utzac tumen.

<sup>1</sup> Holom. An insect resembling a wasp, but larger and of a different color. They make their nests of earth or clay, on walls, beams, cloth, books, etc., and construct them so solidly that it is difficult to destroy them. Their sting is very severe. (Pacheco Cruz.)

*Dry cough, white phlegm, whooping cough.*

All night he coughs; his cough does not loosen. Grind chile pepper fine with salt, and then you take one egg as soon as it has fallen from the hen. Then you bore a hole in this egg so he can drink it. Then you put into it the entire ground chile-pepper. Thus the egg is taken by the patient. Following this let him drink hot water and cover his mouth and nose, so the breath is kept in, three or four times. The cough will loosen. Or else well roasted rice is to be crushed and put into a well beaten egg. This remedy is also good. If this does not stop it, take a twist of black tobacco with four chile peppers, of which the smoke is taken into the throat of the patient. He will thus recover.

18—*Tuz ik.*

(Sotuta, f. 48 r.; Mena, p. 9).

C̄ha *cocaac*,<sup>1</sup> hunxeth u boxel y cappel xtuzil y ææec *akmax* ca a huch̄ tulacal catun a æa yuke cu hauziç (*maxak* yaliç æaca).

*Difficulty in breathing.*

Take the coc-ac, a piece of the husk or outside, and two clothes-moths and a little of the ak-max.<sup>2</sup> Mash them all and give it to drink to stop it (max-ak, they call the remedy).

19—*Tuz ik coc, loth coc y zeen coc, u kabaob.*

(Sotuta, f. 48 r.; Judío, p. 18; Mena, p. 9).

Caxant *cocche*, *tancoc*, *bich̄coc*, *bilimcoc*, *lothcoc*, *tzalam*, *chacte coc uayakte*, *chimtok*, *toonche*, *zaccpah*, *chiceeh*, *bobch̄ich̄*, *tostab*, *yaxnic*, *puçim*, *taamaay*, *taaci*, *yaximche*, *chaculubtok*, *zaculubtok*, *hyuy*, *kante*, *ææuc*, *ppelæxcuch*, *zactah*, *tokaban*, *holol*, *chacah*, *zutup*, *kanalzin*, *zahom*, *ækanan*, *habin*, *maaxak*, *taman*, *payhul*, *buhunkak*, *chichibe*, *zamchac*, u lee' *zacubto*, *hmuc*, *zaclob*, *yaxek*, *zacyikche*, *zacchuenche*, u yoyol niob tulacal bin c̄haba(c) ooxual tulacal cheche yach̄bil (ca chaçtabac ca æabac yuke y) ichinbil chach̄bil xan ca yichinte. Uamae toçbil u boxel *cocac*, hunppel cuchara u may bin æabac ichil uabal uklil ti kohan bin hauæ tumen.

*Difficulty in breathing, spasms, coughing asthma.*

Seek the coc-che (asthma-tree, *Conocarpus erecta*, L.?) the *tancoc*, the *bich̄coc*, the *bilim-coc*, the *loth-coc*, the *Lysiloma latisilqua*,

<sup>1</sup> Coc-sac? Lit. Asthma-grass.

<sup>2</sup> Max-ak, or ak-max. Lit. Chile-vine; monkey-vine.

L., the chacte-coc, the uayakte, the chim-tok<sup>1</sup> (*Quiebra-hacha*), the toon-che, the *Byrsonima crassifolia*, H. B. K., the *Chrysophyllum mexicanum*, Brandweg (*Cayumito silvestre*), the bob-ch'ich' (*Coccoloba Schiedeana*, Lindau?), the toztab, the *Vitex Gaumeri*, Greenm., the *Colubrina Greggii*, Wats., the *Zuelania Roussoviae*, Pittier, the *Hippocratea celastroides*, H. B. K., the ixim-che (*Casearia nitida* [L.] Jacq.?), the *Bauhinia Cavanillei*, Millsp. (*Pato de venado*), the *Bauhinia divaricata*, L. (*Pato de vaca*), the *Casimiroa tetrameria*, Millsp., the kante, the *Diphysa robinoides*, Benth., the *Croton glabellus*, L., the *Zexmenia costaricensis*, Benth., the *Trixis radiale* (L.) Lag. (or *Eupatorium conyzoides*, Vahl.), the *Hibiscus elatus*, Sw., the *Bursera simaruba*, L., the *Ipomoea bona nox*, L. (*Nicua*), the *Lonchocarpus rugosus*, Benth. (or the *Phaseolus elegans*, Piper), the *Zexmenia hispida ramosissima*, Greenm., the *Hamelia patens*, Jacq., the *Ichthyomethia communis*, Blake, the maax-ak (chile-vine), the *Gossypium hirsutum*, L. (*Algodon*), the *Phyllanthus conami*, Swartz (*Ciruelillo*), the *Sida acuta*, Burm., the zam-chac, the zac-ubto, the *Dalbergia glabra*, (Mill.) Standl., the *Eugenia mayana*, Standl., the *Lysiloma sabicu*, Benth. (or the *Pithecolobium tortum*, Mart.?), the zac-yik-che, the zac-chuen-che,<sup>2</sup> the tender tips of all of these. There shall be taken three leaves of each, crushed raw, and let them be strained and given to drink as well as employed for a bath. They are to be boiled when used for the bath. Or else burn the exterior of the coc-ac (asthma-grass). One spoonful of the fine ashes is to be put into whatever the patient drinks. (The complaint) will cease by this means.

20—U *caacal athuhuzen yetel xe kik zen wan*

(Nah No. 111).

ca cñabac xpucil cñooc ca çolabac u keuel ca kaktabac, minan tabi ca çabac u hante mac yanil ua lay cu hihio cimile caix noboch uinic yan tie ca çabac ti u hante cu hauzic u çac lae.

*The remedy for convulsive cough and raising blood also,*

let there be taken a female rat. Let it be skinned and roasted without salt. Let it be given for (the patient) to eat. Or if there are severe convulsions in an adult man, let it be given to him to eat that the remedy may stop it.

1 Chintok. Lit. flint-capsule. A thick tree with dark-green leaves. The bark is an astringent. It is used for certain constructions; the wood is so hard that it is called *Quiebra-hacha* by the Spanish speaking Yucatecans. Probably *Krugiodendron ferreum* (Vahl) Urban.

2 Zac-chuen-che. A small shrub with short lanceolate leaves.



21—(No Maya title).

. . . kinie ma uchac a ɔacici tumen bin cimic tumen xe cabin a ɔa le ɔac ti lay kohana ca a ual ti ma u zipil y xchup bin cimic ua kahal ti coil ti, ticin zeen u kaba ua pulmonia, tumen hechahanob u bacel matan yocol ɔac ti ua citac u xe ua ma (i)li xenac ca a uila u uix ua chachac tat tu yit lay bentosae t(i) zipi y xchup ma a ɔaic ɔac ti tumen bin a cimez ua uchac a ɔaic tie cña u lee rabano chacbil y cab y vinagre ca a ɔa yuke maili lecec u ceele maili yuk manbale hatzcab cabin yuke, catun a tepp y sabana ppiz u kilcabe tu lak kine bin a uila u uix ua ziz yan ti ua chacau ua uchac a caxtic u ɔacal . . . ɔacoba ma a ɔic ti xchup yoom ma utzi.

(Probably pneumonia, with complications).

. . . you will not be able to cure him because he will die with vomiting. Then you give this medicine to the patient and you tell him not to sin with a woman. He will die if he turns to lewdness. Dry cough is its name, or pneumonia, because his bones are opened up, the medicine does not enter. If he immediately vomits, or before he vomits, you inspect his urine. If it is red on his rectum (after cupping) then he has sinned with a woman. Do not give him the medicine because you will kill him. If you can give it to him, you take the leaf of a radish; boil it with honey and vinegar and give it for him to drink; before the chill recurs before he drinks anything at dawn let him drink it. Then wrap him in a sheet until he sweats. On the next day you inspect his urine, whether there is mucus in it, whether it is hot (to see) if you can find the remedy . . . Do not try it on a pregnant woman. It is not good.

22—*U zacil flema y tuz ikil.*

(Sotuta, f. 48 v.; Judío, p. 39; Mena, p. 10).

Le tie flema cu chacethal, tu kin chikin ike lic u ɔ(aic) tuz ikil xan, zac zeen u zeenil flema bay u yom habon u tub u yomil yanile. Cña manteca de azahar chococinbil ca nabzabac yokol u catzucil, y tu tzem bay hebix tin ualaha, cici pocb(il) u nok tu buoil *romero* ua *aluzema* oxten ua canten bin betaac ti bin hauac tumen.

*White phlegm and difficulty in breathing.*

This is a phlegm which becomes worse on days when there is a west wind so that it causes difficulty in breathing also, white phlegm, he spits phlegm like soapsuds. Take orange-flower pomatum, heat it and spread it over the spleen and on the chest as I have said; rub it well on a cloth smoked with lavender or rosemary. Three or four times it shall be done. It will cease by this means.

23—*U sacal zac zen etico,*

(Nah No. 2; Mena, p. 127; Kaua, f. 148 v.)

kinkin chacuil u cuch ya nakil u cuch ca cña u le *halal* cici chachbil catun yichinte can canppel kin latulah yubic u samal yol ca hauac yichintic cax kuchuc lahunten yichintic hach u sacal lae.

*The remedy for white phlegm, consumption;*

high fever is the symptom; abdominal pains are the symptoms. Take the leaf of the *Scirpus validus*, Vahl. Boil it well and bathe with it for four days, until he feels (his fever) go down. Then cease the bath, even though he has been bathed ten times with this remedy.

24—*U sacal zac zen, etico*

(Nah No. 110).

tu than sulob lae; he u sacal uaix zazac calil uaix u pasmar u cal unic chocoyol ca yuk ziz haa, cu yulul tii ca cñabac bay hunppel tumin cab yetel tancoch onsa pimienta de castiya ca hucñuc ticin ca tozoc ichil lay cabe yetel lahcañit *yc* escurre yetel tancoch ual *kutz* muxbil xan, ca sabac ichil cab ca chacac huybil ppiz u zappal uaix u luthba ca a cña u ziztal ca sabac u ni ak lay ak zazak cale ppiz u xupul tu mak ca u canante uba, ma yukic ziz haa oxppel kin, yetel lele bin utzac lae.

*The cure for white phlegm, consumption in the language of the Spaniards.*

This is the remedy, whether it is an irritated throat or convulsions in a man's throat. Let him drink cold water when he is taken with it. Take a tomin of honey and half an ounce of Spanish pepper. Grind it and sprinkle it on the honey. Also twelve chile peppers and half a leaf of tobacco, pulverized, also. Then let it be put in the honey and boiled until it has boiled away. If there is a chill, you take it cold and put it on the end of his tongue until it is sucked away. Then let him cover himself up and not drink cold water for three days. With this he will recover.

25—*Zac zeen y coc.*

(Sotuta, f. 49 r.; Judío, pp. 19 and 40; Mena, p. 12).

Pom *zizim xnabanche*, hoñit *maxyc* y secec tab cici takan chachbil ca a sa t(i) yeeb cu zasztale ca a kinte a sa yuk(e) maili u kam u chie le kohane. Le zac yah zeena flema thathaynac hohole tu cal le

꠆acale u kab *pakal* yebbil cu zasztale ca a ꠆a u muxbil kel bil tab ichil, ca a ꠆a yuke, cu ꠆ocole ca u yuk kinal hun luch haa tu pach, ua matan u xee ca hoyabac y kukum ca utzac u xEIC le flema yan tu cale.

*White phlegm and asthma.*

Copal, the *Artemisia Mexicana*, Willd. (*Agajo del pais*), the *Bursera graveolens*, Tri. & Planch., five peppers of the *Capsicum frutescens*, L. (*Chile del monte*), and a little salt. Boil well and put it out in the dew until dawn. Then you heat it and give it to him to drink before he takes his breakfast. (For) this white phlegm, which fills the throat of a man with small perforations filled with phlegm, the remedy is orange-juice left out in the dew until dawn. Then put ground roasted salt in it and give it to him to drink. After he has drunk it, let him drink one gourd of warm water with it. If he does not vomit, tickle his throat with a feather so he will vomit the phlegm which is in his throat.

26—*Zakzak calil asma cooc.*

(Mena, p. 121).

Ca a cña azufre cici huçñe á ꠆a ychil hunppel hee ca pecez ca a ꠆a yuke uamae kux hun xetheli *ca(n)luch* u kab bin u hauez uamae ca yuk ychil ꠆e꠆ec ha bey hunppel chichan cuchara bin ꠆abac ychil yukul ah kohan ua za ua chucua u kaba ychil u kabob uamae huçñuc yitz *yaw halal che* ca ꠆abac ychil yukul le kohan ca u zaliz chupul u catzucel uinic.

*Tickling in the throat, asthma.*

You take sulphur, mash well and put it in an egg. Then shake it and give it to drink. Or else let him chew the branch of the *Crescentia cujete*, L. (*Jicara*). It will stop it. Or else let him drink (the same) in a little water, about one spoonful shall be put in the drink of the patient, either atole or chocolate. Put in the juice (of the *Jicara*). Or else crush the gum of the *Pedilanthus itzaeus*, Millsp., and put it into the drink of the patient also for swelling of the spleen.

27—*U ꠆acal zeen coc.*

(Judío, p. 106).

*Kanmucuycoc zacleonak, chacmul y maxyc* y ꠆e꠆ec u tanil *cocak* u boxel *kancoc* hoten ua oxten bin yukic lauac zanzamal *kanan* y u yoyol ni *pychi* cu haul kuxlacil tu yichinte u ꠆acal xan.

*The remedy for coughing asthma.*

The kan-mucuy-coc,<sup>1</sup> the zac-leon-ak (white spider-vine), the chac-mul (*Gomphrena dispersa*, Standl.) and the *Capsicum frutescens*, L. (*Chile del monte*), and a little of the ashes of the coc-ak (asthma-vine), the exterior of the kan-coc. Five times or three times he shall drink this every day. Also the *Hamelia patens*, Jacq., and the tender tips of the *Psidium guayava*, L. (Guava) may be chewed. Put them in his bath as a remedy also.

28—*U zeenil flema y tuz ik.*

(Sotuta, f. 48 v.; Judío, p. 38).

Le u zenil flema cu chacethal tu kinil chikin ik lic u caic tuz ikil ti le kohan. Cña u sebo hxulub ceh cax uacax y yax kutz huchibil y u sebo de macho cici kinbil ti lac ca nabzabac tu cal tac tu tzem tac tu ppeptan tac tu yokol ym cumlic u nohkabil bay ix tu paccunlic u nohkabil tu yan u ual bacel ca pocac u nok tu bucil romero uaix *aluzema* cici teppbal oxten ua canten u betaal bin hauac tumen.

*Loose cough and difficulty in breathing.*

This is a loose cough which becomes worse on days when there is a west wind which causes difficulty in breathing for the patient. Take the fat of a male horned deer, or even beef-suet, and green tobacco with the fat of a male goat well heated on a plate. Rub it on the throat down to the chest, down below the stomach, above the breast and where the upper arm joins the shoulder. Then smoke a cloth with rosemary or lavender and wrap him well in it. Three or four times this is to be done; it will cease by this means.<sup>2</sup>

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## BIRTH, OBSTETRICS AND DISEASES PECULIAR TO WOMEN

29—*Alancil lae.*

(Judío, p. 12).

Caix cemen uinic tu nak chuplal loe caix hokan yoc ua tux u tal yalabal uaix u kab hokan kat cabal yanil caix u xothol u tab

<sup>1</sup> The kan-mucuy-coc and the zac-leon-ak are either synonyms or something very similar, probably a *Gomphrena* or *Alternanthera ramosissima* (Mart.) Chod.

<sup>2</sup> The use of rosemary and lavender indicates that this prescription is largely drawn from European sources.

ybin kalan ti c̄huplale payanbe ca yumil ti Dios y ca cilich colel zuhuy Maria c̄habac *cabalput* u chel y u motz y le tulacal y *xpakunpak* yt *zacmizib* u chun y u motz tulacal chacbil ppiz u tahale ca yuke kinkinal cu haual tumenel.

### *Birth.*

When the fetus has descended from the woman's abdomen and the foot has emerged, or the arm, in a manner to obstruct (delivery), then cut the umbilical cord attached to the woman. But first call upon our Lord God and our Holy Lady, the Virgin Mary. Then take the *Lepidium virginicum*, L. (*Mastuerzo*), its stock and root, its leaf, all of them, and the *Yerba de la golondrina* (*Euphorbia dioica*, H. B. K.?) and the *Ageratum Gaumeri*, Millsp., its trunk and root, all of them, boiled and duly cooked. Let her drink the liquor tepid that (the trouble) may cease, by this means.

### 30—*U sac alancil ca zebac.*

(Sotuta, f. 4 v.; Nah No. 72).

Le ti le *zac-chichibe*, u le ca huc̄uc y cappel pimienta u xocol u huc̄ule, ca pukuc ca xabac ti le max cu yalancil ca utzac u zebtal. U lak u sac ti le alancile, ua matan u yalancile, ca c̄habac u chun *xaan* le uouoloc bay yoome hun (acal y canal) hulub (huhub) ca yuke y ca tokoc u yam (yoc) c̄huplale (lic u yoltic ca yumi ti Dios yalancal chuplal tumen lae).

### *The medicine to hasten delivery.*

This is the *Melochia tomentosa*, L., its leaf. Let it be mashed with two peppers. After it is mashed let it be dissolved and given to anyone who is being delivered that it may be hastened. Another remedy for delivery, if birth does not occur, is to take the (inside of) the trunk of the *Sabal japa*, Wright; roll it into a ball like a foetus. Set it up and let it descend. Then let her take a drink and let her be bled, between the legs of the woman, so that it may be the will of our Lord God that the woman shall give birth by this means.

### 31—*U hokzaal pal cimen tu nak u naail.*

(Sotuta, f. 43 v.)

Ca a c̄ha u leche x̄chup xaakan y aseite de comer ca a xa yuke. Uamae, xa u leche pek y vino a xa yuke. Uamae c̄ha hunppel lac chuc̄uc ca a ppult y *pom* y cal y aseite ichil. Lay chuce bin a

ppultic tulacal, bin yalin cax cimen. Yalan le c̄huplal ca ɔaic hun lac chuc utial a ppultice.

*The delivery of a foetus already dead in the womb.*

You take woman's milk mixed with table-oil and you give it to drink. Or else put the milk of a dog in wine and give it to drink. Or else take a plate of coals and make a smoke with copal and lime and oil in it. You shall smoke her with all of this. She will give birth, even though it is dead. Beneath the woman you set the plate of coals in order to smoke her.

32—*U kalal ibin ti c̄huplal.*

(Sotuta, f. 43 r.; Kaua, f. 148 v.)

Le tie xual ibin tu thanobe, (tumen) ma utz yalintacil, tu zebalacil caxantac u yal h̄c̄och̄ y u pak ca a yac̄it ca a ɔa cabi, cax minan cabi, kintac ca ɔabac yuke bin yalint tuzebal tumen u ɔac. U lak ɔace ti le kalal ibin ti c̄huplale. C̄ha medio cab y muxbil *aluzema* chococinbil tune, ca a ɔa yuk le kohane utz xan ca ɔabac u kikel pollo ichil uac c̄heeh ca a ɔa yuk le kohan lae cax chu u xothole, bin yalintic tumen hach u ɔac. Uamae chacbil *wchalche* yuke. Uamae *zacmizib* catun . . . yoxou tu hol u na. Uamae . . . u yutal ceeh ua ca a kax yutal ceeh tu muk yoc. Uamae ca yuk u leche x̄c̄up. Ua ca yuk *zacmizib altamisa* yaalcoob, chacbil. Ua katacabal yanil pale ca a c̄ha *perejil* ca a ɔa tu tu hol u na u nak, bin yalinte u yibnel yal.

*Retention of the after-birth.*

This is late after-birth, as they say. It is not a good quick delivery. Seek the ah-c̄hoc̄h<sup>1</sup> with its nest. Crush it and add its honey, or even if there is no honey, warm it and give it to drink. She will give birth immediately because of the medicine. Another remedy for this retention of the after-birth is to take a medio of honey and powdered lavender. Heat it and give it to the patient to drink. It is good also to put chicken blood in it, six drops, and give it to drink to the patient. Even if it comes in parts, she will be delivered of it because of the virtue of the medicine. Or else boil the *Pluchea odorata*, L., for her to drink. Or else the *Ageratum Gaumeri*, Millsp., (is employed) to steam the vagina. Or else . . . the bezoar of a deer. You bind the bezoar of a deer to the fleshy part of her foot. Or else let her drink woman's milk. Or let her drink the *Ageratum Gaumeri*, Millsp., they call it an artemisia, boiled. If the foetus lies crosswise, you take parsley and

<sup>1</sup> Ah-c̄hoc̄h, "A species of bee or 'honey-fly,'" P. P.

apply it to the entrance to the womb. She will be delivered of the after-birth.

33—*Kal ybin.*

(Judío, p. 54).

U sacale medio cab chacaucunbil y sacac azucar kucbil maceteli kelbil tozbil pikhuybil ichil chocou cab ca sacac yuke kohan bin yanac tuzebal utzi xan u sabal u kikel poyo ichil u kikel u tel cax cappel kin kalac ybin xoth man xoth cabin u pule u lak u sacal u bin ybin yapbil *chay* y yakal ta tzimin cab y *yc* xakbezabil ca ukuc kinkinal.

*Retention of the after-birth.*

The remedy is a medio of honey heated with a little sugar, not much, roasted, powdered and stirred thoroughly into the hot honey. Let it be given to drink to the patient. It will be good to put immediately the blood of a chicken in it, the blood from the leg of the chicken. (When for) two days the after-birth may be retarded in part, administer the other remedy for the after-birth, grated *Jatropha aconitifolia*, Mill. (*Chaya*) with horse-dung and honey and *Capsicum annuum*, L. Let it be drunk warm.

34—*U sac ma yalancil.*

(Sotuta, f. 7 r.; Nah No. 73).

U sacal ca hauac yalancile ca a cña u chuch *yc* y u *hacay* u *pach hacay xiu* y u *hacay* u hol cñen u pukul mumun *luch* le u kabil tulacale hucñibil le u chucane, ca pukuc ti chachab y u kabil *hach* hach hatzcab cabin yuke sacac yuke.

*The medicine when parturition is delayed.*

The medicine to complete parturition is that you take a cluster of chile peppers and the *hacay* from the back of the house, the *hacay xiu*, the *hacay* from the mouth of a well, the soft interior of the young *Crescentia cujete*, L. (*Jicara*), the liquid (or juice) of all of these after they have been mashed, with the juice of the *jicara* (gourd). Let it be thinned out by passing it through a sieve and early in the morning let it be given to drink.

35—*U man yilic u nok xchup.*

(Sotuta, f. 44 v.)

Ca a cña camppeles corales ca a muxe ca a ja ich agua de azahar yuke, kinkinal ua hach kinal xan ca a ja yuke. Uamae chac zizal xiu yuke, leti le u yayaxile uamae hun oc buul, hun oc tux, kankelbil ca huchuc hunppel escudilla u kab ca sabac yuke.

*Failure to menstruate in a woman.*

You take four berries of the *Rivina humilis*, L., crush them and put them in orange-flower water for her to drink, tepid, or very warm also, when you give it to drink. Or else boil the *Brophyllum pinnatum*, Lam. (*Siempre vive*) for her to drink. It is the deep green sort. Or else a handful of beans (*Phaseolus vulgaris*, L.) and a handful of cotton-seed, roasted yellow. Mash in a porringer for the juice and give it to drink.

36—*U man yilic u nok xchup.*

(Sotuta, f. 44 v.)

Caxant le ah chicam kuch, bay zac seboya cici huchē catun a puk y haa a ja yuke cu hauzic.

*Failure to menstruate.*

Seek the ah-chicam-kuch, it is like a white onion. Mash well and dissolve in water. Then give it to drink to end (the complaint).

37—*U naa u nak xchup*

(Sotuta, f. 44 r.)

cu nacal, cu yemel, cu xotol u yic. Ca a cña lana y hunppel xamach ca a ppult tu nii yetel. Uamae suela ca a ppult u nii yetel. Uamae ca yuk u taa yegua ichil vino. Uamae ca a ppult y u pluma hchuhum ma lob utial.

*The womb of a woman,*

which rises and falls, which cuts off menstruation (?) You take wool on a frying-pan and burn it under her nose. Or the sole of a shoe and burn it under her nose. Or let her drink the dung of a mare in wine. Or else burn the feather of the ah-chuhum<sup>1</sup> (Uxmal Woodpecker). It is not bad for this purpose.

<sup>1</sup> Ah-chuhum. A woodpecker, so called because by means of its strong pointed bill it makes its nest inside a tree. It has claws and a short tail. Destroys fruit-trees. (Cuevas.)



38—*U naa u nak xchup, &c.*

(Sotuta, f. 44 r.)

Cħa u motz *lirio* ca a chac y aguardiente ca a ɔa tu naa u nak. Bay xan le cħuplal matan yalcab yilic u nok amal ue, chac *oregano* ichil vino ca a ɔa tu hol u naa u nak, tuzebal, bin tac kik ti. Ua chac *poleo* y vino ca a ɔa yuke tuzebal bin emec ti. Uamae chac *xchalche* ca a ɔa tu hol u naa u nak bin emec ti. Uamae chac canela yuke ma lobi.

*The womb of a woman, etc.*

Take the root of the *Hymenocallis lacera*, Sals. (*Lirio*) and boil it with aguardiente and apply it to the womb. Thus also (for) a woman who does not menstruate every month, boil the *Lippia graveolens*, H. B. K. (*Orégano*) in wine and apply it to the entrance to the womb. Immediately the blood will come. Or boil the *Clinopodium Brownei* (Sw.), Kuntze. (*Poleo*) with wine and give it to drink. Immediately she will menstruate. Or else boil the *Pluchea odorata*, L., and apply it to the entrance to the womb. She will menstruate. Or else boil cinnamon for her to drink. It is not bad.

39—*U naa u nak xchup.*

(Sotuta, f. 44 r.)

Cħa u lee *ruda* y u motz ca a chace cu zappale ca a ɔa vino ichil ca a too t(i) piɔ ca a ɔa tu cucutil catun a ɔa yuɔben lay kohan xane. Uamae cħa u kukmel xek cax ca a toce ca a ɔa u taanil ich vinagre yuɔbent lay kohane.

*The womb of a woman.*

Take the leaf of the *Ruta graveolens*, L. (*Ruda*) with its root and boil it until the liquid boils away. Then put it in wine and wrap it in cotton-wool and apply it to the body (vagina?). Then you give it to the patient to inhale also. Or else take the feathers of a black hen and burn them and put the ashes in vinegar. Let the patient inhale it.

40—*Olom kik tu cħuplal.*

(Sotuta, f. 44 v.)

Ca a cħa u nek *xkoche* ca a hucħe y u bat *tzub* hucħ y vinagre y vino y u kab *yanten*, catun a ɔa yuk tulacal leoba, bin utzac hamen.

*Clotted blood in a woman.*

You take the bean of the *Ricinus communis*, L., and mash it with the claws of the *aguti pinto*. Mash them with vinegar and wine and the juice of the *Plantago major*, L. (*Llanten*) and give it to drink, all of these. She will recover by this means.

41—*U yail bakel xchup.*

(Sotuta, f. 44 v.)

*Cħa* aceite y u enjundia xcax y albayalde cici bokbil tu yoxtzucil catun a yuulte y kukum he tux yan u yaile xocole, tumen u ximbal cu yuchul ti y uabax tumen u yanale c(u) yuchul xan.

*Soreness in a woman's external genital organs.*

Take oil, chicken-fat and white lead. Beat well together in three (equal) parts. Then apply with a feather where the pain is, whether it is the result of walking that it comes to her, or from whatever cause it comes.

42—*U zebtal yalancil cħuplal.*

(Sotuta, f. 43 v.)

*Cħa yerba buena* huch y haa y cab ca a xa yuke tuzebal bin alnac. *Uamae cħa* u kukmel x(cax) . . . *Uamae* . . . cab y aseite ca a toc yalan lay cħuplal tuzebal bin alnac.

*To bring on parturition in a woman.*

Take mint. Mash it with water and honey and give it to drink. Immediately she will be delivered. Or else take the feathers of a hen (and burn them for her to inhale). Or else honey and oil. Burn these under this woman and immediately she will be delivered.

43—*Cu xocol yalancil cħuplal.*

(Sotuta, f. 43 v.; Mena, p. 82).

*Cħa* u kan heel xcax ca a chac y vino ca a hokez ti ziztal, ca a xa u kab *altamisa* y rancio keken ma u hach tattal mix u hach hachital catul y u lolol *pich* catun a xa tu hol u naa u nak, bin culac tohyol. *Uamae* ca a *cħa* u semilla *ixmomnicte* ca a chac a xa tu hol u na u nak le cħuplal, bin culac tohyol ychil u yabal haab.

*After a woman has been delivered.*

Take the yelk of a hen's egg. Boil it with wine and take it out to cool. Add the juice of the *Parthenium hysterophorus*, L., and rancid lard, not very thick, nor very thin. Add the blossom of the *Calliandra Portoricensis*, Jacq., and apply to the entrance to the womb. She will recover. Or else you take the seed of the *ix-mon-nicte*,<sup>1</sup> boil it and apply it to the entrance to the womb of this woman. She will be well within a year.

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## BITES AND STINGS OF ANIMALS, INSECTS AND REPTILES

44—*U chibal ahaucan* &c.

(Sotuta, f. 35 r.; Judío, p. 56; Mena, p. 138).

He tu chibil uinic tumen ahaucan ua kokobcan y uabax canile. Caxantabac u uii *kumcan* bay u uii *solchakanile*, bay u lee *ajoe* y hunppel u co *ajo* hunppel u co tab y u kab limones ca *zabac* yuke chuhbil u hol y lay *zac* xane (*caxbil boraja*) huchbil ca *xakbezabac* ca *kinalcinzabac* ca *zaba(c)* ti, bin hauac tumen. Ua tan u xEIC kike *zabac* medio manteca yuke uacix aseYTE de comer *zabac* yuke. Yan xiu tu luuMil licil u *zucul* u *zocal*, uaix u luuMil nucuch cheob t(i) kaax *caxbalac* nucuch cheilob *caxbac* xiuilob bin hokoc xan tu luuMile, *chabac* oxual ua canual u lee *chabac* y u motz huchbil tun ca *zabac* yuke, caix *nabzabac* tu hol u *chibal* ziiz cabin a *zaic* cax kokob *caxbalac* canil u *zocal*.

*The bite of a rattlesnake, etc.*

This is when a man is bitten by a rattlesnake or a kokob<sup>2</sup> or any snake. Let there be sought the tuberous root of the *kum-can*<sup>3</sup> resembling the tuberous root of the *sol-chakan*,<sup>4</sup> its leaf is like that of garlic, together with a clove of garlic and a crystal of salt and lemon-juice. Let it be given to drink. Apply this remedy very hot to the perforation also. Seek borage, mash it and mix it. Heat it. Then let it be administered. It will cease by this means. If he vomits blood, let there be added a medio of lard for him to drink,

<sup>1</sup> *Ix-mom-nicte*? The Mena prescribes the *Zabac-nicte*, or *Plumeria rubra*, Jacq. in this case.

<sup>2</sup> Kokob. Today the name seems to be applied to any poisonous snake, but the first Spanish settlers refer to it as a certain very poisonous variety.

<sup>3</sup> *Kum-can*? Lit. Cucurbit-shoot.

<sup>4</sup> *Sol-chakan*? Lit. Gourd of the meadow. *Sol* is another unidentified variety of cucurbit. It is green and edible.

or table-oil for him to drink. There is a plant on land where logs rot, where large trees, any plants, grow up on the land. Take three or four leaves and the root (of this plant), mash them and give it to drink. Then anoint it on the perforation of the bite. (Let it be) cold when you administer it; whether it is a kokob-snake or any snake, it is the remedy.

45—*U chibal am.*

(Sotuta, f. 35 v.; Judío, p. 13; Mena, p. 63).

Ca a huch u pach *chacah* a ppoic. Uamae chococint *cibche* a choi. Uamae yeo u kab *muloch* a sa yuke.

*The bite of a spider.*

Crush the exterior of the *Bursera simaruba* (L.) Sarg., and employ it as a wash. Or else you heat the *Myrica Mexicana*, Willd. (*Palo de cera*) and rub it on. Or else squeeze out the juice of the *Triumfetta semitriloba*, L. (Cadillo) and give it to drink.

46—*U chibal am.*

(Judío, p. 129).

U sacal u chibal am ca chabac *amak* u *cantaauü* yan ti chakan *acanalhau* huchbil ca a yuk payanbe, ua manan *cantaauü*, chabil haz *haatzak*.

*The bite of a spider.*

The cure for the bite of a spider: let there be taken the am-ak (spider-vine), the can-taa-üii which is found in the open meadows, the *Dorstenia contrajerva*, L. (*Contrayerba*). Crush these and let (the juice) be drunk first. If there is no can-taa-üii, take the *Musa sapientum*, L., and the hatz-ak.

47—*U chibal can.*

(Sotuta, f. 34 r.; Mena, p. 136).

Caxant lay *acabalchunkak* huchbil u lee ca a yeo u kabil tu hol u chibal can ma lob utial. Bay xan le xiu ua u kabil ma lob u ouic u kazil baal ponzofia yalabale. Bay xan caxant *kuxubcan* ca a huch ca a ppoe y u kab cu ouuc le u kab u chi uacix abil aseYTE ma tu holi tu pach u abal.

*The bite of a snake.*

Seek this ix-cabal-chun-kak (*Verdolaga*, Purslane?). Crush its leaf and squeeze the juice on the perforation of the snake-bite. It is not bad for it. Thus also this plant or its juice are not bad (to employ) in sucking out the poison, *ponzoña* as it is called (in Spanish). Thus also seek the *Rivina humilis*, L. (*Coral*) and bathe (the part) with its juice when sucking (the bite) with the mouth. Or apply oil, not to the perforation, but around (the bite).

48—*U chibal can.*

(Sotuta, f. 34 v.; Judío, p. 58; Mena, p. 137).

Caxant u motz *kanchunup* y *ibincan* y *xhabancan* y *incan*, *uutoo* u chun *xaan acamxiu polkokob tulixkik* ꝑꝑꝑꝑ *kutz* y ꝑꝑꝑꝑ *ajo* ca hucñuc ꝑꝑꝑꝑ yuk le max chian tumen cane.

*The bite of a snake.*

Seek the root of the *Thouinia paucidentata*, Radl., the *ibin-can*, the *ix-haban-can*, and the *Sesuvium portulacastrum*, L. (*Verdolaga de la playa*), the *uutoo*, the trunk of the *Sabal japa*, Wright, the *acam-xiu*, the *pol-kokob* (snake-head), the *tulix-kik*, a little tobacco and a little garlic. Crush these and administer as a drink to anyone who is bitten by a snake.

49—*U chibal can.*

(Sotuta, f. 34 v.; Mena, p. 137).

Caxant u yoyolni yakil *xtabcanil* le ti le hilaan tu uich luume *chacbiken* y *tooncan chilimcan* y u thupil akzah le cu cilba, cu ꝑꝑꝑꝑ u uixice y ꝑꝑꝑꝑ taa bay u cah u nek *xaane*, mucul ꝑꝑꝑꝑ, hucñbil ca ꝑꝑꝑꝑ yuke ꝑꝑꝑꝑ lae.

*The bite of a snake.*

Seek the tender tips of the vine, *Cissus rhombifolia*, Vahl., which creeps on the surface of the ground, the *chac-biken*, and the *toon-can* and the *chilim-can* and a drop of man's urine, shaken off after he urinates, a little excrement, about the size of the pit of the *Sabal japa*, Wright, produced secretly, mashed and given to drink as a cure.

50—*U chibal can.*

(Sotuta, f. 35 v.; Mena, p. 62).

Caxant u lee *acam* u motz *zabacalcan*, u kixel u chun *beeb cantzacan*, u motz *canchacche*, u yoyolni *tabcan* u motz *kanchunup*, u motz *taasi*, u motz *ci*, y *cho* huchbil tulacal chococinbil ca chuhuci aabil tu hol u chibal eu hauzie.

*The bite of a snake.*

Seek the leaf of the *acam* (*Orobanche* Sp.), the root of the *Cereus Donkelaarii*, Salm-Dyck (*Pitahaya*), the thorns from the trunk of the *Pisonea aculeata*, L. (*Uña de gato*), four of them, the root of the *Chiococca racemosa*, L. (*Cainca*), the tender tips of the *Cissus rhombifolia*, Vahl., the root of the *Thouinia paucidentata*, Radl., the root of the *Hippocratea Grisebachii*, Loes., the root of the *Agave* and the *Ceiba aesculifolia* (H. B. K.) Britt. & Baker (*Pochote*). Crush them all, heat them and apply very hot to the perforation of the bite to cause it to cease.

51—*U chibal can.*

(Mena, p. 131).

*Xtabalan can* u canil lae u motz.*The bite of a snake.*

(Employ) the shoot or sucker of the *Croton flavens*, L., and its root.

52—*U sacal u chibal can.*

(Judío, p. 11).

Ca cñabac *iwñabanche* y u le y u motz chacbil ca ppoboci.*The remedy for the bite of a snake.*

Let the *Bursera graveolens*, Tri. & Planch., be taken with its leaf and root. Boil them and employ as a wash.

53—*U chibal u canil be.*

(Sotuta, f. 35 v.; Mena, p. 62).

Ca a cña u lee *zuhuy op* ca a toc tu hol u chibal u canil be, bin hauac tumen.

*The bites of "road snakes."*

You take the leaf of a virgin *Annona reticulata*, L. (*Annona colorada*) and burn it on the perforation of the bite of the road-snake. It will cease.

54—*U chibal caanob.*

(Judío, p. 56; Teabo No. 2).

U sacale u le *chac zubinche* xiu yachbil ukbil ziz ukbil u *hazcan* huchbil u motz pakbil tu hol u motz *taamay* u motz *zabacelcan* u motz *kanchunup* u canil ac pakbil tu hol u chibal can u le y u motz *acamech xiu* hayalhay tu uich lumoli bay *xcabalyaxnice* yachbil caix zih ukbil u sacal u chibal canoob.

*The bites of snakes.*

The remedy is the *chac-zubin-che* (red acacia), the plant is to be crushed and drunk cold. The *haz-can* (mamey-shoots), its root, is crushed and poulticed on the perforation. The root of the *Zuelania Roussoviae*, Pittier, the root of the *Cereus Donkelaarii*, Salm-Dyck (*Pitahaya*), the root of the *Thouinia paucidentata*, Radl., the shoots of the ac<sup>1</sup> are to be poulticed on the perforation of the bite of the snake. The leaf and root of the *acanceh-xiu*, which spreads out on the surface of the ground like the *Ruellia tuberosa*, L., is to be crushed and drunk cold as a remedy for snake-bites.

55—*U chibal can ua cooil pek.*

(Sotuta, f. 33 v.; Mena, p. 135).

Yan *ulum* bay u pach *icime*, bay u pluma *cutze* xotbil u cal ca a *cha* u kikel, kinkinal xakan y cab catun a *ca* yuke le max chiane. Bay xan lay *outoo* nuctac u lee u pach y u lee huchbil le u sacal u pache kinkinal catun a pak yokol u chibal can y hunpeokin cu hual u kinam. U lak xane ca a *cha* le *xcabalkaak* ca a *chac* u motz catun a *ca* yuke u sacal tulacal u chibal u kazil baal.

*The bite of a snake or a mad dog.*

There is a large fowl with a back like that of an owl and feathers like a turkey. Cut its throat, take the blood, warm it and mix it with honey. Then give it to drink to anyone who is bitten. Thus also the *outoo*, which has a thick leaf, its exterior and its leaf are to be crushed, the white exterior. Warm these and poultice them on the bite of the snake or hunpeokin-lizard, that the pain may

<sup>1</sup> Ac. A tall broad-leaved grass growing in the savannahs and used for thatching.

cease. Another thing is to take the ix-cabal-kak (ground-fire) and boil its root. Then you give it to drink as a remedy for all bites of poisonous creatures.

56—*U chibal citam.*

(Sotuta, f. 34 v.; Mena, p. 138; Nah No. 78).

Caxant u motz *yaaxchacah* y u motz *citamche* y u motz *citamac* huc̄ibil chocotune ca chuhuc y bon bin utzac tumen.

*The bite of a peccary.*

Seek the root of a green *Bursera simaruba*, L., the root of the *Caesalpinia Gaumeri*, Greenm., the root of the citam-ac (peccary-grass). Crush them, heat them and apply hot with a cloth. He will recover by this means.

57—*U chibal coil pek.*

(Judío, p. 77; Mena, p. 46; Sotuta, f. 33 v.)

U ꝓacale chuhbil y u asetel *niin* cu haul.

*The bite of a mad dog.*

The remedy is to apply very hot the grease from the *Coccus axin*.

58—*U chibal kanpetkin.*

(Sotuta, f. 34 v.; Mena, p. 136; Nah No. 122; Kaua, f. 149 r.)

He tu chibil uinic tumen *kanpetkin*, *kanal* u lak u kabae. Caxant *ꝓcambalhau* y *ꝓꝓocchakanil* y u chun *xaan* y u seboil kazal xiblal huc̄ibil tune ca yuke ca a pak tu hol tux chian xani bin hauac tumen.

*The sting of a kanpetkin.*<sup>1</sup>

This is when a man is stung by a *kanpetkin*, *kanal* is another name for it. Seek the *Dorstenia contrajerva*, L. (*Contrayerba*), and the ix-ꝓꝓoc-chakanil (that which is on the edge of the savannah), and the trunk of the *Sabal japa*, Wright, and *semen-viri* (?) Crush these together and let him drink it. Then you poultice them on the perforation, where he has been stung. It will cease by this means.

<sup>1</sup> *Kanpetkin*, or *Kanal*. A variety of yellow wasp which builds a round flat nest and produces an inedible honey. Its sting is plainly visible. (Pacheco Cruz.)



59—*U chibal pek.*

(Sotuta, f. 34 v.; Mena, p. 138; Nah No. 78).

Ua hach yae ca a c̄ha ticin taa, tooc u taanil, ca a ɔa tu hol can lik bin a ɔaic ti, bin utzac tumen.

*The bite of a dog.*

If it is very painful, take dry excrement, burn it to ashes and apply it to the perforation. Four times you shall apply it. He will recover by this means.

60—*U chibal taxinchan.*

(Sotuta, f. 34 v; Mena, p. 137; Nah No. 7).

Le tu chibil uinic tumen taxinchan ca a caxant u lee *chacoam* y u bacel huch̄bil ca ɔabac yuke. Uamae caxant *ibincan*, *kanchunup*, *habancan*, ɔincan ɔutoo u chun xaan, y hunppel u co aho huch̄bil tulacal kinkinal tune ca a ɔa yuke. Ca a c̄ha u lee yax kutz pacchucte ca a c̄hah u kabil tu hol xakan y ajo le kutz lae. Ua yoom can chibalnahie machan ɔac ti cu chupul, tu hol tocbil u bacel can ca a toz tu hool u polvosil can lae le tuux yan u chibale bin utzac tumen.

*The bite of a taxinchan.*<sup>1</sup>

When a man is bitten by the taxinchan you seek the leaf of the *Rhoeo discolor*, L., Her. Mash its stalk and give it to drink. Or else seek the *ibin-can*, the *Thouinia paucidentata*, Radl., the *habancan*, the *Sesuvium Portulacastrum*, L. (*Verdolaga de la playa*), the interior of the trunk of the *Sabal japa*, Wright, with a clove of garlic. Mash them all, warm and give to drink. Then you take the leaf of green tobacco, roast it over coals and drop the juice into the perforation, mixed with garlic is this tobacco. If there is froth on the snake-bite, press the remedy down on the swelling. Where there is corruption (an infection?) in the perforation, burn the bones of a snake and sprinkle the powder on the perforation, wherever the bite is. He will recover by this means.

61—*U chibal xacatbe.*

(Sotuta, f. 34 v.; Nah No. 7; Mena, p. 137; Kaua, f. 149 r.)

Le u chibil uinic tumen *hxacatbe*, c̄ha *xcambalhau* y kinbil haa huch̄bil ca yuke. Nanakbil tu hol u chibal xani caix u kux u yoyol

<sup>1</sup> *Taxinchan*. A poisonous snake described in the *Relación de Mérida*. Doubtless the same as the *Taxinchan* described by Pacheco Cruz, a snake which grows to a yard in length and has black and green stripes.

ni *uaxim* y ox ual u lee *chacmolche* bin hauac tumen, ua chachbil ca yuk xani.

*The bite of the ah-xacat-be.*<sup>1</sup>

This is when a man is bitten by the ah-xacat-be. Take the *Dorstenia contrajerva*, L. (*Contrayerba*) and hot water. Crush it and poultice it on the perforation of the bite also. Then let him chew the leaves of the *Leucaena glauca* (L.) Benth., and three leaves of the *Erythrina coralloides*, Mocq. & Sesse. (*Colorin*). It will cease by this means if it is boiled and drunk also.

62—*Utial u ppobal u chibal can.*

(Sotuta, f. 35 v.; Judío, p. 58; Mena, p. 61).

Utial u ppobice caxant *cuyumche*, *cibche* u lak u kaba, *zabacelcan*, *kuxubcan*, *pahalcan*, *ibincan*, bilimtacanil ppoclampixil, *akabxiu*, *itzimte*, *zactabcan*, *chachac kanan* cici chachbil ti hunppel tumbul cum u lee tulacal catun ppoboc u chibal can bin utzac tumen.

*For bathing the bite of a snake.*

For bathing it, seek the *cuyum-che*, its other name is *cib-che* (*Myrica Mexicana*, Willd. or *Palo de cera*), the *Cereus Donkelaararii*, Salm-Dyck. (*Pitahaya*), the *Rivina humilis*, L. (*Coral*), the *Solanum nigrum*, L. (*Yerba mora*), the *ibincan*<sup>2</sup> which grows thick among other things and is topped by a crown, the *Blechum blechoides*, Sw., the *Clerodendron ligustrinum* (Jacq.), the *zactabcan*,<sup>3</sup> the red *Hamelia patens*, Jacq. Boil well in a new pot the leaves of all of these, and then bathe the bite of the snake.

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## BLEEDING

63—*Macbal kiik.*

(Sotuta, f. 32 v.)

Lay xiu *lakintan moo*<sup>1</sup> yachtabil catun abac le tie tuux cu hokol le kiik. Cax benas xotol cu macic u kikel. Bay *xanabmucuy* xan huchbil ca abac yokol benas xotol cu macic u kikel.

<sup>1</sup> Ah-xacat-be. An insect resembling a locust, but smaller. It is ash-colored and jumps at anyone trying to catch it.

<sup>2</sup> Ibin-can. The text would suggest that it might be the same as the *ibin-xiu* (*ibin-plant*), or *Valerianoides Jamaicense* (L.) Kuntze.

<sup>3</sup> Zac-tab-can. Lit. White tab-can. The tab-can is *Cissus rhombifolia*, Vahl.

*To stanch bleeding.*

This plant is the lakintan-moo;<sup>1</sup> it is to be crushed and to be applied wherever the bleeding is, if it is a severed artery, to stanch the blood. Thus also the *Euphorbia hirta*, L. (*Yerba del pollo*). Mash it and apply it to the severed artery to stanch the blood.

64—*Tok.*

(Mena, p. 108).

Chicbezahanil benas yokol bin hokoc ti lae le venas yan chumuc u hol y tu pach u lec uinice tokbil utial u haulal kuxpol ua kinam pol oxppel venas yan yalan u pol u pix uinic tokbil haulal bocan cax tu yich tu yit uinic xan, hunppel vena yan tu uao yoc uinic tokbil ca utzac u pacat uinic y cappel vena yan tu pach u tzelec uinic yan tu pach u xibil uinic tokbil haubal ya puczikalil y zac cimil ti uinic cappel vena yan tu tzelec ua tux u nonoh haulil kiknak y kuxuc nak kuxuc tu mocol u bacel tokbil haubal kik choch y bena tu ca yit uinic utial kik choch xan hunppel nohoch yan tu chalatel uinic tokbil haubal bocan yokilic kakobe y u chalatil xan hunppel vena yan tu ná u kab y yoc cñuplal laili cu tokol tie haubal yit ma noh nok cñuplal y utial xan kik cappel venas yan tu xax u pach xan tokbil xan kik hoppel venas yan tu uich ne uinic tokbil haubal kamazcan tu pic uinic hunppel vena yan tu tzelec uinic noh vena tokbil haubal incordio yan venas tu chun yicñac u tu chun u coe y yokol u mohtun y tu yul uinic tokbil u haubal tzitz mo tamaz y azmo tamcaz yalabal hunppel vena yan tu ooc u ni uinic tokbil haubal yak ich yan vena tu uao yoc uinic le tuxe tokbil haubal u yail u thet uinic le venas tu kab uinic lae likul tu puczikal y tu zacole tokbil haubal kuxucil tu ninchil yan venas yalan u cal uinic tokbil haubal chibal ych y uchben yab yan venas tu yalan tupil u cal u kab uinic tokbil haubal hunbal u kinam yaal pek uinic tu nak ley li xan le bena xana cu tokol utial hunbal tippte tu nak uinice oxppel benas tu pach u xibilil uinic tokbil haubal campach y ya tzemil chibal puczikal y chichebal ua chichebal u muk uinic y hunppel venas yan yalan u yak uinic tokbil haubal puoob chi tub tale zacol mac u talel u venas tu boxel u uich uinic venas yan tu na u kab uinic lay yan chumuc u tuchube tokbil haubal chibal ych ua chibal pool kuxub holi.

*Bleeding (administered as a remedy).*

(This is) an indication of the veins which are to be opened. The veins in the middle of the forehead and on a man's temple are to be

<sup>1</sup> Lakintan-moo. Probably the same as Lakintan, a *Euphorbia* of the Chamaesyce group. Lit. eastern parrot.

bled to stop slow headache or throbbing head. Three veins beneath the knee-cap are to be bled to cure tumours, even if they are on a man's rectum. One vein on the joint of the foot of a man is to be bled to restore a man's sight, and two veins on the shin-bone and on the genital organs of a man are to be bled to cure pain in the heart and fainting in a man. Two veins on the tibia, anywhere on the right (tibia), to stop dysentery and abdominal pains. (The veins) over the joints are to be bled to stop dysentery, and the vein on a man's rectum, for dysentery also. One large one over a man's ribs is to be bled to cure a tumour on the arm or ribs. A vein on the thumb or large toe of a woman is to be bled to stop excessive menstruation and for bloody flux. Five veins on the buttocks are to be bled to cure "ant-eruption." Over the knee of a man is a vein, over the tibia of a man, to cure buboes on the groin. There are veins at the base of the nails and in the gums and over the eye-brow of a man which are to be bled to cure "tzitz mo"<sup>1</sup> madness. There is one vein on the end of a man's nose which is to be bled to put an end to a watering of the eye. There is a vein on the joint of the foot of a man, where it is to be bled to cure hip complaint. The veins on a man's arm opposite the heart are to be bled to stop slow pain in the gums. There are veins beneath a man's neck which are to be bled to cure sore eyes and chronic trouble. There is a vein below a man's wrist to be bled to cure pain in the spleen of a man and in the abdomen also. Three veins there are on the exterior of a man's genital organs to be bled to stop pain in the chest, pain in the heart, loss of strength in a man, and one vein beneath the tongue to be bled to cure excessive spitting from the mouth or from the lungs, wherever it comes from. The veins of the eye-lids of a man, the veins on the thumb of a man are to be bled to stop pain in the eye or headache or slow continued headache.

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## BOWELS AND ABDOMEN

65—*Akab kaxil.*

(Sotuta, f. 43 r.)

Kan kaxil u lak u kaba, ca a cña yich *yc* bolonçit y u nek *xkanhaaz* pakte y u boxel u pach *xkan abal* cocochtunte ca a çam y uix bay hunppel tumin cab u ppiz u uixile, hunppel akab çaman cu zasztale, ca yuk ichil vino ua ichil chucua ua ichil zaa, ua ich kinbil haa. Bin hauac tumen.

<sup>1</sup> Lit. spotted parrot. See No. 434.

*Night stools.*

Yellow stools is the other name (of the complaint). You take the fruit of the *Capsicum annuum*, L. (*Chile*), nine of them, and the seed of a yellow *Mammea Americana*, L., together with the bark of the *Spondeas lutea*, L. (*Ciruela amarilla*) mashed with a stone. Then you soak it with urine, in the quantity of a tumin of honey is the measure of the urine. After it has soaked one night until dawn, let him drink it in wine or in chocolate or in atole or in warm water. It will cease by this means.

66—*Akab kaaxil.*

(Judío, p. 18).

U sacale u lee *chiitee nabanche* u le *xizim* u le *chahuc lima* y yitz *pom* takan *chacbil* ca ukuc *ukbil* u sacal ya nak y akab *kaxil*.

*Night stools.*

The remedy is the leaf of the *Bursera graveolens*, Tri. & Planch., the leaf of the *Artemisia Mexicana*, Willd. (*Agenjo del pais*), and the leaf of the sweet lime, and the gum of the *Protium copal*, (Schl. & Cham.) Engl., well boiled and let it be drunk as a remedy for abdominal pains and night stools.

67—*Bay yan lob tie.*

(Sotuta, f. 46 r.)

Le kohan bay yan yabal lob ti u puczikal. U lee y u lol y u motz *borraja* a chace catun a sa sacec vino ichil ca a sa yuke bin utzac tumen. Uamae u lee *clavel* y agua de asahar y perlas y almiscle, *corales* huchibil tulacal catun a sa ichil agua de asahar catun a cha xane hunppel yeel xmulix ca a lukez u baal ca a chup y le saca hatzcab cabin a sa t(i) kin las onze, cabin a sa yuke, bay xan le maax yan xaan kiik malob xan.

*Dyspepsia* (?)

The patient is as though there were evil in his heart. The leaf and the blossom and the root of borage. You boil it and put a little wine in it and give it to drink. He will recover by this means. Or else the leaf of the *Dianthus caryophyllus*, orange-flower water, and pearls (?), musk and the berries of the *Rivina humilis* (L.) Crush all of these and put them in orange-flower water. Then you take the egg of the ix-mulix<sup>1</sup> and remove its contents. Then fill it with

<sup>1</sup> Ix-mulix. The name suggests a crested bird. "*Gallina morisca*." (Beltran, 1859, p. 229).

this medicine at dawn. Then you administer it about noon, when you give it to drink. Thus also for anyone who has bloody flux it is not bad also.

68—*Camarail y kaxil.*

(Mena, p. 141; Sotuta, f. 38 r.)

Ca me(n)t u polvosil *xcanbalhau* u zacil cazac cal a ða yuke uamae ca a ða u pach *chacah* y u uich u hante ma lob utial. U lak u ðacal hubnak ziz u *zizim kak* ua *wikin kak* chac u motz ca a chace catun a ða yuke cu hauzic laili lela u ðacal *ouc kak* caxan lae ua caxan cantul *zinan* ca puk ychil hunppel harro kinal há ca pukic catun nabzabac tu chun u nak kinkinal ca ðabi u ðac bin hauac tumen.

*Diarrhea.*

You powder the *Dorstenia contrajerva*, L. (*Contrayerba*) (with) white lime and give it to drink. Or else you give the bark of the *Bursera simaruba* with its fruit to eat. It is not bad for it. Another remedy for diarrhea with mucus is the *zizim-kak* (*Porophyllum macrocephalum*, DC. (*Hierba del venado*)). Boil its root and give it to drink to stop it. There is a cure, the *ouc-kak*; or you seek four scorpions and dissolve them in a jar of hot water. Let this be applied to the rectum. It should be warm when the remedy is applied. It will cease by this means.

69—*Chibal nak.*

(Sotuta, f. 38 r.; Mena, p. 1).

Ca a cña hunppel onza *pom* ca atoo ti hunppel paño ca a chac ichil hunppel cum haa y hun loch ticin *ic* la tu ppiz u zaappal, ca culac hunppel escudilla bay chochoilo ca a ða yuk hatzcab maili ukulnace, bin tohac yol. Uamae cña u polvosil *kokobche* huchibil ca a ða yuke, cu hauzic y ca a ða ðæec tu chi u puczikal bin hauac tumen.

*Abdominal pains.*

You take an ounce of copal and wrap it in a cloth. Boil it in a pot of water with a handful of dry chile until it is boiled away. Then set out a pan of what is left and give it to drink at dawn before he drinks anything. He will recover. Or else, take the powder of the *kokob-che*<sup>1</sup> when it is crushed. Give it to drink to stop it. Then apply a little to the upper abdomen. It will cease by this means.

<sup>1</sup> Kokob-che. Lit. Snake-tree. A shrub two yards high with small aromatic leaves.

70—*Chibal nak.*

(Sotuta, f. 36 r.; Nah No. 58).

Bin *ɔ*abac purga ti ua yan ppulmal u thibba ca a *ɕ*ha hoppel *cacau* y u nek *ɔkanlol* ca a ppiz ti takin hunppel tumin takin ca huchuc ca *ɔ*abac yuke bin utzac tumen.

*Abdominal pains.*

Let him be given a purge if there is gas in the bowels. Then you take five raw cacao beans and the pit (or seed) of the Tecoma stans, L. (*Tronadores*) and measure it out on a real-piece. Let this be mashed and given to drink. He will recover by this means.

71—*Ghibal nak.*

(Sotuta, f. 37 r.; Judío, p. 85; Mena, p. 3).

Ca a *ɕ*ha sebo, *pom*, cib, niin, yaax *kutz*, y *zizim*, hach *zizim*, ma *zizim kak* tzahbile ca a pakte tu chun u nak.

*Abdominal pains.*

You take fat, copal, wax, coccus axin, green tobacco, and *zizim* (*Artemisia Mexicana*, Willd.), the real *zizim*, not the *zizim-kak*. Fry these and poultice it on the lower abdomen.

72—*Chibal nak y ichpuczikal.*

(Judío, p. 84).

U *ɔ*acale *ɔ*ilabac yich *ɔucpakal* *ɔ*abac ti yeb cu zasztale ca u hante *ɔ*abil taab y azucar tozbili utz u kuncintic yanak.

*Pain in the abdomen and stomach.*

The remedy is to remove the skin of the fruit of a bitter orange. Let it be put out in the dew until dawn and let him eat it, having added salt and sugar sprinkled (on it). It is good to soften a swollen abdomen.

73—*Chibal nak y chibal xicin y chibal puczik.*

(Mena, p. 89).

The *chiople*, y *chichibe*, le hunhuntul ake *tok-chichibe* y *chicuchi* *piroy* y *chiaebe* tu bolonpis *yc* huxbilob ca *chactabac* kinal ca *ɔ*abac yuke.

*Pain in the bowels and heart.*

The Eupatorium aromatisans, DC. (or E. Populifolium, H. B. K.) and the Sida acuta, Burm., and a certain vine, the tok-chichibe,<sup>1</sup> the Guazuma polybotria, Cav., and nine chile-peppers. Mash and boil these and when warm let them be given to drink.

74—*Chibal puczik.*

(Sotuta, f. 23 v.; Mena, p. 21).

Le maax yanil le chibal puczik lae ca au ila u uix payanbe bix yanil ti ca a cña u polvosil *manzanilla* y hunlap *xucul* ca a chace, ca a hucñe ca a ða yokol u puczikal. Uamae ca a ða bentosa yalan u tuch y tu bobox. Uamae, ca a ða u polvosil u *cambalha* yuk ichil vino. Uamae ca a cña *berbena*, ca a chace ca a ða u kabil tu puczikal chacau. Uamae, u kikel xibil *yuc*, chocou, ca a ða tu puczikal cici kelbil t(i) sarten. Lay u kikel *yuce* ca a ða tu puczikal lay kohan lae. Uamae, u kikel *tzub* cici kelbil t(i) sarten ca u hante. Uamae ca a toc cab y kelbil *anis* y vino ca a ða t(i) nok bay penchuc ca a kax tu puczikal chocou. Uamae, ca a chac u motz *moho* ca a ða yuke. Uamae ca u hant *xucul* utz u ðacal bin hauac tumen. Uamae chachile *borraja* ca a ða yokol u puczikal. Bay xan ca a cña uac ual u lee *chiople* y ca ual u lee *xkoch* y hun ual *kutz* ca a chac yuke maili ukulnac bolonpiz kin yukic. Bay xan ca a cña hunppel cuchara *cominos* ca a hucñe ca a ða ichil ziz haa yuke. Uamae, ca a cña hunppel hee, ca a cña hunppel cuchara *anis*, ca a hete ca a hucñe ca a ða ichil le zutkakkbil hee ca a ða yuke. Uamae, ca a cña *xcambalhau* ca a hete ca a ða ich vino, ca a ða yuke. Uamae ca a cña u tannel xcax y u tuchil y u puczikal ca a hete ca a hucñe ca a ða ich vino yuke. Uamae ca a cña *moztaza* y *chalche* hucñbil tulacal kinalcunbil ca kaxac yokol u puczikal bin yutzcinte.

*Pain in the heart.*

When anyone has this pain in the heart, you inspect his urine first (to see) how it is. Then you take powdered Helenium quadridentatum, Labill. (*Manzanilla*), and a handful of the Portulaca oleracea, L. (*Verdolaga*). Boil and mash them and apply it to the heart. Or else you apply cupping below the navel and at the base of the spine. Or else you give the powdered Dorstenia contrajerva, L. (*Contrayerba*) to drink in wine. Or else you take Verbena Aubletia, L. (*Verbena*), boil it and apply the liquid to the heart, hot. Or else, the blood of a male Yucatan Brockett (*Mazama Rufina*), hot; you apply it to the heart, well roasted in a frying-

<sup>1</sup> Tok-chichibe. Lit. Flint-chichibe. Chichibe is the term loosely applied to several forms of Malvaceae.



pan. This is the blood of the brockett, and you apply it to the heart of this patient. Or else the blood of an Aguti pinto, well roasted in a frying-pan and let him eat it. Or else you burn honey with roasted anis, (mix) with wine and put it on a cloth like a thick cake baked in hot ashes. Then you bind it on the heart, hot; or else you boil the root of moss and give it to drink; or else let him eat the *Portulaca oleracea*, L. (*Verdolaga*). It is a good remedy; it will cease by this means. Or else boil borage and apply it over the heart. Thus also you take six leaves of the *Eupatorium aromatisans*, DC (or *E. populifolium*, H. B. K.), and two leaves of the *Ricinus communis*, L., and one leaf of tobacco. Boil them and let him drink it before he drinks anything (in the morning). Nine days he shall drink it.

Thus also you take one spoonful of cumin-seed, mash it and put it in cold water for him to drink. Or else you take an egg, and you take one spoonful of anis, and you shred it and mash it and put it in this heated egg and give it to drink. Or else you take the *Dorstenia contrajerva*, L. (*Contrayerba*) and shred it and put it in wine and give it to drink. Or else you take a hen's liver with its gizzard and heart, shred and mash them and put them in wine for him to drink. Or else take *Sinapis niger*, L., and *Pluchea odorata*, L., mash them all, warm them and bind it over the heart. It will cause him to recover.

75—*Chibal puczik y chibal nak.*

(Sotuta, f. 24 r.; Judío, p. 22).

Chibal pucziik y chibal nak y ya nak lae. Ca a cña *ahauche*, *kokobche canchacche bilimcoc y cocche y hoppel maxyc* hucñibil u zolob ca au uk ichil chocou zaa ua ich kinal haa. Uamacit hauic ca a cña bolonñit *maxyc* y bolonñit u kixel *coceh* y canñit *hmaxyc*, hucñibil tulacal ca ppukuc kinkinal tun ca ñabac yuke.

*Pain in the heart and abdominal pains.*

Pain in the heart and bowels. You take the *Tabebuia*, *chrysantha*, (Jacq.) Nicholson, the *kokob-che*,<sup>1</sup> the *Chiococca racemosa*, L. (*Cainca*), the *bilim-coc* and the *Capparis incana*, H. B. K. (?), five peppers of the *Capsicum frutescens*, L.; mash the exterior (or scales?) of these and give it to drink in hot atole or in warm water. If that does not stop it, you take nine peppers of the *Capsicum frutescens*, and nine thorns of the *Zarzaparilla* (perhaps *Smilax Gaumerii*, Millsp.), and four peppers of the *Capsicum frutescens*, (*Chile del monte*). Mash them all and steep in warm (water). Then let it be given to drink.

<sup>1</sup> *Kokob-che*. A shrub two yards high with small aromatic leaves. (Cuevas.)

76—*Chibal puczik la ppucaah.*

(Sotuta, f. 25 r.; Judío, p. 29; Nah No. 94).

Le chibal pucziik la ppucahe hulneb-am u kaba xan. U oacale hun xeth u lee yaax *kutz* cici kutbil ich haa ca a yeo u kabil naranja hun hau ichil ca puluc thaba chuc ichil, ti u tupli, catun a oac yuke cici pixbil ca u kilcabte bin xenac xan, he u chiculob le cñapahala ziz u uinclil, zahac ti uinic cax ti booy uinic zahac cax ti hulkin. Bin utzac tumen. Uamae yan xan u lak chibal puczike cñabac u nek *akoch* uacual u lee *chiople*, chachil tulacal ca a oac yuke amal yahalcab, maili yuk bale, bolonpiz kin bin yukic ua lay bin oabac u haail yoch chucua bin hauac tumen.

*Pain in the heart, gas on the stomach.*

This pain in the heart, gas on the stomach, hulneb-am is its name also. The remedy is a section of a green tobacco leaf. Mash it in water and then you squeeze the juice of an orange, one section (of an orange), into it. Then throw a burning coal in it. When it is extinguished, then you give it to drink. Let him be well covered so he will perspire. He should vomit also. Here are the symptoms of this disease. The body is cold. The man shivers whether he is in the shade or in the sun. He will recover by this means. Or else there is also another (kind of) pain in the heart. Take the seed of the *Ricinus communis*, L., six leaves of the *chiople* (*Eupatorium aromatisans*, DC). Boil all this and give it to drink every morning before he drinks anything. Nine days he shall drink it, or this shall be given in the liquid of chocolate. It will cease by this means.

77—*Dolor colico.*

(Sotuta, f. 37 r.; Mena, p. 82).

Ca a oac u taa *yuc* ich vino yuke. Uamae ca a oac azufre yuk ich hee.

*Colic.*

You take the dung of a Yucatan Brockett, put it in wine for him to drink. Or else put sulphur for him to drink in an egg.

78—*Echem ziziz.*

(Judío, p. 89; Mena, p. 133).

Cu tzayal tu mocol u bachel uinic cu chuupul licix u tzayal ti cñuplal cu chicanhal li(c) u manzic uba kik ti ca chupuc u chun u

nak u ðacal ca u manez u lobol kik chacac xiuob lae utial yuke y yehinte *chimtok*, *chaculubtok tokaban tokchichibe* u le tulacal chacbil y tab cu ðocole ca ppultabac y *pom* uaix *romero* cicipixbil ca u kilcabte hac u ðacal.

*Oppressive humours.*

Which attack the joints of a man so they swell, which attacks a woman as manifested by her passing blood and swelling of the lower abdomen. The remedy, to pass off the bad blood is to boil (the following) plants for her to drink and use as a wash; the *chimtok*,<sup>1</sup> the *Bauhinia Cavanillei*, Cav., the *Trixis radiale*, Lag. (or *Eupatorium conyzoides*, Vahl.), the *tok-chichibe*.<sup>2</sup> Boil the leaves of all of these with salt. After that let (the patient) receive the smoke of copal or rosemary and be well covered so he will perspire. This is the remedy.

79—*U hach kazil yahob.*

(Mena, p. 80).

Ca yanili uinic ua alimbil betic *chuplal* yan ti xiblale bay tunich cu manzie u kaxil kikob cu huntuccinzie uba ti lae *cha chackob* (*chokob*) *cat* chacbil u le y u motz y u motz *hulubche* mecha y *hulubche* hunppel u cuchara y *ææec* tab y u cumtan ca chacac cu table y xiue humppul yalil tac cabin zapp ca kuchuc hunppel escudilla ca *ðabac* yuke citac yahal catun u manez ua xiblale yanile tulacal.

*Poisoning, blood in the feces.*

When this attacks a man, or a woman about to give birth; if it is a man, like a stone is the evacuation of bloody feces which gather in a mass. Take the *Ipomoea carnea*, Jacq., boil its leaf and root and the root of the *hulub-che*<sup>3</sup> with a spoonful, a little, salt. Boil well until the plant is thoroughly cooked, and the liquid has boiled away until there is a porringer left. Give it to drink as soon as the pain begins, then he will pass it. Even though it is a man (or a woman) they all suffer from it.

80—*U hach lobil kik, waan kik &c.*

(Sotuta, f. 20 r.; Judío, p. 60).

U ðacal le u lobil kik ti *chuplale* xan kik yalic(ob) hebac ma tu hauai t(i) ðacil xan kikob lae matan u hauai tumen ti cu uolic

<sup>1</sup> *Chim-tok*. A thick tree with dull green leaves. The bark is an astringent. (Cuevas.) Probably *Krugiodendron ferreum* (Vahl) Urban.

<sup>2</sup> *Tok-chichibe*. Lit. Flint-chichibe. Probably some form of Malvaceae.

<sup>3</sup> *Hulub-che*. Perhaps the same as the *Hulub*, or *Bravaisia tubiflora*, Hemsl.

uba ichil u uincil *chuplal* cu manzic *chuplal* ppiz u cimil yetel. U *oace* *cha* hunppel libra *xchalche* u lee y u motz ca chacac hun ppul yalil ppiz u zappal tancoch catun chachtaac y paño ca likzabac hetun cabin *oabac* yuke amal yahalcabe, *oabac* vino ichil tu lak kine ca chacac hun uaben holoch y u *hacay* u pach nale xaan, cu papahaal tu pach nae, y ni *cibche* y chachom *huyche* y u yoyolni chac *oabac nichte* ca chacac, ca a *o* yuke holo yuk *xchalche* y vinoe, yalil bin yuke payanbe u cicithan ca yumil ti Diosi bin pukuc le kik cu yolic uba ti le *chuplal* lele caten ua oxten u *oabal* ti.

Uamae u lak xan kik, hehelan u tal xan uix kik xic yalintic bak, u helanil yaah ca *cha* hunlapp u lee limones, y u lee *xouuc*, u lee *chacah* bay hunppel tumin cab ichil likil tu hobnil ziz cabin yuk le kohan utial ca zebac yalintic, caxbalac. Ca a *cha* limones, ca a ye<sup>e</sup> ppiz u kuchul hun luch u kabil cici chachbil, ppiz u kuchul bay medio zappale catun a *o* muxbil tab ichil kinkinal ca yuke.

U *o*ac chen xaan kik ca a *cha* huntzel oc xtop zicil y huntzel oc mehen zicil y huntzel oc *chac xicin che*, u motz *zac catzim*, u lee *chac ouubtok* u lee *chimtok* y lahunoit ti *maxyc* huchbil kinkin y haa ukbil. Uamae u yitz *kikche* u yitz *pomolche* u lee *xan* muchucnac xuechxaan yalabal u xichil *ac* u motz *kuub* y u yoyolni u *chachacil xicinche* u macapil *halal* u macapil kaxil *koch* y *cabal xaan* xiu *cambalhau xpakunpak chackeuel nichte* u nic u(a)ix u lee, u motz *chaczinkin*, cappel cheche cacau huntzel oc xmehen zicil y canoit tamcaz *yc* huchbil tulacal chococinbil, kinkinal cabin *oabac* yuke. Uamae utze *xaan* y *xpakunpak*, chachbil y hun chach lai xiu chachbil y media onza azucar tac ca lutzbanac, u chicul u tahal, ukbil hatzcab cu ayunar cu hauzic uix kik y kik choch heuac cu betic hubnak tumen u uii *mahan-chuun*, huchbil ca chachtabac, kinkinal ca yuk hatzcab maili u kam u chie utz utial xaan kik. Uamae hun oc *buul* y hun tuy tux, cici kankelbil ca huchuc y yoyolni *kuub*, y *cabal kopte* yan ti kax y *caba(l) xaan* y canoit *maxyc* yebbil citac u zasztale ca kinlabac ca *oabac* yuke ayunas.

*Very bad blood, bloody flux, etc. (dysentery?).*

The remedy for bad blood in a woman, bloody flux they call it. It will not cease with the (usual) remedies for bloody flux; it does not cease by this means. It clots in the woman's body; she passes it until she dies with it. The remedy is a pound of the *Pluchea odorata*, L., the leaf and the root. Boil it in a pot of water until it is half boiled away. Strain it through a cloth and take it out and give it to drink every morning at dawn. Put wine in it the next day. Then boil a year-old corn-husk, and the sour thatch from the roof of a house, the tips of the *Myrica Mexicana*, Willd., the *Karatas plumieri*, E. Mar. (?), the *chuy-che* (a tree-parasite some-

what resembling a thistle), and the tender tips of the red *Plumeria rubra*, Jacq. Let these be boiled and given to drink. After a day let her drink the *Pluchea odorata*, L., with wine. The liquid is to be drunk. First call upon God for his benediction. This will dissolve the blood which clots in a woman. Two or three times it is to be given.

Or there is another sort of bloody flux which is recurrent, bloody urine, evacuation of tissue, recurrent pains. You take a handful of lemon-leaves and the leaf of the *Diphysa robinoides*, Benth., and the leaf of the *Bursera simaruba* (L.) Sarg., about one-third of a drachm of honey in it, fresh from the hive, and let the patient drink this to bring on parturition, or whatever it is. Then you take lemons and you squeeze them until you have a gourd full of the juice. Then put ground salt into it. Let her drink it tepid.

The cure for mere bloody flux (without complications) is to take a handful of large squash-seeds and a handful of small squash-seeds and a handful of the *chac-xicin-che* (a red tree-fungus), the root of the *Mimosa hemiendyta*, Rose & Rob., the leaf of the *Bauhinia Cavanillei*, Millsp. (*Pie de venado*), the leaf of the *chim-tok*<sup>1</sup> (*Quiebra hacha*, a large tree), and ten peppers of the *Capsicum frutescens*, L. (*Chile del monte*). Crush these in tepid water for a drink. Or else the gum of the *Castilla elastica*, Cerv. (*Hule*), the gum of the *Jatropha Gaumeri*, Greenm. (*Piñon*), the leaf of the *Sabal japa*, Wright, the curling pendent leaves as they are called, the cordlike part of the *ac*,<sup>2</sup> the root of the *Bixa orellana*, L. (*Achiote*), and the tender tips of the *chac-xicin-che* (a red tree-fungus), the pith of the *Scirpus validus*, Vahl., the pith of the *Cecropia obtusa*, Trec., the *Tubiflora squamosa*, (Jacq.) Kuntze, the *Dorstenia contrajerva*, L. (*Contrayerba*), the *Yerba de la golondrina* (*Euphorbia dioica*, H. B. K.?), the *Loranthus calyculatus*, D. C. (*Muerdago*), its flower or leaf, the root of the *Caesalpinia pulcherrima*, L. (*Flor de camaron*), two raw cacao-beans, a handful of small squash-seeds and four peppers of the pure *Capsicum annum*, L. (*Chile*). Crush them all, heat them, and when tepid let them be given to drink. Or else a good thing is the *Sabal japa*, Wright, and the *Yerba de la golondrina* (*Euphorbia dioica*, H. B. K.?) boiled with a handful of this plant. It is to be boiled with half an ounce of sugar until it curls up, as a sign that it is cooked. It is to be drunk at dawn before breakfast to stop blood in the urine and dysentery which causes abdominal pains. The succulent root of the *mahan-chun* (probably a *Peperomia* resembling *P. glutinosa*, Millsp.) is to be boiled and strained. When tepid let it be drunk at dawn before he has his breakfast. It is good for dysentery. Or else a handful of yellow

<sup>1</sup> *Chimtok*. Probably *Krugiodendron ferreum* (Vahl) Urban.

<sup>2</sup> *Ac*. A tall broad-leaved grass (*Barbon*) growing in the savannahs and used for thatching houses.

beans (*Phaseolus vulgaris*, L.) and a pinch of cotton-seeds well roasted. Let them be crushed with the tender tips of the *Bixa orellana*, L. (*Achiote*), and the cabal-kopte which is found in the forest, and the *Tubiflora squamosa*, (Jacq.) Kuntze, and four peppers of the *Capsicum frutescens*, L. (*Chile del monte*). Put it out in the dew. At dawn let it be heated and given to drink before breakfast.

81—*U helanil xe kik.*

(Sotuta, f. 23 r.; Nah No. 70).

Yax yulel xe kik ti uinic ma hach chaci bay u kab yabacna ca a cña limones y *chacak* y *chacac* yan ti chakane y *ppaccan* y *kikaban* ca a yacñte cheche ma chacbili catun a ja yuke max yanil. Uamae *zizbic* kelbil u lee ca a ja u polvosil yuke.

*Recurrent blood-vomit (probably yellow fever).*

First the blood-vomit comes to a man. It is not very red (but rather) like dissolved soot. Then you take lemons, the *chac-ak* (red wine), the *chac-ac* (red grass) which grows in the savannahs, and the *Physalis angula*, L., and the *Castilla elastica*, Cerv. (?). Crush them raw; do not boil them. Then give it to drink to anyone who has (this complaint). Or else the *Vanilla fragrans*, (Salisb.) Ames; roast its leaf and give it powdered to drink.

82—*Hubnak.*

(Sotuta, f. 38 v.; Judío, p. 55).

Cña le *kuum* ma ppoan u pache ca a huchñ y u mumun ich *chacal haaz* zuzbil u boxel u pach ca a huchñ (za) u mumun nek ca a huyte ca a ja yuke bin hauac tumen. Uamae utz xan u nek *on* kelbil ca a ja ich zaa kum yuke bin hauac ua yan u xeil tie ua matan u hauale *ambil* u kab tu cahmatic ichil ziz haa. Utz ina xan u paxtal u kab likul tu uaa u kab kuchuc tac tu ni u kab. Ua matan u hauale u hubnake paobil tu uaa u yoc kuchuc tu ni yoc, bin hauac tumen.

*Diarrhea.*

Take unhulled maize paste and mash it with the green fruit of *Lucuma mammosa*, L. Powder the bark and mash the green seeds with maize paste. Stir it up and give it to drink. It will cease by this means. Or else it is good also (to employ) the pit of the *Persea gratissima*, Gaert. (*Aguate*). Roast it and put it in atole of maize

paste to drink. (The complaint) will cease. If he vomits and it does not stop, soak both arms in cold water. It would be a good thing to massage the arm from the joint (elbow?) to the tip of the fingers. If the diarrhea does not cease (then), massage the leg from the joint to the tip of the foot. It will cease by this means.

83—*Hubnak*.

(Sotuta, f. 38 v.; Judío, p. 99).

Cña castran *ib* ca chacac y vinagre ca a ña u hante uaix ca hucñuc ich uah ca a penchucte ca a ña tu chun u nak.

*Diarrhea.*

Take Spanish beans, boil them with vinegar and give them to eat. Or mash them into a tortilla, make it thick and roast it over coals; then apply it to the base of the abdomen.

84—*Hubnak*.

(Judío, p. 11).

U ñacal hubnak y xe ix cabal *kopte* chachyabil ca ukuc cheche.

*Diarrhea.*

The remedy is the ix-cabal-kopte,<sup>1</sup> strained and drunk raw.

85—*Hubnak*.

(Judío, p. 119).

U ñacal hubnak u yoyolnii *chiople muloch chacculubtok zinan-che* yachñibil ca ukuc u ñacal.

*Diarrhea.*

The remedy for diarrhea is the *Eupatorium aromatisans*, DC. (or the *E. populifolium*, H. B. K.), the *Triumfetta semitriloba*, L. (*Cadillo*), the *Bauhinia Cavanillei*, Millsp. (*Pie de venado*), the *Zanthoxylum caribaeum*, Lam., to be squeezed and let the medicine be drunk.

86—*U ñacal hubnak*

(Nah No. 11; Kaua, f. 149 v.)

caxantac cantul zinan ca a pul ichil hunppel harro haa, ca pukuc u aseiteil catun ñabzabac tu chun u nak unic kinkinal u ñac.

<sup>1</sup> Ix-cabal-kopte. A lower plant having a fancied resemblance to the *Cordia dodecandra*, DC. (Ciricote). Perhaps the *Cordia cylindristachya*, (R. & P.) Roem & Sch., a shrub 15 feet high.

*The remedy for diarrhea.*

Seek four scorpions. Throw them into a jar of water and let their oil be dissolved. Then let it be anointed tepid on the man's rectum for a remedy.

87—*Hubnak ceel.*

(Sotuta, f. 5 v.; Judío, p. 15).

Le u ñacal hubnak ceel (cu tzayal ti mehen palal y nucuch uinic xan tu uacal yitobe he u ñacale ca cñabac) ayuda ti, *xanab mucuy* y *pakunpak* catun ñabac media onza zac azucar y u kanheel xcax catun a ña theringa uamae ca a tooc . . . che t(i) cum cu chocoutal tune ca a ña u lee *paychee* u lee *hyuy* u lee *xchalche* y u lee (*nantaha*) cici tazbil tulacal t(i) cum catun culanabac yokol u cña yoxou kinkinal ca u kilcab tuba cici pixan bin utzac.

*Diarrhea and chills.*

This is the remedy for diarrhea and chills which attack boys and men as well. When the rectum protrudes, the remedy is to give as an enema (a solution of) the *Euphorbia hirta*, L. (*Yerba del pollo*) and of the *Yerba de la golondrina* (*Euphorbia dioica*, H. B. K.?). Then employ half an ounce of white sugar and the yolk of a hen's egg as an enema. Then burn . . . the *Lonchocarpus longistylus*, Pittier, in a pot to heat it. Then you put the leaves of the *Peteveria alliacea*, L. (*Zorrillo*) and the leaves of the *Casimiroa tetrameria*, Millsp., the *Pluchea odorata*, L., and the leaves of the *nantaha* into a pot that is well covered. (Afterward) let (the patient) be set over it to catch the steam and perspire. He is to be well covered up. He will recover.

88—*Hubnak tu zeblacil.*

(Mena, p. 121).

Ca chacac *luch* ca chacac *haaz* ca a mehenkupte ca chace hun luch cabin chace hunppel yalil ua tancoch pul ppiz u ñappale bay hunppel tumin cabe yalae ca patac u ziztal ca ñabac yuke max yan ti le tumen tuzebal u cinzic uinic hubnak u kaba.

*Sudden diarrhea.*

Boil the *Crescentia cujete*, L., and the *Musa sapientum*, L. Cut them up into small pieces and boil a gourd of the liquid, say half a pot of it, until it has boiled down to the measure of a *tomin* of



honey. Give this to drink to (the patient), because it will kill a man, this so-called diarrhea.

89—*Huntaa, pujos u kaba.*

(Sotuta, f. 39 r.)

Cu ñacal zacuum chachile ca a muc ti chicix taan catun a ña u hante cu hauzic toobil ca mucuc.

*Tenesmus, pujos it is called (in Spanish).*

The remedy is "white earth"<sup>1</sup> boiled and buried in live coals (or hot ashes) and give it to him to eat to stop it. It is to be baked like a paste when it is covered up (by these hot ashes).

90—*Huntaa, pujos yalabal.*

(Sotuta, f. 39 r.)

Le cu manzic u yabal ziz ichil u kaxile cax uchben cñapahal ca a cña u uix ca a uilae ua tau ilah zacpilene yan ziz tu yit u bentosail, u chicul yan ziz tu chun u nak y ti yan tulacal u chun u cñapahal, ua ta uila y kinam cu manzic lay ziz y tan u yelee ca a ña u tuxil *taman* y *buul*, kelbil, ca a ment u polvosil ca a toz yokol zaa yuke ua ichil hunppel hee tuzabal bin tohac yol tumen cax tan uilic u hanal yetel yukule kakaz cñapahal. Bay xan ua cu zipil y cñuplal bin cimic tumen. Ua ta uila chac u yakzah tat u yit bentosae u chicul yan choco tu yich puczikal y u chicul yan ziz tu bobox ua eler u cah ua ma uchac a ñaic tumen yanil canal y cabal ca a cña ca ual oxual u lee *akoch* catun a too hunppel choco zintun catun culac yokol utial binel t(i) uenel ocnakin, caten ua oxten bin utzac tumen.

*Tenesmus, pujos it is called (in Spanish).*

He passes much mucus in his stools and it may be a chronic complaint. You take his urine and inspect it. If you see that it is whitish, if cupping indicates mucus in the rectum, it is a symptom that he has mucus in his lower abdomen (or colon?) and there is the whole cause of the complaint. If you see that pain accompanies this evacuation of mucus, and a burning sensation, then you administer cotton-seed and yellow beans, roasted and powdered. You sprinkle these on atole for him to drink, or in an egg. Immediately he will recover by this means even though you see when he eats and drinks he is somewhat sick. Thus also if he sins with a woman, he will die because of it. If you see that his urine is red

<sup>1</sup> Zac-luum, or white earth, was used as a varnish for painting.

when cupping is applied to the rectum, it is a symptom of heat (fever?) in the stomach and a symptom that there is mucus (or cold) in the lower spine. If it burns or you cannot administer it, because there is heat (fever?) above and below, then you take two or three leaves of the *Ricinus communis*, L., and wrap them around a hot stone. Let him sit on it that he may go to sleep at sunset. (Do this) two or three times and he will recover by this means.

91—*U sacal kal taa y kal uix ti uinicob.*

(Sotuta, f. 4 v.; Judío, p. 70).

U sacale ca cña u canil platanos *haaz* ca a sa u kabil yuke . . . bil. Uamae u macap *na* y u macap *wkoch* y *wkumtulub*, y hunyoc u uich *xhaail* y tab huchbil ca pukuc y haa ca a sa yuke. Uamae u yultal ceeh u tunich ceeh tu thanob *sabil* yuke ich vino ua ich agua de azahar.

*The remedy for constipation and anuria.*

The remedy is to take the shoots of the *Musa sapientum*, L., and give the juice to drink. Or the pith of a green corn-stalk, and of the *Ricinus communis*, L., the *Melothria pendula*, L. (*Pepinillo*) and a handful of the fruit of the *Impomoea Meyeri*, Don., with salt. Let these be dissolved in water and give it to drink. Or else the bezoar of a deer, the stone of a deer as they say. Give it to drink in wine or orange-flower water.

92—*Kan kaxil.*

(Sotuta, f. 38 v.; Judío, p. 69).

Caxant *kanchikinche*, *kanche*, u chululil *kankirixche* u motz *canchacche* u motz *kanmucuyche* y *wkantunbub* chacbil tulacal ca a sa yuke u sacal xan kankuxnak utial kanchikin bin utzac.

*Yellow stools.*

Seek the *Conocarpus erecta*, L. (jaundice-tree, bile-tree, or *Mangle prieto*), the heart of the *Acacia farnesiana*, L. (*Aroma*), the root of the *Chiococca racemosa*, L., the root of the *kan-mucuyche* (yellow-dove-tree), and the *Sanvitalia procumbens*, Lam. (*Sanguinaria de flores negras*). Boil them all and give (the liquor) to drink. This is also the remedy for yellow diarrhea, cramps and biliousness; he will recover by this means.

NOTE—The Maya word *ziz* may mean either cold or mucus, causing a certain ambiguity at times. It may well be the Maya equivalent of the humors of European medicine.

93—*Kan kaxil*.

(Sotuta, f. 38 r.; Nah No. 34).

Le kohanil kan kaxile kankan yothel u uinicil ca a c̄ha kanchicixche (*kanchikinche*), *kantunbub*, *kanmucuyche* y yotoch *kanal* chacbil hun cum yaalil yanix ya nakil u cuch xanie hach ɔoyan u uinicil ca a c̄ha *nabanche*, u yitz *pom*, *zizim* y u lee *c̄huhuc lima*, u chacal catun a ɔa yuke u ɔacal akab choeuil xan.

*Yellow stools (Biliousness?)*.

The disease of yellow stools causes a yellow skin. You take the *Conocarpus erecta*, L. (*Mangle prieto*), the *Sanvitalia procumbens*, Lam. (*Sanguinaria de flores negras*), the *kan-mucuy-che* (yellow-dove-tree) and the nest of the *kanal*<sup>1</sup> (a certain yellow wasp). Boil these in a pot of water. When abdominal pains are the cause also, (and) the body is greatly weakened, you take the *Bursera graveolens*, Tri. & Planch., the gum of the *Protium copal*, (Schl. & Cham.) Engl. (Copal), the *Artemisia Mexicana*, Willd. (*Agenjo del pais*) and the leaf of the sweet lime; one night it is boiled. Then you give it to drink for night-fever also.

94—*Kan kuxnak*.

(Judío, p. 84).

*Kanchikin che kanchee* u ɔacal kan kuxnak ynsienso u ɔacal poxmal y ppuppul ik *ix pakunpak xcambalhau* u xak ca ukuc licix u zihil ybin tumenel xan. U lak u ɔacal kan kuxnak *kanlol* bay cappel cuchara u nek tat hucbil (hucfibil) ca ukuc ca tacun uba u uinicil ca paczabac u nak cabin ɔococ yukic u ɔacal.

*Yellow stools and cramps*.

The *kanchikin-che*, (or) *Conocarpus erecta*, L. (*Mangle prieto*), are the remedy for yellow stools and cramps. Incense<sup>2</sup> is the remedy for flatulence and gas in the bowels. The *Yerba de la golondrina* (*Euphorbia dioica*, H. B. K.?), the *Dorstenia contrajerva*, L. (*Contrayerba*), mixed together, are to be drunk for the delivery of the after-birth. Another remedy for yellow stools and cramps is the *Tecoma stans*, L. (*Tronadores*), about two spoonfuls of the seeds to be crushed and drunk. Then cover him up and wrap the abdomen in several folds of cloth as soon as he has drunk the medicine.

<sup>1</sup> *Kanal* or *kanpetkin*. A yellow insect resembling a wasp which has a visible sting. It makes a round flat nest. (Pacheco Cruz.)

<sup>2</sup> Incense. Probably the gum of some conifer.

95—*U kawiltabal kik, taa kik.*

(Sotuta, f. 21 r.)

Ca a cña *zizbic* le tie cu ðabal ich chucua ca a ment u polvosil yuke, ma lob utial max cu xeic kik xan hunppel ak yan *yakba* mentabil u polvosil yuke ma lob u lukzic tie le max cu manzic *kike* castran xcacaltun u kaba albahaca, cña u lee ca ment u polvosil catun a puk ich haa yuke cu hauai tumen. Bay xan *akantunbub*, chachbil ca u hant u lee cu hauzic xan lay *ix pakunpak*, yachtabil, ca yuk u kab, ma lob cu hauzic, y *peteltun* chachbil ca yuke ma lob xani. Uamae cñabac u *kanabyuc* ca a ticincunte ca a ment u huchul ca a ment u polvosil, ca a ða yokol yoch zaa yuke yan hunppel chee *kikche* ca u hant u yitz y ca yuke cu lukzic yan hunppel xiu *tançunun* yachtabil ca hokzabac u kab catun ðabac yuke cu hauzic le cñapahale. Lay *kikchee* cu chacal utial u kab tunkul pax.

*Blood in the feces.*

You take *Vanilla fragrans* (Salisb.), the kind which is put into chocolate, and powder it. Let him drink it. It is not bad for anyone vomiting blood also. There is a vine, the *Andira excelsis*, H. B. K. Powder it for him to drink. It is not bad to cure anyone who passes blood. The *Ocimum canum*, Sims (or *O. micranthum*, Sw.) called *albahaca* in Spanish; take its leaf and powder it, and dissolve it in water for him to drink, that it may cease by this means. Thus also the *Sanvitalia procumbens*, Lam. (*Sanguinaria de flores negras* or *Ojo de gallo*) is to be boiled for him to eat its leaf to stop it also. There is the *Yerba de la golondrina* (*Euphorbia dioica*, H. B. K.?), crush it and let him drink the juice. It is not bad to stop it. Also boil the *Cissampelos Pareira*, L. (*Pareira brava*) for him to drink. It is not bad also. Or else take the *kaxab-yuc* dry it and mash it to powder and put it on atole for him to drink. There is a tree, the *Castilla elastica*, Cerv. (*Hule*); let him eat its gum (or) let him drink it to take away (the complaint). There is a plant, the *tan-çunun* (kolibri-breast). Crush it and take out the juice. Then give it to drink to stop the complaint. This *Castilla elastica*, Cerv. (mentioned above) is the one that is boiled for a drum-stick.

96—*U ðacal kik choch.*

(Judío, p. 102; Teabo No. 6).

*Hex nicibche* lauac *cibche* yan ti chakanob, lay lie yalabal *zizimkuchil zizimkakil* tumen ah ðacobe. U ðacal ix kik choch cici

chacbil ca yuk yalil zanzamal latulah u haua u sac hobon u lak u kaba u sac kik choch hoolooch u catzuc *chacchom kuche* u yoyol ni y chac *zabacnicte* u xak y u ppuppuyul u bel haa tu pach na ca huch tu molcabil ca sac yuke cu haua.

*The remedy for dysentery.*

This is the nicibche or cib-che (*Myrica Mexicana*, Willd. *Palo de cera*) which grows on the savannahs; (also) that which is called zizim-kuch, or zizim-kak (*Yerba del venado*, probably *Porophyllum macrocephalum*, DC.) by the medicine-men. It is well boiled and taken every day until it ceases. Bowel-purging is another name for this dysentery. (Take) the maize-husk, its second layer, the *Bromelia karatas*, L. (?), the *Cedrela Mexicana*, Roem. (*Cedro*), its tender tips, and the red *Plumeria rubra*, Jacq. (*Flor de Mayo rojo*), mixed with crumbled bits of the water-gutter behind the house. Crush all these together and let them be given to drink that (the complaint) may cease.

97—*U sacal kik choch.*

(Judío, p. 102; Teabo No. 5).

Chabac u xiuil *ix-pakunpak*, lay u xiuil cuzam ti castelan than huchbil y yakal y u motz ca hokzabac u kabil ca ukuc, bin hauac. Utz ix u sacal *beregina* tu kabil ti ma chacbil u tibilil cu miztic cucut y u cuchil uix.

*The remedy for dysentery.*

Take some plants of the *Yerba de la golondrina* (*Euphorbia dioica*, H. B. K.?), the plant of the swallow, as it is in the Spanish language, its vine and root. Draw its juice and let him drink it. (The complaint) will cease. It is good also to administer the *Solanum melongena*, L. (*Berengena*), its juice; it is not to be boiled. It is precisely the thing to clean out the bowels and bladder.

98—*U xiuil u lobol yah kik choch.*

(Judío, p. 126).

Max u kat hauale *tanjunun*, *zabacnicte*, *zinanche*, *xcacaltun*, *chac-xicin-che* u sacal lae.

*The plants for the evil disease of dysentery.*

(For) anyone who desires to cure it, the *tan-junun* (kolibri-breast), the *Plumeria rubra*, Jacq. (*Flor de Mayo rojo*), the

*Zanthoxylum caribaeum*, Lam., the *Ocimum micranthum*, Willd. (*Albahaca*), and the *chac-xicin-che* (red-tree-ear, a certain fungus) are the remedy.

99—*Kik nak*.

(Sotuta, f. 21 r.; Nah No. 13, No. 14, No. 15, No. 17, No. 18; Kaua, f. 149 v.)

Caxant u motz *chac-catzim*, u motz *xaax*, u motz *chac-pichi*, u boxel u pach *chac-ya*, *chacbil*, ca yuke, bin u hauez, hatzcab bin yuke. U lak *jacob* utial *kik nak* ca a *chā* u yoyol ni *chac-pichi* y *zazac* taa pek ca *chacac*, catun a *ja* u *choco* taa *tzimin* cu *jocol* u taic catun a *ja* ichil a *chacal* catun a *ja* *jejec* *azucar* ichil ca *yebte* cu *zaztale* ca a *ja* yuke ti ah *kik nak*. Uamae *chā* u motz *chimtok* y u motz *chacte* ca a *chace*, a *ja* yuke u *jacal* *tulacal* bin *hauac* *tumen*. Uamae *chā* u *chacil* u *cuxum-che*, y u *chacil* yoyol ni *chac-catzim* *chac lum* y u *cuxum luum*, le tu *boce*, *chac yuke*. Uamae tu *haual* *yukule* ca *chā* u motz *xkan-thirix* yan ti *lakin*, y u motz *pay-che*, y *canoit max-yc* ca a *huchē* ca a *uole* ca a *too* ti *bii* catun a *ja* tu *chun* *kinal* *cax ma kinal*. Bay *xan* ca a *chā* *huntul* ah *cax* *ua chuplal* *yanile*, ca *ximbalnac* *payanbe* ca a *polvoit* *pimienta* de *castilla* a *toz* *ichil* u *hobnil* *xcax* *lae* ca a *packax* tu *chun* u *nak* u *uincil*. U lak u *jac* *kik nak* ca a *huchē* u pach *kokobche* y *kokob-ak* y *am-ak* y *chac-lutzubteob* y *hoppel* *cheche* *cacau* *huchuc* ca a *ja* yuke u *jac*.

*Dysentery*.

Seek the root of the *chac-catzim*,<sup>1</sup> the root of the *Acacia angustissima* (Mill.) Kuntze (*Cantemo*), the root of the red guava, and the bark of the red zapote. Boil these for a drink. It will stop (the complaint). At dawn let him drink it. Another remedy for dysentery is to take the tender tips of the red guava and the white excrement of a dog. Boil them. Then you add hot horse-dung (or tapir-dung) immediately after it has been dropped, and you put it in and boil it. Then you add a little sugar, and leave it out in the dew until dawn. After that you give it to drink to the person who has dysentery. Or else take the root of the *chim-tok* (*Krugiodendron ferreum*, Urban, *Quiebra hacha*), and the root of the *Caesalpinia bijuga*, L. (*Brazil*). Boil these and give the entire remedy to drink. It will cease by this means. Or else take the red part of the *cuxum-che* (mouldy tree), the red tips of the *chac-catzim*,<sup>1</sup> red earth and mouldy earthy which smells; boil them and let him drink

<sup>1</sup> *Chac-catzim*. Red *catzim*, probably one of the Bean Family. *Zac*-(white)-*catzim* is *Mimosa hemiendyta*, and *yax*-(green)-*catzim* is *Acacia Riparia*.

it. Or else after he has drunk it, you take the root of the *Acacia Farnesiana*, L. (*Aroma*), it is in the east, and the root of the *Petiveria alliacea*, L. (*Zorrillo*), and four peppers of the *Capsicum frutescens*, L. (*Chile del monte*). You crush these, roll it into a ball, wrap it in cotton wool and apply it to the rectum warm, or even if it is not warm. Thus also you take a rooster or a hen. First let it walk about; then you powder Spanish pepper and sprinkle it on the entrails of the fowl. Bind the latter closely to the rectum. Another remedy for dysentery is to crush the exterior of the kokob-che<sup>2</sup> (poisonous-snake-tree) and the *Aristolochia odoratissima*, L., and the am-ak (spider-vine; resembles the *Passiflora ciliata*, Ait.), the chac-lutzubteob (red-hooked), and five raw cacao beans. Let these be crushed and give the medicine to drink.

#### 100—*Kiknak*.

(Sotuta, f. 22 r.; Judío, pp. 54 and 55; Mena, p. 139).

Caxant *kikche*, *kikaban*, *xpomolche xanabmucuy* y u habentunil u pach *op* huchibil ua chachil ca *ɔabac yuke* le kohane bin utzac tumen. Uamae *ch̄a* u lee *culantrillo* y *kapabyuc* pelelbet u lee cu bahic che yakil, chace ca a *ɔa yuke* bin utzac tumen. Uamae *ch̄a xpakunpak* y *turcozon* u leob y u motzob y yakil *berenjena*, huchibil ma chachili, ca *ɔabac t(i)* alquitara hokzabil yaalil ma chachili catun *ɔabac yuke*.

Uamae *ch̄a* u motz *ɔulubtok* u motz *chimtok* y u motz *kuxub* ti lakin cici chachil kinkinal ca a *ɔa yuk* ah kohane u *ɔac*. Uamae caxanta<sup>2</sup> *kik* lay cu kabiltic tunkul paxe chachil ca ukuc tumen le kohane.

Uamae u xulub pu<sup>2</sup>na tocbil ca mentabac u polvosil *ɔabal* ichil vino yuke, ua chucua ua ich zaakum, ua ich kinaal haa u *ɔacal* bin utzac tumen. Ua cu hach manatal, man kin, man akab u *ɔaic* ti uince le *ɔac tin* ualaho: Uatun chen taakab cu chactal tocbil *zoo* *ɔabil* u polvosil ich vino ua ich agua de azahar ua ich zaa, ua ich kinbil ha, ca yuke u *ɔac bin* hauac tumen. Bay xan le xiu *tan ɔunun* hokzabac u kabil ca *ɔabac yuke*, cu hauzic le *ch̄apah(a)la*.

Uamae yan u lak u *ɔac utial* u kaxilta(b)al kik *xkantunbub* ukbil u yalil licil u chacal ukbil y u lee. Bay xan ca *ɔabac* u chupil lay *zayal bace*, malob u hantabil xan ychil ensalada, cu macic lay u kaxiltabal kike. Uamae ment u polvosil u motz *ich huh*, ca a toz yokol yoch zaa bai u tozol zicil yuke.

#### *Dysentery*.

Seek the *Castilla elastica*, Cer. (*Hule*), the kik-aban, the *Jatropha Gaumeri*, Greenm. (*Piñon*), the *Euphorbia hirta*, L. (*Yerba*

<sup>2</sup> Kokob-che. A shrub six feet high with small aromatic leaves.

*del pollo*), and the year-old exterior of the *Annona reticulata*, L. (Custard apple). Crush these and boil them; let it be given to the patient to drink. He will recover by this means. Or else take the leaf of the *Adiantum tricholepis*, Fee. (*Culantrillo*) and the *kaxab-yuc*. Boil these and administer as a drink. He will recover by this means. Or else take the *Yerba de la golondrina* (*Euphorbia dioica*, H. B. K.?) and the *tul-cozon*,<sup>1</sup> their leaves and roots, and the stock of the *Solanum melongena*, L. (*Berengena*). Crush these, do not boil them. Then put them in a still and draw out the liquid, not boiled, for him to drink.

Or else take the root of the *Bauhinia divaricata*, L. (*Calzoncillo*), the root of the *chimtök*<sup>2</sup> (*Quiebra hacha*, a thick tree with a very hard wood), the root of the *Bixa orellana*, L. (*Achiote*), it is in the east. Boil well and when tepid give the medicine to the patient to drink. Or else the rubber used for a drum-stick. Boil it and let it be drunk by this patient.

Or else the horn of a spike-horned deer is to be burned and powdered and given in wine to drink, or in chocolate, or in atole, or in warm water for a remedy. He will recover by this means. Or if there is profuse diarrhea all day and all night, give the remedy which I have mentioned. When it has only boiled down to a paste, burn a bat; put the powder in wine, or in orange-flower water, or in atole, or in warm water. If it is hot to the touch, do not put in wine; put it in cold water and let him drink the medicine. He will recover by this means. Thus also, this plant, *tan-ñunun* (*kolibri-breast*), let the juice be extracted and let him drink the medicine. It will put an end to this sickness.

Or else there is another remedy for the evacuation of blood, the *Sanvitalia procumbens*, Lam. (*Sanguinaria de flores negras*). The liquid is to be drunk when it is boiled with its leaf. Thus also let there be given the *Zayal-bac*. It is not bad to be eaten also in salad to stop this evacuation of blood. Or else powder the root of the *ich-huh*,<sup>3</sup> and sprinkle it on atole, just as they sprinkle gourd seeds, for him to drink.

101—(*Kiknak y xe kik*).

(Judío, p. 73).

*Xmuscoc muchcoc muchulcuæ oxtzuc u kaba doradiya yayalic*  
*oul cñabac tulacal u le y u motz chacbil tulacal u kabil ukbil u ñac*

<sup>1</sup> Tul-cozon. The Malujo, a vine with leaves not so long but resembling those of the chile. Yellow flowers in racemes, Small fruit. (Cuevas.)

<sup>2</sup> Chim-tök. A thick tree with dull green leaves. The bark is an astringent. (Cuevas.) Probably *Krugiodendron ferreum* (Vahl) Urban.

<sup>3</sup> Ich-huh. Perhaps *Eugenia axillaris*, (Swartz) Willd. Lit. Iguana-eye. A plant half a yard high. Dark green, porous aromatic leaves with an odor like that of cloves. Flowers with violet petals. The fruit forms in small clusters. (Cuevas.)



kiknak y xe kik hach utial ix u chupil y u yail bazo catzuc yalal y tammel cu lukzic tulacal lobol kik ti hemax napahan yukice toyol u kakel bay u bel *telciu xmuɔcoc* lae.

(*Evacuation and vomiting of blood*).

The xmuɔ-coc, much-coc, muchul-cox are the three names of the *Doradilla* (*Selaginella longispicata*, Underw.), as the Spaniards call it. Take its leaf and root, boil them all and drink the liquid as a remedy for evacuation of blood and blood-vomit. It is very suitable also for swelling and pain in the spleen, the catzuc, as it is called, and the liver, to carry away all the bad blood from anyone who drinks it. It is wholesome for the blood; like the *Adiantum tenerum*, Swar. (*Culantrillo de pozo*) is the xmuɔcoc.

102—*Kinam tzucel, vaso yalabal.*

(Sotuta, f. 37 r.; Mena, p. 4).

Ca a ual u tokol tuzebal tu nooh u kab u benail u tzucel ca kohzabac zaacaan kiik ti ɔambil u kab ti kinal haa cabin tokoc cax yan u yicnal hanil (uyanal kohanil) ti bin hauac. Uamae cña oxppel kinbil uix ca au omantez ca a ɔa hunppel nok ichil le choco uix catun a hay yokol u tzucel le kohane. Uamae ca a cimez hunppel pek ca a hokez u tzucel chocotune ca a ɔa yokol u tzucel le kohane. Uamae ca a cimez hunppel pek ca a hokez u tzucel chocotune ca a ɔa yokol u tzucel akab cu zasztale a lukzic ti ca a ɔa t(i) kin hebix u binel u tihile bay bin u hauac.

*Throbbing spleen, bazo it is called (in Spanish).*

You tell him to be bled immediately in the right arm, the vein in the fleshy part. When the clotted blood dries, plunge the arm into warm water. When he is bled, even though it is a different disease, he will recover. Or else take three day old urine and steam it and put a cloth into this hot urine and spread it on the abdomen of this patient. Or else you kill a dog and take out its belly, warm, and put it on the (patient's) abdomen at night until dawn when you remove it. Then you put it on by day. As it dries up, so will (the complaint) cease, also.

103—*Kokob kiknak.*

(Sotuta, f. 21 v.; Nah No. 19).

Kokob kiknak zintun kiknak u lak u kaba ca a cña le kik cu kabilite paxe y kikche y kikaban y kiknioch chachil tulacal le xiuoba ca yuke hatzcab ua oena kin.

*"Poisonous snake dysentery."*

This kokob-dysentery is also called hot-stone-dysentery. You take the gum (rubber) used for beating a drum from the *Castilla elastica*, Cerv. (*Hule*), the kik-aban<sup>1</sup> and the kik-ni-och. Boil all these plants and let him drink (the liquid) at dawn or at sunset.

104—*Lombrices, u canil u nak winic.*

(Sotuta, f. 36 r.; Mena, p. 1).

Cña leche y cab y vinagre ca cultabac tu chun u nak bin u hokez tuzebal. Uamae u xulub puona ca a ixayte ca a ja ichil kinal haa yuke ichil cappel oxppel kin tulacal bin cimic. Uamae ca a puzt u kixel *picapica* a ja yokol yoch zaa hatzcabil maili u kam u chie, ua *xanchacche* chacbil ca chactac kinal ca yuk hatzcab.

*Worms in a man's bowels.*

Take milk and honey and vinegar and apply to the rectum (or lower abdomen). It will draw them out immediately. Or else the horn of a spike-horned deer. Grate it with a fish-skin and put it in warm water for him to drink. Within two (or) three days they will all die. Or else powder the thorns of the *Mucuna pruriens*, L. (or *Dolichos pruriens*, L.) and put it on atole for him to take at dawn before breakfast. Or the *Chiococca racemosa*, L. (*Cainca*), boil it and strain it; when it is warm administer it at dawn.

105—*U lom tokil hubnak.*

(Sotuta, f. 38 r.; Mena, p. 131; Nah No. 36).

Ca a cña u uich *op* ua u lee *zuhuy op* uaix u uich *pichi* huchbil (ticincunbil u polvosil) ca a ja yokol zaakuum xma ppobil u pach u kuumil ca a ja yuke.

*Cramps and diarrhea (Lit. stabbing diarrhea).*

You take the fruit of the *Annona reticulata*, L. (Custard-apple), the leaf of the virgin tree (same) or the fruit of the *Psidium Guajava*, L. (or *P. pomiferum*, L.) Mash them, dry and powder the same and put it on maize paste which is unhulled. Then you give it to drink.

<sup>1</sup> Kik-aban. Perhaps a form of *Castilla elastica*.

106—*U lom tokil hubnak y lothcehil.*

(Sotuta, f. 38 r.; Judío, p. 47; Nah No. 99).

Caxant u yoyolni *pixoy*, u lee *taamaay*, u lee *ixim-che*, u lee *muloch*, u lee *buhumkak* ua *buhumcoc* u lak u kaba cheche yacñibil bay hunppel tumin cab yalile ziz cabin ñabac yuke mehen palalob cax tan u xe cax yan u loth cehil bin hauac tumen.

“*Knife-thrust*” *diarrhea and cramps.*

Seek the tender tips of the *Guazuma polybotria*, Cav. (Guava or *Guayabo*), the leaf of the *Zuelania Roussoviae*, Pittier, and the *ixim-che*,<sup>1</sup> the leaf of the *Triumfetta semitriloba*, L. the *buhum-kak* or *buhumcoc*<sup>2</sup> as it is also called, its leaf. Crush these raw in the quantity of a tomin of honey. Cool the liquid and let it be given to drink to boys even though they vomit or if they have cramps. (The complaint) will cease by this means.

107—*Lucumcan kik, chibal nak.*

(Sotuta, f. 37 r.; Mena, p. 3).

Lic u chibal tu nak uinic, ca a cña lay *ñebxiu* a zizcuntic u kakil le u haxil (kaxil) yah cu yulel ti le u hobnel uinice, le chibal nak cu cimzic uinic. Ca a cña u motz *zubin* u motz *zaccatzim* u motz chichan *xaan*, cheche, catun a cocohtunte, ca puk y u motz lai cheoba kinbil tun ca a ña yuk le max yanil chibal nake.

“*Angle-worm blood*,” *abdominal pains.*

For this pain in a man's bowels you take this *ñeb-xiu* to cool the burning of this poison which gets into a man's bowels, the abdominal pains that kill a man. You take the root of the *Acacia spadicigera*, Cham. & Schl., (or *Cornizuelo*), the root of the *Mimosa hemiendyta*, Rose & Rob., the root of a small *Sabal japa*, Wright. Pound with a stone and dissolve (steep?) the roots of these trees. Then give it to drink to anyone what suffers from abdominal pains.

108—*Opilación.*

(Sotuta, f. 5 v.)

Le yah opilacione u hach lobil yaah zacyoomcan kamazcanciz yalabal. Ca a thunt yitz *yaxhalalche* ppizbil y dedal y hunthoh haa kinbil haa ca u yuke.

<sup>1</sup> *Ixim-che*. *Casearia nitida*, (L.) Jacq. (?) Lit. Maize-tree. P. P. calls it a certain plant or shrub.  
<sup>2</sup> *Buhum-kak*. Lit. *Buhum-fire*. The *Bohom* (Millsp) is the *Cordia gerascanthoides*, H.B.K. or *Borio*. It is called Spanish elm in the British West Indies.

*Obstruction of some vessel (here the spleen perhaps).*

This obstruction is a very serious complaint. It is called false pregnancy, kamaz-ant-mucus. You drop the gum of the *Pedilanthus Itzaeus*, Millsp., from a thimble into a small gourd of water, warm water, and let him drink it.

109—*Ppulbailik.*

(Sotuta, f. 37 v.; Mena, p. 5).

Cña u sebo uacax u sebo ceeh, ca a ɔa ti kinal haybil nok ca a pio tu nak bin hauac tumen.

*Flatulence.*

Take beef-fat, deer-fat, and spread it on a hot cloth and you bind it on the abdomen. It will cease by this means.

110—(*Ppulbal ik, zotzot cü*).

(Nah No. 35).

U pacal ppulba yk, zotzot cii. Ca cñabac tu nak pak kaxbi(1) yetel nok latulah yubic yutztal:

*The remedy for flatulence.*

Let there be bound on the abdomen a cloth until he feels better.

111—*Utial mac cu ppulbal u nak uinic.*

(Mena, p. 124).

Ca a cña le *pichiche* ca huñe catun a pak yokol lay chupul y ca a cho aceite paybe u hauac tumen.

*For anyone whose abdomen is inflated.*

You take the leaf of the *Psidium Sartorianum*, Niedenzu, and mash it, then you poultice it on the swollen part. You rub it first with oil. It will cease by this means.

112—*Ppulmal.*

(Sotuta, f. 37 v.; Judío, p. 80; Mena, p. 5).

Cña u sebo uacax, u enjundia xcax; uaix u sebo hxulub ceeh, kinkinal tune, cabin paotabac tu nak uinic, cax nucuch uinic, cax mehen palalob, bin hauac tumen.

*Flatulence, gas in the bowels.*

Take beef-fat, chicken-fat, or the fat of a horned deer. Warm it and massage the abdomen of the man with considerable pressure, whether it is an adult man or small boys. It will cease by this means.

113—*Ppulmal, lucumcan u kaba.*

(Sotuta, f. 36 v.; Judío, p. 81; Mena, p. 2).

Ca a cña oxppel ua cappel u lee *xhunpeokin*, bay u lee mehen *ac*, thumthumbal u lee ca a muc ti chicix taan ca tahle, ca a buhkupte u tanchumucil, ca a ja muxbil *asafran* yokol tozbil catun a kax tu nak le max yanil ppulmal ti yan le kohanil tu hobnil uinic u acal.

*Gas in the bowels, called worms.*

You take two leaves of the *hunpeokin* (*Tillandsia* sp.); it resembles the leaf of a small *ac*;<sup>1</sup> drops ooze from its leaf. You bury it in hot ashes and cook it. Then you split it up the middle and add crushed saffron sprinkled upon it. Then you bind it on the abdomen of anyone who has gas in the bowels. This is a disease of a man's bowels. This is the remedy.

114—*Ppuppul ik ti cñuplal.*

(Sotuta, f. 36 v.; Judío, p. 99; Mena, p. 3).

Utial u acac le ppuppul ik lic u tzayal ti cñuplale, ca a cña lay *zacal*, ca a hucñe, ca uomantez y haa, ca a ja tu hol u cucutil u cñuplil u hol u mah yan ppulik tie bin utzac tumen. Uamae u nek *putcan* ichil vino ca abac yuke.

*Gas in the bowels of a woman.*

To cure this gas in the bowels which attacks a woman, you take the *zac-lal*<sup>2</sup> (white nettle; *Ureca microcarpa*?). Crush it, steam it with water and insert it in the woman's vagina, if she has gas on the bowels. She will recover by this means. Or else the seed of the *Lepidium virginicum*, L. (*Mastuerzo*) in wine is to be given to drink.

<sup>1</sup> The *Ac* is a tall broad-leaved grass employed for thatching houses.  
<sup>2</sup> Possibly the *Zac-halal*, or *Phragmatis vulgaris*, Lam., is intended.

115—*Chuchup nakil, emplasto.*

(Sotuta, f. 17 v.)

Chābac *malvas* y zacan, unto sin sal y asafran, u kanheel xcax y aseite, chacbil tulacal, catun a huče ca a xakbez y hunppel tumin unguento kinkinal, ca a ɔa nok, catun a kax tu nak, cu hauzić le chuchup nakil ti uinic.

*A plaster for swollen abdomen.*

Let there be taken the *Malachra alceifolia*, Jacq. (*Malva*), and maize-paste, fresh grease and saffron, the yelk of a hen's egg and oil. Boil them all. Mash them and mix them together with as much ointment as will cover a *tomin-coin*. Warm and apply to a cloth which you shall bind on his abdomen to cure swollen abdomen in a man.

116—*Chuchup nakil y noh nakil.*

(Sotuta, f. 17 r.; Judío, p. 43; Nah No. 106).

Utial u ɔacal le chuchup nakil, noh nakil, zacyoomcan u lak u kabae ca chābac u mumun ich *huaz* lukzabil u noy ti tun bin uixnac kohan ichile chūycinbil yok kaak catun xic chābil u xethel u pach *zacnichte* t(i) kaax yalan kin licil u tipil kin ca u chā u ppiz yoc u ɔaic yok bay xanabe le ɔa(m)bil u kanil catun a chūycint tan kin. Cu ɔocole ca a ɔa t(i) yoc. Mucbil canppel u co ajo (ca a muc chicix taan) u hant ah kohan amal u zasztal, maili u kam u chie, amal hatzcab zanzamal, ppiz u kakba le *huaz* yanil yok kaak yanil uixe y u xanab boxel *zacnichte* ppiz u kakic uba xane baix bin u ɔuɔic uba y u ɔumul u chupil u nak ah kohan xan, bin utzac tumen.

*Swollen abdomen.*

To cure this swollen abdomen, big belly, false pregnancy is another name, let there be taken the green fruit of *Crescentia cujete*, L. (*Guiro*), remove the pulp and let the patient urinate in it. It is to be hung over a fire. Then let him go and get a piece of the bark of the *Plumeria alba*, L. (*Flor de Mayo blanco*) in the forest, in the sunlight when the sun rises. Then let him take the measure of his foot and put it on his foot like a sandal, so that it gives out its yellow coloring matter. Then hang it in the sun. After you have put it on his foot, bury four cloves of garlic in hot ashes for the patient to eat every morning before he takes his breakfast, every day at dawn, while the *Crescentia cujete*, L., is being heated over the fire with the urine in it, and until the bark of the *Plumeria alba*,

L., is heated also; just as these dry out, so will the swollen abdomen of the patient be consumed and reduced also. He will recover by this means.

117—*Noh nakil.*

(Sotuta, f. 37 v.; Mena, p. 5).

Ua tu manez kik mix kanan haa, chococint hunppel mazcab ca a cña u lol *granada* y kelbil arroz y u lee *pichi*, huchbil catun a ða ichil ca luch haa catun a cña le choco mazcab chac holene ca a tup ichil le hae ca a ða ayudail ti.

*Swollen abdomen.*

If he pass either blood or much water (as a symptom) you heat an iron and you take the flower of the *Punica granatum*, L., and roasted rice and the leaf of the *Psidium guajava*, L. (or *P. pomiferum*, L.) Mash them and put into it two gourds full of water. Then you take the iron, red hot, and extinguish it in the water. Then you administer an enema to him.

118—*Ta kik zoꝝ.*

(Sotuta, f. 39 r.)

Ca a cña zoꝝ y vino yuke, mentabil u polvosil osten bin yukic. U lake, u pach *granada*, y u lol y cacau kelbil u polvosil ichil vino yuke. U lak xan u xulub ceeh pulbil kaak, ca a ment u polvosil ti ua ta uila ch . . . cuche, ca a ða ichil ziz . . . yuke. Ua ta uila ziz yanil xane ða ich vino yuke. U lak xane chuc huntul *hcolomte* le yan t(i) cahe tooc tulacal y u kukmel cu ziztale ca a polvoste xakbil ichil vino ca yukic cax uchben kik taa. Uamae æœœc polvora y hunppel hee hokzabil u zac heeil, y æœœc cab bokbil y æœœc haa y æœœc *pimienta de Tabasco*, ca a ða yuke. Uamae u kab *chac ic* y hunppel co tab ða t(i) yeeb cu ziztale ca a ða yuke.

*Blood in the feces, a bat (is the remedy).*

You take a bat in wine for him to drink. It is to be powdered. Three times he shall drink it. Another (remedy) is the bark (or skin) of the *Punica granatum*, L., and its blossom and roasted cacao, the powder in wine, for him to drink. Another (remedy) also is the horn of a deer thrown into the fire and (then) powdered. If you see that . . . is the cause, then you put it into cold . . . for him to drink. If you see that there is mucus also, put it in wine for him to drink. Another (remedy) also is to catch a male wood-

pecker (Ceophloeus Scapularis, Vigors), the kind that is (found) in town. Burn it, feathers and all; when it cools you powder it and mix it with wine for him to drink, even though it is a chronic case of blood in the feces. Or else a little gunpowder with one egg, the white removed, and a little honey beaten up with a little water and a little Myrtus pimenta (*Pimienta de Tabasco*) and give it to drink. Or else the juice (or sap) of the Capsicum axi, Vell. (*Chile colorado*) with a crystal of salt. Put it out in the dew until dawn and then give it to drink.

119—*Tippte tu nak uinic.*

(Sotuta, f. 36 v.; Mena, p. 2; Nah No. 59).

Ca a cña lahunpiz limones, ca a yeo u kabil t(i) luch ca a oa lahunoit *max yc havana yc* ichil le u kabil le limones, ca a cñuycint tu chi na, ocnakin cu zasztal tune ca a kinte ca a oa yuke. Hetun ua le hach ya nakile hach tzem u uinicil oambic u taa cño y haa lahunpiz kin oambic u ta cño hunppel escudilla u yalil bin yuke ua hun thoh yalil u taa cño oabac ti lae, canten bin yukic, canppel u manez cabin yuke ua oxppel kin.

*Hysteric pulsation of the abdomen.*

You take ten lemons and squeeze the juice into a gourd. Then add ten peppers of the Capsicum frutescens, L., or of Havana chile into the juice of these lemons. Then hang it in the doorway of the house from sunset until dawn. Then warm it and give it to drink. But if the abdominal pains are very severe, if the man is very weak, soak the excrement of a rat in water; for ten days the rat-excrement is to be soaked, one porringer of the liquid. Let him drink this, or a small spinner's gourd of the liquid rat-excrement shall be given to him. Four times he shall drink it, four times he shall pass it in three days.

120—*Tub kik.*

(Sotuta, f. 33 r.; Mena, p. 78; Nah No. 66).

Le ma xe kiki. Ca a cña u motz *zinaanche y tulixkik* yan ti luum, matech u nohochtal le xiu, olah bay u lee *chichibe*, bay *kanan* kik u tane le tuna chacbil ca oabac yuke.

*Spitting blood.*

This is not blood-vomit. You take the root of the *Zanthoxylum caribaeum*, Lam., and the tulix-kik; it lies on the ground, it does



not grow large, does this plant. It smells like the leaf of the *Sida acuta*, Burm., it is like the *Hamelia patens*. This tuna is to be boiled and given to drink.

121—*Tub kik.*

(Sotuta, f. 38 v.)

Le *zizalxiu* yayax u lee u *chupile*, hetun ahxibbile chachactac u le le tun u *xchupile*, cu *chabal* chacbil, catun a *ja* yuke u kabil. Uamae *cha xucul* pakte y *xbaal uo* y u lee *chaczik* utz tulacal catun a *yeo* kabil ti escudilla a *ja* yuke. Uamae *chacmul* y *xkantunbub* ca a chace catun a *ja* yuke. Uamae ca a *ja pakal* y azucar yuke. U *oc* bet u tokol *yoc* bin utzac tumen.

*Spitting blood.*

This *Brophyllum pinnatum*, Lam. S. Kurz., (*Siempre vive*), green is the leaf of the female (plant), but the male has a red leaf. This, then, is the female which is to be taken, boiled, and the liquor given to drink. Or else take the *Portulaca oleracea*, L. (*Verdolaga*) together with the *ix-baal-uo* (*ix-bacal-uo?*) and the leaf of the *Caesalpinia pulcherrima*, L. (*Flor de camaron*). They are all good. Then you squeeze the juice into a porringer and give it to drink. Or else the *Gomphrena dispersa*, Standl. (*Amor seco*), and the *Sanvitalia procumbens*, Lam. (*Sanguinaria de flores negras*); you boil these and give it to drink. Or else you administer an orange with sugar for a drink. Finally let his foot be bled. He will recover by this means.

122—*U sacal wan kik.*

(Nah No. 53).

Cu pulic *chuplal* ca *chabac* u motz *pom(ol)che*, yan ti lakine, yetel u motz *chü* yetel u pach *abal*, *ix-houen*, hucñilob ca mucuc catun *abac* yuke canten bin u muchal ca cabeh u *abal* yuke can canten bin yukic xan.

*The remedy for dysentery.*

When it attacks a woman, let there be taken the root of the *Jatropha Gaumeri*, Greenm. (*Piñon*), it is in the east, also the root of the *Malpighia glabra*, L. (*Nancén*), and the exterior of the *Spondias purpurea*, L. (*Ciruela colorada*), mash them and cover them up. Then let it be given to drink. Four times they shall be covered and on the second day given to drink. Four times it shall be drunk.

123—*Xaan kikob.*

(Sotuta, f. 19 r.; Judío, p. 60; Nah No. 4; Kaua, f. 149 r.)

Cña *xanabmucuy* ca a huçhe, ca puk y vino ca a ða yuke cu hauziç taa kik xan. Uama tu hauai . . . u yal *kankub* toçbil ca a hokez yal ca a yaçite catun a ða yuke bin utzac tumen.

Bay xan u motz *pomolche* yan ti lakin y u motz *chi* u pach *whouen*, chacbil y hunppel u co tab, canten bin betabac ca cabeh a ðaic yuke. Uamae cña u yol u chul zuhuy *xaan* y *cabal xan* y u chun zuhuy *hinim* chacbil, kinal cabin a ða yuke hatzcab bin utzac tumen.

Uamae lic u tocabal lay uoo, ca mentabac chichan mucuc bolsa nok utial u ðabal u tanil, catun cña bac le mucuc u tanil uooc ca a ða yumte (tu chun u nak) lay kohane.

Uamae u zac taa pek ticine cici muxbil ca a ða ichil yukul, caxbalac yukul. Uamae poc u yal kan *kankub* u hante y yuke bin hauac tumen.

Uamae cña u tzuc nal huçhibil catun a cña u boxel hee a toce ca a muxe, catun a ða ichil huçhibil tzucnal ca a ða yuke. Uamae cña u chacil u lol *zulubtok* y u chacil u lee *chun* huçh ca a ða yuke.

Uamae cña u kab *yerba buena* y vinagre y u semillail *yanten* huçhibil ca a ða yuke, kinkinal cabin yuke. Uamae ca huçh *zizalxiu* ca a kax tu tzem. Uamae ca chac *akantunbub* y azucar y *romero*, ca a ða yuke. Uamae u kab *zizalxiu*, hunppel escudilla yalil ca a ða yuke ti çhuplalob cu manziç kanan kik cña u . . . melon ca a chac y chen haa kinkinal cabin ðabac ti yuke.

*Dysentery.*

Take the *Euphorbia hirta*, L. (*Yerba del pollo*), (or some other small prostrate *Euphorbia*). Crush it and dissolve it in wine. Then give it to drink to put an end to blood in the stools. If it does not cease, there are the young kan-kub (an insect). Burn (the nest); take out the young ones and crush them. Administer them in a drink. He will recover by this means.

Thus also the root of the *Jatropha Gaumeri*, Greenm. (*Piñon*), it is in the east, and the root of the *Malpighis glabra*, L. (*Nancén*), and the exterior of the *Spondias purpurea*, L. (*Ciruella colorada*). Boil them with a crystal of salt. Do this four times, and after two days you give it to drink. Or else take the interior of the trunk of a virgin *Sabal japa*, Wright, and the *Tubiflora squamosa*, (Jacq.) Kuntze, and the trunk of a virgin *hinim* (*Spondias lutea?*). Boil these and give it to drink, warm, at dawn. He will recover by this means.

Or it is by burning this frog; make a little cloth sack to put the ashes in. Then take the sack of the ashes of the frog, and apply it to the rectum of this patient.

Or else the dry excrement of a dog is to be crushed; put it in his drink, whatever his drink is. Or else roast the young kan-kub for him to eat and drink. It will cease by this means.

Or else take green corn-silk; crush it. Then you take an egg-shell; burn and grind it. Then put this in the crushed corn-silk and administer it in a drink. Or else take the red flower of the *Bauhinia divaricata*, L. (*Calzoncillo*) and the red leaf of the *Maximiliana hibiscoides*, Humb. & Bonpl.<sup>1</sup> Mash them and give it to drink.

Or else take the juice of mint with vinegar and the seeds of the *Plantago major*, L. (*Llanten*). Mash them and give it to drink, tepid, when he drinks anything. Or else mash the *Bryophyllum pinnatum*, (Lam.) S. Kurz. (*Siempre vive*) and bind it on his breast. Or else you boil the *Sanvitalia procumbens*, Lam., with sugar and rosemary and give it to drink. Or else the juice of the *Bryophyllum pinnatum*, (Lam.) S. Kurz., a porringer of the liquid, and give it to drink . . . for women who pass considerable blood take the . . . melon and boil it with water only. Let it become tepid and give it to drink.

124—*Xan kik, uix kik.*

(Judío, p. 78).

U sacale top zicil huntzel oc y mehen zicil huntzel oc xan ix *chac xicin che* u motz *zaccatzim* u le *chacculubtok* y u le *chimtok* y lahunpiz *xmaxyc* huc(h̄) bil tulacal ukbil yitz *kikche* u yitz *pomolche* u le *xaan* muchucnac u leech *xaan* yalabal u le *xitnac* loe u motz y yoyol ni *kuxub* u *chachacil xicinche* u macapil *halal* u macapil *kaxil koch xcabal xaan xcabal huaz pakunpak chackewel* niete u nie uaix u motz *chac zinkin* hoppel cheche cacau huntzel oc mehen zicil canoit tancaz *yc* huc(h̄) bil tulacal ukbil utzi xan *xpakunpak* chacbil y azucar latulah u lutzba u chicul u tahal ukbil lic u nicic uix kik y kik choch binix hauac hubnak tumenel u uich *mehen chun* hucñebil ca chachtabac hatzcab mail u kam u chie ca yuke u sacal.

*Bloody flux and blood in the urine.*

The remedy is thick gourd-seeds, one handful, small gourd-seeds, one handful also; the *chac-xicin-che*, the root of the *Mimosa hemiendyta*, Rose & Rob., the leaf of the *Bauhinia Cavanillei*, Millsp. (*Pie de venado*), the leaf of the *Krugiodendron ferreum*

<sup>1</sup> Chun, or *Maximiliana hibiscoides*. The Judío MS mentions the *ix-chuu* in this connection, which is a tree-parasite resembling a pink.

(Vahl.) Urban (*Quiebra hacha*), and ten peppers of the *Capsicum frutescens*, L. (*Chile del monte*), all crushed together for a drink. The gum of the *Castilla elastica*, Cerv. (*Hule*), the gum of the *Jatropha Gaumeri*, Greenm. (*Piñon*), the leaf of the *Sabal japa*, Wright; the curling pendent leaf, as it is called, is to be unfolded. The root and the tender tips of the *Bixa orellana*, L. (*Achiote*), the *chac-xicin-che* (a red tree fungus), the pith of the *Scirpus validus*, Vahl., the pith of the *Cecropia obtusa*, Trec., the *Tubeiflora squamosa* (Jacq.) Kuntze, the low *Crescentia cujete*, L., the *Yerba de la golondrina* (*Euphorbia dioica*, H. B. K.?), the *Loranthus calyculatus*, DC. (*Muérdago*), the flower or the root of the *Caesalpinia pulcherrima*, L. (*Flor de camaron*), five raw cacao beans, a handful of small squash-seeds, four peppers of the pure *Capsicum annum*, L., are all boiled for a drink. Good also is the *Yerba de la golondrina* boiled with sugar until it curls like a hook, a sign that it is cooked. It is to be drunk to stop blood in the urine and dysentery. Also diarrhea will cease by this means. The fruit of the *mehen-chum* (a *Peperomia*?) is to be mashed and strained; at dawn, before breakfast, let him drink the medicine.

125—*Xe kik*.

(Judío, p. 80; Nah No. 21).

U sacale yitz *xpomolche*, *chactez*, u macil u capil *kawil-koch*, *xtuzil*, *chac-kan-cab*, *chac-piliz-mo*, *chac-piliz*, *chac-xicib*, *macap-lum* *hucñibil macoc zum*, *kankan* u top y *kuxubcan* y *xanabmucuy* *ukbil* u *sacal*.

U sacal *xe kik* tu kinil tu tanil ca *ñabac xincan* y *xcantaxi* y *ñilimcan* y u *yalaelel*, *chacmuc* y *canchacche* ak ca *chacac hunppel* akab ca *ukuc lae ppiz* u *zappal yalil* hun *ppul cabin* *chacace*.

*Blood vomit (yellow fever?)*

The remedy is the gum of the *Jatropha Gaumeri*, Greenm. (*Piñon*), the *chac-tez*,<sup>1</sup> the pith of the *Cecropia obtusa*, Trec., the *ix-tuzil* (clothes-moth), a certain reddish earth, the (feathers of) the *chac-piliz-mo* (a certain small red parrot) and of the Yucatan cardinal, the *macap-luum* ground up with the *mac-oc*, the *Tithonia rotundifolia* (Mill.) Blake, yellow are its shoots, the *Rivina humilis*, L. (*Coral*) and the *Euphorbia hirta*, L. (*Yerba del pollo*). The remedy is to be drunk.

The remedy for blood-vomit: let there be taken the *Sesuvium Portulacastrum*, L. (*Verdolaga de la playa*) the *ix-canta-xii*, and

<sup>1</sup> *Chac-tez*. Lit. red *tez*. The *Tez* has been variously identified as *Amaranthus amectus*, *A. hybridus*, L. and *A. spinosus*, L. so it may well be one of these or something very similar. The *Zac*-(white)-*tez* is *A. polygonoides*, L.

the *Oxalis yucatanensis* (Rose) Standl. (*Agritos*), the *Rauwolfia heterophylla*, Roem. & Schult., and the *Chiococca racemosa*, L., the vine. Let these be boiled one night and then drunk. Until a pot of the liquid is boiled away let it be drunk.

126—*Xe kik*.

(Sotuta, f. 23 r.; Judío, p. 80).

Caxant u chacil u kukmel *moo* u chacil u kukmel *chacxib* u chacil u kukmel *chactun piliz*, ca a toce, catun a ja u taanil yuke, bin hauac y kik tu ni uinic bay xaan kik xaan.

*Blood-vomit (yellow fever)*.

Seek the red feathers of the macaw, the red feathers of the Virginia cardinal, the red feathers of the chactun-piliz (a small red parrot). Burn them and then put the ashes in his drink. It will cease, as will bleeding at the nose and dysentery also.

127—*Utial xe kikob y xtuu tamnel*.

(Sotuta, f. 22 v.; Nah No. 52).

U chicule tan u xEIC kik, ca jabac u kabil *contrapeste* hokzabil ti alquitara, ca yuk u kabil, lay *xchilimkak* yalabal, ua minan u cuchil u hokzaale, utz u huchul ca pukuc yetel mayab, ca a chachte, catun a ja yuke. Ma takancunbil halil u kintale ua zutkakbil y luch, ca jabac ti yuke.

Bay xan laili le kohanila, chabac letie *xuican* y *xchilimcan*, canppel *xiui* y *yala elal* y *chacmulahkak* y *chemchaccheak* (can-chacche-ak?), ca chacac hunppel akab hum ppul yaalil bay hunppel tumin cab yalae ca a ja yuke bin hauac tumen.

Uamae zat yeeb u *oul xiu*, huchibil ca a zulaan ichil ca jabac ti yuke le xiua le cu zihil nak pakobe. Bay xan yoyolni u lee *kuxub*, *cabal xaan* yoyolni *chaculubtok* yoyolni *puvim*, yoyolni *chaczinkin*, y caoit *maxyc*, huchibil ca jabac yuke bin hauac tumen. Bay xan xekik chachac yan ti uinice, u lee *puvim*, u lee *kuxub xabal xaan* u uiiob y u motzob pakte y u chacil *omak* u y chacil *cha(c)zikin*, y u chacil bol yan ti pintor licil u abal oroe, y u chacil u *cuxumche* (xnuc ic yalabal), lay petelpete, lay hach chace, y u hach chacil *xnucic* y u kabil limones, y u kabil u taa tzimin lay castaño y *cambalhau* y zuhuy cab likul ti hobnil, chacbil ca jabac yuke u jac.

*For blood vomit and "rotten liver."*

The symptom is that he vomits blood. Then let there be given the liquor of the *contrapeste*, extracted from a still, and let him

Drink the liquor of this ix-chilim-kak as it is called. Or if there is not at hand the apparatus for extraction, it is good to mash, steep and strain it through a sieve. Then give it to drink. It is not to be heated, only warmed or heated in a gourd. Then let it be given to him to drink.

Thus also (for) a chronic case, take the ix-oui-can and the ix-chilim-can, four Red-eyed Cowbirds and the Oxalis yucatanensis, (Rose) Standley (*Agritos*) and the Chac-muclah-kak, and the chem-chac-che-ak. Boil these for one night, a pot of the liquid, until the amount of a tomin of honey remains. Then give it to drink. It will cease by this means.

Or else put out in the dew the oul-xiu,<sup>1</sup> mash it and steep it and let him drink this plant which grows or sprouts from the face of a wall. Thus also the tender tips of the Bixa orellana, L. (*Achiote*), the Tubiflora squamosa (Jacq.) Kuntze, the tender tips of the Bauhinia Cavanillei, Millsp. (*Pie de venado*), the tender tips of the Colubrina Greggii, Wats., the tender tips of the Caesalpinia pulcherrima, L. (*Flor de camaron*) and two peppers of the Capsicum frutescens, L. (*Chile del monte*). Crush these and administer (the juice) as a drink. It will cease by this means. Thus also for blood-vomit which is very red in a man, the leaf of the Colubrina Greggii, Wats., the leaf of the Bixa orellana, L. (*Achiote*), the Tubiflora squamosa, (Jacq.) Kuntze, their tubers and their roots together, and the red part of the Gouania dominguensis, L., and the red bole employed by a painter for gilding, and the red cuxum-che (mouldy tree). This is round; this is very red. Also very red old ripe chile and the juice of lemons, the liquid or juice of the taa-tzimin (horse-dung or tapir-dung), this *castaño* (chestnut), and the Dorstenia contrajerva, L. (*Contrayerba*), and virgin honey, fresh from the hive. Boil these and give the medicine to drink.

128—*U xiuil xan kik ti chup.*

(Judío, p. 79).

Ca chacac hunppel libra *xchalche lal xanabmucuy ix pakunpak kikche chacwicinche xibkiik* u kikel u uich *num y numtzutzuy* u takanil *mukay* u macapil *halal* u macapil *zakab* lay cappel habene *xmacap-lumil* u kukmel *mo chacwixib* kakkbil ca zibanac u lumil yit ppul u noy *kuxub* ukbil lae.

*The plants for dysentery in a woman.*

Let there be boiled one pound of the Pluchea odorata, L. (*Santa Maria*, or *Salvia*), the Urera microcarpa, Wedd. (*Ortiga*), and

<sup>1</sup> This "u oul xiu" may be intended for zizal-xiu, or Brophyllum pinnatum, S. Kurz, which grows in the manner described in the text.

*Euphorbia hirta*, L. (*Yerba del pollo*), the *Yerba de la golondrina* (*Euphorbia dioica*, H. B. K?), the *Castilla elastica*, Cerv. (*Hule*), the *chac-xicin-che* (red tree-ear, a certain tree-fungus), the *xib-kiik* (*Tetramerium scorpioides* [L.] Hemsl.), the blood (red juice?) of the fruit of the *Acanthocereus pentagonus*, Brit. & Rose, a mass of cochineal,<sup>1</sup> the pith of the *Scirpus validus*, Vahl., the pith of the *zakab*, the two-year old macap-lumil, the feathers of the macaw and of the Yucatan cardinal, burned. Then dry the sediment from the bottom of a pot, the fecula of the *Bixa orellana*, L. (*Achiote*) to be prepared for a drink.

129—*U sacal ya nak coc.*

(Judío, p. 110).

*Canche* yan alic *zac-kokob-cheeyl*, lay lie yukic mac yanil ya nak u boxel u pach u sacal coc ca hoyabac u cal y *maxyc* yan mac alic *zac-kokob-cheeyl* yalic *coc-cheeyl cancheyl* yalabal.

*The remedy for abdominal pains and asthma.*

The can-che, there are those who call it *zac-kokob-che*. This is what anyone is to drink who has abdominal pains. Its bark is the remedy for asthma. Let his throat be swabbed with the *Capsicum frutescens*, L. (*Chile del monte*). There are those who call (the first mentioned plant) the *zac-kokob-che* (white poisonous-snake-tree), and they call it *coc-che* (asthma-tree); the can-che (snake-tree) they call it also.

130—*Ya nak ep, opilación, dolor de vaso.*

(Sotuta, f. 16 r.; Judío, p. 84).

Le u chupul u catzucil uince. Caxant u habente co tzimin tocbil y hun xeth *epche*, takuntak tu pach *tzalam* letie *epche* uaix *chucum* caxbalac cheil y canoit tancaz *yc* hucñibil y u pukil uich *luch* yeöbil u yalil le u kabilte kinkin cabin öabac yuke u chichtal nak yichpuczikal u öace öilaac u kanil yich *naranja* ca öabac ti yeeb cu zasztale ca öabac tabi ca u hante pakte y tocbil azucar, utz u kumcintic ya nak cu öacintic.

*Abdominal pain, obstruction of the spleen.*

This a swelling of a man's spleen. Seek an old horse-tooth; burn it; also a piece of the *ep-che* (tree-spleen) which adheres to

<sup>1</sup> Takanil mukay. This passage could be translated either as the cochineal or the sticky portion of the cactus on which the cochineal is found.

the bark of the *Lysiloma latisiliqua*, L., this ep-che, or to the *Pithecolobium brevifolium*, Benth., or any other trees; also four pure chile peppers (*Capsicum annuum*, L.) Crush these with the pulp of the fruit of the *Crescentia cujete*, L. Press out the juice, warm it and let it be drunk. For hardening of the abdomen, of the stomach, the remedy is to remove the yellow part of an orange. Leave it out in the dew until dawn; then let salt be added, and let him eat it together with burned sugar. It is good to soften the sore abdomen, to cure it.

131—*Ya nakil.*

(Sotuta, f. 36 r.; Mena, p. 63; Nah No. 28).

Lahcapiz kin aman u taa choo y u canil ac y habentunil u taa tzimin aman tune ca abac yaalil yuke bin hauac tumen.

*Abdominal pains.*

For twelve days the excrement of a rat and the shoots of the ac<sup>1</sup> have been soaked (in water) with year-old horse manure. After they have been soaked, let the liquid be given to drink. It will cease by this means.

132—*U yatal u chun uinic.*

(Sotuta, f. 45 r.)

Chā malbas a chace y u co tab utial a ppoic le yai ti ina a ppoic y a kab y pio yoklal ma u chupul bay hatzcab bay tu pach hanal cu ocole u ppobila ca a cho u mant(eca) uacaxe cumzic. (Uamae) u kab zeboya ti ya chunile. Uamae u maõil arina ca a chace y ca chāh ua ox chāh limones ichil catun a hokez a too tu xethel nok ca culac yokol.

*Sore anus or rectum.*

Take the *Malachra palmata*, Moench., and a crystal of salt in order to bathe the sore. You might well bathe it with your hand and with cotton-wool, so that it will not swell, both at dawn and after he eats. After you have bathed it, then you rub on beef-fat to reduce it. Or else the juice of an onion on the sore anus. Or else the bran from flour. You boil it with two or three drops of lemon-juice in it. Then you take it out (of the dish) and put it on a cloth and let him sit upon it.

<sup>1</sup> Ac. A tall broad-leaved grass growing in the savannahs and used for thatching.



133—*U yatal u chun u nak uinic.*

(Sotuta, f. 45 r.)

C̄ha cappel onza *pom* cici too y hunppel chinchā paño ca a ɔa ichil hunppel chinchā cum y hun oc xnuc *yc* ca a chace ppiz u kuchul hunppel escudilla ca a ɔa yuke, u xixile ca kaxac tu puczikal.

*Sore anus or rectum.*

Take two ounces of copal and wrap it well in a small cloth and put it in a small pot with a handful of old ripe chile-peppers. Then boil it until there is a porringer full left. Then give it to drink. The sediment is to be bound on his heart.

134—*Yaya tamnel.*

(Sotuta, f. 37 v.; Mena, p. 6).

Lay xiu *zahum* u kaba chacbil u lee ca u hante catun u kab licil u chacle, ichil hunkal kin bin u hantic y yukic yalile cu hauā tumen.

*Liver complaint.*

This plant, *zahum* is its name (*Zexmenia hispida ramosissima*, Greenm.) is to be boiled, its leaf, and let him eat it and then (take) the liquor in which it was boiled. For twenty days he shall heat it and drink the liquor, that it may cease by this means.

135—*Zac kik nak.*

(Sotuta, f. 21 v.; Nah No. 54, No. 56 and No. 57).

Le zac kik nak bay puhe. C̄ha u lee *ich huh* y *woltenuc* yac̄bil, kinbil ca ɔabac yuke. Bay xan u lak u ɔac kik nak lae kiknak hunppel akab u chacal u yitz *pom* y u yitz *tahte*. Lay bin ɔabac yuke bin hauāc tumen.

Uamae yoyolni u lee *ɔucuc*, u motz *pichiche* cocohtunbil u kabil tune ziz cabin ɔabac yuke bin utzac tumen.

## "White dysentery."

This white dysentery is like pus. Take the leaf of the *ich-huh*<sup>1</sup> and the *Hyptis suaveolens* (L.) Poit. (*Confitura*). They are to be

<sup>1</sup> *Ich-huh*. Perhaps *Eugenia axillaris*, (Swartz) Willd. Lit. Iguana-eye. Cuevas describes it as a plant half a meter high with dark green aromatic leaves. It has an odor like that of cloves. Flowers have violet petals. The fruit forms in small clusters.

crushed, warmed and given to drink. Thus also another remedy for dysentery is for one night to boil the gum of the *Protium copal*, (Schl. & Cham.) Engl. (*Copal*) and the gum of the tahte.<sup>2</sup> This shall be given to drink. It will cease by this means.

Or else the tender tips of the leaves of the *Diphysa robinoides*, Benth., the root of the *Psidium mexicanus* (Berg.) Niedenzu, pounded with a stone (to extract) its juice. Let it be cold when given to drink. He will recover by this means.

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## BURNS

186—*Chuhul*.

(Sotuta, f. 45 r.; Kaua, f. 149 v.)

Ca nabzabac u cabil colmenas tuzabal. Uamae u yitz *kum nabzabali*. Uamae nabez u yitz *nictai*. Uamae u lee *yanten* y vinagre y u lee *malbas*, chacbil y vinagre ma haai cu *ocol* a chacice ca a *yachit* y aseite, ca a nabez. Uamae u hach zacil kuultaan *oam t(i)* haa cu *chaltale* ca a pule *oam tucaten* cu *chaltale* ca a pul tucaten xan ppiz tu bolonten a *oamic* y a pulic u haaile catun a *cha* u noy le taane ca a *yach* u kanheel *xcax* ca a nabez yohol (*yokol*) u *chuhul* bin hauac tumen le u kiname. U lak u *oace* ca a *cha* u kanheil *xcax* ca a homoch boke catun a *oa* yokol le *chuhule*. Uamae choo aseite ca a ppoo paybe ti aseite, oxten, catun y hunppel pluma yohol (*yokol*) le *chuhule*. Uamae, *cha* u taa taman catun a choo yokol le *chuhule*. Uamae *cha* a tooce catun a men u polvosil ca a toz yokol lay *chuhule* cu hauzic. U lak *oac* *chuhule*, *cha ibincan* ua ma a uohel *ibincane*, *cha* u lee ti le *ib* cu hantale ca a *yeo* u kab tuhunali, mix hun *chah* haa bin *oabaci*.

### Burns.

Let it be anointed with honey fresh from the hive, immediately. Or else the gum of the *Cucurbita moschata*, Duch., is to be anointed. Or else anoint the gum of any *Plumeria*. Or else the leaf of the *Plantago major*, L. (*Llanten*) and vinegar and the leaf of the *Malachra palmata*, Moench., boiled with vinegar, not water. After you have boiled it you crush it with oil and anoint it (on the burn). Or else very white lime is soaked in water until it is dissolved, then thrown in water to soak again and again until it has been soaked nine times in water. Then you take this sediment of the lime with

<sup>2</sup> Tahte. In the Peten district this is the name for a pine. (Means, 1917.)

the yolk of a hen's egg and anoint it on the burn. It will stop the pain. Another remedy is to take the yolk of a hen's egg and beat it quickly and apply it to the burn. Or else rub on oil. Bathe it with oil first, three times, then apply to the burn with a feather. Or else take the dung of a sheep and rub it on the burn. Or else take an old sole (of a sandal) and you burn it. Then powder it and sprinkle it on this burn to cure it. Another remedy for a burn is to take the *ibin-can*<sup>1</sup> or if you do not know the *ibin-can*, take the leaf of the *Phaseolus lunatus*, L., which is eaten and squeeze the juice on it only, not one drop of water shall be given.

137—*Chuhul ti kak.*

(Judío, p. 112).

U sacale citac u socol u chu(hu)le ca cñabac yitz *kikchee* ca u nabez yok chuhule ua bin uakac tumen hach yail chuhule ca tocac u cheel *numtzutzuy* ua u boxel ca tozoc tu uaklil chuhule lay bin manzic lay bin yoxinte hetun ua ma yae chen yitz *kikche* bin sacac zizcuntic.

*A burn from fire.*

The remedy is as soon as the burn has occurred let there be taken the gum of the *Castilla elastica*, Cerv. (*Hule*) and you anoint it on the burn. If it shall crack because of the severity of the burn, then let them burn the stalk of the *Acanthocereus pentagonus*, or its bark. Let it be sprinkled on the crack of the burn. This will relieve it; this will be a protective covering. But if it is not so serious, only the gum of the *Castilla elastica*, Cerv., shall be applied to cool it.

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## CHARMS, MAGIC

138—*Ceeh cu yocol ti col.*

(Judío, p. 66).

U sacale u zebo *uacax* y *coh* y *ceh* y *boolay chacekel* huc(ñ) bil y *ajos* catun a chac lay kan y lay seboob y *ajos* utial a zin tu pach

<sup>1</sup> *Ibin-can*, Lit. *Ibin-shoot* or sucker. There is an *ibin-xiu* (*ibin-plant*) which is identified as the *Valerianoides Jamaicensis*, L. Kuntze. (*Verbena*).

*col*, bin hauac yocol ichil col cu haul u boc lay kane ca chac tucaten ua canan cool u sacal hach canan col.

A sonic ceh matan yalcab u sacale he cabin a son hxulub ceh ca hokezu xnoklil u ni ca haykinte piz(z) u kakbae catun a sa tu payoil a son ma a lukzici matan yalcab ceh tech te u tale u sacal tumen yolah ca yumil ti Dios ca ualac bay yalic nucuch ah sac yahob xan lay u ni u ne puonabe ca uet ximbalte matan uchic ech can tumenel.

*Deer entering a field.*

The remedy is the fat of a bull and a puma and a deer and a jaguar. It is to be mashed with garlic and then you boil a rope in this grease with garlic in order that you may stretch it behind the field. These (deer) will cease to enter the field. When the odor of this rope ceases, then boil it again, if the remedy is to really guard the field.

You shoot a deer when it is not running for a remedy. It is a horned deer that you shoot. Then remove (any) maggots<sup>1</sup> from its nose and stretch it out in the sun to dry. Then you (thus) indicate that you have shot and carried away a deer that was not running. This remedy comes to you by the will of our Lord God, while it is related by the great medicine-men also. This is the end of the tail of a spike-horned deer and you walk about with it. A snake will not approach you because of this.

139—*U sacal a chucic xinan.*

(Judío, p. 93).

Ca a ual u kaba lay xiu duguen dontado ydaman he a chucic ma u chi ceche hehel u ximabal ta kabe.

*The "medicine" to catch a scorpion.*

<sup>2</sup>Then you say the name of this plant, duguen<sup>3</sup> dontado ydaman. Thus you catch it. It does not sting you. It changes its course toward your hand.

1 Xnoklil u ni. The above is a literal translation, but it may be surmised that perhaps the copyist has made a mistake and what is meant is that the hide be removed.

2 If we change the word *kaba* to *kab*, the reading could be,—“Then you raise the branch of this plant” etc.

3 Duguen dontado ydaman. These words have a Spanish appearance as neither the “g” nor “d” occur in Maya. As in many charms used in Spain to this day, these words have been distorted beyond recognition.

## CHILLS AND FEVER

140—*Akab chacuil, akab kilcab.*

(Judío, p. 12).

U sacale hunppel uahil zacan ca pukuc kinkinal ha ca pakac yokol akab chacuil y akab kilcab utz ix u ppobol y pah pocol haa.

*Night fever, night sweat.*

The remedy is one cake of maize-paste. Let it be dissolved in tepid water and poultice it on the (patient suffering from) night fever and night sweats. It is good also for it to be bathed with sour maize-paste (in) water.

141—*U sacal akab chacuil.*

(Judío, p. 103).

He sam chacbil (*chacuil*) xiu lic yalabale lay akabxiu licil u ppobol palalob y yan akab chocuil tiobe ci u boc xiu chenbel ambil ti haa cu yocol kine ca samac ti hunppel lec cu zahtale (zaztale) ca tozoc yokol kohane tibil ca bin sabac ti lic ix u haul y hobnil haa y *kanleca*y kinkinal cabin yic(h)inte cu haul.

*The remedy for night fever.*

This is the high-fever-plant (*Capraria biflora*, L.?) as it is called; or it is the *Blechum blechoides*, Sw., with which boys are washed when they have night-fever. Sweet is the odor of the plant. It is only to be steeped in water at sunset. Then let it be steeped in a gourd until dawn and sprinkled over the patient. Then let it be given to him, that it may cease. Administer "hive-water" and the *Cuscuta Americana*, L., tepid, in a bath, that it may cease.

142—*Akab chocuil.*

(Sotuta, f. 42 v.; Nah No. 5; Kaua, f. 149 r.)

Le chocuil cu tzayal ti uinic chen t(i) akab, cu lecel tie. Cha *xbacal-che*, *taamay*, *habin*, *chacya*, *akabxiu*, *xmamcazche* y le *tunich*, yan u kilcab zanzamale, *xkanan*, *zacchichibe*, *xcatzcabna*, *kutz* (*aban*) le hayalhay t(i) lumie u nii *chacah* y *zulubtok* chacbil tulacal ca sabac yichinte (yokol tulacal uincil) bin hauac tumen.

*Night fever.*

This fever attacks a man only at night and recurs. Take these plants, the *Bourreria pulchra*, Millsp., the *Zuelania Roussoviae*,

Pittier, the *Ichthyomethea communis*, Blake, and the *chacya*,<sup>1</sup> the *Blechnum blechoides*, Sw., the *Zanthoxylum pterota*, L. (*Palo mulato*) and this *tunich*.<sup>2</sup> (When) there is sweating every day, the *Hamelia patens*, Jacq., the *Melochia tomentosa*, L., the *ix-catzcabna*, the *Isocarpha oppositifolia*, (L.) R. Br., which spreads out on the ground, the tips of the *Bursera simaruba*, L., the *Bauhinia divaricata*, L. (*Calzoncillo*), are all to be boiled and the entire body bathed with the liquor. It will cease by this means.

143—*Ceel y kaxil.*

(Sotuta, f. 6 r.; Judío, p. 15).

Ca a cña u motz *ekbalam* y u motz *tuuak* ca kelaac, ca muxuc catun a ða ich zaakum yuke ua ich chocua, ua ich kinbil haa yuke bin utzac.

*Chills accompanied by diarrhea.*

You take the root of the *Croton flavens*, L. (or the *C. Cortesianus*, H. B. K.) and the root of the *tuu-ak* (fetid vine) to be roasted and ground. Then put them into atole for him to drink, or in chocolate, or in warm water, for him to drink. He will recover by this means.

144—*Ceel o oxppel kin.*

(Sotuta, f. 7 v.)

Ayuda . . . max yan o . . . kin ceel tie y . . . ca . . . celil ca a cña u uix la . . . yan chocuil . . . cabin a uila . . . uinic u chicul chocoutie u chicul ðooc u pasmar u cñapahal, matan u cici kilcab cu lecel u ceel . . . u ðaic u chocuililte tu . . . u yax paybeelee c . . . aul cu ðicte palalob y akabkilcabe yan hunppel xiu *akabxiu* u kaba hunkuch u boc cha(c)bil le xiue tibio catun ppooboc u hool y paaziz, oxten bin ppobal u hool oxppel kin xan.

*Chills recurring every three days.*

Administer an enema to anyone who has these three-day recurrent chills. Then you take his urine (to see) if there is fever. Then you make an inspection . . . of the man for the symptoms of fever and the symptoms that the convulsion (associated) with this sickness has ceased. He does not perspire freely while these chills are recurring . . . which brings on the fever . . . and is the original cause (of the trouble) . . . which provokes night-sweats in boys.

<sup>1</sup> *Chac-ya*. Lit. Red ya. Ya is the *Achras sapote*, L. (*Zapote chico*).

<sup>2</sup> *Tunich*. Lit. Rock or stone. The *zizal-tunich*, or *Asplenium pumilum*, Schwartz, may be intended.

There is a plant called the *akab-xiu* (*Blechum blechoides*, Sw.) It has a very marked odor. Boil this plant and when it is tepid, bathe the head with it, neither hot nor cold. Three times the head is to be bathed, for three days also.

145—*Chacuil*.

(Judío, p. 20; Nah No. 89).

U sacale cimzabil ceh tu kin bieernez ca cñabac lay bac yan tu puc puczikale habil y ixcay ua tocbil huchibil çabil ti ziz haa ukbil u nupe cñabil u chel u le y u motz *chacmul* chachil cu ziztale ca çab yuke ah chacuil uaix cabin cimzabac ceh hach tzem bin caxantac tu tzucil uaix tu cuchil u uix cu yantal piedra tunich (p)iedra bezal yalabal hac (h) utz u tazic ca ma u tzayal pulbil yah tie. Caix yuk xan (p)pizbil hunppel tumin takin utial u kilcabtal chacuil.

*Fever.*

The remedy is to kill a deer on Friday. Take the bone (next) its heart; grate it with a fish-skin or burn and crush it, and put it into cold water for him to drink. Another (remedy) is to take the stalk, the leaf and the root of the *Gomphrena dispersa*, Stand. (*Amor seco*), boil them. When it cools give it to the fever-patient to drink. Or let a deer be killed. A well nourished one shall be sought, and take from its stomach or its bladder the stone which is there. It is called a bezoar. It is very good to carry it in order not to be afflicted with sickness brought on by magic. Let him drink as much of it as will cover a real-piece in order that the fever may be sweated out of him.

146—*U chacuil hobonte kak.*

(Sotuta, f. 6 v.)

Ca a cña zacçunan mukayche y (*zizal tunich*) lay mehen xiu cu hokol yok tunich (e ua nak pak) *zizal tunich* u kaba y hunppel limones u kabil y yeçec hobnil cab tu hobnil u tal cabin çabac ichil yuke.

*Fever accompanied by an eruption of livid spots.*

You take the zacçunan, the mukay-che<sup>1</sup> and the *Asplenium pumilum*, Swz. This is a small plant that comes out of the rocks or on the face of a wall, it is called *zizal-tunich*. With it take the juice of one lemon and crush honey fresh from the hive. Let these be put into his drink.

<sup>1</sup> Mukay-che. Lit. Cochineal tree. Perhaps a cactus.

147—*Chacuil matan u kilcabtal.*

(Judío, p. 20; Nah No. 112).

Utial ca kilcabnace cñabac u motz *muloch* ca cocohuntac ca pukuc la tu pak bay cabe ca çabac yuk mac yan chacuil tie ca nabzabac tu uincil tulacal ca pixic ca kilcabnac u çacal.

*Fever unaccompanied by perspiration.*

In order that he may perspire, let there be taken the root of the *Triumfetta semitriloba*, L. (*Cadillo*). Let it be mashed and dissolved into a mass like honey. Then let it be given to drink to anyone who has fever. (Also) let it be anointed all over the body. Cover him up so he will perspire, for a remedy.

148—*Chocuil y ceel yan can canppel kin.*

(Sotuta, f. 6 v.)

U çacal cancanppel kin chocuil ca a cña u uix ca a uila bax kohanil yan ti ua zize ca a cña canppel *naranja* y tab y çitaan ca a ça yuke. Uamae ca uila u uix tucanten ua bix yanil ti ua chachac ua ziz yanil . . . ti ik u tael uaix tumenel u yabal ziiz muc . . . uba tu tzem flemas çoc u xaxa kik kohanil y u kikel ua cu manel lah . . .

*Fever and chills in four days.*

The remedy for this four-day fever is that you take the urine and inspect it to see what the sickness is, whether there is mucus. Then you take four oranges with salt and ashes and give it to drink. Or else you look at the urine again (to see) how it is, whether it is very red, whether there is mucus in it . . . whether it comes from gas or from excessive mucus . . . in the chest, phlegm. When the disordered blood has been passed . . .

149—*U chocuil chac hulubte kak.*

(Sotuta, f. 6 v.; Nah No. 64).

U chocuil chac julubte kak lae cñabac *payhul* y u canil *ac* y u motz *halal* çambil cu yuke; uamae chacbil ca çabac yuke max yanil chac hulubte kake.

*Fever with a red eruption that pierces the skin.*

This fever with a skin-piercing eruption. Take the *Phyllanthus conami*, Swartz (*Ciruelillo*) and the shoots of the *ac*<sup>1</sup> and the root

<sup>1</sup> *Ac.* The *Barbon*, probably *Andropogon*, sp. A tall broad-leaved grass growing in the savannas and used for thatching.



of the *Scirpus validus*, Vahl., steeped in water for him to drink. Or else let these be boiled and given to drink to anyone who has this perforating eruption.

150—*Chocuil zanzamal.*

(Sotuta, f. 6 r.)

He cabin a uila hach chic lay choquil ti, y u uix hunkuch chachac, minan resfriado ziz ti u chacuil . . . ꞑaic u kab pakal esto es naranjada . . . ke las on . . . kin ich haa ppiz u ziztal u choquil . . . bin yuk . . .

*Fever every day.*

When you see very plainly he has this fever and his urine is markedly red, and there is no chill with the fever, . . . give him the juice of oranges in warm water until the fever cools . . .

151—*U haꞑ yk resfriado.*

(Judío, p. 34).

U ꞑacale manzaniya eneldo ruda inojo aluzema maztueso zizim chalche y tancoch onza hucñibil naba ca chacac tulacal hetun cabin tahace ca halac ti cat machil u hol y xac ca culac ti kan ua ti cama ca heolac yoc tu cahmatil yokol xac cu cña yoxou haa lic u kilcatic latulah u haual chacuil haae ca chalac ti cama cici pixbil ca ꞑabac za anis ua cheche yarim ua zahum y anis u nup ua yan canela clabo castra(n) pimienta utz u ꞑabal ychil yukul kinkinal ca kilcabnac pixbil.

*Convulsions, chills.*

The remedy is the *Helenium quadridentatum*, Labill., *Anethum graveolens*, *Ruta graveolens*, L., *Foeniculum vulgare*, L., *Lavandula spica*, *Lepidum apetalum*, Willd., *Artemisia Mexicana*, Willd. (*Agenjo del pais*), *Pluchea odorata*, L., half an ounce of crushed *Myroxylon peruiferum*, D. C. (*Balsamo de Peru*). They shall all be boiled until thoroughly cooked. Take (the liquid) out in a pan and cover its top with a basket. Then set (the patient) in a hammock or on a bed and put both feet over the basket to get the steam so he will perspire until the water is no longer hot. Then put him to bed and cover him up well. Then give him atole with anis, or raw maize or the *Zexmenia hispida ramosissima*, Greenm., with anis. With this, if there is any, (give) cinnamon, cloves, Spanish pepper. These are good to put into his warm drink so he will perspire when he is covered up.

152—*U haꝝ yk, resfriado y cel.*

(Mena, p. 113).

Lic u ꝝabal ychcil ti chan pal ca tu ꝝah u yax u ya ulel tie cña bolon ual u le *saramuy* chacbil ho luch yalil bay baytun cappel tumin cab yalale zappale ca ppizic bay hunppel tumin cab bin ꝝabac ti le kohan cu ꝝocole ca ci(ci) pixic utial u kilcabcic catun bin ꝝabac yuke cabin u kat bal yuke bin hauac tumen.

*Convulsions and chills.*

Give the boy a bath as soon as he becomes sick. Take nine leaves of the Anona Cherimolia, Mill. (*Saramuyo*); boil five gourds full of the liquid until the quantity of two thirds of a drachm of honey is left. Then measure out the quantity of one-third of a drachm of honey. After that cover him up well so he will perspire. Then let it be given to him to drink, whenever he desires a drink. It will cease by this means.

153—*Resfriado.*

U ꝝacale u le *xbataban* zozopkakkbil ca hibic tu tan u kab tu tan yoc ca kilcabnac.

*Chills.*

The remedy is the leaf of the bat-aban.<sup>1</sup> Toast it and rub it on the palms of the hands and the soles of the feet. Then let him perspire.

154—*Resfriado y yaax ceel.*

(Sotuta, f. 5 v.; Judío, p. 50).

Resfriado y yaax ceel y akab kilcab u ꝝacale cñabac u uix hxi(b)pal bay hun noh luce le bin chacbal le xiub lae, u le *laal*, y hun ual yax *kutz* u lee *mostaza* y hun lapp u lee *manzanilla*, hun lapp u le *chalche*, y u lee *naranja* ꝝeꝝec manteca y huntzel oc tab chacbil tulacal bay hunppel tumin cab yala zappale, ca a hokez chocho . . . a nabzabac tu mocol u bachelob u kohan . . . tulacal u hool u bachelob; cu ꝝocol cici pixic ca kilcabnac lay xan yan yaxcel tie lic yalabal ꝝac chalche u cñapahal caix maac uinicil bin ꝝacal u yaxcel y lay ꝝac lae.

<sup>1</sup> Bat-aban. Called *Frijolillo* by the Spanish Yucatecos. Perhaps *Cassia occidentalis*. Lit. Hatchet bush.

*Recurrent chills.*

(For) cold and recurrent chills and night-sweats, the remedy is to take the urine of a boy, as much as a large gourd full. In it boil these plants, the leaf of the *Urera microcarpa*, Wedd. (*Ortiga*), a leaf of green tobacco, the leaf of the *Sinapis niger*, L., and a handful of the *Helenium quadridentatum*, Labill., a handful of the leaf of the *Pluchea odorata*, L., the leaf of the orange-tree, a little lard, a handful of salt. Boil all of these until the quantity of one-third of a drachm of honey remains. Let it be taken out hot and anointed on the joints, on all the joints of the patient. After that cover him up well and let him perspire. For these recurrent chills, as they are called, the remedy is the *Pluchea odorata*, L., and for anyone who has recurrent chills this is the remedy.

155—*Yaax ceel.*

(Sotuta, f. 5 v.; Judío, p. 51; Teabo No. 12).

Ca panac u motz *halabche* ca huchuc ca pukuc cici chachbil bay hunppel zol hee bin abac yuk le kohane, utial xenahe yoklal u hubul u nak, pah keyem tun bin abac yuk cabin oococ u xe y u hubnakil lay *halabche* y u xeile cu macal tumen.

*Recurrent chills.*

Let there be dug up the root of the *halabche*.<sup>1</sup> Let it be mashed and dissolved, being well strained; about an eggshell full shall be given to the patient to drink that he may vomit, that his bowels may move. Sour posole shall be given, and after he has vomited and passed the *halab-che*, his vomiting will be stopped by this means.

156—*Yaax ceel.*

(Sotuta, f. 7 v.)

Ca a cña u motz *ich huh* kele ca a ment u polvosil ca a a ich haa, ua ich zaa ua ichil ziz haa cu haul tumen ca abac y(uke).

*Recurrent chills.*

You take the root of the *ich-huh*,<sup>2</sup> roast it and powder it. Then you put it in water, or in atole, or in cold water that it may cease by this means when it is given to drink.

<sup>1</sup> *Halab-che*. Lit. Tree which purges. On fol. 46 v. of the Sotuta MS we find the *ik-che* given as a synonym. *Ik-che* means "wind-tree."

<sup>2</sup> *Ich-huh*. Perhaps *Eugenia axillaris*, (Swartz) Willd. Lit. Iguana-eye. Cuevas describes it as a plant half a yard high. Its dark green porous leaves have an aromatic odor like that of cloves. Leaves are somewhat lanceolate. There are small white blossoms and a round fruit the size of a bullet.

157—*Yaax ceel o oxppel kin.*

(Sotuta, f. 5 r.; Judío, p. 41; Nah No. 101).

Ca a cña cappel onza azucar y ca ual yaax *kutz zoppkabil*, ca yeæc u k(abi)l ichile azucar chachtabal citac u lecel lay ceele catun (æabac) yuke lay kohane, ua minan azucar (cax) caña dulce, bin u xee u yabal flemas.

*Chills recurring in three days.*

You take two ounces of sugar and two leaves of green tobacco, toasted, and let the juice be squeezed into the sugar. It is to be strained. As soon as the chill recurs, let it be given to the patient to drink, or, if there is no sugar, get sweet cane. He will vomit much phlegm.

158—*Yax ceel.*

(Mena, p. 127).

Ca a cña yitz u æac *holom kahab tokbalaban, chalche chacmul akabæiu* chacbil tulacal æa yichinte.

*Recurrent chills.*

You take the gum of the holom,<sup>1</sup> the kahab, the *Trixis radiale* (L.) Lag., the *Pluchea odorata*, L., the *Gomphrena globosa*, L., the *Blechnum blechoides*, Sw. Boil them all and employ the (liquor) as a wash.

159—*Xib celil.*

(Judío, p. 69).

U æacale citac u lecele ca cñabac *xibcel* cu yantal ti kaxob tu kab cñilib tu tzic na bay ich *acitz* tu pache y yilkel kelabil ca muxuc ca æabac ichil za ua ichil chucua u yuk mac yan ceel ti u æacal xibcel cñabac hunppel tunbil hee ca hokzabac u zac heehil ca culac u kan heeil tu hunal. Catun chupuc y binagre u boxel hee yanil kanhee catun pikhuytabac ca yuk mac yan cel ti u lak u æac ceele cñabac u boxel *zuuo pakal* ca huçñuc tat catun pukuc y bino citac u hoppol cel cu yuke catun ximbalnac y bin hauac.

<sup>1</sup> Holom. Pacheco Cruz describes this insect as similar to a wasp, but larger and of a different color. It makes a nest of clay on walls, clothing and books. The nest is very solidly constructed and destroyed with difficulty. The sting of this insect is very painful.

*Chills.*

The remedy, as soon as it recurs, is to take the xibcel<sup>1</sup> which are in the forest on the branches of the low plants and shrubs, on the thatch of the house. It resembles the fruit of the *Thevetia nereifolia*, Juss. (*Cabalonga*). Roast it with the larvae (worms?) and let it be crushed and put into atole or into chocolate for anyone to drink who has chills. For the cure of (these chills called) xib-celil let there be taken one fresh egg; remove the white and let the yelk remain. Then fill with vinegar the egg-shell with the yelk in it. Let it be stirred thoroughly and drunk by anyone who has chills. Another remedy for chills is to take the skin of a sour orange, grind it up fine and let it be dissolved in wine. As soon as the chill begins, let him drink it and then walk about. It will cease.

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 CONVULSIONS

160—*U sacal haə yk.*

(Judío, p. 105).

Lay xiu lae zazaactac u nic canleeth u chel ci u boc əəəec yanil tu kin hahal minanan ti yaxkin u *tamcaz cheeyl chakan* chachbil u lee y u motz y *kanchee* y hun chach *əippchee* mek kaxan hatzbal yokol kohan chin haabil paynum utzil bin ix əabac yoxou u əaye keluc ti tumen yk haəmail pasmo uazut cimil u haə yk to orayl.

*The remedy for convulsions.*<sup>2</sup>

There is a plant. Very white is its blossom, rough is its stalk, sweet its odor. It grows sparsely in the rainy season, but it is not found during the dry season. The *tamcaz-che*<sup>3</sup> of the meadow; strain (the water from) its leaf and its root with the *Conocarpus erecta*, L. (*Mangle prieto*), and a handful of the *Bunchosa glandulosa*, Cav., is to be tied in a bunch and water sprinkled over the patient from it. It is better to steam him to make him perspire because of the convulsion or recurrent attacks of convulsions from time to time.

<sup>1</sup> Xibcel. The text indicates an insect of some sort.

<sup>2</sup> This word, haə-ik, may mean either palsy or convulsions. Here the latter seems to be indicated.

<sup>3</sup> *Tamcaz-cheel chakan*. The *Tamcaz-che* is the *Zanthoxylum pterota*, L. (*Palo mulato*), and this "*tamcaz-che* of the meadow" may or may not be the same tree.

161—*U sacal u haꝝ ik, tamcaꝝ.*

(Nah No. 6; *Kaua*, f. 149 r.)

Lai u xiuil u haꝝ *hatabal* u le *chꝝoh* yetel u le *chooch* yetel *ix-chalche* yetel *zac chuen che* yetel *xchiople* yetel *yax kanan* yetel *ix haatz* yetel u le *zabacelcan* yetel *zipche* yetel *ixmahanchun* yetel u le *narahas* yetel u le *muc* yetel u le *xuul* yetel *ichlumiltunich* canppel ca ꝝamac tu *kabil* xiuoob lae catun yichint kohan lae.

*The remedy for convulsions, delirium.*

These are the plants for convulsions. Pound or shred the leaf of the *Indigofera anil*, L. (*Añil*, Indigo), and the *Lucuma hypoglauca*, Standl. (*Zapote blanco*), and the *Pluchea odorata*, L. (*Santa Maria*), the *Zac-chuen-che*,<sup>1</sup> and the *Eupatorium aromatisans*, DC, and the *Myrstiphylon horizontalis*, Sav., the *Euphorbia hirta*, L. (*Yerba del pollo*), and the *Cereus Donkelaarii*, Salm-Dyck. (*Pitahaya*), and the *Bunchosa glandulosa*, Cav. (*Cojon del fraile*), and the *ix-mahan-chun* (a *Peperomia* much like *P. glutinosa*, Millsp.), and orange-leaves, and the leaf of the *Dalbergia glabra*, Pittier, and the *xuul*<sup>2</sup> (which grows) on rocky land, four of them, steeped in the juice of the above plants. Then employ this as a bath for the patient.

162—*U tzayal pasmo.*

(Mena, p. 122).

Bay xan *chꝝa* le *xpakunpak* chac y u tzucel uo, chace y *anis* ca a ꝝa yuke chochoco. *Uamae chꝝa* ꝝibil uo, ca a *chꝝa* u tzucel, chace, ca ꝝa yuke utial *cimbale*, bin utzac tumen ua bin xanac. *Uamae chꝝa* hunppel kankan tok ca pul ychil kak ca uilic u chactale chac hopene (chobene) ca pul ychil ziz ha. Bay xan u nek *chacalhas*, ca hokzabac u aceite, ca ꝝabac hun ual *kutz* ichil, ca ꝝabac frasco ca tacac tumen u yabal *boꝝ* cu ꝝacic ua yan uinic cu yutzentic, ca nabzabi zac ti yah ychil cu lukzic xanobe le akab ychil cu zazcunzic u uichil xan cocil cu *heic* u xicin uinic ca a chacic ya pixil choco cu hauzic xan. Nacan *kik* tu hool, ca choboc ti uinic cu chopaytic le *kik* cabal ti le max *nacan kike* pizic u yocilob ceel ua ceel cha choboc y tu chi u leec cu hauzic *chibal* hool ua kinam hool ua kal uix chobel tu bel cu yocizic *kinal ti uinci* ca hauac u zakteil (aceiteil) ca ꝝabac tiob.

<sup>1</sup> *Zac-chuen-che*. Described as a small shrub with short lanceolate leaves which are an emollient.  
<sup>2</sup> *Xuul*. The *Xul* is mentioned as a tree from which they obtain poles for thatched houses. (Motul.) It is possible that the *Xucal*, or *Portulaca oleracea*, L. is intended.

*An attack of convulsions.*

Thus also take this *Yerba de la golondrina* (*Euphorbia dioica*, H. B. K.?), boil it with the belly of a frog, boiled with a little anis. Or else take a spotted frog; take its belly, boil it and give it to drink to the sick person. He will recover by this means, even though slowly. Or else take a yellow flint and throw it into the fire. When you see that it is red-hot, throw it into cold water. Thus also the seed of the *Lucuma mammosa*, L. (*Mamey colorada*), draw out its oil. Then put one leaf of tobacco in it and let it be put into a flask to preserve it, for it foams when it is prepared. Or if it is a man who is recovering, apply it to the white film on a sore eye to draw it out. If there is a dark spot in it, it will clear it up also. For deafness, it will open the ear of a man. Apply it hot for sore knees, to stop this also. For blood mounting to the head, let it be rubbed on the man to force the blood downward, for anyone who has blood in the head and in the temples, to stop it. Or for retention of the urine, fever in the urethra, to stop it, take the oil, let it be administered.

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## CUPPING

163—*Homa*.

(Mena, p. 110; Kaua f. 83 r.)

Le ventosa cu ñabal chumuc u pol uinic haubal u chupul u lec y chibal ych xan. Le ventosa cu ñabal tu celembal uinic tumen u chupul u mochtun y zazhebal u pacat xan, le ventosa cu ñabal yalan u tuche uinic haubal kan kuxnak y kal uix y kik choch, le ventosa cu ñabal yalan u puc yite uinice haubal bocan y kakob y zazebal tu uich xan, le ventosa cu ñabal tu tzem tac tu chun u nake, uamae cña *naba* cicipul ti tulacal u uinclil uamae cña *pom* ca pul y malob uamae cña azufre ca ña yuke uamae ca á ña ychil chacbil u le *pakal* naranja u kaba ca a cici chace ma lob lic u hauzie y utial yocez kinal tu uinclil.

*Cupping (lit. a gourd).*

The cupping which is applied to the middle of the head of a man is to stop the swelling of the forehead and pain in the eyes. This cupping which is applied to the shoulder of a man is because of the swelling of the eyebrow and the white of the eye also. This cupping which is applied below the navel of a man is to stop yellow stools

and retention of the urine and bloody dysentery. This cupping which is applied below the buttocks of a man is to cure an abscess and eruptions and a cast on the eye also. This is the cupping which is applied from the breast to the rectum. Or else take *Myroxylon pereirae*, Klotsch, (*Balsamo de Peru*) and smoke the entire body well. Or else take copal and smoke (the patient) with it. It is not bad. Or else take sulphur and give it to drink. Or else you put in it boiled orange-leaves, *Naranja* as they are called, and boil them well. It is not bad to stop it and to bring warmth into the body.

164—*Uinice*.

(Mena, p. 105).

Cu ðabal u catzuuc uinic nacan canale le vendosa cu ðabal tu chun u nak çhupe tac yalan u tuche haubal u yahbal ua puch lay hal uemel zac u madre yalale uaix nacan canale uich puczikal le ventosa cu ðabal tu chun u nak tu cheil u cal uinic haubal ya calil lamparones u kabae le ventose cu ðabal chumuc u pach uinic zahal-tabil tumen u lochol u pach tubin (tumen) tu pultic yit tumen u ðabal oxppel vendosa cu ðabli u ðabal oxppel vendosa cu ðabli le ventosa cu ðabal yoklal u yim uinice haubal y u puczikal uinic. Utial u kaholtal tu uix kohan le akzah hunkuch (hun luch) tat y chachace tulacal le akzah tu yit ventosa ðocan u ðayal ziz resfriado yalabal le akzah yan tu uich (yit) *chacbilche* morado yalabal tumen yab choco yan ti tzem xakan y kanchikin le akzae bay buæ y y bay yoch zae yan tu yit le uix çhuplal uamae u chicham pal le yanal tal ua ziz ti kohan resfriado u kaba cappul hunual u le xiu ichil lay za ca uila natal u tac u tat u yumile ti tu tan a uilie u co u ðoc yail y çhuplal ma u uchac u ðabal ðac ti le akzah chachac ziz u ni yoc u yumile u chicul chen tu bakel yan ziz tu keyel ua hach hach thaben u uix ma zaci ichil ti le chocuil cancanppel kine. Le akzahil oxppel kin ceel y caxbalac celile bay yabacnace uixile ua zahpilene y u yabal zize u chicul yan choco tu uich u puczikal uamae maix minan u chicul chocotic tie ðoc u pasmartic u kohanil ma tu cici kilcab tu bael u ceel bin u ðaic (ðococ) tumen minan choco ti.

### *Cupping.*

When cupping is applied to the spleen, move it upward; when applying it to the rectum of a woman below the navel, it is in order to cure a complaint of the womb. It is called falling of the womb. The cupping is to be applied to the rectum and to the neck of a man to stop (any) neck-complaint, tumour of the neck, *lamparones*



it is called (in Spanish). The cupping is to be applied to the middle of a man's back for shivering, for twisting of the back, because of gas in the rectum. Three cuppings are to be applied for the breast, to put an end to heart trouble. To diagnose the urine of the patient, fill a gourd with it, boil it all. Cupping is applied to the rectum for an attack of cold, *resfriado* it is called (in Spanish). This liquid in the rectum is (then) the color of boiled wood, violet color, *morado* it is called (in Spanish), because there is too much heat in the chest and jaundice. The urine is like smoke, like atole, this urine of a woman, or in small boys. When the patient suffers from a cold, *resfriado* it is called, throw one leaf of this plant in atole. Then you inspect (the urine?) in order to understand what the trouble is. In (the case of) a woman, you cannot give any remedy for this urine. There is a red mucus on the genitals of a man. It is a symptom that there is mucus in the skin. If there is no whitish substance in his urine, he has four-day recurrent fever. This urine betrays three-day recurrent chills or and other chills. When there is excessive urine and it is whitish and there is excessive mucus, it is a symptom that there is heat in the stomach. Or else if there is no symptom of heat, after the patient has had convulsions and does not perspire profusely to sweat out the cold in his bones, it will be because there is no heat.

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### NERVOUS COMPLAINTS, IRRITABILITY, DEPRESSION, LOSS OF SPEECH, NIGHTMARE, VERTIGO, ETC.

165—*U sacal xcamuk olal, loob cu yalabale.*

(Nah No. 117).

Heix u chicul loob yan ti uinice citac yubic than cax chem kam eachthan cu yuchule cu hoppol cña yik yetel cu hoppol u yokol ua cñuplale tumenel sacan u kumtal u puczikal tumen yik yetel yalan u cal lay tu kom yalan u koch uaix u noche lay cu hach luclucancal yetel u tan u kab hohoxci bay lab keule u(a)ix cheche keuele, hetun ua xiblale hach chiche bin sacbal la tu ppiz u chacal yichcilil ti ca hauac tumenel, helan u puczikal xiblal lay ca bin a uilab ceech ah sac yahe. Lay ix u xiuil lay *xcamuk olal* yantac tu yam be mehentac u bacel mehen ix u lee uololuol sacac bay u lee *poleo* yan ichil saclobe uaix t(i) conventoe. Heix u uiche bay u uich *ixkahyuce* lay tun ca hohic yetel u motz hunppel *libra* cabin hoppoc u chacal yetel

hunppel ppul haa cu (ho)ppol yome ca halabac catun a hokez bay hunppel tumin ppiz cabe tan chumuc yichcil kohane, catun çabac yuke yetel hunppel u zol hee hohochil ca ppizic agua de asahari ca çabac ichil lay ca bin yuke oxten bin çabal ti cu hauual u çac lae.

*The remedy for irritability, called "evil."*

This is the symptom of this irritability which people suffer from. As soon as he hears anyone speak, even if it is only a call that reaches him, he begins to gasp for breath; if it is a woman, she begins to weep. One's breathing causes a pain in the heart and beneath the throat, in the Adam's apple, beneath the throat or chin. The palm of the hand wrinkles like old leather or rawhide. It is very serious in a person; it will continue until you boil a (certain) bathing lotion to stop it. Then a man's heart is changed, as you medicine-men will see. This is the plant, the ix-camuk-olal;<sup>1</sup> it grows between the roads. The stalk is small and the leaf curls, a little like the leaf of the *Clinopodium Brownei*, (Sw.) Kuntze (*Poleo*), which grows among the Spaniards or by the convent. But the fruit is like that of the *Astrocasia phyllanthoides*, Rob. & Millsp. Pull it up by the root, a pound of it, and let it begin to boil in a pot of water. When it begins to froth, take it off (the fire) and take out the quantity of a third of a drachm of honey, while you bathe the patient. Then give it to drink in an egg-shell. Measure out some orange-flower water, and put it in and let him drink it. Administer the medicine three times to cause (the complaint) to cease.

166—*Cananil*.

(Sotuta, f. 40 v.; Mena, p. 78).

*Çha yala elal* catun a chac a uuk yaalil cu hauzic y u yaabal utz cu mentic.

*Lassitude*.

Take the *Oxalis yucatanensis* (Rose) Standl. (*Agritos*), boil it and drink the liquid. It will do much good.

167—*U hakal yol uinic ichil u uenel*.

(Sotuta, f. 46 v.)

U chicul yan lob ti tumen u hakal yol ichil u uenel u puczikal cu hakal yol. Ca a çha le luk cu hach uahacñtale letie cu yantal

<sup>1</sup> Ix-camuk-olal. Described as a small plant with small leaves which are pitted on the circumference. The violet flowers form in clusters. The leaves are employed as a sedative. (Cuevas, 1913, p. 24.)

tan bee y *pakam* y u pak *holom*, ca a hucñe ca a pak tu tzem y tu tan u kab y tu tan yoc. Uamae ca a lukez u puczikal, oxtul *cuzonob* utial a kax tu muk u kab, bin utzac tumen.

*Nightmare.*

The symptom of mental trouble because of nightmare is that he shudders with fear. You take loose mud from the road and the *Opuntia Dillenii*, (Gaw.) Haw. (*Tuna*), and the nest of a *holom*.<sup>1</sup> Mash these and poultice them on his chest, on the palm of his hand and on the sole of his foot. Or else you take out the hearts of three swallows<sup>2</sup> in order to bind them on the fleshy part of the arm. He will recover by this means.

168—*Lob ua xcamuk olal.*

(Sotuta, f. 46 r.)

Ca cñabac u motz *halabche*, *ik che* u kaba, chac yuk hatzcab maili yuk manbale ca utzac u xEIC payanbe cu xocole (u x)EIC ca xabac agua de azahar kinkinal . . . (tu)caten bin yuke ua oxten hunppel kin bin u manez cabin u bet u lak ua yan mucul kanchikin tie bin u manez bin u paybe xee y ua u colcal tie lay cu yulel tu puczikal uince xuxulci yik uinic tumen cu yantal u tuzikil xan le bay tun ximbal uince cu yakabtal u uich uinic tumen xan le u chicul u yulel ti uinic.

*Mental trouble or irritability.*

You take the root of the *halabche*,<sup>3</sup> *ikche* it is called (also). Boil it for him to drink at dawn before he drinks anything else in order that he may vomit first. After he has vomited, let him be given orange-flower water tepid . . . again he shall drink it, or three times in one day. He will pass it, and then let him do it again. If there is hidden jaundice, he will pass it, (but) he shall vomit first. And if there is mucus in him which comes to his heart, he will breathe with difficulty because, when it is there, he will strangle when he walks, so that his face becomes black because of it also. This is the symptom that it has come to a man.

169—*Minan yol tu puczikal.*

(Sotuta, f. 46 r.)

Ca a cña u lee *xmuo* ca a chace catun a xa yalil yuke.

<sup>1</sup> *Holom*. An insect resembling the wasp, larger and of different colors. It makes its nest of fine earth or clay on walls, tim-beams, clothing and books, so solidly constructed that it is destroyed with difficulty. The sting is very severe. (Pacheco Cruz.)

<sup>2</sup> *Cuzonob*. This term is applied the following birds, Chimney Swift, or *Chaetura Gaumeri* (Lawrence), the Frogne *Chalybea* (Gmelin), and the *Steigidopteryx Ridgwayi* (Nelson).

<sup>3</sup> *Halab-che*. Lit. Purging tree. *Ik-che* means wind-tree.

*Lack of heart (lassitude).*

You take the leaf of the *Mimosa pudica*, L. (*Sensitiva*). You boil it and give the liquid to drink.

170—*U sacal u nunil yk cu tzayal ti uinic lae.*

(Nah No. 49).

Minan u than, cabin lubuc. Ca cñabac *panzil* y *pakkan* y *bacalche* y *ixtucizcan* y *kuxubcan* y *yuyumcan* y *kokobcan* y *canchacche* y *canxolob* y *cabal-x-tuak*, ca chablahac yantac ti nohol che y xiuob lae, ca sacac ti nohoch che cumchacbil catun sacac yukei, ca ich zabac uinicilil catun pakac u ta xiuob tu uichil lae, catun sacac chuc yalan ca u kilcabte tulacal.

*The remedy for loss of speech which attacks a man (epilepsy?).*

He is speechless and will fall. Let there be taken the *Suriana maritima*, L., the *Solanum nigrum*, L. (*Yerba mora*), the *Bourreria pulchra*, Millsp., the *Corallocarpus Millspaughii*, Cogn., and the *Rivina humilis*, L. (*Coral*), the *yuyum-can* (oriole-shoot), the *kokobcan*, the *Chiococca racemosa*, L. (*Cainca*), and the *can-xolob*, and the *cabal-x-tu-ak* (low fetid vine). Let it be pulled loose; it will be on large trees and plants. Let them be boiled in a pot; give a little to drink. If the face becomes black, poultice the paste of these plants on his face. Then put (hot) coals beneath him so he will perspire all over.

171—*U nunil yk.*

(Mena, p. 119).

Le nunil yke, minan u than uinic, yanil cu lub xiu uinic xan. Caxante *panzil*, *paccan*, *xbacalche*, *xtucizcan*, *kuxubcan*, *yuyumcan*, *kokobche*, *balche*, *canchacche*, *canxolob*, y *cabaltuak*, ca cici chac ti humpel nohoch cum le xiuob, ca sacac yuk sacaci, lay yan kaxe ti caxbalac sacil yanil bay hune laili lela *tzotzceh* u ich *xanceh* yantie tu pach *xan* y u lee y yakilob tulacal tocbil y u xulub u tzotzil ceh, catun chacac ca sacac yichinte yukule pak kutz cab u muyah chibal ca a sacac yuke bay u lay kohane zizimae ca sacac ti.

*Loss of speech (epilepsy?).*

This is dumbness, a man loses speech, a man falls down among the plants. Seek the *Suriana maritima*, L., the *Physalis angula*, L., (*Farolitos*), the *Bourreria pulchra*, Millsp., the *Corallocarpus Millspaughii*, Cogn., the *Rivina humilis*, L. (*Coral*), the *yuyum-can*

(oriole-shoot), the kokob-che,<sup>1</sup> the *Lonchocarpus longistylus*, Pitier, the *Chiococca racemosa*, L. (*Cainca*), and the cabal-tuu-ak (low fetid vine). Boil these well in a large pot, these plants, and let him drink a little. They are found in the forest where plants rot in the water. There is also the tzotz-ceh (deer-hair), the fruit of the tanceh, they cling to the *Sabal japa*, Wright. The leaves and vines of all of these, with the burned horn of a hairy deer, are to be boiled and employed as a bath and a drink. Poultice tobacco, honey, as hot as he can stand it. Then give a drink to the patient which is cool when you administer it.

172—*Okom puczikal.*

(Sotuta, f. 25 r.)

Ca a cña u lee borraja y u lol y u motz, ca a chac yulimte. Uamae ca a ja agua de azahar yuke yeel, ca a fiuch humppel almiscle corales, catun a puk ichil le agua de azahar, catun a ja ichil, humppel u boxel u yeel *mulix cax*, ca a ja ti kin las onze, cabin jabac yuke, bin hauac ichil u yabal haab, utz utial xaan kik xan.

*Depression, melancholia.*

You take the leaf of the borage with its flower and root. Then boil it down until it is thick. Or else you give orange-flower water to drink with eggs; then you crush musk, "corals" and dissolve them in orange-flower water. Then you put it into the shell of the egg of a crested hen (*gallina morisca*). You administer it about noon; at that time let it be given to drink. (The complaint) will cease within a year. It is good for dysentery also.

173—*Ix okom puczikal y gota coral.*

(Mena, p. 24).

Le mac minan yol u puczikale, ca a cña u le *xmus* ca a chace, ca a ja u yalil u yuke. Uamae chac *xpichiche*, ca a chace ca a ja vino ichil, ca a ja yuke. Bin utzac tumen xokom puczikale.

*Depression and epilepsy.*

For anyone who lacks heart, you take the leaf of the *Mimosa pudica*, L. (*Sensitiva*) and boil it. Then you give the liquid to drink. Or else you boil this *Psidium Sartorianum* (Berg.) Niedenzu, and put wine into it. Then give it to him to drink. He will recover by this means from his depression.

<sup>1</sup> Kokob-che. Lit. poisonous snake-tree. Possibly an *Aristolochia*.

174—*Okom puczikal y gota coral.*

(Sotuta, f. 25 r.)

Čha camppel u puczikal u *cozone* čhen, ca a hule catun a kax tu kab tu čič tuzabal, bin a uila u manel cil mac yol.

*Depression and epilepsy.*

Take the hearts of four cave-swallows (probably chimney-swifts) and string them. Then you bind them on his left arm. Immediately you will see his depression pass away.

175—*Ppencech uenel y nicib.*

(Sotuta, f. 42 r.)

Mankin uenel u cah, nicib u cah, ca a čha u xothol castran nok ca a čhul y vinagre y *ruda* ca a kaxtac tu chi u lec, tac tu chun u xicin. Uamae čha u tzotzel u pol uinic ca a pul tu pach ca laili ca tocabac y vinagre, utial u yuobente bin hauac tumen.

*Excessive sleepiness and drowsiness.*

All day he sleeps. He is drowsy. Take a piece of Spanish cloth, wet it with vinegar and *Ruta graveolens*, L. Then bind it on the temple down to the base of the ear. Or else take the hair of a man's head, throw it on a grindstone and let it be burned with vinegar for him to snuff. It will cease by this means.

176—*U sacal u tzayal cursos ti uinice.*

(Nah No. 118).

Matan hauile ca čhabac *landano*, catun sacac dos gotas ichil za u yuke, ua matan u yutzal tu yukba ca sacac tres gotas ichil kinbil haa . . . u ayudail ti himac yanil u sacale.

*The remedy for an attack of loose bowels in a man.*

When it does not stop, take two drops of ladanum and put it in atole for him to drink. If he does not recover, put three drops into warm water. Apply an enema to anyone who has it, for a remedy.

177—*Utial maax cu minantal u than.*

(Sotuta, f. 31 v.)

Cha *xchalche* ca a chac y vino catun a ppo yak y bin thanac. Uamae ca a čha azufre ca a sa tu tan yak bin thanac tumen xan.

*For anyone who loses his speech.*

Take the *Pluchea odorata*, L. (*Santa Maria*) and boil it with wine. Then bathe the tongue with it and he will speak. Or else take sulphur and put it on the center of his tongue. He will speak by this means also.

178—*U zutcab tu uich uinic.*

(Sotuta, f. 46 v.)

Le uinic cu zutcab tu uich cu lubul (ti) beeob zac cimil yan ti. U lee *oregano* ca a chac yuke. Uamae ment zopa tu cab hanal ca a ɔa ichil u ha(nte). Uamae huch̄ xma ppo pach kum y u lee *zizim* y u lee *poleo* u penchucte ca a ɔa vino tu uich le penchuc ca a kax tu puczikal. Uamae ch̄a aceite y vinagre ca a ɔa yuɔbente bin utzac tumen.

*Vertigo.*

The man has vertigo and falls in the road. (Take) the leaf of the *Lippia graveolens*, H. B. K. (*Orégano*), and you boil it for him to drink. Or else make a soup with its juice and put wine in it for him to take. Or else mash unshelled maize-paste with the leaf of the *Artemisia Mexicana*, Willd. (*Agenjo del país*), and the leaf of the *Clinopodium Brownei*, Sw. (*Poleo*). Make a cake of this and put wine on this cake and bind it on his heart. Or else take oil and vinegar and let him snuff it. He will recover by this means.

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## DISLOCATIONS AND ACHING BONES

179—*Chibal bac y haɔ ik.*

(Sotuta, f. 41 r.; Judío, p. 86).

Chibal bac utial resfriado y u haɔ ik ti uinic. Ch̄a u lee *cehche*, *moolcoh*, *chiceh*, *ichhuh*, *ppoppoɔ*, *tamanch̄ich̄*, *yawnic*, *zahom*, *citamche*, *biñcoc*, *beeb*, *zit*, *chac chimtok*, *atzah*, *chactecoc*, *ɔwɔuc*, *puɔyim*, *chulceh*, *zanicte*, *ɔpeteltun*, *ɔtokaban*, *amcanxiu*, *zacleunak*, *yalal yaxcocayak*, *maxyc*, y *popte ikak*, u leob tulacal le xiuoba chacbil ca ɔabac yichinte chocou chocou u ppiz u mukyahtice, cu ɔocole ca ɔabac zaakum yuke ca cici pixac ca kilcabnac bin hauac tumen.

*Aching bones and convulsions.*

Aching bones, cold and convulsions in a man. Take the leaf of the ceh-che (deer-tree), the *Dalechampia scandens*, L., the *Eugenia axillaris*, (Swartz) Willd. (?), the *Chrysophyllum mexicanum*, Brandweg, (*Cayumito silvestre*), the *Tragia nepetaefolia*, Cav. (*Ortiguilla*), the *Malvaviscus arboreus*, Cav. (*Manzanita*), the *Vitex Gaumeri*, Greenm., the *Caesalpinia Gaumeri*, Greenm., the bich-coc, the *Pisonia aculeata*, L. (*Uña de gato*), the *Panicum divaricatum latifolium* (L.) Fourn., the red chimtok<sup>1</sup> (*Quiebra hacha*), the *Jatropha aconitifolia*, Mill., the chacte-coc, the *Diphysa robinoides*, Benth., the *Colubrina Greggii*, Wats., the chul-ceh, the *Plumeria alba*, L. (*Flor de Mayo blanco*), the *Cissampelos Pareira*, L. (*Pareira brava*), the *Trixis radiale*, L., the amcan-xiu (spider-plant), the zac-leum-ak (white spider-vine) as it is called, the yax-cocay-ak (green firefly-vine), the *Capsicum frutescens*, L. (*Chile del monte*), the popte, the ik-ak (wind-vine). The leaves of all these plants are to be boiled and employed as a bath as hot as he can endure it. After that let him be given a drink of maize-paste, and cover him up well so he will perspire. It will cease by this means.

180—*Moch kabil.*

(Mena, p. 104.)

Uatux yan lay chupile, ua tu xyk(ɔic) ua noh yan ca ɔacic c̄ha u taul(um) c̄ha u cuch taman yan ziz ti ua chupe ca a ɔa telezku tzahbil y uix vino ti u chupil. Uamae c̄ha agua de aza(ha)r ca untar ti. Uamae c̄ha sebo yuc cu ɔocol u koch hokzal tu hobnil y *lal*, *chalche*, *kutz*, u lee, *tux* huch̄bil tulacal ɔabili y u sebo yuc ca a ɔa tu moch kabil. Uamae chac u ta yuc ca ɔa tu moch kabil. Uamae c̄ha u ta yuc tzah y vino ca a ɔa ti chocho tu moch kab.

*Spasm of the arm or crippled arm.*

Wherever this swelling is, whether on the right or on the left arm, to cure it you take the *Ageratum Gaumeri*, Rob. (*Mota morada*). Take the boll of cotton. With cold or inflammation, then you administer the telez-ku (*Solanum* sp., perhaps *S. verbascifolium*) fried with urine (or) wine. Apply it to the swelling. Or else take orange-flower water and anoint it. Or else take the fat of the Yucatan brockett from its entrails and the leaves of the *Urera microcarpa*, Wedd. (*Ortiga*), the *Pluchea odorata*, L. (*Santa Maria*), a tobacco-leaf with cotton-seed. Crush them all with the fat of the brockett and apply to the crippled arm. Or else boil the

<sup>1</sup> Probably *Krugiodendron ferreum* (Vahl) Urban.



excrement of the brockett, and apply it to the crippled arm. Or else take the excrement of the brockett, fry it with wine, and apply it hot to the crippled arm.

181—(No Maya title given).

(Nah No. 1; Kaua, f. 148 v.)

He u yalmahobe lic yalahalobe lai lic tu mah uinice lacix tu heeh uinice, uaix tu chachacel uinic, licix tu kubae uinic uaix yalan u xik uinic, lauac ix yalan u cal uinic ua yan tu bulic u tipile, heix u xiuil u aacale, *zacbeeb*, *chacak*, *bulche* ua zakal yae ca aabac tabi y, *ixcheichi*, y ixauauh (*ix-auuc*) y zac *ixmahanchun*, y *netab*, *bulak* u uiob huchibil ca pakacie.

(*Ruptures and dislocations*).

Here are the directions which have been recited for scrotal hernia or rupture of the groin, when there is a dislocation, either beneath a man's arm-pit, or beneath the neck, or if there is a dislocation of the thigh. These are the plants which will cure it: The *Pisonea macranthocarpa*, Donn. Smith? (*Zarza del pais*), the *chac-ak* (red vine), the *bul-che* (bean-tree). If there is an itching rash, apply salt and the *ix-che-ichi*, the *Diphysa robinoides*, Benth., and the white *ix-mahan-chum* (perhaps a *Peperomia* resembling *P. glutinosa*) and the *ne-tab*,<sup>1</sup> the *bul-ak* (bean-vine). Their tuberous roots are to be mashed and poulticed.

182—*Tukmantuk*.

(Sotuta, f. 46 r.)

Leti christiano tukmantuk, cña lay *akokobche* ca a huche ca a ca le tux yan tukmantuke yokol uinic cu yantal.

*Dislocations*.

This is for Christians (suffering from) dislocations. Take this *ix-kokob-che* (poisonous-snake-tree, perhaps an *Aristolochia*), and you mash it and apply it wherever the dislocation is on a man.

183—*Utial max cu puatal u uinclil*.

(Mena, p. 6).

Ca a cña u le *pichiche* ca huche a pak yokol lai u chupile cu hual tumen.

<sup>1</sup> *Ne-tab*. Described as a rare shrub native to the coast. The leaf is divided into three or four leaflets like that of the *Ceiba pentandra*, but is thicker.

*For anyone whose body is bent over (kyphosis?).*

You take the leaf of the *Psidium Sartorianum* (Berg.) Niedenzu, and poultice it on the swollen part. It will cease by this means.

184—*U zayal bac.*

(Sotuta, f. 40 v.)

Lay *xkantunbub* chachbil u lee, catun *ɔabac* yokol le bac zayale, kaxbil yokol. Yan u lak xiu u *ɔacal* tie *maravilla*, *xɔacalbac* u kaba, ca a *ch̃a* u motz ca a *cocohtunte* kinkinal, ca a pakci cax u bacal xan kaxbil ca *pupuch̃tuntaac*, ca *ɔabac* yokol cax u motz malobi, cax cachal ua zayal u bacel uinic utz utial.

*Dislocation of a bone.*

This *Sanvitalia procumbens*, Lam. (*Sanguinaria de flores negras*), its leaf, is to be boiled; then let it be applied to the dislocated joint. It is to be bound on. There is another plant which is a remedy, the *Maravilla*<sup>1</sup> (*Ruellia albicaulis*, Bert., and other *Ruellias* this form) which is called *x-ɔacal-bac* (bone-remedy). Take its root, crush it with a stone. Let it be tepid when you poultice it. Or even its stalk may also be roasted, and crushed with a stone, and applied. But its root is not bad; whether there is a broken or a dislocated bone in a man, it is good for it.

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## EAR COMPLAINTS

185—*Chibal xicin.*

(Sotuta, f. 27 r.; Mena, p. 132).

Caxant *zizalxiu* ca a chace tu nohoch boxel ceboya yokol chun cu *ɔocol* a *cici* omancale ca a hokez paa ziz catun a thoh tu xicin. Uamat lukic ca a *ch̃a* u leche *xch̃up* ca a xakbez y u lee *oregano* lay u kabe catun a thoh tu xicin cu hauzic. Uamae ca a *ch̃a* u leche *xch̃up* y u kab zac seboya, ca a thoh tu xicin. Uamat luke *ch̃a* u lee *xhaail* catun a choh tu xicin. Uamae chuc hunppel *ch̃o* ca a chac y vino latupak u *ɔuucul*. Catun a manez t(i) nok, chachbil yalabal (ca a uomantez catun a zizcunte) paaziz cabin a thoh tu xicin. Uamae ca a *ch̃a* *herbabuena* ca a . . . (*ɔam kat*) haxbil,

<sup>1</sup> *Maravilla*. This local Spanish name is also applied to the *Mirabilis Jalapa*, L.

catun a thoh tu xicin. Uamae c̄ha u moč̄h ah chab ua u yic̄hac ca a tooce ca ɔa u buɔile ɔabil ich halal u ɔac.

*Earache.*

Seek the *Brophyllum pinnatum*, (Lam.) S. Kurz. (*Siempre vive*), and boil it with the large skin of an onion that is just above the stalk. After it is well steamed, you take it out, cool it and drop it into the ear. Or else if that does not remove (the cause of the trouble), you take the milk of a woman and mix it with the leaf of the *Lippia graveolens*, H. B. K. (*Orégano*), that is, its juice, and then you drop it in the ear to stop it. Or else you take a woman's milk and the juice of a white onion and drop it into the ear. If that does not take away the trouble, you take the leaf of the *Ipomoea Meyeri*, Don., and drop it into his ear. Or else catch a rat and boil it in wine until it falls to pieces. Then you pass it through a cloth, strain it, as they say. Then you steam it and cool it and drop it into the ear. Or else you then take mint and soak it in a pot, squeeze it and then drop it in the ear. Or else take the toes of an ant-eater (*Tamandua tetradactyla Mexicana*, Sauss.), or its claws, burn them and apply the smoke (to the ear) through a reed.

186—*Chibal xicin.*

(Sotuta, f. 27 v.; Judío, p. 29; Nah No. 91, 92 and 93).

Caxant u lee *tupkin* le takuntak tu pach *ixilche* caix uabal cheil petelpet u lee bay u mehen nic u *tup palal* u nice zoppkakkbil kinkinal tune ca a yeɔic. Uamat hauic utz xan u le *mostaza* zoppkakkbil ca haxalhax le ca a yeɔ u kab tu xicin, cu ɔocole ca a ɔol piɔ tu xicin. Uamat hauic ca a c̄ha chac xnuc *yc* ca a pote ca a hokez u nek ca a c̄ha ɔeɔec ho (bnil cab) ca a ɔa ɔeɔec haai, catun a ɔa ichil lay xnuc *yc*, omanzabil ti chicix taan, kinkinal tun xane ca a thoh tu xicin. Ua mat hauic c̄ha u uix hxipal ɔabil ichil zol xnuc *yc* omanzabil ti chicix taan kinkinal tun xane, ca a thoh, tu xicin. Ua le chibal xicin cu pulic puhe, y u coocil xane, ca c̄habac u canil (*zac*) ci mucbil ti chicix taan, ca yeɔec u kabil, ca a ɔa ɔeɔec cal ichil kinkinal tune ca a thoh tu xicin bin hauac u hokol puhí y u coocil xan ca cici mentaac hebix yanile u ɔac.

*Earache.*

Take the leaf of the *Hibiscus tubiflorus*, Moq. & Sess., which clings to the sides of the barked trees or any other trees. Its leaf is round; like the little blossom of the *tup-palal* is its flower. It is to be roasted and while it is still tepid you squeeze it. If that does

not stop it, good also is the leaf of the *Sinapis niger*, L. (*Mostaza*). Let it be roasted and twisted, then you squeeze its juice into the ear. After that you stuff the ear with cotton. If that does not stop it, then you take old ripe red chile (*Capsicum annum*, L.) and punch out the seeds. Then you take a little honey from the hive and add a little water to it. Then you put it into this old ripe chile. Steam it on hot ashes and when tepid, drop it into the ear. If it does not stop, take a boy's urine, put it in this old ripe chile and steam it in hot ashes. Let it be tepid also when you drop it into the ear. If it is the earache which causes pus and deafness also, then let there be taken the shoots of the *Agave fourcroydes*, Lam. (*Henequen*) and buried in hot ashes. Squeeze out the juice and put a little lime into it. Let it be tepid then when you drop it in the ear. It will cease, the discharge of pus and the deafness also. Then apply well the (other) remedies.

187—*Chibal xicin.*

(Sotuta, f. 28 r.; Judío, p. 48).

Ca a cña chichan *kulche*, uacix u kuuk (*kulche*) mucbil ti chicix taan. Cu hokzale ca a zole u holil u pach, kinkinal tune, ca a ɔa tu xicin bin hauac u kinam. Uamae u yoyolni naranjas zoppkakkbil kinkinal, ca ɔot tu xicin bin hauac u kinam y u hum y u coocil.

*Earache.*

You take a little *Cedrela Mexicana*, Roem. (*Cedro*) or the young sprout of this tree, bury it in hot ashes. When it is taken out, you draw off the exterior, and let it be tepid when you apply it to the ear. The throbbing will cease. Or else the tender tips of the orange-tree, roasted, are to be inserted tepid in the ear. The throbbing will cease together with the buzzing and the deafness.

188—*Chibal xicin.*

(Sotuta, f. 41 r.)

Caxant u motz *xkanlol* le yan u kixile ca a hucñe ca a too t(i) bii catun a ɔa tu xicin u ɔacal.

*Earache.*

Seek the root of the *Argemone ochroleuca*, Lindl. (*Cardo santo amarillo*) the thorny kind, and mash it. Then you wrap it in cotton-wool and apply it to the ear as a remedy.

189—*Chibal xicin.*

(Judío, p. 93).

U sacale cñabac *mostaza* ca hučñuc catun lacac u pach u uii *zeboya* ca sabaci ca kintabac ppiz yomancil y u zol u pach *zeboya* ca sabac tu x(ic)in y u kab ym cu haua.

*Earache.*

The remedy is to take the *Sinapis niger*, L., let it be mashed and the outside skin of an onion taken from its bulb. Let this be added (to the former) and let it be heated until it steams in the skin of the onion. Then let it be applied to the ear with milk from (a woman's) breast, so it will cease (to pain).

190—*Chibal xicin.*

(Judío, p. 106).

U sacale yoxou u boxel *pakal* y *ixmohoch* u chochel tobil y bi ca lapac tu hol u xicin y u lol *taman* u sacal.

*Earache.*

The remedy is the steamed skin of a bitter orange, and the "bowels" of the *ix-mohoch*,<sup>1</sup> wrapped in cotton and inserted in the ear with the blossom of the *Gossypium herbaceum*, L. (*Algodon atabacado*) as a remedy.

191—*U sacal u chibal xicin.*

(Judío, p. 110).

Ca hučñuc u lol *cat* y *yc* ca yececi tobil y bi y u lol *taman* catun lapac bi tu xicin cabin cococ u yaçal tu xicin.

*The remedy for earache.*

Is to mash the blossom of the *Parmentiera edulis*, DC. (*Pepino de arbol*) with the *Capsicum annum*, L. (*Chile*) and wrap it in cotton-wool with the flower of the *Gossypium herbaceum*, L. (*Algodon atabacado*). Then let the cotton be inserted in the ear, after it has been squeezed into the ear.

<sup>1</sup> *Ix-mohoch*. "Certain wingless crickets of sluggish movement, with a neck like a monk's cowl and a tail like that of the locust." Motul.

192—*Chibal xicin y puh y cocil.*

(Judío, p. 29).

U ꝥacale u canil *ci mucbil* chicixtan yeꝥbil u kabil ca ꝥabac ꝥeꝥec cab ichil kinkinal, ca yaꝥac tu xicin bin hauac u chibal y u tah puhí binix hauac u cocil xan.

*Earache accompanied by pus and deafness.*

The remedy is the shoots of the maguey (*Agave Americana*, L.) buried in hot ashes. Squeeze out its juice and add a little honey. while it is tepid, squeeze it into the ear. The earache will cease, also the pus and deafness.

193—*Ya xicinil.*

(Sotuta, f. 28 r.)

Cña u lee *pichiche* ca a zoppkakte catun a yeꝥ u kab ichil u xicin. Uamae u kab zac *seboya* y tab catun a thoh tu xicin cu hauzie.

*Earache.*

Take the leaf of the *Psidium Sartorianum*, (Berg.) Niedenzu, and roast it. Then you squeeze the juice into his ear. Or else the juice of a white onion and salt are to be dropped into the ear to stop it.

194—*Chibal xicin.*

(Mena, pp. 89 and 129).

U cizneb pato u cizneb mistun u ni u xik zoꝥ hucñibil ca ꝥabac yokol xicin.

*Earache.*

The rectum<sup>1</sup> of a duck and the rectum of a cat and the tip of a bat's wing are to be mashed and put on the (outer) ear.

195—*Dunuz ti xicin.*

(Sotuta, f. 28 r.)

Amal u zasztale caa pak u *pahtubi*. Uamae *kokobak* thunt u yitz a pakez. Uamae *tzotzicimak* thuntabil pakbil xani. Uamae *kokob-xiu cuchillo xiu* u lak u kaba thuntabil u yitz pakbil xani, hebase ppopbil u yail paybe y u uix hxipal uaix le xiua, ua castran habon

<sup>1</sup> Cizneb. The word is usually used in the sense of either a peep-hole or the gland of the Yucatan peccary.

cu xocol u ppobole ca zoppkaktabac u lee xkaxil *xkoch* ca yeꝑec u kabil y tab, catun ꝑabac u ticin tozil lay kaxil *xkochie*. Uamae utz u hucñil y tab ca yeꝑac. Uamae utz u yitz *copo* thuntabil ca pakac. Uamae utz u yitz *kikak* xanie ca pakace.

*Abscess or ulcer in the ear.*

Every day at dawn you poultice it with the pah-tub (sour saliva). Or else the *Aristolochia odoratissima*, L., poultice the drops of its gum. Or else the *Ipomoea pentaphylla*, L., its dropping (gum) is to be poulticed also. Or else the *kokob-xiu*, *cuchillo-xiu* (*Asclepias curassavica*, L., Milkweed) is its other name. Its drops of gum are to be poulticed also. But first you wash the sore ear with the urine of a boy or with this plant, or with Spanish soap. After it has been washed, you roast the leaf of the wild *xkoch* (*Cecropia obtusa*, Trec.) and squeeze its juice with salt (into the ear). Then apply the dried powder of the wild *ix-koch*. Or else it is good to crush it with salt and squeeze it (into the ear). Or else the gum of the *Ficus cotinifolia*, H. B. K. (*Alamo*) is good. Poultice it on the ear. Or else the gum of the *kik-ak* (blood-vine or rubber-vine) is good as a poultice.

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## EYE COMPLAINTS

196—*Buy tu uich uinic.*

(Sotuta, f. 28 r.; Mena, p. 35; Nah No. 44).

Ca a cña u chun mehen *waan* ꝑambil ti haa, ca pukuc u kabile, cu xocol u pukule, ca ꝑabac u taa u xicin uinic ichil catun ꝑabac tu buy ich lae. Yan xan u lak, ca a cña *buulche* y *habancan*, lay chachac yalan u lee, yan ix u zazacil xan, u uiob, ca cñabac hucñibil, ca a muce kinkinal tune, ca a ꝑa tu uich uinic u ꝑacal lic u haual tumen.

*Film on a man's eye (cataract).*

You take the trunk of a small *Sabal japa*, Wright (*Guano*) and soak it in water. When the juice has been soaked out of it, you put the ear-wax of a man into it and then apply it to the film on the eye. There is also another (remedy): you take the *buul-che* (bean-tree), and the *haban-can*. This last is very red under the leaf, there is the white sort also. Crush its succulent root, cover it up, and apply it tepid to the man's eye as a remedy which will stop it.

197—*Ekmayil*.

(Sotuta, f. 29 r.; Judío, p. 96).

Caxant *ekmuyalak*, u kaba le xiu lae, akil u cah u xiuil uale, utz u tuknel u uich uinic pacat u cah ti lobil, hebac mabal cu yilic le tumen, bin aabac u kabil *ekmuyalxiu* tu ekmayil paybe u aabal u noy le caxtran habon tu uiche zuzbil ca aabaci amal yocol kin oxppel yocol kine ya cu hepahal tumene bin aococ y catun aabac u kabil le xiu lae zazcuntic u pacat le tie aacan u niños le bin pacatnal tu uich tucaten.

*Blindness.*

Seek the ek-muyal-ak,<sup>1</sup> as the plant is called. These plants are of the nature of vines. If the eye-ball is good and the man sees badly or does not see at all because of this (complaint), give the juice of the ek-muyal-xiu. For blindness, first apply shaved Spanish soap to the eye; let it be applied every day at sunset for three days. If it is opened up by this means, it will come to an end (the blindness). Then administer the juice of this plant to clear up the sight. Children have been cured and made to see again.

198—*Haꝝ mo ik tu uich uinic.*

(Sotuta, f. 30 r.; Judío, p. 33).

U chicule bay u tak *yc* u uiche cña u ne *moo* ca a tooce huchbil tun y *chacmoolche* ca a cñul y aecac haa ca a too t(i) piꝝ catun a muc tu lee *haꝝ zanzamale* ca a hokez ca a yeꝝ tu uich bin utzac.

*Piercing pain in a man's eye (literally, blow from a parrot's tail in the eye).*

The symptom is as though chile got into the eye. Take the tail of a parrot and burn it. Mash (the ash) with the *Erythrina coraloides*, Mocq. & Sesse. (Colorin), and wet it with a little water. Then wrap it on cotton-wool and you keep it covered every day with a banana leaf. Then when you take it out, squeeze it in his eye. He will recover.

199—*Kinam ich.*

(Sotuta, f. 29 v.)

Ca a ppoo y vino ua u kanheel yeel xcax y incienso cici bokbil ca a pak tu chi u lec cu hauac tumen.

<sup>1</sup> Ek-muyal-ak. Lit. Black-cloud-vine. The Judío MS calls this the ek-mayil-ak, or blindness-vine.



*Throbbing eye.*

You bathe it with wine or the yolk of a hen's egg, beaten up well with incense. Then you poultice it on the brow that it may cease by this means.

200—*Xmuo u haꝝ ik tu uich mehen palalob.*

(Sotuta, f. 30 r.; Judío, p. 34).

Mumuꝝi u uichil, c̄ha u lee *taman*, u lee *ojo ak* (*xoyoc*) catun a muc tu lee platano *haaz* ti chicix taan zanzame ca a hokez, ca yeꝝ tu uich pale zanzame ca a lukez y piꝝ tu ni c̄hilib bay u lukzabal bak tu uich uinic bin hauac tumen.

*Twitching and convulsions or spasms in boys' eyes.*

The eyes twitch. Take the leaf of the *Gossypium herbaceum*, L. (*Algodon atabacado*), the leaf of the *Morinda Royoc*, L. Wrap it in a plantain leaf and bury it in hot ashes for a while. Then you take it out and squeeze it into the boy's eyes for a short time. Then you remove it with a bit of cotton-wool on the end of a twig, just as you remove a fleshy excrescence (*pterygium?*) from a man's eye. It will cease by this means.

201—*Pasmo tu uich uinic.*

(Mena, p. 102).

Ca a c̄ha *xkoch* pepechtunte ca c̄ha (ꝝa) tu uich uamae c̄ha enjundia cax y catun a pakchucte ca cho tu uich hatzcab cabin ꝝabac tie cu hauzic hatz.

*Convulsion of a man's eye.*

You take the *Ricinus communis*, L. (*Higuerillo*), pound it and apply it to the eye. Or else take chicken-fat and roast it over hot coals; then rub it in his eye at dawn. When it is applied it will stop it.

202—*Ya ich.*

(Sotuta, f. 28 v.; Mena, p. 36; Nah No. 45).

Yan u lak ya ich xane, ca a c̄ha u uii *zacmuyalxiu*, hayalhay ti luum bay u nacal muyal yalan u lee, catun c̄habac u uii bin c̄habac y *chacmolche* yaꝝbil, ca ꝝabac tu uich lae. Ua yan zace, c̄ha u chun mehen *waan* y chacmoak (*chacmolak*), *xanabmucuy* y ek lum *chaac*, le chachac yalan u lee, y *ixniiche*, u noy u uich, y mehen *buul*, ca puke a ꝝa tu uich.

*Sore eye.*

There is another sort of sore eye also. Take the fleshy root of the zac-muyal-xiu (white cloud plant), which spreads out on the ground; (it is) like a rising cloud beneath its leaf. Then let its fleshy root be taken with the *Erythrina coralloides*, Mocq. & Sesse. (*Colorin*), and the trunk of a small *Sabal japa*, Wright, and the chacmol-ak (*Alternanthera ramosissima*, [Mart.] Chod.?), the *Euphorbia hirta*, L. (*Yerba del pollo*), "black-earth" chaac (*Maranta Arundinacea*, L.?) which is red beneath its leaf, and the *Cocoloba uvifera* (L.) Jacq. (*Uva del mar*), the pulp of its fruit, and small beans. Let these be dissolved and then applied to the eye.

203—*Ya ich.*

(Sotuta, f. 29 r.; Judío, p. 82).

Citac u hoppol ya ich ca ch̄abac u lee yaax *kutz* ca yeœec u kabile. Utz xan u yeœel u kab yoch imil pal. Utz xan lik hobnil cab y yoyolni *put*, mucbil y u lee *haaz* cu tahle ca a œa œœec tabi, ca a tepp y piœ ca a yeœ tu uich. Uamae u chun mehen *waan* ua yan ziz tu uich huch̄bil ca yeœec u kabile, ua yan bak tu uich amal cabin œabac tu uiche teppbil y piœ. Uamae *ibincan* y *habancan* u lak u kaba chachac yalan u lee yan zaz(a)cil xan huch̄bil u le *habancan* lae ca yeœec ti ya iche bin u lukez buy ziz uacix bak. Uamae u uii *chacmoak* y *buyche* u motz uacix u lee y *œcabalac* cheche huch̄bil ca yeœeci. Uamae *chacmoolche* cheche huch̄bil ca a too t(i) piœ, ca yeœeci. Uamae cheche *biul* huch̄bil ca yeœeci. Uamae u nek *uzbib* huch̄bil ca a tepp tu lee platano *haaz* ca a muc chicix taan cu tahal tune ca tobac t(i) piœ ca yeœ tu uich bin u hokez bak uaix buy ziz. Uamae u yich *chulche* u noy bin ch̄abac cheche ca yeœec ti ya ich, bin u hokez bak. Uamae *zazac ch̄ilib* œambil t(i) haa ca pukuc u zazacil u pach he cabin œœococ u pukle ca œabac u ta xicin ichil catun œabac ti le ya ichile le ya ich yanil zace bin u hokez, yetel yitz *pomolche* xan utz xan. Uamae *yerba mora pahalcan* pacchuchbil, haxtabil ca yeœec tu uich cax uchben ya ich. Uamae *xanabmucuy* hallalhay (hayalhay) t(i) luum u yitz utz œabal tu uich.

*Sore eye.*

As soon as the soreness begins in the eye, you take the leaf of green tobacco and squeeze its juice. It is also good to squeeze woman's milk. It is good also to take fresh honey from the hive and the tender tips of the *Carica papaya*, L., covered with banana leaves and cooked, add a little salt, then wrap it in cotton-wool and squeeze it into the eye. Or else (employ) the stalk of a small *Sabal*

japa, Wright, if there is anything resembling mucus in the eye. It is to be crushed and its juice squeezed out. If there is pterygium in the eye, every day let the juice be applied to the eye with cotton. Or else the ibin-can, the haban-can is its other name, (is to be employed). It is very red beneath the leaf; there is a white sort also. Crush the leaf of this haban-can and squeeze it into the eye that is sore. It will draw out the mucus or the pterygium. Or else the succulent root of the *Serjania adiantoides*, Radlk., is to be crushed; it is to be tepid when you squeeze it (into the eye). Or else the succulent root of the *chac-mol-ak* (*Alternanthera ramosissima*, [Mart.] Chod. (?) and the *Serjania atrolineata*, Sauv. & Wright, its root or its leaf, and the *ix-cabal-ac* (low grass), raw, crushed and squeezed. Or else the *Erythrina coralloides*, Mocq. & Sesse (*Colorin*) is to be crushed, wrapped in cotton-wool and squeezed (into the eye). Or else raw beans are to be mashed and squeezed (into the eye). Or else the seeds of the *Couepia dodecandra*, (C.) Hemsl. (called baboon-cap in British Honduras) are to be crushed. Wrap these in the leaf of a plantain and bury them in hot ashes to cook them. Then wrap them in cotton-wool and squeeze them into the eye. This will remove the pterygium, or the film-like mucus. Or else the fruit of the *Croton arboreus*, Millsp., its pulp, is to be taken raw and squeezed into the eye. This will remove the pterygium. Or else the *Tetramerium hispidum*, Nees., is to be steeped in water and its white exterior dissolved. After it has been dissolved, add ear-wax to it and let it be applied to the sore eye. When there is a white substance in the sore eye, it will be drawn with the gum of the *Jatropha Gaumeri*, Greenm. (*Piñon*) also. This is good also. Or else the *Solanum nigrum*, L. (*Yerba mora*) shall be roasted over hot coals, twisted and squeezed into the eye, even though it is a chronic sore eye. Or the *Euphorbia hirta*, L. (*Yerba del pollo*) which spreads out on the ground; its gum is good to apply to the eye.

204—*U lak u sacal ya ich, xhauay yalabal.*

(Nah No. 46).

Ca cñabac *cacauak* y *canak* y *hauayche* y *cabal hmuc* lay hach kah tu hahile, ca cici *chacaucunbil* ca *chuhuci* lic u hual tumen.

*Another remedy for sore eye called leprosy.*

Let there be taken the *cacau-ak* (cacao-vine) and the *can-ak* (snake-vine) and the *Parthenium hysterophorus*, L. (*Altanisa*), and the *Rauwolfia heterophylla*, Willd., which is very bitter when it is

the genuine plant. Heat these well and apply them very hot to cure it by this means.

205—*U lak u sacal ya ich.*

(Nah No. 47).

Ca c̄habac ca huxul *halac* . . . ca yaꝑac tu uich uinic. Ua ma tu hauzahe, ca c̄habac albayalde lay licil u ꝑabal uich santoe, catun pukuc ichil ꝑeꝑec haa, ca thahac tu uich uinic lic u hauziꝑ.

*Another remedy for sore eye.*

Let there be taken and grated the halac and squeeze it into the man's eye. If that does not stop it, then take white lead, the sort applied to the faces of images of the saints, and let it be dissolved in a little water. Then let it be dropped into the man's eye to stop (the complaint).

206—*Ya ich tu yocol baki.*

(Sotuta, f. 29 r.)

Ca a c̄ha u yitz *cardo santo* ua ca a c̄ha u lee *ꝑbacaluoo*, ca a ꝑacchucte, catun a haxalhaxte, ca a yeꝑ u kab tu yich. Ua ca a ꝑa u yich *tanꝑunun* ti, ua ca a ꝑa huc̄bil *buul*, u kab ma lob xani.

*Sore eye with pteridium.*

You take the gum of the Argemone Mexicana, L. (*Cardo santo*); or you take the leaf of the ix-bacal-uoo (frog-bone), roast it over hot coals, twist it and squeeze the juice into the eye. Or you apply the fruit of the tan-ꝑunun<sup>1</sup> (kolibri-breast) to it. Or you apply mashed beans, the juice is not bad also.

207—*U sacal ya ich.*

(Nah No. 9; Kaua, f. 149 r.)

U yitz *ꝑanabmucuy* lume lai cu c̄haic u zayan u sacal te u uich yalob ca u ꝑpic u kuxteob u ni u lee, lay *ꝑanabmucuy* lai tun c̄habac u yitz ca ꝑabac tu uich uinic lae hach mehen u lee, hayalhay ti lume.

*The remedy for sore eye.*

The gum of the Euphorbia hirta, L. (*Yerba del pollo*) (which lies on) the ground. To cure the eyes you pluck the tips of the leaves of this Euphorbia hirta, take the gum and let it be applied

<sup>1</sup> Tan-ꝑunun. Probably a Euphorbia of the Chamaesyce group. (Standl.)

to the man's eye. These leaves are quite small and spread out on the ground.

208—*Zac thah ich.*

(Sotuta, f. 29 r.; Mena, p. 36).

Cña uich *chacmolche*, ca a huñe, ca a ÷a tu uich. Bay xan le *chicamthul*, hokzabil yaalil ti alquitara, catun thahac tuux yan zac thahil u uich. Bay xan u yax *canak* cñabil u yitz ca ÷abac tu uich cu lukzic xan le kamchile. Bay xan u yitz *amus* ÷abil tu uich cu hauzic.

*White film on the eye.*

Take the fruit of the *Erythrina coralloides*, Mocq. & Sesse. (*Colorin*). Then you crush it and apply it to the eye. Thus also the *Cracca Greenmenii*, Millsp. (*Jicama del conejo*), extract its juice in a still, and drop it where the white film is on the eye. Thus also the green can-ak (snake-vine), take its gum and apply it to the eye to remove it also. Thus also the gum from the *Mimosa pudica*, L. (*Sensitiva*) is to be applied to the eye to put an end (to the complaint).

209—*U ÷acal zac tu uich uinic.*

(Judío, p. 109).

*Xhatz*, *canbalzac* u lak u kaba, thumtabil yitz amal u zahtal (zaztal), amal yocol kin u ÷acal xan.

*The remedy for a white (spot) on the eye.*

The *Ix-hatz*, also called *canbal-zac* (*Euphorbia hirta*, L., or some similar *Euphorbia*, *Yerba del pollo*); its gum is applied drop by drop every day at dawn, every day at sunset also, as a remedy.

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## FAINTING, SUSPENDED ANIMATION, UNCONSCIOUSNESS

210—*Zac cimil.*

(Sotuta, f. 46 v.; Mena, p. 8).

Ca a cña piedra bezal u tunich ceeh yalabal ca a hixcayte ca a ÷a ich agua de azahar yuke. Malob. Uamae cña u motz *zabacche*

ca a ment u polvosil ca a ɔa yuk ich vino malob xani. U lak u ɔace. Caxant *kaxiwchel* u yakil y u lee ca hucñuc kinkinal tune ca pakac yokol u puczikal ma *xkawikin kaxiwchel* petelpet u lee. Uamae cña u tunich ceeh ca a ment u polvozil, ichil agua de azahar y vino pakte y u polvozil *zabacche* catun a ɔayuke bin utzac tumen.

*Fainting.*

You take a bezoar, a deer-stone it is called, and you grate it with a fish-skin and put it in orange-flower water for him to drink; it is not bad. Or else take the root of the *Exostema Caribaeum*, Jacq., and powder it. Then you give it to him to drink in wine. This is not bad also. Another remedy is to seek the *kax-ix-chel*,<sup>1</sup> the vine with its leaf, mash them, and poultice it tepid on his heart. This not the *kaxikin* (but) the *kax-ix-chel*. Its leaf is round. Or else take the bezoar of the deer and powder it in orange-flower water and wine together with the powdered *Exostema Caribeum*, Roem. & Schult. (*Falsa quina*), and give it to him to drink. He will recover by this means.

211—*Zac cimil.*

(Sotuta, f. 46 v.; Mena, p. 66).

Ca a ɔa u nek *haaz* yalan yak, hun xeth bay u pimil icñace ppiz beinte y quatro oras ca lukzaaci. Uamae ɔa u taa yegua ich vino utial yuke, yeɔec u kabil, ca a ɔa ichil vino catun . . . Uamae ca a ɔa yeel u cep mehen hthel, ca a puc(h) ich vino, ca a ɔa yuke bolon yahal cabe, bolon puch u mehen thelil en ayunas cabin ɔabac yuke.

*Fainting.*

You put the seed of the mamey beneath his tongue, a piece as as thick as one's finger-nail, for twenty-four hours. Then you remove it. Or else put the dung of a mare in wine for him to drink. Press out the liquid, and put it in wine, then . . . Or else you administer the testicles of a cockerel. Shred them and put them in wine for him to drink for nine mornings at dawn, nine shreds of the cockerel. Give it to drink before breakfast.

212—*Zac cimil, hihiōbe u lak u kaba.*

(Sotuta, f. 47 v.; Judío, p. 86; Mena, p. 65).

Caxant *tameazche*, *zabacelcan*, *ppaccan*, *xchalche*, *kanchunup*, *taamay*, u canil, yan ti lakin, *zacci*, *xmahanchun*, u lee limones,

<sup>1</sup> *Kax-ix-chel*. "A climbing plant. Its root, peeled and washed and mashed well, when placed on the part somewhat hot, is a marvelous poultice to draw the cold out of an arm, hand or leg." (Motul.) Lit. Wild ix-chel. Ix-chel was the goddess of medicine, and the word also means rainbow.

*chichibe*, u lee *ch̄oo*, *homtoloc*, *hunpeokin* yan tu kab *xaan*, y u macapil *halal* takan chachbil tulacal le xiuob lae, ca *ɔabac* yichinte heuac tibil u mukyahtice choco tu ppiz bin utzac tumen.

*Fainting, swoon is its other name.*

Seek the *Zanthoxylum pterota*, H. B. K. (*Palo mulato*), the *Physalis angula*, L. (*Farolitos*), the *Cereus Donkelaarii*, Salm-Dyck (*Pitahaya*) the *Pluchea odorata*, L. (*Santa Maria*), the *Thouinia paucidentata*, Radl., the *Zuelania Roussoviae*, Pittier, the shoots, it is in the east, of the *Agave fourcroydes*, Lam. (*Henequen*), the *x-mahan-cnun* (probably a *Peperomia* resembling *P. glutinosa*, Millsp.), lemon-leaves, the *Sida acuta*, Burm., the leaf of the *Ceiba aesculifolia* (H. B. K.) Britt & Baker, and of the *hom-toloc* (*iguana-snout*), and of the *hunpeokin* which climbs on the *Sabal japa*, Wright, and the pith of the *Scirpus validus*, Vahl. Boil well all these plants and employ the liquor for a bath as hot as he can stand it. He will recover by this means.



## FALLING

213—*Lubul*.

(Sotuta, f. 33 v.; Mena, p. 8; Judío, p. 75).

Uabin pecnac kik tu hobnil, cabin lubuc uinic yoklal u lubul uabax tioklal xanie, ua tan u tubic kik ua tan u xEIC kik, ca *ch̄abac* hun chach *xucul* u lee y u bachel pakte y u motz chachbil bay hunppel tumin cab yalile, baytun yalae cu ziztal tune, ca a *ɔa* azucar ichil tu ppiz *ch̄uhucil*, catun a *ɔa* yuke hatzcabil en ayunas oxppel kin yuke ua canppel kin. Uamae u lee *chacubteon* chachbil u kabil cu yukul ichil canppel kin, bin utzac tumen. Citac u lubule *ɔabac* uix yuke tuzebal bin uixil kik tu hobnel. Uamae bin yanac puh tu hobnel, postema u kaba. Utz xan u mucul u yich *huaz* ti chicix taan cu tahle, ca a ye $\text{\textcircled{a}}$  u kab yuke ti hatzcab. Citac u lubule ca chacac u may u kupche ah men che utial *ɔabal* hatzcabil, bin utzac tumen.

*Falling.*

If there shall be a movement of blood in his bowels, and a man shall fall for this or any other reason also, or if he spits blood or if he vomits blood, take one handful of the *Portulaca oleracea*, L.

(*Verdolaga*),<sup>1</sup> its leaf and stalk together with its root. Boil this down to the quantity of a third of a drachm of honey, let it cool, add sufficient sugar to sweeten it and then give it to drink at dawn before breakfast for three or four days. Or else the leaf of the *chac-lubte-on*<sup>2</sup> is to be boiled and the liquid is to be drunk for four days. He will recover by this means. As soon as he (begins to) fall, let urine be given to drink, immediately. He will pass in his urine the blood that is in his bowels. Or else if there is pus in his bowels, an abscess it is called, it is good also to bury the fruit of the *Crescentia macrophylla*, Seem. (*Guiro*) in hot ashes to cook it. Then you squeeze its juice out for him to drink at dawn. As soon as he falls, boil the dust from a carpenter's (cedar) shavings that it may be given to him to drink at dawn. He will recover by this means.

214—*U sacal u lubul uacix u nactantal yikal haa,*

(Nah No. 113; Kauh, f. 148 r.)

bay nohoch uinic uaix palalob xan citac u nactantic cu hoppol cha(c)uil tii yetel u cursosil ma muculbil uich u kohanili, citac u pactale hach manal yax cuchanil yetel lay u zazacil u uiche hach manel okomil yol ti tun ca kaholticii cech ah sacyah uinice tilic tun a tuntic bal halab sac ti kohan lae, laix u xibil cin bin yn tzole lae utial halab sacal kohan u yax chune; ca chabac u lee *cehche* yetel *pichiche* yetel *zutup chiceh yc* hach *anicab bilimcoh, molcoh* yetel *atzah chulceh, chiople chalche pakal hunlapp akanan mizibcoc* yetel *laalmuch* ca cici chacac ca yichinte kohan lae.

The remedy for falling or a staggering gait as though on (a boat) on rough water, in the case of adults or of boys also. As soon as he begins to stagger, fever and looseness of the body begin; it is not concealed by the countenance of the patient. Immediately it is seen that he is very pale and excessively depressed. This will be recognized by you medicine-men, when you attempt to purge the patient. This is the man I will tell you about, to purge the patient the first thing. You take the leaf of the *ceh-che* (deer-tree) and the *Psidium Sartorianum* (Berg.) Niedenzu, the *Ipomoea bona nox*, L. (*Nicua*), the *Chrysophyllum mexicanum*, Brandweg (*Cayumito silvestre*), the *Capsicum annuum*, L. (*Chile*), the genuine *anicab* (*Cydista aequinoctialis*, [L.] Miers.), the *bilimcoc*, the *Dalechampia scandens*, L., the *Jatropha aconitifolia*, Mill., the *chul-ceh*, the *Eupatorium aromatisans*, DC., the *Pluchea odorata*, L. (*Santa Maria*), the bitter orange, one handful of the *Hamelia*

<sup>1</sup> Xucul. In this connection the Judío MS prescribes the *chac-xul*, which has been variously identified at the *Cosmos caudatus*, H.B.K. and the *Bidens bipennata*, L.

<sup>2</sup> *Chac-lubte-on*. Lit. Red fallen aguacate.



patens, Jacq., the *Turnera diffusa aphrodisiaca*, Urban (*Damiana*), the *Gronovia scandens*, L. Boil these well and bathe the patient (with the liquor).

215—*Mehen palal cu lubul tumen ik.*

(Sotuta, f. 46 v.)

Tumen cu topnocal ik tu uich u puczikal bay cimenob ca a ɔa ayuda chen haa y tab . . . leti, ua tu pukih ziize minan u bileil ti chen ayuda zanzame . . . ca ɔaic u lak ti bin utzac tumen.

*Boys who fall because of gas on the stomach,*

because there is a sudden rise of gas in the stomach. You administer an enema of only water and salt and . . . If there is mucus and no bile in the stomach, merely administer an enema. Continue to do this until he has recovered by this means.

216—*Uinic cu lubul t(i) luum,*

(Sotuta f. 47 r.; Mena, p. 9).

bay ulaan cooil tie, tumen tan u betic u kab bay lae cu yaalal ocan cizin ti xan ma bayi, ca yumil ti Dios cu tuchit le kohanila, he u ɔacal cu yalic Ricardoe hemax cu lubul t(i) luum tan u betic u kab tan u hokol yom u chie. Caxan u xulub ceeh tooce ca a men u polvosil ca a ɔa yuke. Uamae cña yeel u cep mehen thel a puch ich ziz haa yuke. Uamae cu lecal tie, ca tok u benail u xicin ca a ɔa yuke. Uamae cimen huntul pek ca hokez u kah a ɔa yuke. Uamae lukez hun yal u xanab ua a xanab ca uixnac ichil ca a ɔa yuke. Uamae ca a tooc *ruda* ca a ɔa u taanil yokol tu hol u nii yuɔbente. Uamae ca a chac *poleo* y vino ca a ɔa yuke bin utzac tumen.

*A man who falls to the ground (epilepsy?)*

as though insanity had come to him, because he moves his arms as though the Devil had entered into him, as they say, and also not in this manner. It is our Lord God who has ordained this sickness, but here is the remedy spoken of by Ricardo (Ossado)<sup>1</sup> for anyone who falls to the ground and waves his arms and froths at the mouth. Seek the horn of a deer and powder it for him to drink. Or else take the testicles of a cockerel, shred them in cold water for him to drink. Or else, when it recurs, bleed the vein in his ear and give him something to drink. Or else kill one dog and remove its gall and give it to him to drink. Or else remove one sole of

<sup>1</sup> Ricardo Ossado, alias *el Judío*.

his shoe or your shoe, let him urinate in it and give it to him to drink. Or else burn the *Ruta graveolens*, L. (*Ruda*) and put the ashes in his nostrils for him to snuff up. Or else you boil the *Clinopodium Brownei*, Sw. (*Poleo*) with wine and give it to him to drink. He will recover by this means.

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### HAIR, DISEASES OF THE SCALP

217—*A kat ma u hokol tzotz.*

(Judío, p. 100; Mena, p. 101).

U ðacal tzotztzotz u kikel uo y u kikel zoð ca nabez hetub a uolahe maili u hokol tzotze mazamac hokoc ca a nabez u kikel uoo he u kabil *haway* xakbezabil y aseite ca nabez hetub a uolahe ma u hokol tzotze matan u hokol tzotz tumenel.

*When you do not want the hair to come out.*

The medicine for abundant hair is the blood of a frog and the blood of a bat. You anoint it on the part desired<sup>1</sup> before the hair comes out. Before (the hair) comes out, you anoint it, with the blood of a frog. But there is the juice of the *Parthenium hysterophorus*, L. (*Altinisa*), which is to be mixed with oil, and you anoint it where you desire the hair not to come out. The hair will not come out because of this.

218—*Utial u banal u tzotzel pol. Mochil kab.*

(Sotuta, f. 30 v.)

Caxant le xiu *kaxiku* ca a ment u ðamal catun a haa u pol y, malobi. Bay xan, malob xiua utial max ðocan u mochol u xichel u kab.

*For hair falling out, contraction of the arm.*

Seek this plant, the *kax-ix-ku*,<sup>2</sup> soak it and bathe his head with it. It is not bad. Thus also the plant is not bad for anyone suffering from a contraction of the cords of the arm.

<sup>1</sup> Evidently such a remedy was not desired on the part of the head where it was once the custom to shave it.

<sup>2</sup> *Kax-ix-ku*. "Another medicinal plant which causes broken bones to knit." Motul. "A plant whose root draws out the cold." Dict. San Francisco.

## COMPLAINTS OF THE HEAD

219—*Chibal pol.*

(Sotuta, f. 30 v.; Judío, p. 93).

Ca a c̄ha zazac azucar, ca a ɔam ti haa ca puukuc, catun a ɔa u xuchnite y yik tile tu nii, tuux cu chibal u hoole ua tu cahmatil u hool, tu hachunhac̄he tu cappelil u hol u nii u xuchiktic u ɔac. Uamae *xbolontibi*, huch̄bil u lee, ca pak tu pol u ɔac.

*Headache.*

You take white sugar and soak it in water. When it is dissolved, then you give it to him to snuff up with his breath in his nostril. Wherever the headache is, or if it is in both (sides of his) head, in his temples, it is into both nostrils that he is to inhale the remedy. Or else the *Cissus trifoliata*, L., its leaf is to be crushed and poulticed on the head for a remedy.

220—*Chibal hool.*

(Sotuta, f. 31 r.)

Ca a c̄ha u lee *chaczubinche*, yach̄bil ziz cabin yuke. Uamae u lee *haazcan* yach̄bil ziz cabin ɔabac yuke. Catun a ɔa ɔeɔec tu hoole, le caɔic tu hoole, u motz ma u lee. Bay xan, u motz *taamay* u motz *zabacelcan*, u motz *kanchunup* y u canil ac, huch̄bil kinkinal tune ca a pak tu hool. Uamae c̄ha u motz *acanceh* yach̄bil ziz cabin yuke, bay u lee *xcabalyaxnic* hayalhay ti luum.

*Headache.*

You take the leaf of the *chac-zubin-che* (red *Acacia*), crush it when it is fresh and then give it to drink. Or else the leaf of the *haaz-can* (mamey-shoot) is to be crushed fresh and given to drink. Then you apply a little of the second (plant) to the head, its root, not its leaf. Thus also the root of the *Zuelania Roussoviae*, Pittier, the *Cereus Donkelaarii*, Salm-Dyck (*Pitahaya*) the root of the *Thouinia paucidentata*, Radl., and the shoots of the ac (a tall broad-leaved grass, *Barbon*), are to be crushed, warmed and poulticed on the head. Or else take the root of the *acan-ceh* (a plant that spreads on the ground), crush it fresh and let him drink it. Its leaf is like that of the *Ruellia tuberosa*, L., which spreads out on the ground.

221—*Chibal hool.*

(Mena, pp. 90 and 130).

Cñabac *hunpeəkinak* u kabae *yoch imil pal hunpeəkinxiu* u ni bin zac *xboloncouoh zinanche xmolcoh* huchbilob ca puc ha pakac tu pol ah kohan.

*Headache.*

Take the *hunpeəkin-ak* (a vine which climbs on the *Sabal japa*) as it is called, "mother's milk," the *hunpeəkin-xiu*, its tip will be white, the *ix-bolon-couoh* (nine tarantulas), the *Zanthoxylum caribaeum*, Lam., the *Dalechampia scandens*, L. These are to be crushed, dissolved in water and poulticed on the patient's head.

222—*Chibal hool, hunpeəkin u kaba xan.*

(Sotuta, f. 30 v.; Judío, p. 93).

Caxant *hunpeəkin-ci* thunthuntabal y *hunpeəkinak* yan tu pach *xaan* ua tu pach che, y *hunpeəkinxiu* hayalhay tu uich luum *netab, xkintah*, huchbil tulacal kinal tune ca pakaci. Ua mat hauic, ca a cña *chuyche* ca a huchē y yiklil, ca a pak tu pol, bin u kilcabte. Ua mat hauic ua u kinam kin yan tu pole, ca a cña *zabila*, huchbil ziz cabin pakaci ua kinbil ca pakaci. U lak xan ua mat hauic, ca a cña *kokobak*, bay u lee *ahmuce* u lole kankan, u motze kankan zih (ziz) u boc bay *buulake*, huchbil u motz, ca a nabez tu pol y cax tu mocol u bacel cax chupil chen tu hunal. U lak xan ua mat hauic, ca a cña *zolcan, amak* u lak u kaba, huchbil ca nabzabac ti le pol cu chibale, bay u le *cocche*. U lak xan ua mat hauic, ca a cña u motz *pelexcuch* huchbil ca nabzabac ti le pol cu chibale, utz u packaxal yoyol ni ti le pol cu chibale xane, cada veinte y quatro horas, huntal u mental hunhunppelil le əacob tia.

*Headache, hunpeəkin is also its name.*<sup>1</sup>

Seek the *Aloe vera*, L. (*Zabila*), it is spotted with little drops, and the *hunpeəkin-ak* which clings to the *Sabal japa*, Wright, or other trees, also the *hunpeəkin-xiu* which spreads out on the surface of the ground, the *ne-tab*,<sup>2</sup> the *Desmodium procumbens* (Mill.) Hitchc. (or *D. purpureum* [Mill.] Fawc. & Rendle). Crush them all, warm them and poultice them on the head. If that does not

<sup>1</sup> Supposed to be caused by a *hunpeəkin-lizard* biting the shadow of one's head. This is a lizard closely related to the Gila monster.

<sup>2</sup> *Ne-tab*. A rare shrub native to the coast. It is said to have a compound leaf like that of the *ceiba*, only thicker.

stop it, take a certain hanging insects' nest<sup>1</sup> and crush it with the grubs. This is to be poulticed on his head, and it will cause him to perspire. If that does not stop it, or if his head is hot and throbs, you take the *Aloe vera*, L. (*Zabila*), crush it cold and poultice it; or warm it and poultice it. Another (remedy), if it does not stop, is to take the *Aristolochia odoratissima*, L. (?); its leaf is like that of the *Dalbergia glabra* (Mill.) Standl.; its flower and root are yellow; it has a fresh odor like that of the buul-ak (bean-vine). Crush its root and anoint it on the head, or on the joints of the bones (of the skull), or even if it is merely a swelling. Another remedy also, if it does not stop, is that you take the zol-can, its other name is the am-ak (spider-vine). Crush it and anoint it on the aching head. Its leaf is like that of the coc-che (asthma-tree). Another remedy, if it does not cease, is that you take the root of the *Croton glabellus*, L. Crush it and anoint it on the aching head. It is good to bind the tender tips (of this plant) on the aching head. This is to be done once every twenty-four hours.

223—*Chibal pol y chibal puczük.*

(Sotuta, f. 24 r.; Judío, p. 27).

Le chibal pol y chibal puczike, lay chapahalob uchic ban cimil tu habil 1730 y 1731 años lae. He uchic u ðacal tumen ah ðacyahobe, citac u hoppol u kinam u uinclil, ca a yeo u kabil *pakal* ichil kinal haa yuke utial u xenaheb, ua matan xee, ca hoyabac y kukum, uaix matan u haual u kinam u puczikale ua u nak, ca lubzabac u muk u lee *coles* ichil choco haa, catun a nabez manteca y tabi chocochoco, catun a packax ti le, tuux cu kiname. Ua matan u hauale, chacil u lee *payhul*, kinkinal cabin yuk ti hatzcab maili u kam u chie, utial ca kahac lae.

*Headache and pain in the heart.*

This headache and pain in the heart was the disease which came in the epidemics of the years of 1730 and 1731.<sup>2</sup> Here is the remedy of the medicine-men. As soon as the pain begins all over the body, you squeeze the juice of an orange into warm water for him to drink in order that he may vomit. If he does not vomit, then let his throat be scraped with a feather. If the throbbing in the heart or abdomen does not cease, then let the strong liquor be drawn from cabbage-leaves in hot water; and you anoint him with lard and salt, very hot. Then let it be bound tightly on him wherever the pain is.

<sup>1</sup> *Coc-che*, "that which hangs from a tree." There is an unidentified tree-parasite of this name. It is said to resemble a thistle and the Indians obtain water from it. In these native medical prescriptions, sometimes the hanging nest of an insect is indicated.

<sup>2</sup> Possibly the result of the famine of 1727, when 17,000 people died of hunger, (Molina 1904-13, III p. 177).

If it does not cease, boil the leaf of the *Phyllanthus conami*, Swartz, (*Ciruelillo*), and when it is tepid, let him drink it at dawn before breakfast, in order that it may be remembered.

224—*Chulil pol, tukmantuk.*

(Sotuta, f. 29 v.)

Cña u uich *wkoch* ca a huče ca a takez. Uamae ca a cña u lee *culantro* yayax ca a huče y u somel chichan uacax u kabinte, ca a pakez, bin utzac tumen.

*A protuberance on the head.*

Take the fruit of the *Ricinus communis*, L. (*Higuerillo*), crush it and poultice it (on the part). Or else you take the leaf of the *Coriandrum sativum*, L. (*Culantro*), it is a greenish color. You mash it with calves-brains and draw out the juice. Poultice it (on the part). He will recover by this means.

225—*U sacal chibal pol.*

(Judío, p. 109; Teabo No. 7).

*Yx-hunpeokin* u sacal kuxpol ua tumen kinam pol tumen kin huchbil ca pakac tu pol uinic ua tumen zih yanile mucbil ti chicix tan chacau cabin nabzabac tu pol uinic, hebix tiblile buhkupbil chumuc nakyabac tu pol chacau chacau lae.

*The remedy for headache.*

The *ix-hunpeokin*<sup>1</sup> is the remedy for slow continued headache; either because of the sun, when it is mashed and poulticed on the man's head, or because of cold when it is buried in hot ashes and anointed hot on the man's head. It is suitable, however, to split it up the middle and bind it tightly on his head very hot.

226—*Chibal pol y chibal okol.*

(Judío, p. 112).

U sacale *kokobak* huchbil ca nabzabac ti chibal pol y ti chibal okol he *kokobake* bay (y)akil *xtabcanile xthucitunich* lic u yalabal u nic lic u nacal ti cheeob xan.

<sup>1</sup> *Ix-hunpeokin*. A plant with a leaf resembling that of the henequen. It has a soft point and not a hard spine.

*Pain in the head and various parts of the body.*

Its cure is the kokob-ak (*Aristolochia odoratissima*, L.?). It is to be mashed and anointed on the aching head and on the aching body. This kokob-ak is like the vine of the *Cissus rhombifolia*, Vahl.; the x-thuci-tunich, as its blossom is called, which climbs on the trees also.

227—*Holom ix al, chibal pol.*

(Judío, p. 26; Mena, p. 103).

U sacale *ak-hauay* y lay *mehenchum* muchucnac oiblac u lee yantac tu kab cheob bayix lay yantac tu kab cheob ti kaxe uololuol u chun caix lay u cucutil yanil u lee xane, utz cñabal *babain*, *zacchuenche* u cappel u kaba, *buhumkak chichibe* cñacñe yacñbil uaix hucñbil tulacale *xholomxhalkin*, bay u le u tak pinyase tu kab cheob yan ti kax y *ppoppoxcan ixmahanchun*, lic u zihil tu kab *pelexcuch* hucñbil kinkinal, ca pakac tu hol xhal chibal pol tie.

*Post-partum headache.*

The remedy is the *Parthenium hysterophorus*, L. (*Altinisa*) and this mahan-chun (probably a *Peperomia*). Thickly spotted or stained is its leaf. It is to be found on the branches of trees as well as on the branches of forest trees, where it winds about their trunks. (Take) the thick part of the leaf. Also it is good to take the *babain* (alligator-foot) or *zac-chuen-che*,<sup>1</sup> as it is also called, and the leaf of the *buhum-kak* and the *Sida acuta*, Burm., crushed raw or mashed entirely. (Also take) the *Tillandsia streptophylla*, Scheidw., its leaf is like a cluster of pine-nuts on the branches of trees in the forest; also the *Tragia nepetaefolia*, Cav. (*Ortiguilla*), and the *ixmahanchun* which grows on the branch of the *Croton glabellus*, L. Crush these and poultice them tepid on the patient suffering from a post-partum headache.

228—*U sacal xholom xal ti cñuplal.*

(Judío, p. 138).

*Mostaza* cici yacñbil y kinal haa ca puluc chuc yalan lae.

*The remedy for post-partum headache in a woman.*

The *Sinapis niger*, L., is to be well crushed with warm water. Then let her be smoked with charcoal placed beneath her.

<sup>1</sup> *Zac-chuen-che*. A small shrub with short lanceolate leaves.

229—*Kinam hol, matech u uenel uinic.*

(Judío, p. 93).

U ðacale u lee *hookab* huchibil ca nabzabac y *chacxul* u le kaxbil y *chilib-tux* u lee kaxbil y *yaxppehelche* huchibil ca nabzabaci y zac cebolla u ui ca u puch u kab ca yuabente, bin hauac.

*Headache and insomnia.*

The remedy is the leaf of the *Tecoma quinquefolia*. Crush it and anoint it (on the head). Also the *Bidens cynapiifolia*, H. B. K., its leaves are to be bound (on the head). Also the leaf of the *Acalypha Selereana*, Greenm., is to be bound (on the head). Also the *Piper Gaumeri*, Trel., is to be crushed and anointed (on the head). Also the bulb of a white onion is to be plucked apart and inhaled. (The complaint) will cease.

230—*Hunpeakin.*

(Judío, p. 137; Mena, pp. 90 and 130).

U ðacal *hunpeakin* u tanil *xhunpeakin* y u tanil *hunpeakinak* y *xacatbe* tu than nom toc bil ca yanil u tanil pakbili u ðacal.

"*Hunpeakin*" headache.<sup>1</sup>

The remedy for this headache is the ashes of the ix-hunpeakin-lizard, and the ashes of the hunpeakin-vine and the *xacatbe*,<sup>2</sup> as they call it. These are to be burned and the ashes poulticed (on the head) as a remedy.

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## HICCOUGHS

231—*Amcan tukub.*

(Sotuta, f. 41 v.; Nah No. 82).

Le yan tuz ikile amcan u kaba, caxant *amcanxiu* y *amcanak*, u motz *hokab*, *xtuzikche* *xmamac luumil* yan tu pach chee y yotoch kanal, y yotoch tupchac ca huchuc catun kintaac ca a ða yuke bin hauac tumen.

<sup>1</sup> The ix-hunpeakin has been described as a lizard 3 or 4 inches long with black, pink and ash-colored horizontal stripes on its back. The belly is pink. If it bites the shadow of a person's head, a headache will result which is considered dangerous. See fauna-list.

<sup>2</sup> Xacatbe. Described as an insect resembling a locust. See fauna-list.



*"Amcan"*<sup>1</sup> *hiccoughs*.

This is a difficulty in breathing or gasping called "amcan." Seek the amcan-xiu and the amcan-ak, the root of the *Tecoma quinquefolia*, the x-tuzik-che (asthma tree), the ix-mamac-luumil which is on the bark of trees, the nest of the kanal<sup>2</sup> and the nest of the tupchac.<sup>3</sup> Let them be mashed and warmed; then administer them in his drink. He will recover by this means.

232—*Tukub*.

(Sotuta, F. 41 v.; Nah No. 81; Judío, p. 81).

Caxant *huuncaan*. Lay petelpet, yan tu pach chee bay huune bay *xtoyil* u uinicile y *htukub* y *xtuzil* u macapil *halal*, u macapil *xkoch* y (u motz) *hmaak* le cu macintic frascoe, huñe catun a kinte a ja yuke bin utzac tumen paktecunbil y *xtuzikche*.

*Hiccoughs*.

Seek the huuncaan. It is round and is found on the bark of trees. It is like a sheet of paper and like the ix-toyil<sup>4</sup> is its body. Also (take) the ah-tukub<sup>5</sup> and the ix-tuzil,<sup>6</sup> the pith of the *Scirpus validus*, Vahl., the pith of the *Ricinus communis*, L., and the root of the *Anona palustris*, L. (*Corche*) which is used to cork a bottle. Mash and heat these and administer in his drink. He will recover by this means, together with the tuz-ik-che.

233—*U sacal tukub*.

(Judío, p. 119).

Oabil homa yokol u puczikal oczic kinal tu puczikal ma kupbili, chenbel tak homabil cu hual u sacal xan u kukmel . . . *mo kuwub* y ooo pukbil u sacal lae.

*The remedy for hiccoughs*.

Is to apply a gourd (for cupping) over the heart to bring warmth into his heart. Do not let it cut (the flesh) but only cup it, to put an end to (the hiccough). Another remedy also is the feather of a parrot, the *Bixa orellana*, L. (*Achiote*) and beat it up so it is dissolved as a remedy for hiccoughs.

1 Amcan. A certain poisonous spider said to fight with snakes.

2 Kanal. A yellow wasp or hornet that makes a round flat nest. (Pacheco Cruz.)

3 Tupchac. An ash-colored wasp with a long thin body.

4 Ix-toyil. A certain spider found in houses.

5 Ah-tukub. Lit. something which hiccoughs. Apparently an insect.

6 Ix-tuzil. A certain clothes-moth. (Motul.)

234—*Tukub kohan.*

(Sotuta, f. 42 r.)

Cax y kin y aakab cu tzayalte uinic kohan ca cñabac lik hobnil cab, ca çabac bay tancoch medio yuke cu çocole ca cñabac choco haa yuke tu pach xan. Uama u tukubil cimile bin utzac tumen.

*A serious illness accompanied by hiccoughs.*

Whether it is by day or night that it attacks a sick man, let there be taken honey fresh from the hive and let him be given about one-half of a *medio* to drink. After that, let hot water be given to him to drink with it also. If it is not "fatal hiccoughs," he will recover by this means.

235—*Tukub calanil,*

(Sotuta, f. 42 r.; Judío, p. 65).

lic u tzayal ti uinic ichil u caltal pulbilti tumen u nupulte ua yet kuxil ichil balche yalabal. Ca a cña çopcheil *buul*, ua xcolil *buul*, chacbil, kinkinal ca yuke, minan tabi, ca a ça yuke bin hatzac yol tumen.

*Hiccoughs caused by drunkenness,*

which attacks a man when he is intoxicated, brought on by a spell on the part of his companion or fellow-drinker of balche,<sup>1</sup> so they say. You take stake-beans, or field-beans, boil them and let him drink the liquor tepid, without salt, when you give it to him to drink. The complaint will be relieved by this means.

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## INFLAMMATION, ENLARGEMENT OR TUMEFACATION

236—*Caxbalac chupil.*

(Sotuta, f. 18 v.)

Caxant u motz *acanceh* y u lee le xiu hayalhay ti luum y u lee *çwçuc* y *pahalcan* yerba mora yalabal huchibil tu yoxtzucil ca nabzabac y pluma ti caxbalac chupil bin u hauez.

<sup>1</sup> Balche. A drink made of fermented honey mixed with the bark of the *Lonchocarpus violaceus*, Millsp.

*Any swelling.*

Seek the root of the *acanceh* and the leaf of this plant, it spreads out on the ground, and the leaf of the *Diphysa robinoides*, Benth., and of the *Solanum nigrum*, L., the last is called *yerba mora*. Mash these and anoint it with a feather on any swelling. It will put an end to it.

237—*Chuchup calil.*

(Sotuta, f. 14 r.)

Hunppel ak *buul ak bay buul* u yichancale *chabac* u motz ca *huchuc* catun a pak tuux yan u *chupil* cu *hauzic*. Yan xan hunppel ak *kuxubak* *chabac* u lee *huchibile* ca pakac yokol u *chupil* cu *sumzic*.

*Swollen neck.*

(There is) a vine, the *buul-ak*; it fruits like the bean. Let there be taken its root and let it be mashed; and you poultice it wherever the swelling is to reduce it. There is also a vine, the *kuxub-ak*.<sup>1</sup> Let its leaf be taken, mashed and poulticed on the swelling in order to reduce it.

238—*Chuchup Calil.*

(Sotuta, f. 14 r.)

Ca a *cha malvas* y cab catun *huchuc* ca yuke. Uamae ca yuk *leche* y *canela* xakan y cab catun *chabac* *chuc* *hetuux* yan u *chupil* u *cali*(1)e.

*Swollen neck.*

You take the *Malachra palmata*, Moen., and honey. Let them be mashed and let him drink it. Or else let him drink milk and cinnamon mixed with honey, and let a little of it be applied wherever the swelling is.

239—*Chuchup calil y cax tuuxac.*

(Sotuta, f. 16 r.; Judío, p. 43; Nah Nos. 103 and 104).

Utial chup u cal yalan u xik y cax tuuxac chup caxant *chuc* *kaxilcab*, ca *chuc* hun hau *limones* *ichil* y hun *yipp tab*, *nabzabil* y

<sup>1</sup> *Kuxub-ak*. Lit. *Kuxub-vine*. The *kuxub* is the *Bixa orellana*, L. or *achiote*. Also the *Kuxub-can* (*kuxub-shoot*) is the *Rivina humilis*, L. or *coral*.

hunppel pluma ti le chupil bin *ɔumuc* tumen ua chuchup cal ichile u cale ca a *ɔa* yitz *athuhuynicte* u hac tu cal chup ichile utz u *ɔab(a)li*.

*Swelling in the neck or elsewhere.*

For a swollen neck, a swelling beneath the arm-pit or elsewhere, you seek a little wild honey and squeeze a section of a lemon into it with a little salt. It is to be anointed with a feather on this swelling. It will be reduced by this means. Or if the swelling is inside the throat, you apply the gum of the *Plumeria pudica* (*Sensitiva*). Let it be spread on the swelling inside the throat. It is a good thing to apply it.

240—*Chuchup hoolil, chuchup calil, chuchup ichil y chuchup tzemil.*

(Sotuta, f. 14 v.)

Caxant *ɔmahanchun* huchuc u lee catun a pak yokol chupile cu *ɔumzic*. Uamae letie xiu *macalcox* huchibil u lee, ca a pak yokol chupile cu hauzic u chupil ppuuc xan. Bay xan ua ca a uilic kohan *ɔoc* u chupul u tzem ca a *chā* u yoyol ni *ɔpomolche* ca a *chā* cu *ɔocol* tune, mamaxtunte ca a pak yokol le chupile cu *ɔumzic* utial chuchup puczikale *chā* u lee *ɔulubtok*, ca a homkakte, catun a *ɔa* yokol le yae cu hauzic. Bay xan hunppel *chāpahal* mazeual chupil, he u *ɔace*, *ɔkumtulub* huchibil ca a pak yokol le chupile cu *ɔumzic* le xiua cu naacal canal.

*Swelling of the head, neck, throat and breast.*

Seek the ix-mahan-chun (probably a *Peperomia* resembling the *P. glutinosa*, Millsp.), crush its leaf and poultice it on the swelling to reduce it. Or else this plant, the macal-cox (pheasant-bulb), is to be crushed, its leaf, and poulticed on the swelling, to put an end to swelling of the cheek also. Thus also if you see that the patient has a swollen breast, you take the tender tips of the *Jatropha Gaumeri*, Greenm. (*Piñon*), and after that you mash them with a stone and poultice them on the swelling to reduce it. For a swelling over the heart (distended stomach?), take the leaf of the *Bauhinia divaricata*, L. (*Calzoncillo*) and roast it quickly over a fire. Then you apply it to the soreness to cure it. Thus also there is a disease called laborers' swelling. This is the remedy, the *Melothria pendula*, L. (*Pepinillo*), which is to be crushed and poulticed on the swelling to reduce it. This is a plant that climbs high.

241—*Chuchup imil.*

(Sotuta, f. 17 r.; Judío, p. 31; Nah No. 95).

Layli ya imile, caxant *analkak*, u lee, y u lee *xouxuc* y u lee xiu *hulimkak* le xiua, matech u canal tal, hayalhay ti luum, ma chouac u chuchi, hunkuch bay u lee y u *capil* (tzapil) *cabalyaxnic*, *chacxamen* u xaxtacil u lee y u *acal* ix chupil ti mehen palalob huchbil ca pakaci. Uamae u lee *pixthonkak* y u lee *zizal-oumya*, bay u le *ibe*, y *cabalziz*, yan nak pak, bay u lee *yaximhaile* y u motz *chicixmoak*, chachilen u motz y u lee *payhul* huchbil ca nabzabaci. Uamae huchbil u lee *xpeteltunak*, ca pakaci, bin utzac tumen.

*Swollen breast.*

This is a soreness of a woman's breast. Seek the *Asclepias curassavica*, L., its leaf, and the leaf of the *Diphysa robinioides*, Benth., and the leaf of the *hul-im-kak*. This plant does not grow tall, it spreads on the ground. It greatly resembles the leaf and spiny covering of the *Ruellia tuberosa*, L. (Take) the *Rhoeo discolor*, L. Her., its leaves droop to the sides. This is also the remedy for swellings on boys, when it is crushed and poulticed. Or else (employ) the leaf of the *Avenia fasciculata*, Millsp., and the leaf of the *zizal-oumya*<sup>1</sup> which has a leaf like that of the Lima bean. Also (take) the *cabal-ziz* (*Asplenium pumilum*, Swz.?) which grows on the face of a wall like the leaf of the *Wolffia braziliensis*, Wedd. Also (take) the root of the *chicix-mo-ak*,<sup>2</sup> its root is a dull red color, and the leaf of the *Phyllanthus conami*, Swartz (*Ciruelillo*). These are to be crushed and poulticed. Or else, crush the leaf of the *Cissampelos Pareira*, L. (*Pareira brava*), and let it be poulticed. She will recover by this means.

242—*Chuchup imil, ua hul im.*

(Sotuta, f. 16 r.; Judío, p. 43; Nah No. 105).

*Cña* u pach *hulub*, yan nak kaknabe, zuzbil u pach, huchbil tu pach im yae. Yan u lak u *ac* xane: thanac u mun le *chuplal* chup yime ca u ment u *ac*, ca u *cña* ca xoth u cheil u *hulubil* cay le yan nak kaknab, ca yalic catun u buhlante bolonait u buhul, catun u ment u chichan hulil y u chichan cheil *xpayhul* cu *ocole* ca mentabac hunppel bik chich utial u noccin yokol le im chupe, catun hoppoc u hulic y u bubuhul u cheil cay bolonait, bolonten u hulic xan yokol

<sup>1</sup> *Zizal-oumya*. Lit. fresh *oumya*. The *oumya* has been described as a vine with large leaves and yellow flowers.

<sup>2</sup> *Chicix-mo-ak*. Lit. fiery parrot-vine. The Judío version of this prescription calls it *chicix-mo*, which Cuevas describes as a shrub of ordinary size with dark-green leaves and a milky sap. See plant-list.

le bikchich cu tzaylobe, hetun le chichan hule holhuch licil u thinib, bin hauac tumen.

*Swollen breast, or "pierced" breast.*

Take the exterior of the *Bravaisia tubiflora*, Hemsl., which grows beside the sea. Let this be crumbled, crushed, (and applied) to the sore breast. There is another remedy also: let the attendant of this woman with a swollen breast be told to make medicine as follows: let her take and cut two stalks of the *Bravaisia tubiflora*, Hemsl., (employed for) stringing fish; they grow by the sea. Then let her make little shafts from small stalks of the *Phyllanthus conami*, Swartz (*Ciruelillo*). Then let her make finally a (wicker) twist in order that she may invert it over the swollen breast. Then she shall begin to thread it with the nine split stalks of the *Bravaisia tubiflora*. Nine times she shall pass it through, over the spiral twist which holds it together. The little shafts shall draw (the breast) up tightly. It will cease by this means.

243—*Chuchup nakil.*

(Sotuta, f. 15 r.)

Ca a cña *culantrillo*, le cu hokol tu nak cñenobe liktac u bacel chacbil ca ðabac yuke. Uamae u motz *inojo* ca a chace catun a ða yuke. Uamae ca a chace u motz *coco* yuke. Ua ca a cña hunxeth acero ca a pul ti kak chacholen tune ca a ða ich vino ca yuke. Uamae ca a choo unguento tu nak cu ðumzic ua u enjundia xcax, castran jabon y vinagre tulacal, ca a choo tu nak. Uamae choco aseYTE choo tu nak bin hauac tumen.

*Swollen abdomen.*

You take the *Adiantum tricholepis*, Fee., which grows beside the wells, strip its stalk, boil it and give it to drink. Or else the *Foeniculum vulgare*, Gaert (*Hinojo*), boil it and give it to him to drink. Or else you boil the root of the *Cocos nucifera*, L., for him to drink. Or you take a piece of steel and throw it into the fire. When it is red-hot, put it in wine and let him drink it. Or else you rub ointment on his abdomen to reduce it, or chicken-grease, Spanish soap and vinegar, all of them are to be rubbed on his abdomen. Or else heat some oil and rub it on his abdomen. It will cease by this means.

244—*Chuchup pixil.*

(Sotuta, f. 15 v.)

Lela moch oc kamaz-can-kak, caxant *canal-zinic*, pixil pix yotoch ti cheeob, cax ti ak, y u uii *abolontibi*, y yotoch *xux*, huchbil ca pakaci. Ua tun ziz u cuch le chupile, u sace *xputcan*, *ibincan*, *chacah*, *zaccatzim*, y *kikche*, u lee tulacal pakte y *xcambalhau* huchbil, ca pakac ti u chupil, bin hauac tumen.

*Swollen knees.*

This is called contracted leg, or "ant-contagion." Seek the canal-zinic,<sup>1</sup> its covered nest is on trees or on vines, and the succulent root of the *Cissus trifoliata*, L., and a wasps' nest. Crush and employ as a poultice. Or in case the swelling is caused by cold, the remedy is the *Lepidium virginicum*, L. (*Mastuerzo*), the *ibin-can*, the *Bursera simaruba* (L.) Sarg., the *Mimosa hemiendyta*, Rose & Rob., the *Castilla elastica*, Cerv. The leaves of all of them, together with the *Dorstenia contrajerva*, L. (*Contrayerba*), are to be crushed and poulticed on the swelling. It will cease by this means.

245—*Chuchup tonil.*

(Sotuta, f. 15 v.; Judío, p. 30).

Caxant u motz *kanche*, *zackokobche*, *cocche*, u yoxtzuc u kaba *ppoppoxcan*, *zolcan* bay u lee *cocche* y u lee *pahalcan* huchbil tulacal ca pakac ti yeel ton ua el el u cahe *ppaccan*, *bezcan* *ibincan*, *habancan* y *cupceh chikin* utz u pakal tu mocol bacob y u le *kantumbub* y *tontzimin* huchbil ca pakaci. Uamae u pukil *luch* u kabil pakbili. Uamae u lol *xchilibtaman* y *ppaccan* huchbil ca nabzabac ti chupil. Utz xan u pach noy oitaan pakbili y hunppel pluma.

*Swollen genital organs in a man.*

Seek the root of the *Conocarpus erecta*, L. (*Mangle prieto*), the *kan-che*, *zac-kokob-che* (white snake-tree), and *coc-che* (asthma-tree) are its three names. Also (take) the *Tragia nepetaefolia*, Cav. (*Ortiguilla*), the *zol-can*, its leaf is like that of the *coc-che*, also the leaf of the *Solanum nigrum*, L. (*Yerba mora*). Crush them all and poultice them on the testicles. If there is a burning sensation, (employ) the *Physalis angula*, L. (*Farolitos*), the *bez-can* (broom-shoots), the *ibin-can*, the *haban-can*, the *Calapogonium coeruleum*, Benth. (*Jicama cimarron*), the *ceh-chikin*. It is good to poultice the joints of the bones with the leaf of the *Sanvitalia procumbens*, Lam.

<sup>1</sup> Canal-zinic. A white ant which builds a volcano-shaped nest on the branches of trees.

(*Sanguinaria de flores negras*) and the ton-tzimin (tapir-genitals); they are to be crushed and poulticed. Or else the pulp of the *Crescentia cujete*, L. (*Jicara*). Its juice is to be poulticed. Or else the blossom of the ix-chilib-taman (cotton?) and the *Physalis angula*, L. (*Farolitos*). These are to be crushed and anointed on the swelling. Good also is the sediment of ashes, spread on (the testicles) with a feather.

246—*Chupilob.*

(Sotuta, f. 14 r.)

Caxant *cabal-zilil*, ziz u cuch le xiu pepechitunte, catun a pak yokol le chupile. Uamae cña *zacchacah* maxan u ñumzic chupil elel u nabzabac ti u chupile huchibil u lee ca pakci cax chen yaalil pukbil u lee u zizcuntic cu ñumzic xan. Yan xan u lak ñace *zacchuenche* xakbezabil y u le *zacchacahe* tu cappelil hach utzob huchibil ca pakaci. Uamae *zizalxiu* yachtaac u lee catun a pak yokol le chupile. Bay xan le xiu *lakintan* u kabae huchibil u lee catun a pak yokol. Uamae *chacah* ca yachit u lee, ca a pak yokol le chupile, cu haul tumen. Uamae lay xiu *ñumohoch* yachit u lee catun a pak yokol cu ñumzic. Uamae cña u lee *ppaccan*, bay *ppace* u yich, huchibil u lee catun a tzah y aseite, ca a choo y hunppel plumalile u chupile cu ñumzic. Uamae le xiu *xtuucanil tuuboc* u uizim (?), ca a pepechitunte catun a ña yokol le u chupile cu ñumzic. Uamae le *xanabmucuy* chabil u yitze, ca a ña tu pach u yail, ua tu yoc chuplale ma uchac a ñaic ti, tumen ma utzi.

*Swellings.*

Seek the *cabal-zilil*;<sup>1</sup> it grows in a fresh cool place. Crush this plant with a stone and then you poultice it on the swelling. Or else you take the *Euphorbia mayana*, Millsp.; crush it to reduce the swelling. If there is a burning sensation, let there be anointed on the swelling the crushed leaf, then let it be poulticed. Even merely the liquor of the leaf dissolved (in water) will cool it and reduce it also. There is another remedy, the *zac-chuen-che*<sup>2</sup> which is to be mixed with this *Euphorbia mayana* in equal parts. It is very good to crush and poultice it. Or else the leaf of the *Brophyllum pinnatum*, (Lam.) S. Kurz. (*Siempre vive*), is to be crushed and poulticed on the swelling. Or else this plant, the *lakintan* (some prostrate *Euphorbia*), as it is called, its leaf is to be crushed, and then you poultice it. Or else the *Bursera simaruba*, L., its leaf is to be crushed and poulticed on the swelling. Or else this plant, the

<sup>1</sup> Cabal-zilil. Lit. low zilil. The zilil is a certain palm.

<sup>2</sup> Zac-chuen-che. A small shrub with short lanceolate leaves.



oꝝ-mohoch, its leaf is to be crushed and then you poultice it on (the swelling), to reduce it. Or else you take the leaf of the *Physalis angula*, L. (*Farolitos*), its fruit is like that of the tomato. Crush its leaf and then fry it in oil. Then you apply it to the swelling with a feather. Or else this plant, the *Ix-tu-canil* (or) *tu-boc* (*Passiflora foetida*, L.), you mash it with a stone and apply it to the swelling to reduce it. Or else the *Euphorbia hirta*, L. (*Yerba del pollo*); take its gum and apply it to the sore. If (the swelling) is on the foot of a woman, you may not apply it, because it is not good.

247—*Chupil tu kin hahaal.*

(Sotuta, f. 16 v.)

Le xiu *xtaulumil* le u lolile azul bay yal *yerba buena*. Le xiu a cici huchibil ca oꝝbac tu xethel pati catun pakac yokol lay chupile ti cu ppatal yokol lay chupile.

*Swelling from hot water.*

This plant, the *Ageratum Gaumeri*, Rob. (*Spermacoce tenuioir*), has a blue flower like that of the small mint plant. This plant is well mashed and put on a piece of cotton cloth. Then let it be poulticed on this swelling. It is to be left on the swelling.

248—*Chupil, ziz u cuch.*

(Sotuta, f. 14 v.)

Chã le *yaaxhalalche* ppobil y u kab le chipil tulacal cu oꝝmzie yetel purga xan cu oꝝaic kaxil ti max ukice.

*A swelling caused by cold.*

Take the *Pedilanthus Itzaeus*, Millsp. Wash with its juice the entire swelling to reduce it. Accompany this with the same, as a purge which will move the bowels of anyone who drinks it.

249—*Chub (chup) tsek.* Swollen scalp (literally swollen skull).

(Judío, p. 29).

U oꝝacale u lol cat u lol *taman mac acin* chacchal huchibil ca kintabac ca oꝝbac ci yatzbil (*yaobil*) tobil y pitz (*piõ*) ca oꝝbac.

*Swollen scalp.* (Literally, swollen skull).

Its remedy is the blossom of the *Parmentiera edulis*, Mocq. (*Pepino de arbol*), the blossom of the *Gossypium herbaceum*, L. (*Algodon atabacado*), the *Calea Zacatechichi*, Schl. (or the *C. urticifolia*, Mill. *Yerba de la paloma*). Strain these (after) they are mashed, let them be heated and applied, wrapped in loose cotton, to the part.

250—*U chupul u chun u nak uinic.*

(Sotuta, f. 16 v.; Nah No. 76).

Ca a cña *canchacche*, y *canche*, *macal* y u motz *zabacalcan*, *netab* y *xbolontibi* u uiob ca hucñuc kinalcunbil ca pakaci bin utaac tumen.

*Swollen rectum.*

You take the *Chiococca racemosa*, L. (Cainca) and the *Conocarpus erecta*, L. (?), the *macal* (*Xanthosoma violaceum*, Schott?), the roots of the *Cereus Donkelaarii*, Salm-Dyck, the *netab*,<sup>1</sup> the *Cissus trifoliata*, L., their succulent roots. Let these be crushed, warmed and poulticed. He will recover by this means.

251—*U chupul u kohbilan uinic, &c.*

(Sotuta, f. 15 v.; Judío, p. 42; Nah No. 102).

He tu *chupul u kohbilan* y *chupul tulacal uinicile*, *cñabac hunppel onza pom chachbil hunppul yaalil*, *cici omnac*, *baytun cappel kab zappacie catun halaace*, *ca çabac ti hunppel chichan tinaja macbil u hol*, *le bin çabac ti le kohan utial yuke*, *utz kinal utz ziiz*, *ca yuke cu xupule ca chacac u lak lailie*, *ma kabet u tacie uba kohan*, *bin tohac yool*, *cax tan u ximbal bin utzac.*

*A swollen appearance in a man.*<sup>2</sup>

This a swollen appearance in a man and a swelling of the entire body. Let there be taken one ounce of copal. It is to be boiled in a pot of water, to be well steamed, say, two boilings. Then let it be taken out and put into a small jar. Cover the top. Let this be given to the patient to drink. It is good warm, it is good cold; let him drink it. When it is consumed, let some be boiled again as

<sup>1</sup> *Netab*. A rare shrub native to the coast. The compound leaves are divided somewhat like those of the *ceiba*, only they are thicker. (Cuevas.)

<sup>2</sup> *Kohbilan* would appear to refer to a person's general appearance. The Judío version of this prescription substitutes the word *hochbilan*, which seems to be a synonym. Both *koh* and *hoch* mean a portrait or an image. *Koh* may also mean a mask and a person who acts as substitute for another.

before. It is not necessary for the patient to lie down; he will recover. Even though he walks about, he will get well.

252—*Chuupul u xiblib uinic.*

(Sotuta, f. 15 r.; Nah No. 68).

Caxant u uii *zincan* y *tooncan*, *maxcal* u kaba ca huchuc ca pakci, ca a cña u nohochil mumun *huaz* ca a lukez u noy tancoch ca a ja ti chicix taan ca hocoac catun a thubcint u xiblib ichil ca u cña yoxou le chupe ca kilcabnac ichil yoxou. Laili u luchil *huaze* bin hauac tumen.

*Swollen male genital organs.*

Seek the tuberous root of the *Sesuvium Portulacastrum*, L. (*Verdolaga de la playa*), the toon-can, that which is named the maxcal.<sup>1</sup> Let it be mashed and poulticed. Then you take a large green *Güiro* (*Crescentia macrophylla*, Seem. or *C. cujete*, L.) and take out its fecula, half of it. Then you put it in hot ashes and heat it. Then you put his genital organs into (the gourd) so that they will be steamed and perspire in the steam. This is always the gourd of the *Güiro*. He will recover by this means.

253—*U chupul yeel u xiblil uinic.*

(Sotuta, f. 15 r.; Nah No. 69).

Ca a cña takan *niin*, ca nabzabac tu pach, tu doce ca tzahac canppel hee, kinkinale catun a poc y uacix ca a pak tu pach bin utzac tumen.

*Swollen testicles.*

You take cooked coccus axin;<sup>2</sup> let it be anointed on the surface (of the testicles). After this, let four eggs be fried. When tepid you rub them on or else you poultice them. He will recover by this means.

254—(No title).

(Judío, p. 126).

U xiuil *Libra* lae tu yit uinic cu yulel chupil cu betic *ix-chichibe* u cuntan y *chiople* lecelbil ma tabantac tu pach uinici kak uchuc lae.

<sup>1</sup> Possibly *Xanthosoma violaceum*, Schott.

<sup>2</sup> *L.Niin*. An insect which contains an oil employed for varnish and lacquer.

The plants for *Libra*,<sup>1</sup> when a swelling comes on a man's rectum: Prepare the *Sida acuta*, Burm., with the *Eupatorium aromatisans*, DC. Let it be applied from time to time, not bound on (the part) permanently, when this eruption attacks a man.

255—*Licil u sumul ya'il.*

(Judío, p. 108).

*Ah chuch* u *ɔacal* u *lee* y u *motz ma* u *ɔabal haai catun nabzabac* *yokol cax bic ya'il* u *chupil ɔeetac bin nabzabac* u *ɔac.*

*To reduce a painful swelling.*

The *ah-chuch* is the remedy, its leaf and its root. Do not put it in water. Let it be anointed on the painful swelling, wherever it may be. The remedy shall be anointed at short intervals.

256—*Utial u heebel chupil.*

(Sotuta, f. 40 v.; Mena, p. 78).

Ca a *ɕña chickuk chitcuc* u *lak* u *kaba huchibil* y unto *zizal pak* tu *hol ca utzac* u *heec tuzabal* y u *xethel nok cu ɔab(a)li.*

*To cause a swelling to open.*

You take the *Catsetum macrocarpum*, Rich., it is called both *chic-kuk* and *chit-cuc*. Mash it with unsalted grease and poultice it on the point (of the swelling) that it may open immediately. It is to be applied with a piece of cloth.

257—*U ɔac ya imil ti ɕhuplal.*

(Judío, p. 125).

Lay *bulake netab* y *chacmolak* u *kabil ca pakaci.*

*The remedy for sore breast in a woman.*

This is the *bul-ak*, the *netab* and the *chacmol-ak*.<sup>2</sup> The liquid from them is to be poulticed.

<sup>1</sup> Certain plants were used under certain signs of the Zodiac.

<sup>2</sup> *Chacmol-ak*. Possibly *Alternanthera ramosissima* (Mart.) Ched.

## INSANITY

258—*Cooil*.

(Sotuta, f. 47 r.; Mena, p. 8).

C̄ha u yeel u ton ek theel, huc̄he ca a puk ichil ziz haa ca a ɔa yuke hatzcabil maili u kam u chie amal yahalcab u yukic . . .

*Insanity.*

Take the testacles of a black cock, mash and dissolved them in cold water and give it to him to drink at dawn before he takes his breakfast. Every day at dawn he is to drink it.

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 JAUNDICE AND BILIOUSNESS
259—*Kanchikin*.

(Sotuta, f. 59 r.; Judío, p. 51; Mena, p. 21).

Caxant u lee *chay* yeobil u kab chacbil *chay* ca a ɔa t(i) yeeb tu chi na citac u zasztale catun a ɔa zazac azucar ichil ca a ɔa yuke u ɔac cax uchben kanchikin. Ua matan u haule ca a c̄ha u yal *kankub* oxpec, pooce bay u poocal yal *xux̄e* catun a ɔa u hant le kohane tie (tu hunal) matan u xeix mix tu huubul u nak mix u tacie uba. Uamae, c̄ha u lee *claudiosa*, chace cabin tahace ca hala(b) ac le tun yaalile tu ppiz medio cab bin ppiizic tancoch medio cab tune cu ɔabal ichil cabin yax ukic ox hatz tun yalabal baybe ox hatz hun-lem u chacal xiu *claudiosa* lae layli tu ppiz medio cab bin ppizbal yalil tan chumuc bin ɔabal la cab t(i) yax ɔabi lay tucaten lay tu yoxten bin menta(b)ac ti medio cab bolonpiz kin yukic ichil . . . cu chacal tucaten *claudiosa* lae laili ppizbile hebac tancoch ti le yax ɔabie ca menta(b)ac t(i) ɔabal yuke tu yox (ten tun u ɔ)abal le ɔac ti kohane, cu ɔabal ti u ɔac medio cab yuke chen nab ca chacic tucanten . . . lah tucaten, tu uactene laili xane caten y oxten u kuchul bolon tune, cabin hauac yukic tulaca(1) bolonpiz, yahalcabe le tile ɔac bin u kamchitic bay tune real y medio cab cu bin yuke, uamae *kanlecay* yac̄it ich haa, choo tu uincil.

*Jaundice and biliousness.*<sup>1</sup>

Seek the leaf of the *Jatropha aconitifolia*, Mill. (*Chaya*), squeeze the liquor out of this boiled *chaya* and put it out in the dew at the

<sup>1</sup> Also defined as enlargement of the spleen. (Gann, 1918, p. 34.)

doorway of the house until dawn. Then you add white sugar to it and give it to drink as a remedy, even though it is chronic jaundice. If it does not cease, then you take the larvae of the kankub (some yellow insect), roast them as you roast wasp-larvae. Then you give it to the patient to eat only when he does not vomit or his bowels do not move loosely. Otherwise take the leaf of the *Capraraia biflora*, L. (*Claudiosa* or *chocuil-xiu*), boil it until it is well cooked and take from the pot the (quantity of) a *medio* of honey. Measure out the quantity of half a *medio* of honey and put it in his drink. Then let him drink three portions, as they say. In the same manner boil the *Claudiosa* again, always measuring out the *medio* of honey in the same way as with the first dose. This is to be done the third, fourth, sixth times, etc., until you have done it nine times. Then he shall cease to drink it. Nine times shall this be done at dawn with the medicine. With his breakfast he shall drink the measure of a *medio* and a half of honey. Or else crush the *Cuscuta Americana*, L., in water and rub it on his body.

260—*Kanchikin*.

(Sotuta, f. 59 v.; Mena, p. 100; Nah No. 55).

Caxant u *xiuilob kanchikinche*, *kanpokolche*, *mucuyche*, *zulche*, u canil ac u chululil *kankilische*, *chacbil tulacal ca a ja yuke*. Uamae, *cha kanchikinak*, *kankan u topp*, *kankan u pach yakil tu leppbal bay u motz xan*, u lee y u motz *chacbil ca a ja yuke*. Utz u *abal yichint cane*, *bichcoc kanmucuyche* *chacbil catun abac yichinte*. Utz *xan cax cheche huuchuc ca abac yuke u acal lae*. U lak u *ac ti kanchikine*, le max *kankan xtuknel yiche*, *kankan yakzahil xan utz u abal u motz chobenche yuk caten*, *cheche cabin yuke*, *hetun ua matan u haule*, *ca huuchuc hun nek akoch yuke . . . xan ca utzac u xeil u yabal kan yan ti . . .*

*Jaundice and biliousness*.<sup>1</sup>

Seek these plants, the *Conocarpus erecta*, L. (*Mangle prieto*), the *Duranta plumieri*, Jacq. (*Duranta*), the *mucuy-che* (dove-tree), the *Cracca cinerea* (L.) Kuntze, the shoots of the *ac* (*Barbon*, a tall broad-leafed grass), the hearts of the *Acacia Farnesiana*, L. (*Aroma*). Boil them all and give (the liquor) to him to drink. Or else take the *Cassia anisopetala*, Donn. Sm., yellow are its thick seeds, yellow the exterior of the stock, like the root of the *Sabal japa*, Wright. Boil its leaf and its root and give (the liquor) to him to drink. It is good to put in his bath also the *bich-coc* and the *kan-mucuy-che* (yellow dove-tree). They are to be boiled for

<sup>1</sup> "Kanchikin. Disease of jaundice or worms, which causes the urine to turn yellow." (Mural.)

his bath. They are good also, crushed, raw, and given to drink as a remedy. Another remedy for jaundice and biliousness, for anyone who has a yellow eyeball and yellow urine; it is good to give him the root of the *Trichilia arborea*, C. DC. Let him drink it twice; let it be raw when he drinks it. But if (the complaint) does not cease, then let there be crushed a seed of the *Ricinus communis*, L. (*Higuerillo*) for him to drink . . . also that he may vomit the quantity of yellow substance that is in him.

261—*Kanchikin*.

(Sotuta, f. 60 v.; Mena, p. 101).

U lak u *ɔac* kanchikin, kankan le maca kankan u yakzahil, *c̄ha* nek tok u *chacil amax*, kan *ixim kanchikinche*, *chalche* huchibil tibile ca *ɔabac* yuke y yichinte ca *pocabac* u chun u nak xani max yanil u yikel kanchikin caxan *hmavak* u yakil y *uɔubpek* ca a choe u yitz tulacal u uinicil bin hauac.

*Jaundice and biliousness.*

Another remedy for jaundice and biliousness, for anyone who has yellow urine, is to take the seeds of the *Capsicum frutescens*, L. (*Chile del monte*), yellow maize, the *Conocarpus erecta*, L. (*Mangle prieto*), the *Pluchea odorata*, L. (*Santa María*); duly crush them and give (the juice) to drink; also put them in his bath; also rub them on his rectum. For anyone who has a "jaundice-breath," seek the *max-ak* (chile-vine); it is a black vine, and the *Tabernaemontana amygdalaefolia*, Jacq. (*Jasmin de perro*). Rub the gum of these on his entire body. It will cease.

262—*Kan*.

(Sotuta, f. 59 v.; Mena, p. 101).

Le kan cu tzayal uinice, kankan u kab, u nupil u pach *c̄hobenche* *cocohtunbil* ca *ɔamac* ti haa ca yuke. U lak *ɔac* kan xane, u nū *cabalkunche* y *kumchel* u kaba ukulbil u mental u *ɔac*.

*Yellow color (jaundice).*

This yellow color comes on the body; his hands are yellow. (Take) the thick exterior of the *Trichilia arborea*, C. DC. It is to be crushed with a stone and steeped in water. Let him drink this. Another remedy for this yellow color also is the tips of the *Asclepias longicornu*, Benth., and the *Jacaratia Mexicana*, DC. (*Bonete*), *kun-che*, as it is called. These are to be drunk to accomplish the cure.

## THE KNEES

263—*Chibal pix.*

(Mena, p. 89).

*Chiople, chichabe, chiceh, y ichhuh, chiabal y chacil pichi* chacbilob ca tixic yokol u pix ua zizcunbil le xiu tulacal ca a ɔa ha y u sebo ceh, ca a yal tibe ca peɔkaxte tu pix chochocuil cabin ɔabac ti.

*Pain in the knee.*

The *Eupatorium aromatisans*, DC., the *Sida acuta*, Burm., the *Chrysophyllum mexicanum*, Brandweg (*Cayumito silvestre*), the *ich-huh* (iguana-eye, perhaps *Eugenia axillaris*, [Swartz] Willd.), the *Spondias purpurea*, L. (*Cirucla morada*), and the red *Psidium guajava*, L. (*Guayabo*). These are to be boiled and (the liquid) dashed over the knee. Or else cool these plants, add water and deer-fat and bind (the mixture) firmly on the knee. They are to be heated and applied.<sup>1</sup>

## COMPLAINTS OF THE MOUTH AND TONGUE

264—*Max ya u yak.*

(Sotuta, f. 31 v.)

Ca a cña *yerba buena* ca a pacchucte ca a hu tu tan yak hetuux yan u yaile. Bay xan ca a cña u lee *chalche* ua cinpahan ca u ɔa hun xeth tu chi ca u chache.

*Any sore on the tongue.*

You take ordinary mint and roast over hot coals. Then you squeeze it on the tongue, on the place where the sore is. Thus also you take the leaf of the *Pluchea odorata*, L. (*Santa Maria*), if there is an injury (to the tongue), let him put a piece of it in his mouth and chew it.

265—*Ppencech tub.*

(Sotuta, f. 42 r.)

Le mac manal u tube ca a cña ɔeɔec *mostaza* ca a huch ichil ɔeɔec vino yuke catun a cña sebo cib ca a hapay u kikil chococunbil

<sup>1</sup> On page 129 of the Mena MS a variant of this prescription occurs. The plants are to be crushed instead of boiled and fried in deer-fat. Also the *Alvaradoa amorphoides*, L. (*Palo de orrnigas*) is substituted for the *Psidium guajava*.



tune ca a ɔa tu uich u puczikal cabin xiic ti uenel. Uamae cña hun ual yaax *kutz* haybil tu uich u puczikal. Uamae ppobil u uich u puczikal y choco uix. Uamae u kab xcax y hee ichil le caldo u pabal le hee. Uamae u cñuycint oxppel onza corales tu uich puczikal bin utzac tumen. Yan xan u lak u ɔac tub tin caxantah. Ua xiblal cu hach tube ca a chuc hunppel xchupul cño ca a kakte catun a ɔa u hante. Ua cñuplal le hach tuba kakt huntul xibil cño u hante cu hauziic. Uamae ca yuk chacbil *xanabmucuy* cabin yuke, ca ɔabac cab ichil, catun cici omanza(b)ac choco choco tune ca ɔabac yuke cu hauziic.

*Salivation.*

For anyone who is always spitting, you take a little *Sinapis niger*, L. (*Mostaza*), mash it in a little wine for him to drink. Then you take a tallow candle, heat it and melt it and put it over his stomach and let him go to sleep. Or else take one leaf of green tobacco, and spread it on his stomach. Or else the stomach is to be bathed with hot urine. Or else let him drink chicken-broth with an egg broken into the broth. Or else hang three ounces of corals over his stomach, he will recover by this means. There is also another remedy for spitting which I have found. If it is a man who is salivated, you catch a female rat and roast it. Then you give it to him to eat. If it is a woman who is salivated, roast a male rate for her to eat. Or else let (the patient) drink boiled *Euphorbia hirta*, L. (*Yerba del pollo*) or some other small prostrate *Euphorbia*. Let honey be put into it and let it be steaming hot when he drinks it to stop (the complaint).

266—*U twotal u muz ik uinic.*

(Sotuta, f. 46 r.)

Ca a cña u lee *ynojo* ca a ɔa u chaache. Uamae *anis* ca a kel, ca a ɔa u chaache amal yahalcab. Uamae *perejil* ca a chac yuke. Uamae huch *cominos* a ɔa ich vinagre ca a ɔa yuke bin hauac tumen.

*Fetid breath in a man.*

You take the leaf of the fennel and give it to him to chew. Or else anis. You roast this and give it to him to chew every day at dawn. Or else you boil parsley for him to drink. Or else crush cumin-seeds and put them in vinegar and give it to him to drink. It will cease by this means.<sup>1</sup>

<sup>1</sup> This entire prescription is obviously a European one.

267—*U yatal u yak uinic.*

(Sotuta, f. 42 r.)

Le maax cu yatal yake. Cħa u lee *yerba buena* ca a haa tu tan yak. Uamae cħa *romero* ca a hucħe y can ual u le *pichi* chacbil tun cu tahale ca a ğa ææec alumbre ichil choco cabin a ğa u ppuuce.

*Sore tongue.*

When anyone has a sore tongue, take the leaves of mint and rub them on the tongue. Or else take rosemary, mash it with four leaves of the *Psidium Guajava*, L. (Guava), boil it and when well cooked, put a little alum in it. Give it to him hot to hold in his mouth.

268—*Yaya chũil.*

(Sotuta, f. 32 r.)

Ca a cħa u lee yayax *oregano* ca a ğa u chache y ææec alumbre.

*Sore mouth.*

You take the leaf of the deep green *Lippia graveolens*, H. B. K.,<sup>1</sup> and give it to (the patient) to chew with a little alum.

269—*Yaya chuch akil.*

Ua cu chupile ca a cħa tab y cab y aseite ca a xakbez y catun a ğa ppuuce. Uamae ca a ğa vinagre cu hauzic chupul. Uamae ca a cħa limones y haa ca u ppuuce. Uamae ca a chac *romero* y alumbre ca u ppuuce.

*Sore on the tip of the tongue.*

If it is swollen, you take salt and honey and oil and mix them. Then you give it to him to hold in his mouth. Or else you administer vinegar to stop the swelling. Or else take lemons and water and let him hold it in his mouth. Or else you boil rosemary with alum for him to hold in his mouth.

<sup>1</sup> *Orégano*. This is called X-akil-xiu in Maya.

## COMPLAINTS OF THE NOSE

270—*Kik tu nii winic.*

(Sotuta, f. 39 r.)

C̄ha u taa pek toce catun a ment u polvosil u xuchnite he tuux cu hokol le kike. Uamae c̄ha u lee *ruda* ca a ɔa tu nii. Uamae c̄ha u kab *laal* ca a choo tu chi u lec y tu tan yoc. Uamae c̄ha ulee y u uizim *ruda*, tooce ca a ment u polvosil ca u xuchnite. Uamae c̄ha u motz *laal* ca u luk u kab ethaz tan yemel u kikile bin utzac tumen. Uamae c̄ha u motz *mastuerzo* ca au omantez, cu ziztale, ca a ɔa yuke. Ua mat haule lay kik tu nie ca a bet tokol yoc. Bin hauac cax yan uyanal kohanile.

*Nosebleed.*

Take the excrement of a dog, burn it, powder it and let him snuff it up the nostril from which the blood comes. Or else take the leaf of the *Ruta graveolens*, L., and apply it to the nose. Or else take the juice of the *Urera microcarpa*, Wedd. (*Ortiga*) and rub it on the brow and on the sole of the foot. Or else take the leaf of the *Ruda graveolens*, burn it, powder (the ashes) and let him snuff it. Or else take the root of the *Urera microcarpa*, draw out its juice just as fast as the nose bleeds. He will recover by this means. Or else take the root of the *Lepidium apetalum*, Millsp. (*Mastuerzo*) and steam it. When it cools, give it to him to drink. If all this does not stop this nosebleed, then you have his foot bled. It will cease, though there may be another complaint (in consequence).

271—*U labal u hol nii uinic.*

(Sotuta, f. 42 r.; Judío, p. 95).

Ua yan puh tu nie, ca a c̄ha u lab otoh *hkanpetkin* tooce ca a ɔa u xuchnite u taanil bin hauac tumen.

*Gangrene of the nostril.*

If there is pus in the nose, you take the old nest of a *kanpetkin*,<sup>1</sup> burn it and give it to him to snuff the ashes. It will cease by this means.

<sup>1</sup> *Kanpetkin*. A yellow wasp or hornet that makes a round flat nest.

272—*U macal u nii uinic.*

(Sotuta, f. 7 v.)

Ca a cña *acaban* tun u motz huchibil u le catun yeæc, catun yuke, le max macal u bel yike u lake ca yuk *payche* cu hauzic lay romadizo.

*Obstruction of a man's nose.*

Take the ac-aban, mash its root and leaf and press them. Then let him drink it, anyone who has his "breath-passage" obstructed. Another (remedy) is to let him drink the *Petiveria alliacea*, L. (*Zorillo*) to put an end to this nasal catarrh.

273—*U nohlaile u ni.*

(Judío, p. 99).

*Coles* kuxbil tucaten hunppel kin licil u haual u nohlaile omansabil y bino ca çabac ti ukul licil u haual tumenel.

*Enlargement of the nose.*

Cabbage is to be grated twice a day to put an end to enlargement of the nose. It is to be steamed with wine and given to drink that it may cease by this means.

274—*Ppencech hetzim.*

(Sotuta, f. 42 r.)

Le max cu hach hetzime tumen hachahan u hool u bachelob y u benailob hunppel kin ua hunppel akab bin cimic tumen. Ca a cña hun chach u lee naranja ca a chac a ça ti oc catun a choo tu uinclil u kabil xan.

*Excessive sneezing.*

Anyone who sneezes excessively, so that it will affect the joints and veins, will, one day or one night, die of it. You take a handful of orange-leaves, boil them, apply (the liquid) to the foot and then you rub the body with the liquid also.

275—*U twatal u nii uinic.*

(Sotuta, f. 40 r.)

Cña u lee *libra* ca a yachite catun a ça xuchite u boc. Uamae cña u lee *taman* ca a zoppkakte ca a yachit(e) ca a choo u kabile tu ni bin utzac tumen.

*Gangrene of the nostril.*

Take the leaf of the *libra*, crush it and give it to him to snuff its aroma. Or else take the leaf of the *Gossypium herbaceum*, L. (Cotton), toast it and crush it. Then you rub the juice into the nostril. He will recover by this means.

276—*Yemel kik tu nii uinic.*

(Sotuta, f. 33 r.; Judío, p. 97).

Čha u lee *ruda* ca a yeə u kab tu hol u nii licil yemel kike catun nup homataac u muk u kab tu oic. Ua čhuplal cu hokol kik tu niie, yokol yim cu əabal homa. Bay xan ca chuucuc lay uoo *much* ca a toc ichil cum cici machil u hol u cumil, catun a hokez u taanil ca a əa u xuchite tu nii bin hauac u hokol kiik tu ni, bin utzac tumen.

*Nosebleed.*

Take the leaf of the *Ruta graveolens*, L. (Rue), and squeeze its juice into the nostril from which the blood descends. Then you cup with a gourd the fleshy part of the left arm. If it is a woman whose nose bleeds, it is over the breast that the cupping is applied. Thus also you catch a frog, the kind called *much*,<sup>1</sup> and you burn it in a pot. Cover well the top of the pot. Then you take out the ashes and give them to him to snuff into his nostril. His nose will cease to bleed; he will recover by this means.

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 POISONING
277—*U əacal u kazil yah.*

(Judío, p. 104).

U telchacil u boxel u pach *opolchee* u motz huchibil ca cumpakaci ca chacaucuntabac ca əabaci he u yahile bay lahlic u pak *kanpetkine* ti yotoche caten ua oxten hunppel kin u chuhul bin u əab kin tuba bayix ah əace ix *peteltunyakilob* hecen ya tu hanalobe utz takbil utz pakbil xani tu nup kinile bay ca taaahie ca a nabez tucatenie cu manzie yoc.

<sup>1</sup> *Much*. According to Pacheco Cruz, *much* is the generic name for frog, while *uo* is a certain small variety found in wet places and beneath stones.

*The remedy for poison.*

The deep red bark of the *Adenocalymna Selerii*, Loes. (and its root are mashed, packed down into a pot, heated and applied to (the part). The pain will be as though one strikes against a nest of the kanpetkin<sup>1</sup> in the house. Two or three times it is to be applied a day, very hot. The medicine man shall apply it himself. Another remedy is the *Cissampelos Pareira*, Lamark. (*Pareira brava*). These are all too strong to eat, but they are good to plaster on, good to poultice also. On the next day after you have applied (this remedy) you anoint it (on the part) again to remove the traces.

278—*U kazil ya, ponzona yalabal.*

(Sotuta, f. 33 v.; Mena, p. 136).

Caxant u motz *xcambalhau* ca a ment u polvosil, ca a ɔa yuk ich zaa ua ich chucua ua ich vino cu haul.

*Poisoning, Ponzoña it is called (in Spanish).*

Seek the root of the *Dorstenia contrajerva*, L. (*Contrayerba*) and powder it. Then let him drink it in atole, in chocolate or in wine to put an end to (the complaint).

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SKIN DISEASES, ULCERS, ABSCESSSES, CANCER  
AND TUMOURS

279—*Akab tok.*

(Sotuta, f. 19 r.)

Lic u tzayalte uinic el el u cah ti yothel uinic, kinam u cah xan tu man akab, huchuc u lee *ppac* ca pakaci u ɔac.

*"Dark flint."*

Which attacks a man, there is a burning (sensation) on the man's skin. It throbs all night. Mash the leaf of the *Lycopersicum esculentum*, Mill. (*Tomate grande*) and let it be poulticed as a remedy.

<sup>1</sup> Kanpetkin. A certain yellow wasp or hornet what makes a round flat nest.

280—*Akab tok.*

(Sotuta, f. 43 r.)

Akab tok u kaba cu yulel ti uinic elel kinam u cah tu man akab, cu tippil kine minan yeled. Ca a cña u lee *xpomolche* u lee *ppac* y u lee *zacbeec* ca a hucñe, catun a ña tu uinclil. Uamae u lee *kutz* haxlabil u kabil ca a ña t(i) yoc tac tu piix u xul bin bin utzac tumen.

## “Dark flint.”

This “dark flint,” as it is called, comes on a man. It burns, it throbs all night. When the sun rises, there is no burning sensation. You take the leaf of the *Jatropha Gaumeri*, Greenm. (*Piñon*), the leaf of the *Lycopersicum esculentum*, Mill. (*Tomate grande*), the *zac-beec*<sup>1</sup> and mash them. Then you apply them to the body. Or else the leaf of tobacco, squeeze out the juice by twisting it and apply it to the leg from the tip of the toes to the knee. He will recover by this means.

281—*Anal kak.*

(Sotuta, f. 13 r.; Judío, p. 74).

Le chupil, anal kaak u kaba, caxant u motz y u lee *analxiu* huchibile catun a pakez, uamae u motz *chicixmo* ua u uii *xtibibak* huchibile, catun a pak xani. Uamae u uii *xcanzelak*, yan ti kaaxe, bay *pichi* u lee, yan u yitz bay u yitz *chay*, huchibil xan u pakali. Uamae cña *ñincan* y *xcanzelxiu*, bay tup u lolile, y *chichibe*, catun a pakez, bin hauac tumen.

*A certain small ulcer.*

(For) this swelling called anal-kak seek the root and the leaf of the *Asclepias curassavica*, L. (Milkweed). Crush and poultice it. Or else the root of the *chicix-mo*<sup>2</sup> or the tuberous root of the *Cissus trifoliata*, L. (?) are to be crushed and poulticed also. Or else the tuberous root of the *ix-canzel-ak* which is in the forest. Its leaf is like that of the *Psidium guajava*, L. (*Guayabo*); its gum is like that of the *Jatropha urens*, L. (*Chaya*). This is to be crushed also for a poultice. Or else take the *Sesuvium Portulacastrum*, L. (*Verdolaga de la playa*), and the *ix-canzel-xiu* (another form of *A. curassavica*?). Its blossom is like an ear-plug. Also the *Sida acuta*, Burm.; crush it and poultice it. It will cease by this means.

<sup>1</sup> Zac-beec. Lit. White beec. The beec is the *Ehretia tinifolia*, L. (*Roble*).

<sup>2</sup> Chicix-mo. Lit. fiery parrot. It is described as a shrub of ordinary size with a milky sap. Its root is said to be an antiphlogistic.

282—*Anal kak.*

(Sotuta, f. 9 v.)

Yan xan anal kak, ca a cña yoyol ni *chicixmo*, ca a hucñe ca a choo tulacal u uinclil cu hauziç.

There is also a small ulcer for which you take the tender tips of the *chicix-mo*, mash them and rub the entire body with it.

283—*U çacal lay bacab zob*

(Nah No. 61).

cu tzayal yokol uinice matech u tzayal tuyanal. Ca cñabac u baceel ahaucan yetel lay mehen u liil petelpet lae, ca kelabac catun hucñuc yetel lay u baquel ahaucaane ca çabac yuke hemax yanil bacab zob lae cu haul tune.

*The remedy for these "pseudopustules"*

which attack a man, but do not "change" (point?): take the bones of a rattlesnake with its small round rattles. Roast them and mash them with the bones of the rattlesnake. Put this in the drink of anyone who has pseudopustules that they may cease.

284—*X ba kaak.*

(Sotuta, f. 11 v.; Judío, p. 14; Nah No. 86).

Caxant *yakba* bay lanzeta u lee tuçultuç y u lee *zactabcan* y *anicab* y u taa hba hucñbil ca a paki bin utzac.

*"Gopher eruption."*

Seek the *Andira excelsa*, H. B. K. (lit. gopher-tongue), its leaf is long and narrow like a lancet, and the *zac-tab-can*<sup>1</sup> and the *Cydista aequinoctialis*, L., and mash them with the excrement of a Pocket Gopher. Poultice this and it will cease by this means.

285—*X bizlim tacan çunuz.*

(Judío, p. 64).

Yx bizlim tacan tu hol u nii hunppeli y çunuz kak he çunuz kake maxan u tamtal u makic u xupul xicin tu kux tuzabal hetun bizlim tacane cacal u bin yail. U çacale u le *taman* hucñbil ca pakac

<sup>1</sup> *Zac-tab-can*. Lit. White tabcan. The tabcan is the *Cissus rhombifolia*, Vahl.; the *yax*-(green-) tabcan is the *Ampelopsis cordata*, Michx.



cu cu mak u ya caten ua oxten ua matan yuyub tu cappel kin ca *chabac* u le *xpechukil* huchbil ca pakci kuxic u yail latulah u xupul yaah loe licix u *abab* u tanil lay xiu *xanio* mazic pocbili he lay u *chacil* yaahob lae ca pakac u le *ycaban* makic hunppel kin hunppel akab u nabzabal ti cux oth chen ti lay yaah bin *abac* loe.

*"Perforating, chronic" ulcers.*

This "perforating chronic" (ulcer) in the nostril is the same thing as *ounuz-kak* (eruption of ulcers), but the latter does not go in deep and eat away the ear immediately, therefore this is a sore (called) perforating chronic ulcer. The remedy is to mash the leaf of the *Gossypium herbaceum*, L. (Cotton) and poultice it so it will "eat away" the sore. It is to be done two or three times, but not so much on the second day. Then take the leaf of the *Porophyllum nummularium*, DC., mash and poultice it that it may "eat away" the sore until the sore is consumed by it. You also apply the ashes of this plant, the *Xantium strumarium*, L. (*Jántio*) which are to be rubbed on. When the sores are red, poultice the leaf of the *Croton albidus*, Müll. (or the *C. humilis*, L.) to "eat" it away. For one day and one night it is to be anointed on the raw skin. Only for this sore is it to be given.

286—*Bobote kak.*

(Sotuta, f. 10 v.; Nah No. 37).

Caxant *boboteak* yan ti chakane y u lak otoh *bobote* ca ma lab le chachochene y u yotoch kanal huchuc ca a pak yokol he tuux yan yae, bin hauac tumen.

*"Bobote" eruption.*<sup>1</sup>

Seek the *boboté-ak* which grows in the open savannahs, and with it the nest of the *boboté*, an empty one, if it is not an old one, also the nest of the *kanpetkin*.<sup>2</sup> Crush these and poultice them on him where the sore is. He will recover by this means.

287—*Bocan kak.*

(Sotuta, f. 11 v.; Judío, p. 13; Nah No. 85).

*Chā* u lee *chacmolche*, u lee *kanteceh*, u lee *bocanche*, u lee *chacmolak*, bay u lol *izake*, chachac u toppol, y u lee *yaaxnic*, u le *pperezcuch*, u le *pucak*, *zackanan* y u lee *buulak*, bay u binel yakil

<sup>1</sup> The *bobote* is evidently an insect. The complaint may be either its sting or an eruption resembling it.

<sup>2</sup> The *kanal*, or *kanpetkin*, is a yellow wasp which constructs a round flat nest.

*kokobake*, *yayax yakil*, *y u lee zipche*, *u lee pucyim*, *y u le chacah*, *y u lee yaxkak* *ua yaaxak* huchbil tulacal ca pakaci.

*Eruption of ulcers or abscesses.*

Take the leaf of the *Erythrina coralloides*, Mocq. & Sess. (*Col-orin*), the leaf of the kante-ceh, the leaf of the bocan-che (abscess-tree), the leaf of the chacmol-ak (*Alternanthera ramosissima* [Mart.] Chod.?), its flower is like that of the iz-ak (camote-vine), its bud is very red, also the leaf of the *Vitex Gaumeri*, Greenm., the leaf of the *Croton glabellus*, L., the leaf of the *Salmea Gaumeri*, Greenm., the zac-kanan,<sup>1</sup> the leaf of the buul-ak (bean-vine), its vine extends like that of the *Aristolochia odoratissima*, L., very green is its vine. Also take the leaf of the *Bunchosia glandulosa*, Cav. (*Cojon de fraile*), the leaf of the *Colubrina Greggii*, Wats., and the leaf of the *Bursera simaruba*, (L.) Sarg., and the leaf of the yax-kak, or yax-ak (*Lysiloma sabicu*, Benth. (or *Pithecolobium tortum*, Mart.)), crush them all and poultice them.

288—*U sacal bocan kak.*

(Judío, p. 107).

*Elel* yalabal, yan ti chakane, *yemulak* u kaba, bay u le *pancile*, ca chabac u telchacil, ca ppooboc u pach ca zuzac u pach u boxel, ca huchuc, ma u sabal haa u kabilte, halili uix palal bin u kabilte, ca teppet ti bi ua nok, cici ppobil u tuil y uix, catun yaac u kabil tu hol u yaile, ca cunpakac tu cintanil yae, cabin sabaci latulah u manele, catun tozoc u ticinil, bin manzic. U lak u sacal bocan kak, utz ix utial onkoch *chicixmoak*, *bulak*, *netab*, *ixmahanchun*, u leob lay xiu huchbil ziz, cabin a sa saca *xbakak*, yanob canal, tu yox tzucil u sacale, lauac chac hulubte kak, bocan kak, kuxkak, lay chac hulubte kak cu yulel ti im chuplale, laac tu kab, laac tu cal u cuy, laac tub citan cu tzayal lay xiu yan canal lae, u sacal bocan kak y xux kak, bay u chibal xux, u zippile, manan u xak sac.

*The remedy for ulcers or abscesses,*

is the *Oxalis yucatanensis* (Rose) Standl. (*Agritos*), it grows in the open savannahs, the ic-mul-ak, is its name. Its leaf is like that of the *Suriana maritima*, L. Let the deep red (part) be taken and let (the sore) be washed. Then let the outside be rubbed off. Do not dilute it with water, only with the urine of a small boy shall it be diluted. Then wrap it in cotton wool or a cloth to wash well the pus. Then press out this liquid on the head of the abscess and

<sup>1</sup> Zac-kanan. Lit. white kanan. Kanan is the *Hamelia erecta*, Jacq. Yax-(green-)kanan is *Myrsiphyllon horizontalis*, Sav.

let it be poulticed on the sore. It will soften until it is carried away. Then powder the dry (scab) and this will be carried away. Another remedy for ulcers, which is good also for inflammation in the throat, is the chicix-mo-ak, the bul-ak, the ix-mahan-chun.<sup>1</sup> The leaves of these plants are to be mashed when fresh and then the remedy is to be applied. The ix-bak-ak, which grows high up, is the third remedy for it, also for chac-hulubte-kak (red piercing eruption), for abscesses and cancers. This chac-hulubte-kak is a sore that comes on the breast of a woman, or on the arm or in the ankle. As soon as it comes apply this plant that grows high up for a remedy. It is the cure for abscesses and for xux-kak which is like the swelling that comes from the sting of a wasp.

289—*Bocan kak lay (cu yantal) tu hac̃unhac̃ uinice,*

(Sotuta, f. 12 r. and 18 v.; Judío, p. 14; Nah No. 87).

y tu chun u xicin y tu cheel u cal uinice, cu hokol uaan cu hokol kataal ca(ix) talac u chac yulen tal caix talac u chac onob canil catzuc u talel u cha (yilabal) u kaholtic max yohel c̃habac *chacmo-ak buulak, netab* y *ix-mahanchun*, ca u chac u lee y u uüob bin c̃abi huc̃bil ca pakaci.

*Tumor or abscess on a man's temples,*

at the base of the ear and on a man's neck, which emerges straight, which emerges cross-wise, and then becomes reddish or becomes like ringworm; it takes both forms and will be recognized, when it is seen by anyone who knows it. Let there be taken the *chac-mo-ak* (*Alternanthera ramosissima*, [Mart.] Chod.), the *netab*,<sup>2</sup> the *ix-mahan-chun* (probably a *Peperomia*). Crush them all and let them be poulticed.

290—*Bocan kak tu heeh uinic.*

(Judío, p. 14).

U sacale u le y u uii *habancan*, u motz *netab*, huc̃bil ca pakaci u yaxil naraha pakbile u yich u yaxil u pach.

*Abscesses or pustules on a man's groin.*

The remedy is the leaf and the succulent root of the *haban-can*, the root of the *netab*. Let them be crushed and poulticed. Then a green orange is to be poulticed, its fruit, that is, the green rind.

<sup>1</sup> *Ix-mahan-chun*. Probably a *Peperomia* much like *P. glutinosa*, Millsp.

<sup>2</sup> *Netab*. This is described as a rare shrub native to the coast. Its leaves are composite, somewhat like those of the *ceiba*, only thicker.

291—*Bocan tu koch uinic.*

(Sotuta, f. 18 v.; Nah No. 22; Kaua, f. 148 v.)

Oonkoch u lak u kaba, tu koch uinic cu yulel, zac yulen chac yulenil, ca talac u kulenhal xan u oacle, lay tzolan canale, *chacmoak*, *buulak*, *netab*, *xkulimche*, y *ixmahanchun*, *pahte* y *xcocche* hucñbil chacaucinbil . . . ca pakaci.

*Abscess of the throat.*

Oonkoch (a term often applied to both diphtheria and croup) is its other name, when it comes on a man's throat. It is whitish and redish and then it festers also. Its cure, as recounted above, is the chac-mo-ak (*Alternanthera ramosissima*, [Mart.] Chod.), the buulak (bean-vine), the ne-tab, the *Astronomium graveolens*, Jacq. (*Palo mulato*), and the ix-mahan-chun (a *Peperomia*), the pahte and the ix-coc-che. These are to be crushed and heated; then let them be poulticed.

292—*U oacal bubas.*

(Judío, p. 11).

U oacal bubas, ca cñabac *ixcacaltun*, ca yeoec u kab tu oocole ca choboc caxtran aseite, ca takac u chach yacil *kutz* yokol.

*The remedy for buboes.<sup>1</sup>*

The remedy for buboes is to take the *Ocimum micranthum*, Willd. (*Albahaca*) and squeeze its juice (on the sore). After that let it be rubbed clean with Spanish oil and poultice strong tobacco on it.

293—*Cancer, oonuz u kaba.*

(Sotuta, f. 40 r.)

Lay cangrejo, hbuk u kabae le yan nak kaknabe cña u coob ca a ment u polvosil a oca yokol le cancer y *sebadilla* oabil yokol le cancer. Uamae polvosil u pach cum, malob xani. Uamae ca a tooc xmappobil pach kuum laua ca a oca u taanil tu pach le cancer. Uamae u chun *coles*, ca a ment u polvosil yokol le cancer bin hauac tumen.

*Cancer or ulcer. Oonuz is its name (in Maya).*

There is a crab called the ah-buk. It is on the sea-shore. Take its claws and powder them. Then you apply this to the cancer or

<sup>1</sup> It is interesting to note a tendency in the Mayas to employ the Spanish term for syphilitic ulcers and tumors, although they seem to have always had a good Maya word for these manifestations, i. e. zob.

ulcer, with powdered hellebore (also) applied to the cancer or ulcer. Or else a powdered potsherd is not bad also. Or else you burn paste of unhusked maize and apply the ashes to the ulcer. Or else the stalk of a cabbage is to be powdered and applied to the cancer or ulcer. It will cease by this means.

294—*Ceeh tu pol palal.*

(Sotuta, f. 31 v.; Judío, p. 77).

Le u hutu(1) u tzotzel u polob yalabal xpehel ua xpeh ca a cña u tzuyil *zicil kum* papakbil utz u sac.

*Ringworm of the scalp on boys' heads.*

This falling out of the hair is called ix-pehel or ix-peh. You take the interior of Cucurbita pepo, L. (*Calabaza*) and let it be poulticed.

295—*U sacal chacanlah kak y chacmulah kak.*

(Judío, p. 111).

U boxel u pach *bul-ak* y yoyolni *on* y yoyol ni *kuxub* u munil u ni *kuxub* u ni *suc* ca huch ti molcab catun nabzabac ti yail ca ca tibilac u kinam caten oxten bin sabali.

*The remedy for certain eruptions resembling hives.<sup>1</sup>*

The bark of the *bul-ak* and the tender tips of the *Persea gratisima*, Gaert. (*Aguacate*), the tender tips of the *Bixa orellana*, L. (*Achiote*), the tips of the *Diphysa robinoides*, Benth. Mash these together and then let it be anointed on the sores, applied as long as the pain continues; two or three times it is to be applied.

296—*U chacil sunuz.*

(Sotuta, f. 11 r.)

Ca a cña u yitz kaxil *putchich* ca a sa tu yail ca kuchuc canlem a saice.

*A red ulcer.*

You take the gum of the wild bird-papaya (*Carica papaya*, L.) and apply it to the sore until you have applied it four times.

<sup>1</sup> *Chacanlah-kak*: "A disease which the ancient Indians called *chacanlah-kak*, which usually causes fever. The bean-like swellings which are caused by this disease are like the bite of the *cimex*." (Y. y H. del Yuc. f. 94 r.) "The arm, leg, head or some other part of the body is accustomed to swell, and they call this disease *chacmulah-kak*; there is also a plant of this name." (Ibid. f. 57 v.)

297—*Chac hoch kak.*

(Sotuta, f. 19 r.)

Lic yulel ti c̄huplal tu cucutil, c̄habale xiu *zacmulahkak*, yan canal, ca ppoboc ti yetel, uamae ppoboc y yach̄bil *chacah* yeec u kab hunppel limon ichil ca ppoboc.

*A red perforating ulcer.*

When it comes on a woman's body,<sup>1</sup> take the *zac-mulah-kak* plant which grows up high, and let her be bathed with it. Or else bathe her with the crushed *Bursera simaruba*, (L.) Sarg. Let the juice of one lemon be squeezed into it when she is bathed with it.

298—*Chacmuclah kak.*

(Sotuta, f. 12 r.; Judío, p. 20).

Yan hunppel kohanil, *chacmulah kak* u kaba. U sacale *chacmuclah kak*, u cappel u kaba *yala-elel*, yoxppel u kaba *toch̄chakan* (or *ch̄oh-chakan*), huch̄bil u uii pakbili, u nup yoyol ni *kuxub*, u yoyol ni *on*, u yoyol ni *muc* y u yoyol ni *kuxubche*, y *kuxubcan*, *chiciamoak*, zuzbil y u uich *chacmolche*, huch̄bil tulacal, ca nabzabac ua tu pol ua tub yan *chacmuclah kak*.

*An eruption of the head, arms or legs accompanied by inflammation.*

There is a disease, *chacmuclah-kak* is its name. Its cure is the (plant called) *chacmuclah-kak*; its second name is *yala-elel* (*Oxalix yucatanensis*, [Rose] Standl. *Agritos*); its third name is *toch̄-chakan* or *ch̄oh-chakan*. Crush its succulent root with the tender tips of the *Bixa orellana*, L. (*Achiote*), the tender tips of the *Persea gratissima*, L. (*Aguacate*), and the tender tips of the *Dalbergia glabra*, (Mill.) Standl., and the tender tips of the *kuxub-che* (perhaps a *Croton*) and the *Rivina humilis*, L. (*Coral*) and the *chicix-mo-ak* (fiery parrot-vine), powdered with the fruit of the *Erythrina coralloides*, Mocq. & Sesse (*Colorin*). These are all to be crushed and anointed either on the head or wherever the eruption is.

299—*U chucan bocanob.*

(Sotuta, f. 12 r.)

Le bocan cu yantal tu kab uinice, c̄habac *chacmoak*, *bulak*, *netab*, *xmahanchun*, *yaxkanan*, *xan*, ca huch̄uc, ca pakaci. Uama *xan* pocbil y u uix naranja.

<sup>1</sup> Cucutil. The dictionaries translate this as body or corpulence, but in the medical prescriptions the lower abdomen appears to be indicated.

*Other tumors or abscesses.*

These are tumors or abscesses which are on a man's arm. Let there be taken the *chac-mo-ak* (*Alternanthera ramosissima*, [Mart.] Chod.), the *bul-ak* (bean-vine), the *netab*,<sup>1</sup> the *ix-mahan-chun* (perhaps a *Peperomia* resembling *P. glutinosa*, Millsp.), the *Myrstiphylon horizontalis*, Sav., the *Sabal japa*, Wright (*Guano*). Or else the *Sabal japa* is to be roasted with orange juice.

300—*U chucan kakob hehelan.*

(Sotuta, f. 9 v.)

Yan yabal kakob hehelan tacob, cu hokol yokol christianob: zuluay kak u sacale zuluay xiu. U zake . . . kak u sacce le xiu chac uech ua chac kuch huchbil u lee y u lee *taman* catun a pak yokol lay kake cu hauzie.

*Other recurrent eruptions.*

There are many recurrent eruptions which come out on Christians. For *zul-uay*<sup>2</sup> eruption the remedy is the zuluay-plant. For the itching eruption, the remedy is this plant, for *chac-uech*, or *chac-kuch* (lit. red scab) mash (this plant), its leaf, and the leaf of the *Gossypium herbaceum*, L. (*Algodon atabacado*) and then poultice them on this eruption to stop it.

301—*Chuchum kak.*

(Sotuta, f. 12 v.; Judío, p. 26).

Le chuchum kak, y hunpeokin kak y holomik xchibalkak xthuch-kaake lela u hehelanil u kaba le chuchum kake caxant *zincan* y u uii *cupkak* bay *chicame cupche* u lak u kaba y *netab zacbacelcan* y *tooncan* huchbil ca pakaci bin utzac tumen.

*An eruption of tumors or ulcer.*

This chuchum-kak, hunpeokin-kak,<sup>3</sup> holom-ik,<sup>4</sup> ix-chibal-kak,<sup>5</sup> ix-thuch-kak,<sup>6</sup> are the various names for this eruption of tumors or ulcers. Seek the *Sesuvium Portulacastrum*, L. (*Verdolaga de la playa*), the tuberous root of the cup-kak, it resembles the *Cacara*

<sup>1</sup> *Netab*. Described as a rare shrub native to the coast. The leaves are divided like those of the *ceiba*, but are thicker.

<sup>2</sup> *Zuluay* eruption. *Zuluay* is a certain nocturnal white butterfly or moth.

<sup>3</sup> *Hunpeokin-kak*. Lit. lizard eruption.

<sup>4</sup> *Holom-ik*. Lit. beetle-breath.

<sup>5</sup> *Ix-chibal-kak*. Lit. biting eruption.

<sup>6</sup> *Ix-thuch-kak*. This name resembles the *thuch-lun-kak* which the San Francisco Dictionary defines as a light small-pox which is not dangerous.

erosa, L. (*Jicama*), the cup-che<sup>5</sup> is its other name, the netab,<sup>6</sup> the *Cereus Donkelaarii*, Salm-Dyck, (*Pitahaya*), and the toon-can. Let these be mashed and poulticed, and he will recover by this means.

302—*U sacal chuchun kak*

(Judío, p. 125).

u lee *beec* ua machan tie ca *sabac chacahi*.

*The remedy for ulcers,*

is the leaf of the *Ehretia tinifolia*, L. (*Roble*). Let it be plastered on the complaint. Then let the *Bursera simaruba*, (L.) Sarg., be applied.

303—*Chuchun*.

(Sotuta, f. 19 v.)

*Yerba mora*, *pahalcan*, huchbil u lee *sabil* yokol le chuchum cu takancuntic, y ua ca huchie, catun a xakbez y aceyte comer catun a pake, cu heic u hol.

*Abscess or pustule.*

The *Yerba mora*, or *Solanum nigrum*, L., its leaf, is to be mashed and applied to the abscess to bring it to a point. When you mash it, then mix it with table-oil. Then you poultice it that it may cause the head to open.

304—(*Ek peo kak*).

(Sotuta, f. 10 r.)

Yan xan ek peo kak he u *sacale* u lol y u lee y u pach *zabacnicte* kelbil tulacal catun a huchie ca a *sa sesec* hobnil cabi cheche cab catun a *chacaucunte* bay tibile catun a *sa yuke* le max yan lay kak tie cu haul u yelet y u kinam.

*Confluent smallpox.*

There is also black confluent smallpox. This is the remedy, the blossom and the leaf and the outside of the *Plumeria rubra*, Jacq. (*Flor de mayo roja*). Let these all be roasted, then you mash them and you add a little honey from the hive, raw honey. Then you heat it to just the right temperature and you give it to drink

<sup>5</sup> Cup-kak, or cup-che. Its resemblance to the jicama would rather indicate that it is the same as the cup, or *Calopogonium caeruleum*, Desv. (*Jicama cimarron*.)

<sup>6</sup> Netab. See description in second prescription preceding.



to anyone who has this eruption, in order that it may put an end to the burning and the throbbing.

305—*Elel puczik y chibal pol, canal kak.*

(Sotuta, f. 24 v.; Judío, p. 24).

U sac elel pucziik y chibal pol, canal kak cu lubul yokol tu pol uinic cu lubul u kinam, ti likul cabin lubuc tu puczikal uinic lae. Lay chapah(a)lob uchic ichil Febrero y Marzo de 1730 y 1731 añ lay uchic u yantal ah kohanob payanbe, ca yumil ti Dios sacbal ti lay sacob lae, *ek huleb*, *chuyche taamaay kikche*, *bezinicche*, *uaxim*, *chaabil* u leob tulacal cheche yachibil, ziz cabin sacbac yuke bay hunppel tumin cabe ma kabet u hoyabal u cali bin cici xenac ca zatac yol ua zac cimil yoklal xe lae, he cabin thanac, he cabin u kat bal yuke ca sacbac pah keyem yuke ca tokoc xan u kab cahmat y cahmat yocob xan oxppel onza u kikel bin emec (u sacbal pachile) u lee *zipche cibche* u lee xan yachibil ca sacbac yuke bay uchic u . . . u maxob mat cimobie bin utzac tumen.

*Heart-burn and headache, a contagious eruption.*

The remedy for heart-burn and headache, a contagious eruption which comes on a man's head, the throbbing descends from (the head) down to a man's heart. This was the sickness which came in the epidemic of February and March in the years 1730 and 1731, which attacked sick people, (sent by) our Lord God. These were the remedies (employed): the *ek-huleb*, the *chuy-che*, the *Zuelania Roussoviae*, Pittier, the *Castilla elastica*, Cerv. (*Hule*), the *Alvaradoa amorphoides*, Liebm. (*Palo de ormigas*), the *Leucaena glauca*, L., the leaves of all of these are to be taken raw and crushed while fresh. Then let it be given to drink in the amount of one-third of a drachm of honey. It is not necessary to swab his throat. He will vomit thoroughly and then lose consciousness, will swoon, because of his vomiting. Then when he shall speak (again) and shall demand something to drink, let him be given sour maize-paste (*pozole*) to drink, and let both arms and legs be bled also, until three ounces of blood are taken. At the same time administer the leaf of the *Bunchoisa glandulosa*, Cav., and the *cib-che* (*Palo de cera*, probably *Myrica mexicana*, Willd.), its leaf also. Let it be crushed and given to drink. He will not die, but will recover by this means.

<sup>1</sup> *Chuy-che*. A tree-parasite said to resemble a thistle. The natives drink the juice when water is not available. Lit. "that which hangs from a tree."

306—*Hauay kaak.*

(Sotuta, f. 11 r.)

Hauay bay u hokol kaake ca a cña *cabalzilil* y *mucceh* y yak *uacax xiu* ca hučñuc ca a uomantez y haa catun a chuhi.

*Eruption of so-called leprosy.*

For leprosy, breaking out after the manner of an eruption you take the *cabal-zilil*,<sup>1</sup> the *muc-ceh*<sup>2</sup> and the vine of the *uacax-xiu*.<sup>3</sup> Let them be mashed. Then you steam them with water and apply very hot.

307—*Hauay tu lootol.*

(Judío, p. 95; Teabo No. 1).

U *ɔacale wtzicnil ɔaycan* yan ti chaltune *ɔincan* u lak u kaba *xmucñ* kuch tu lotole u catzuc u *ɔacal xochcan* lauac *hauay* y *yalaelel* kankan u nic yan ti chakanobe omanzabil y *nyax popchee* cantzuc tuba tu lobol xiuob lae tu yuchul *ɔacyahi* he *ytzincan* lae bay bin kuch t(i) lobale hali he mehentac cñacbanen u pach u chel bay thululthulil u le *zizimkuche* zazactac u nic u tabalob u *ɔacal* u lotol u xiuilob canobe cu hual.

*A so-called leprosy accompanied by ridges or welts.*

The remedy is the *Calea Zacatechichi*, Schlecht., the *ɔaycan* (*Sesuvium Portulacastrum*, L., or *Verdolaga de la playa*). (The latter) grows in hollow rocks and is also called the *ɔin-can*. The second remedy is the *x-och-can*, or *hauay* (*Parthenium hysterophorus*, L., and the *Oxalis yucatanensis*, (Rose) Standl. (*Agritos*). Its flower is yellow; it grows in the open savannahs. These are to be steamed with *nyax* and the *pop-che*. These are four bad plants (or weeds) which come to be remedies. Then there is the *itzin-can*, (to be employed) when there is a bad scab. But if (the scab) is small, take the outside of its stalk. It is like the long narrow leaf of the *zizim-kuch*. Its flower is white and hangs from it. It is the remedy for (this eruption) of welts. These are the plants (and) shoots to stop it.

1 Cabal-zilil. Lit. Ground-zilil. The zilil is an unidentified variety of palm.

2 Muc-ceh. Lit. Deer-muc. The muc is the *Dalbergia cibix*, Pittier.

3 Uacax-xiu. Lit. Bull-plant.

308—*Haycan.*

(Judío, p. 35).

U *ɔacale u canil pop*, u *canil ɔaycan*, *xautzicin*, *ɔincan oxtzuc u kaba*, u *canil ac*, *kumcan*, *zabacelcan* y *ixcambalhau* cohbil tulacal ca yichintac kinkinal u *ɔacal*.

*Haycan.*<sup>1</sup>

Its cure is the shoots of the *pop*,<sup>2</sup> the shoots of the *Sesuvium Portulacastrum*, L. (*Verdolaga de la playa*), whose three names are the *ɔaycan*, the *xau-tzicin* and the *ɔincan*; also the shoots of the *ac* (*Barbon*, a tall broad-leaved grass), the *kum-can*, the *Cereus Donkelaarii*, *Salm-Dyck* (*Pitahaya*) and the *Dorstenia contrajerba*, L. (*Contrayerba*). These are all to be pounded and put into a warm bath as a remedy.

309—*U ɔacal haone can kak.*

(Judío, p. 109).

*Xpahalcan*, *yhcan* u *lak u kaba*, y *ppaccan* u *le*, ca *huchuc*, ca *nabzabac tu yail*, *el el u cah bay* u *chibal xux u yale*.

*A contagious skin-disease accompanied by pustules.*

Its remedy is the *Solanum nigrum*, L. (*Yerba mora*), also named *ich-can*; also the *Physalis angula* (*Farolitos*), its leaf. Let these be crushed and anointed on the sores. They burn; like the sting of a wasp are the sores.

310—*Haone can ziz.*

(Sotuta, f. 51 v.; Mena, p. 74).

*Le haonecanziz bay* u *pach can tu yulel ti oc uinice cña netab canche*, *canchacche ɔincan* y *tooncan* ca *hucñe kinal tun* ca *ɔabaci bin* u *hau ez*.

*Some form of eczema?*

This *haonecanziz*<sup>3</sup> resembles (the condition) of a snake's skin. It comes on a man's foot. Take the *ne-tab*,<sup>4</sup> the *can-che*,<sup>5</sup> the

<sup>1</sup> *Haycan*. This might be translated either "spreading eruption" or "destructive eruption," depending on a strong or light aspiration given to the *h*. It is probably the same as *hauay*, or *leprosy*.

<sup>2</sup> *Pop*. Probably the *Scirpus validus*, Vahl. (usually called *halal* by the Mayas) from which the mats called *pop* are made.

<sup>3</sup> *Haonecanziz*. The element, "ziz," in the name of this complaint implies a watery secretion.

<sup>4</sup> *Ne-tab*. A rare shrub native to the coast. The leaves are divided into three or four divisions like those of the *ceibo*, but are thicker. (Cuevas.)

<sup>5</sup> *Can-che*. Lit. Snake-tree, although the word may also mean a wooden crib, frame or shelf. *Kan-che* is the *Conocarpus erecta*, L.

*Chiococca racemosa*, L. (*Cainca*), the *Sesuvium Portulacastrum*, L. (*Verdolaga de la playa*), the toon-can. Mash these warm and apply them. It will stop (the complaint).

311—*Utial u heebel chupilob.*

(Sotuta, f. 16 v.)

Caxant *chitcuuc*, huchbil y unto zinzal pakbil yokol u hool cu heeic tuzebal caxbalac chupil.

*To make abscesses point.*

Seek the *Catasetum maculatum*, Kunth. Mash it with fresh grease and poultice it on the head (of the abscess) so that it will immediately cause any swelling to open.

312—*Hemtan kaak.*

(Sotuta, f. 13 r.; Judío, p. 76).

Le kaba hemtan kaaka t(i) yoklal te cu chunpahal tu tohil tuux cu hemtantaal pauoe, cña *zicil* y tab y u lee uaix u pach *chactecoc*, huchuc, catun a pakez. Uamae *nemaxak* y *nemaxiu*, u *zulche*, ca huchuc u leeobe, catun a pakez. Uamae u lee uaix u motz *waan* huchibile, catun a pakci. Uamae *zac maxyc* huchbil y tab ppobiltun paybe u yail y u kabile, u uix chichan pal, bin ppobal cici yabil ca puchuc u yailob, catun pakac le huchbil, u le *yc* y tabe, bin utzac tumen.

*Eruption of sores on the breast.*

This is named hemtan-kak (pack-strap eruption), because it begins right where the rope of a pack-net crosses. Take squash-seeds and salt and the leaf or the exterior of the chacte-coc. Let these be crushed, and then you poultice them. Or else (take) the ne-max-ak (monkey-tail-vine) and the *Heliotropium parviflorum*, L., and the *Tephrosia cinerea*, (L.) Pers. Let their leaves be crushed, and then you poultice them. Or else the leaf and root of the *Sabal japa*, Wright, are to be crushed, and then you poultice them. Or else the white part of the *Capsicum frutescens*, L. (*Chile del monte*) is to be crushed with salt. First bathe the sores with the juice and with the urine of a small boy. Wash off the blood, when the sores are pressed, and then poultice the chile leaf which has been crushed with salt. It will heal by this means.

313—*Uoacal hokol kakob tu bakel uinic.*

(Judío, p. 25).

Ch̄a tab, pul ichil zih haa, ca yichinte las onse kin.

*The remedy for eruptions which come out on the genital organs of a man.*

Take salt and throw it into cold water. Then bathe with it about noon.

314—*Hul-im.*

(Sotuta, f. 16 v.)

Laili chuchup imile, caxant *lakintan* huch̄bil, ca a pak yokol u chupile, cu hauzic u chupul, *u che zuc* y *paihul* huch̄bil, ca abac yokol.*Abscess of a woman's breast.*Always the breast is swollen. Seek the *lakintan* (some prostrate *Euphorbia*), crush it and poultice it on the swelling to stop it. Also the *u-che-zuc* (*Ruellia tuberosa*, L.?) and the *Phyllanthus conami*, Sw. (*Ciruelillo*) are to be crushed and applied to (the sore breast).315—*Incordio.*

(Sotuta, f. 17 v.)

Ch̄a *atelezku* huch̄bil, catun a xakez y unto sin sal y hunppel pluma, ca a choo yokol cu takancuntic, catun a pote. *Uamae chac-molak*, huch̄bil y unto sin sal ma lob u tahal tumen. *Uamae orina*, aceite, u kanheel xcax, asafran, y le aceite huntuc, ca a oa ti kaak, ca a cici pecez cu ococole, ca a oa tu xethel nok, ca a pak yokol, ua postema, tuzebal bin a pote cu hauzic.*Bubo of the groin.*<sup>1</sup>Take the *Ix-telez-ku* (*Solanum verbascifolium*, L.?), and then you mix it with unsalted grease. With a feather you rub it on to make it point. Then you lance it. Or else the *chac-mol-ak* (*Alternanthera ramosissima*, [Mart.] Chod.?) is to be crushed with unsalted grease. This is not bad to make it point. Or else (employ) urine, oil, the yelk of a hen's egg, saffron, together with this oil.<sup>1</sup> *Incordio*. Here again we note a consistent Maya tendency to give any manifestation of syphilis its Spanish name, although there is little doubt that this disease long antedated the arrival of the Spaniards.

Put it over the fire and stir it well. Finally you spread it on a piece of cloth and poultice it on (the sore). If it is an abscess, lance it immediately to put an end to it.

316—*Yncordio*.

(Sotuta, f. 18 r.)

Le incordio lae u bul, u heeh uinic cu zipil, tumen caanal u muk uinic, ca cña chicix taan, too u lee *xkoch*, ca a poc amal ocnal kin, y amal u zatzal, ma uchac u tokole, bin zaatac tu hunal. Utz ix u tzatz keken xan citac u hokzabal tu hobnel, ca chuhuc y le tzatz, bay xan u lake pocabac y u lee *ixtelezku*, chamico yalabal sulob.

*Bubo of the groin.*

This bubo is on the thigh, the groin, of a man who sins, because of the exhaustion of the man's vital strength. You take hot ashes, wrap them in the leaf of the *Ricinus communis*, L. (*Higuerillo*), and rub them on (the sores) every day at sunset and at dawn. He cannot be bled; it will disappear by itself. It is also good to employ the lard of a hog immediately after it is taken from the entrails. Let this lard be applied very hot, and in the same manner also let it be rubbed with the leaf of the *ix-telez-ku* (*Solanum verbascifolium*, L.?), which the foreigners call *Chamico*.

317—*Yncordio*.

(Sotuta, f. 18 r.; Nah No. 48).

Le incordio lae, bay bocan u luukule, cña u lee *xchabancan* y u motz hucñibil, ca pakac; ua chac yulene, pocbil y u uich *pakal*.

*Bubo of the groin.*

This bubo is removed like an abscess or tumor. Take the leaf of the *Isocarpha oppositaefolia*, (L.) R. Bro., together with its root. Crush and poultice them. If it is like a red abrasion, it is to be rubbed with the fruit of an orange.

318—*Incordio*.

(Judío, p. 44).

Chupil tu cap u heeh uinic, yncordio yalabal, uaix u chupul u xicin, yalan cal, tu kab, y tu yoc. U sacale le *babayin*, *xbakayin*, *zacchuenche* u cappel u kabae, u yoyol ni *xpayhul*, u le chauay *yc*, u motz *yximche*, *ycche* u cappel u kaba, u motz *tamay*, u motz *beeb*,

lay u motzob likil u hokol kine huchbil ca nabzabac y kukun tu pach chupil, bin sumuc u sacal yncordio eek *telezku* lay *berengenilla* huchbil y unto sin sal xakbezabil y *zabila*, ca pakac yokol, ca sabac u le yokol xan cu haul tumen.

*Bubo of the groin.*

The swelling between a man's groins is called *incordio*, or a swelling of the ear, below the neck, on the arm, and on the leg. Its remedy is the bab-ayin (alligator-claw); ix-bak-ayin (alligator-genitals) and zac-chuen-che are its (other) two names. Also the tender tips of the *Phyllanthus conami*, Sw. (*Ciruelillo*), the leaf of "sharp chile,"<sup>1</sup> the ixim-che (*Casearia nitida*, [L.] Jacq., or *Andira inermis*, H. B. K.), it is also called ic-che, the root of the *Zuelania Roussoviae*, Pittier, and the root of the *Pisonia aculeata*, L. (*Uña de gato*). These roots are at sunrise to be mashed and anointed with a feather on the swelling. It will reduce the swelling of the tumor. (Another) remedy is the black *telez-ku*, that is, the *berenjenilla*<sup>2</sup> which is to be mashed with butter and the *Aloe vera*, L. Then let it be poulticed on it and let the leaf be applied to it also to bring it to an end.

319—*Kabak.*

(Sotuta, f. 58 r.; Judío, pp. 37, 52 and 96; Mena, p. 99; Nah No. 71 and No. 26).

Le kabak lic u tzayal tu chun u co uinic tu xul u uich uinic y tu xay u chi uinic xan. Ca a cña u uii *pich* y *xicinceeh* ua chouace ca xot kupuc, chocotune ca chu (huci). Bay xan u lak u sac kabac yoyol (ni *ixkum*) *tulub*, yoyolni *put*, *xanabmucuy*, yoyol (ni *op* y yoyo) ni *atzah* ua chouace (lay kabak) ca xot kupuc ca . . . oba ca tzahac y sacac uix ca chuhi le xiu *ix huntulek* u kaba hutulhut u lee *zachtulek* xiu yalabal tumen zac hutulhutil u lee y chachac *kuwub* ca huchuc catun hopoc u nabzabali catun pocaac y u xethel ppul u yail ua chouace ca nabez lai xiu yokol, ua tan u pocabale bin haul tumen.

Bay xan u lak u sac kabak *noholaban* y (*kik*) *aban* ca kelaac u lee ca toozci. Uamae u mo(tz) *ekteel* y u motz *chay* huchbile ca pakez. Uamae u xulub u *yucil* kax xotbil ca sac(ac) ti bolsa (uaix) kaxnakil u sac bin tihic tumen cax ti xiblal cax ti chuplal bin u huez.

Bay xan u sac cña u yitz u lee *yocmacal* uaix *macalkuch* le bin ppobal ua machan sac tie cax pulbil yahe. Latuppiz u chuchba ua

<sup>1</sup> Sharp chile. This is elsewhere called Havana chile.

<sup>2</sup> *Berenjenilla*. Here we have a third Spanish name for the *telez-ku*. We have already seen it named the *berenjena rustica* and the *chamico*.

matan (u chuc)hba u taa uluum bin a uomantez utial a chuhic cu hauzic.

Bay xan u lak u sac kabak cña u motz *ichhuh* chacbil, catun chucuc *akuluch* y *amohoch*, ca hucñuc ti u kab *ichhuh* paybe, ppobil u ocol.

*Hemorrhoids and other inflamed protuberances.*

This sore called kabak attacks a man's gums, the corner of a man's mouth and the corner of a man's eye. You take the succulent root of the *Calliandra portoricensis*, Jacq., and the xicin-ceeh (deer-ear). If the sores protrude excessively, cut them off. Warm the remedy and apply it very hot. Thus also there is another remedy for this sore called kabak. It is the tender tips of the *Melothria pendula*, L. (*Pepinillo*), the tender tips of the *Carica papaya*, L., and the *Euphorbia hirta*, L. (*Yerba del pollo*), the tender tips of the *Annona reticulata*, L. (*Anona colorada*, or Custard-apple), the *Jatropha aconitifolia*, Mill. If the sore protrudes excessively, cut it off, and . . . then fry these (tips) with a little urine and apply them very hot. There is the ix-hutul-ek plant as it is called. Very narrow is its leaf. It is called the white hutul-ek plant, because its leaf is white and very narrow. Also the red *Bixa orellana*, L. (*Achiote*) is to be crushed. Begin by anointing these and then rub the sore with a potsherd. It will cease by this means.

There is also another remedy for this sore called kabak. It is the nohol-aban (south-bush) and the kik-aban (rubber bush, probably a low form of *Castilla elastica*, Cerv.) Let the leaves of these be toasted and sprinkled on (the sore). Or else the root of the ek-teel (black shin) and the root of the *Jatropha aconitifolia*, Mill. (*Chaya*) are to be crushed and poulticed. Or else the horn of the Yucatan Brockett is to be cut up and put in a sack and bound on the abdomen. (The sore) will dry up by this means. Whether it is on a man or on a woman, it will stop it.

Thus also a remedy is to take the gum from the leaf of the yocmacal or the *Dioscorea spiculiflora*, Hemsl. (?) This is to be rubbed on or plastered on it if it is a sore caused by sorcery. Until it hardens, (or) if it does not harden, you shall steam the dung of a turkey, so that you may apply it hot to stop it.

Thus also there is another remedy for this sore. Take the root of the ich-huh (*Eugenia axillaris*, [Sw.] Willd.?) and boil it. Then catch the ix-kuluch (a cockroach) and the ix-mohoch,<sup>1</sup> and crush them in the juice of the ich-huh, first having bathed the sore.

<sup>1</sup> Ix-mohoch. Described as a large sluggish cricket with a neck like a friar's cowl and a tail like that of the locust. (Motul.)



320—*Kaak*.

(Sotuta, f. 10 v.; Nah No. 79).

Le kak cu yulel yokol uinice, ca a cña u uii *xatabcanil* y u uii *halal*, y u uii *xcambalhau*, u uii *put*, u uii *kumcan*, y u uii *nokak* huchibil, ca pakac yokol, bin u hauez.

*Eruption or rash.*

For this eruption which comes on a man, you take the succulent root of the *Cissus rhombifolia*, Vahl., and the succulent root of the *Scirpus validus*, Vahl., and the succulent root of the *Dorstenia contrajerva*, L. (*Contrayerba*), and the succulent root of the *Carica papaya*, L. (*Papaya*), the succulent root of the kum-can (gourd-shoot), and the *Bacopa procumbens*, (Mill.) Greenm. These are to be crushed and poulticed on (the eruption) to stop it.

321—*Kaakob*.

(Sotuta, f. 9 v.)

Le kak cu hokol christianobe u sacale *xanabchich*, huchibil ca a pak yokol le kaake ua hach yabe ca a huchē ca a choo yokol tulacal y kab tulacal u kakil cu hauzic.

*Eruptions of pustules.*

This eruption of pustules that comes out on Christians. The remedy is the *xanab-chich*,<sup>1</sup> mash it and then poultice it on this eruption. If (the pustules) are very numerous, you mash it and rub it on all over with the hand, on all the pustules to stop it.

322—*Kaakob*.

(Sotuta, f. 11 v.)

Oxtzuc u hokol yokol uinic, chac canlah kak u kaba zac canlah kak y kulimcan kak lic u yulel tu yoc uinic y tu kab uinic hach ele u cah bay chuhule. Ca a cña u lee u *pomolche* u le *ppac* u lee *beeb* y kultaan ppobil, caten, oxten u ppobilic catun huchuc ca ppoboc y u kabil bin utzac.

*Eruptions of pustules.*

Three kinds (of eruptions) come out on a man. Red "can-lah"-eruption, as its name is, white "can-lah" eruption and "kulim-can"

<sup>1</sup> *Xanab-chich*. Lit. bird-shoe. We are reminded of the *xanab-mucuy* (dove-shoe) which is the name for a number of small prostrate *Euphorbia*.

eruption, come on a man's foot and on a man's hand. They burn seriously like a burn (from fire). Then you take the leaf of the *Jatropha Gaumeri*, Greenm., and the leaf of the *Lycopersicum esculentum*, Mill. (*Tomate grande*), and the leaf of the *Pisonea aculeata*, L. (*Uña de gato*) and lime. He is to be bathed two or three times. Then let (the leaves) be crushed and let him be bathed with the juice. He will recover.

323—*Yan xan kakaz kak.*

(Sotuta, f. 10 r.)

Cu sacal y *hazmaax*, bay u lee *chacal haaze*, ho ual u yoyol ni le tie chee huchbil, catun sacac yuk le kohan lic u hauai tumen. Bay xan le *maxak*, ma lob u yoyol ni le xiue pupuchtunbil, catun sacac ichil tibio haa yuke.

*There is also a disfiguring eruption.*

Its cure is the haaz-max (mamey-chile), its leaf is like that of the *Mammea Americana*, L. (*Mamey colorado*). Four leaves of the tender tips of this tree are to be crushed and then let it be given to the patient to drink, that it may cease by this means. Thus also this max-ak (wild-chile-vine) is not bad. The tender tips of this plant are to be pounded with a stone, and then let it be given in tepid water for him to drink.

324—*Kaak ti chi.*

(Sotuta, f. 12 v.; Judío, p. 37).

Lic uyantal le kak tu chi uinice, catun a chac u motz *chaczik* u ppuce. Uamae, u motz *chacak* huchbil u ppuce. Uamae u motz *xoomak* haxalbil, ca a sa sacac tab, ca a sa tu chii. Uamae u motz *xaax* huchbil, ca a ppuce. Uamae u lol *xtail*, *cabalyaxnic* u lak u kaba, kuxbil maili u kam u chie, lic u manzic u yail u chii uinic, xakbezabil *pakunpak*, lic u manzic uabax yail tu zubtal uinic xan.

*Sores in the mouth.*

To alter (this condition of) sores in a man's mouth, you boil the root of the *Caesalpinia pulcherrima*, L. (*Flor de camaron*) for him to hold it in his mouth. Or else the root of the *chac-ak*<sup>1</sup> (red vine) is to be crushed for him to hold it in his mouth. Or else the root of the *Gouania dominguisensis*, L. (chew stick) is to be twisted; you add a little salt and apply it to his mouth. Or else the root of

<sup>1</sup> Chac-ak. This is probably very similar to the zac-leum-ak (white spider-vine). It is said to be eaten by the Mexican Agouti.

the *Acacia angustissima*, (Mill.) Kuntze (*Cantemo*) is to be crushed; let him hold it in his mouth. Or else the blossom of the ix-tail, the cabal-yax-nic (*Ruellia tuberosa*, L.) is its other name, is to be chewed, before he takes his breakfast, to remove the sore from a man's mouth. Then mix it with the *Yerba de la golondrina* (*Euphorbia dioica*, H. B. K.?) to remove any sore from a man's genital organs also.

325—*Kak tu uich uinic.*

(Sotuta, f. 9 v.)

He u yaxchun u sacale, le xiu *tibixiu* u kabae huchbil u lee y tun a kabe cici chobil tu yich, ma lob u lukzic cu zizcuntic u kakil. Uamae xauuc ca a huchē catun a choo tu yich malob cu lukzic cu zizcuntic u kakil.

*Eruption on a man's eye.*

This is the first remedy, this plant named the *tibib-xiu*.<sup>1</sup> Its leaf is to be mashed with a stone and its juice rubbed well on the eye. It is not bad to cool the eruption. Or else there is the *Diphysa robinoides*, Benth. You mash it and then rub it on the eye. It is not bad to cool the eruption and take it away.

326—*Kak uinclil uinic.*

(Sotuta, f. 9 v.)

Chā *xcabalchi* ca a yachte catun a choo u kab tulacal tux yan le kakobe.

*Eruption on a man's body.*

Take the ix-cabal-chi<sup>2</sup> and squeeze it. Then you rub the juice everywhere where the eruption occurs.

327—*Kamaz can kaak, o kamaz can züz.*

(Sotuta, f. 10 v.; Nah No. 31).

Le kamaz can kaak cu yulel ti xib y ti chup bay yoome lic u pec bay u pec uinice, yikal tu hunal. Caxant *cabal kamaz* u mumun *luch* ca a yeo u kab lay *luch* y *chuyche* lay yan tu kab che canal *kamaz* ca huchuc ca pukuc ichil u kabil lay luche ca a ja yuke bin utzac.

<sup>1</sup> *Tibib-xiu*. Lit. Fear-plant, or reverence plant; perhaps a synonym for the *bolon-tibi*, or *Cissus trifoliata*, L.

<sup>2</sup> *Ix-cabal-chi*. Lit. Low chi, or ground-chi. The chi is the *Malpighia glabra*, L. (Nancen).

*An eruption named after the kamaz-ant.*<sup>1</sup>

This kamaz-can kak, comes on a man and on a woman. It is like a foam or fermentation; it moves as the body moves in breathing. Seek the ground kamaz<sup>2</sup> and a green *Crescentia cujete*, L. (*Jicara*). You squeeze out the juice of this calabash and the chuy-che<sup>3</sup> which is on the branches of the trees, the high-kamaz-ant.<sup>2</sup> Let it be mashed and dissolved in the juice of this gourd. Then you give it to drink and he will recover.

328—*U sacal kuch.*

(Judío, p. 113).

He u xiuil kuche bay muo kake (lay *muscoc*) ca huchuc y u boxel y telchacil *xkanan* u boxel u telchacil u boxel u pach *payluch* y boxel u motz *zabacelcan* huchbil ca nabzabaci u sacal chacau chacau.

*The remedy for scab.*

These are the plants for scab, the *Selaginella longispicata*, Underw. (*Doradilla*). Let it be mashed with the deep red outside part of the *Hamelia patens*, Jacq., the deep red bark of the *Coutaria acamtoclada*, Hemsl., and the outside of the root of the *Cereus Donkelaarii*, Salm-Dyck (*Pitahaya*). These are to be mashed and the remedy anointed very hot.

329—*Kuch.*

(Judío, p. 114).

Lay u xocan yanob kuch u kabaob tumen ah sacob lae licil u yahpahal nuxibob, tancelemob palalob chuplaloob he(k)lay u xocan u xocan u tzuculob tzolancabal lae. U yaxchun kuch u kabae, u catzuc tunich kuch, u cantzuc u kakal can kuch, u hotzuc u pol kuch, uactzuc u pach u xik kuch, uuctzuc yal xik kuch, uaxactzuc u lacan kuch, u bolontzuc u xau kuch, u lahuntzuc u tanil kuch.

Ek mulen u binel muzlac zakil lay u kaba xiuob licil u sacalloob lae cancanlot u lotol u xiuloob. U yaxchun *zizinkuch* y *matzab kuch* lay *yalaelel* kankan u nic u catzuc u kaba *telciu* xan xaxay u le *kel kuy* u lak u kaba y *ukchee* u cantzuc *ah eh (ek) puc chee* u lak u lak u kaba tumen ah sacob huchbil xiu tu cantzucil . . . cil loob ca omanzabac ca ppoboc u yail tu kabil le xiu cicippobil ca nabzabac

<sup>1</sup> The Nah MS translates this complaint as "privación."

<sup>2</sup> Ground kamaz and high kamaz. These are both probably varieties of the ant described by Pacheco Cruz as a white ant that builds its nest on the branches of trees. The nest is of mud, shaped like a volcano, often half a meter in height and circumference.

<sup>3</sup> Chuy-che. A tree-parasite said to resemble a thistle. Lit. That which hangs from a tree.

tu xetel nok u nana . . . u yail . . . kinkinal u kab . . . caten ua oxten hunppel kin latulah u hauac ca hauac u abali.

Heix kuche tu alahe bay u hol yit xnuc ulume petmanpet u binel u yail mumul yilkel he cal kuche u uich kuche petmanpet u yail yilabal. Heix chac kakal can kuche u lobil yah bay pocbil pek u yaile uakaluak buhmanbuh yilabal u ayil he kuch lae lay u xiuilob talah lae *zinzinkuch tzacamkuch yalaelel* kankan u nic y *telciu* xaxay u le *telkuchi* xan u kaba y *ukchee ekpucchee* u lak u kaba tumen ah abac lay cantzuc xiuob utial ppobal chacau . . . y ppoboli u abacal yahob he aban canal loe kuche hunppel y xau kuch y xanab kuch u cappel yoxppel *xicinchee* lay hokol tu pach cheobe catun omanzabac *komkuch* chubil cancanppel y *zipche* hoppel y *zizimkuch* yalabale lay ci u boce bay xan ua yan u hach lobil matan yubee u abacalobe ti caalah canale bay u cah chac kakal can kuche u le *bezinic* bin chacaucuntabac omanzabil utial chubal xau kuch y kom kuch ti abacan u abal *bezinic* ca chuhuci chacau latulah u manel catun tozoc u tienil cicimuxbil u boxel *tziminchee* lae.

### Scab.

This is the enumeration of various names of scab (given) by the medicine-men; they attack old men, youths, boys and women. This is the enumeration of the varieties recorded.

The first is named (simply) scab. The second is stone-scab. The fourth is a burning contagious scab. The fifth is head-scab. The sixth is "behind-the-arm-scab." The seventh is arm-pit scab. The eighth is jowl-scab. The ninth sort is wrist-scab. The tenth sort is cactus-scab.

They vary from a black protuberance to a gnawing itch. These are the names of the plants which cure them; there are four sorts of plants. The first is the *zizim-kuch* (*Porophyllum macrocephalum*, DC. *Hierba del venado?*); and the *matzab-kuch*, the *yala-elel* with a yellow blossom (*Oxalis yucatanensis*, [Rose] Standl. ) is its second name. The *tel-ciu* (*Adiantum tricholepis* Fee, or *Culantrillo de pozo*) with its pinnate leaf, the *kel-kuy* is its other name, (is the third sort). The *uk-che* (louse-tree, *Porophyllum punctatum*, [Mill.] Blake) is the fourth sort; the *ek-puc-che* is its other name given by the medicine-men. The four varieties of plants are to be crushed . . . steamed, and the juice of these plants rubbed on (the sore). Then let (the crushed plants) be spread on a piece of cloth and rubbed on the sore, tepid, two or three times a day, until it disappears. Then let the application cease.

Here is a scab which I have mentioned; it is like the rectum of an old turkey-hen. The sores run together in blotches which are full

of mites. There is throat-scab, face-scab, the sores appear in round blotches. There is red burning contagious scab, resembling roasted milt. The sore appears to be all cracks and splits. These are the plants employed: the zizim-kuch (*Hierba del venado*), the tzacam-kuch (cactus-scab), the *Oxalis yucatanensis*, (Rose) Standl. (*Agritos*) with its yellow blossoms; also the *Adiantum tricholepis*, Fee. (*Culantrillo de pozo*), with its pinnate leaf, also named tel-kuch. There is also the uk-che (*Porophyllum punctatum*, [Mill.] Blake), also called ek-puc-che by the medicine-men. These four sorts of plants are for washing the sores, when they are crushed . . . then let it be steamed and let the sores be washed with the juice of this plant. I have recorded these sores above. One is scab; wrist-scab and sandal-scab are the second and third; and . . . the xicin-che (tree-ear, a tree-fungus) which emerges from the bark of trees; then let the kom-kuch be steamed; and the *Bunchosia glandulosa*, (Cav.) DC., let four of them be taken, and the zizim-kuch (*Porophyllum macrocephalum*, DC., *Hierba del venado?*) as it is called; it has a pleasant odor. Thus also, if it is very bad, nothing has been heard of by the medicine men (like) what we have mentioned above. Of such a sort is the red burning contagious eruption of scabs. The *Alvaradoa amorphoides*, Liebm. (*Palo de ormigas*) is to be heated and steamed to be applied hot to the wrist-scab and kom-kuch (bulging scab). After the *A. morphoides* has been applied, then (continue to) apply it very hot until it disappears. Then let it be sprinkled with the dried, well-ground exterior of the tzimin-che (tapir-tree).<sup>1</sup>

### 330—*Kulim kaak*.

(Sotuta, f. 13 r.; Judío, p. 74).

Le xkulim kaaka, xkulim can, pom kak yalabal xan, ca a cña u boxel u pach y u lee *xkulimche*, y u lee *xhuntura abal*, y *altamisa*, *zac-mizib* yalicob, y *mizibcan* y *ibincan*, *zizimcan*, *cñicbulcan*, y *chaccan*, *chacleonak*, *xtancazche*, *chacbil tulacal*, ca çabac yichinte.

### "*Cimex-eruption*."

This "cimex-eruption" is also called small-pox. You take the bark and the leaf of the *Astronium graveolens*, Jacq. (*Palo mulato*), and the leaf of the *Spondias purpurea*, L. (*Ciruela morada*, hog-plum), and the artemisia which they call *zac-mizib* (*Ageratum Gaumeri*, Millsp.), and the *mizib-can* (broom-shoots), the *cñicbulcan* (*Ani-shoots*), the *Rhoeo discolor*, L., Her., the *chac-leon-ak*

<sup>1</sup> Tzimin-che. Said to be eaten by the tapir.

(white spider-vine), and the *Zanthoxylum pterota*, L. (*Palo mulato*). Boil them all and bathe (the patient with the liquor).

331—*Lamparones*.

(Sotuta, f. 50 v.; Mena, p. 72).

Letie lamparones zob ich maya than. Caxant *balchech*, ca huch' u lee, catun a pak yokol ya cu hauzic. Bay xan *cha chac-leon-ak* huch'ibil u lee, catun a pak yokol u yail cu hauzic. Bay xan caxant le *ajos ak* huch'ibil u lee, ma lob u hauzic. Bay xan *icaban* u yitz ma lob u hauzic, u mamaxtunbil ca a *ja* yokol tunche ua citac u talem u yaax tzintzin yokol . . . yaaxcach, ca uchie nohoch keban, ua matan a cici kaholte u uix tumenel matan a uila u kohanil ua bin u cah ti cimil, ca a uaal confesarnac tumenel *ooc* u hach hokol u boc u cimil, tu uix tu uinicil tulacal minan u *oacal*, halili hahal Dios . . . cu *oocol* u thane tumenel utial cimil.

*Buboes*.

These buboes are called zob in the Maya language. Seek the *Harpalyce formosa*, DC., and crush its leaf. Then you poultice it to stop it. Thus also take the *chac-leon-ak* (white spider-vine), crush and poultice its leaf on the sore to stop it. Thus also seek the *ajos-ak* (garlic-vine); its leaf is to be crushed. It is not bad to stop it. Thus also the *Croton humilis*, L., its gum is not bad to stop it. It is to be crushed with a stone and applied wherever the sore is. When flies attack (the sore) it is a sign that a great sin has been committed. If you do not diagnose his urine, because you do not perceive the disease, (or) if he is on the point of death, then you tell him to confess himself, because there comes forth the odor of death from his urine, from his entire body. There is no remedy; only the true God, the fulfilment of whose command it is that he is to die.

332—*U oacal max kak*.

(Judío, p. 125).

*Maaxak* y *haazmaax* utial chupil, catun, tozoc u ticnil u le *chacahi* u *oac*.

*The remedy for "wild chile eruption."*

The *Max-ak* (wild-chile-vine) and the *haaz-max* are for swellings. Then sprinkle the dried leaf of the *Bursera simaruba*, (L.) Sarg., as a remedy.

333—*Maak tu pol uinic.*

(Sotuta, f. 30 v.)

U chicule tan u hutul u tzotzel u pol uinic tumen. Ca a *chā* lay *zacchacah* cheche *yachbil* y u pach y u lee calem a ppoo u hooli chunkin cabin a mente caten ua oxten ua canten a mentic bin utzac tumen. Ua *huchbil* nek *chacal haaz* y *xcambalhau* omanzabil y haa kinkinal tune ca a *çai* bin utzac tumen. Bay xan ca a *chā* le *cabalzilil* pepechtuntabil catun a pak yokol le maak caten ua oxten cu hauzic. Uamae u lee *canchacche* cici hochbil u zok ca a pak le xiu lela chen zok.

*Crust on a man's head.*

The symptom is when the hair falls from a man's head because of (the complaint). You take the *Euphorbia Mayana*, Millsp. Crush it raw together with its outside and its leaf. Twice you bathe his head at noon, then you do this two or three or four times. He will recover by this means. Or the crushed seeds of the *Lucuma mammosa*, L. (*Mamey*) and the *Dorstenia contrajerva*, L. (*Contrayerba*) are to be steamed with water and applied. He will recover by this means. Thus also, you take this *cabal-zilil*.<sup>1</sup> It is to be crushed with a stone, and then you poultice it on the scurf, two or three times, to stop it. Or else the leaf of the *Chiococca racemosa*, L. (*Cainca*); rub off the scab thoroughly and poultice this plant on the scalled head.

334—*Metnalil kak.*

(Sotuta, f. 10 r.)

Ca yanac ca a *chā* u motz *tamay*, u motz *iximche*, y u motz *chobenche* y *yakba* y yal canal *zinic*, yan tu kab *ixilche* y *chicix-moak*, *kumkak* u kaba u *çacal*.

*Erysipelas.*<sup>2</sup>

When this occurs, you take the root of the *Zuelania Roussoviae*, Pittier, the root of the *Casearea nitida*, (L.) Jacq. (?) and the root of the *Trichilia arborea*, C. DC., and the *Andira excelsis*, H. B. K., and the larvae of the canal-zinic<sup>3</sup> which is found on the branches of the *Ageratum intermedium*, Hemsl. (*Flor de San Juan*). Also (take) the *chicix-mo-ak* (fiery parrot-vine), the *kum-kak*, as it is called, for a remedy.

<sup>1</sup> Cabal-zilil. Lit. Ground-zilil. The zilil is a palm of some sort.

<sup>2</sup> Literally, hell-eruption.

<sup>3</sup> Canal-zinic. An ant which makes its nest in a tree. Lit. high ant.



335—*Mochil y bubas.*

(Mena, p. 104).

Ca a cña hunppel almiscle ixnucce, ca chacac hunppel cum haa cu ziztale, ca cñuy u cumil, catun a hokez u yichilil ca zizac cu cocole ca a cici hucñe, catun a pak tu uincil, tu hol u bacelob, catun a cici teppi y u sabana, ca binez tu cama ppiz u kilcabcic tulacale, oxppel kin ua canppel kin bin yuke vevedizo yuke chochoco, cabin a ða ti, bin utzac tumen.

*Crippled arm or leg and buboes.*

You take musk and boil it in a pot of water. To cool it, hang up the pot, then you take out its contents when cooled. Finally you crush it well and poultice it all over the body, on the joints. Then you wrap (the patient) in a sheet and send him to bed. (Keep him in bed) until he perspires all over. For three or four days he shall drink the potion, let him drink it very hot when you give it to him. He will recover by this means.

336—*Noh kak.*

(Sotuta, f. 9 r.)

He cabin hoppoc le cñapala citac manel hunppel kin tie ca a ða ayuda ordinaria tu cappel u kine u ðambil u yoc y tibio haa tibil mix hach choco mix hach ziiz catun a ða agua *borraja* yuke choco y azucar ichil agua tibia ua hach pim u kake tu yoxppel kine ca choboc tulacal u uincil y unto zin zal lathahbil y vino de castilla chochoco oxten bin u lukez u hail utial tun a zizcuntic yecele ca a cña unto zinzal ca a tzahe catun a ða ichil bay oxppel tumen aseyste de almendras dulces catun a chooh tulacal u uincil y hunppel pluma bay las nueve kine bay tu yoxppel u kinile bin tun a uila u binil u tihil bin tun ðalac u yail matan u hauacinte xootol hetun ua yan choco . . . aacaan tile yokol u puhile ca tokoc yoc cappel onza kik bin hokol ti hetun uama tahace ma utz u tokoli.

*Smallpox.*

When this disease begins, as soon as one day passes, give him an enema. On the second day soak the feet in tepid water, just the right temperature, not too hot, not too cold. Then you give borage-water for him to drink hot with sugar in tepid water. If the eruption is very thick, on the third day rub the entire body with fresh grease spread on a cloth and Spanish wine, very warm. Three times he shall remove the water in order that you may cool the burning. Then you take fresh grease and fry it. Put into it, say, three

*tomines* of oil of sweet almonds. Then you rub the entire body with it, using a feather, nine times on the third day. You will then see it dry up, and you shall press the sores with the hand. Do not let him scratch them. But if they are feverish . . . over the pus. Then bleed the foot. Let two ounces of blood be drawn. But if they point, it is not good to bleed him.

337—*Noh pol kak.*

(Sotuta, f. 19 r.)

Le cu tzayal tu ppuuc, cax tu chi u lec uinic, cax tu buelem uinic xan, u xiu ðonkak bin ðabac. Uamae, cña u motz *abalac* y *iximche*, *taamay*, huchbil tune, ca kintaac, ca pakac tuux yan yae, bin hauac tumen. Yan xan ðonkak, xotomkak cu yulel tu yak uinic, xotol u yak uinic tumen, ca ðabac takan *niin*, ua *zake* ca a ða ææec tabi; catun a ða tu yak uinic bin u hauez.

"Big head eruption."<sup>1</sup>

This attacks the cheek, the brow of a man, the crown of a man's head also. Let the plants for quinsy be administered. Or else take the root of the *Spondias purpurea*, L. (Hog-plum), and the *Casearea nitida* (L.) Jacq. (?), the *Zuelania Roussoviae*, Pittier. These are to be crushed, warmed and poulticed wherever the sore is. It will cease by this means. There is also quinsy, a cutting eruption which comes on a man's tongue. It cuts a man's tongue. Let there be given cooked *Coccus-axin*<sup>2</sup> or locusts. Add a little salt and apply it to the man's tongue. It will cause it to cease.

338—*Noh pol kak.*

(Mena, pp. 88 and 129).

Huchē u hokol *tamcazche* bay u bac *yakba xchuyche kamaz* yan tu tunich xmahanchun yan tu kab *ixilche* y u pach *xcanalzinicche* chul chul cu hauzic u kokol.

*A disease characterized by swelling of the entire head and neck.*

Mash the shoots of the *Zanthoxylum pterota*, L. (Palo mulato), it resembles the stalk of the *Andira excelsis*, H. B. K., the *chuy-che*, the *kamaz*,<sup>3</sup> which is on rocks, on the ix-mahan-chun and on the

1 "Noh-pol. A disease that is very bad. It is characterized by an eruption. The entire head and throat are swollen." (Motul.)

2 The *niin*, or *Coccus-axin*, when cooked produces an oil or wax which is employed to varnish furniture and gourds.

3 *Kamaz*. A certain white ant which builds its nest on the branches of trees. These nests take the form of a volcano, are of earth, and sometimes measure half a meter in height and circumference. These ants live together with another ant called the *kulzinic*.

branch of the *Ageratum intermedium*, Hemsl. (*Bakelus* and *Flor de San Juan*), and on the bark of the canal-zinic-che,<sup>1</sup> to put an end to the swollen head.

339—*Onob can, culebrilla.*

(Judío, p. 76).

Cu yulel yokol palaloob cax n(u)cuch uinic xan ca panac u motz *ciz*, u motz *chobenche*, u motz *kulinche* y u uii *chiciamo* chacbil kinkinal cabin yichinte *yakba xiu kanmucuyche ixcambalhau* huchbil chacau chacau cabin yichinte *ziciltab zacobacelcan bezinic xax kuxubcan tamancan mukuyche mukui onobcan* chachactac baytac *mukuyche* u chacile yan ix u zazacil y yeyekil y u kanil ychinbil ukbil xan utz utial onob.

*Ringworm.*

It comes on boys and even on adults also. Let there be dug the root of the *Gyrocarpus Americanus*, Jacq. (*Volador*), the root of the *Trichilia terminalis*, Jacq., the root of the *Astronium graveolens*, Jacq. (*Palo mulato*), and the tuberous root of the *chicix-mo*.<sup>2</sup> These are to be boiled and, when tepid, employed for a bath. Also (take) the *Andira excelsis*, H. B. K., the *kan-mucuy-che* (yellow-dove-tree), the *Dorstenia contrajerva*, L. (*Contrayerba*). Crush these, heat them and put them in his bath. (Take) squash-seeds, salt, the *Cereus Donkelaarii*, Salm-Dyck (*Pitahaya*), the *Alvaradoa amorphoides*, Liebm. (*Palo de Ormigás*), the *Acacia angustissima* (Mill.) Kuntze (*Cantemo*), the *Rivina humilis*, L. (*Agrimonia*), the *taman-can* (cotton-shoot), the *mukuy-che*, the *mukuy-onob-can*. The red sort is like the *mukuy-che*. There are also the white, black and yellow varieties. These are to be put into the patient's bath and to be drunk also. They are good for ring-worm.

340—*Pek tu nak uinic.*

(Mena, p. 113).

Anis, canela, ua minan anis, claudiosa, y puke lay kohan, cabin yuke, ca pixic, ca u kilcabte, bin hauac tumen.<sup>3</sup>

*White spots on the abdomen.*

Anis, cinnamon, or if there is no anis, the *Capraria biflora*, L. (*Claudiosa*, or *Agrimonia silvestre*). These are to be dissolved in

<sup>1</sup> Canal-zinic-che. Lit. High-ant-tree. Evidently it takes its name from the ant called canal-zinic.

<sup>2</sup> Chicix-mo. Lit. impudent parrot. Reported as a moderate sized shrub with a milky sap. The root is said to be antiphlogistic.

<sup>3</sup> This prescription has evidently been obtained from European sources.

water for the patient; then let him drink it. Then cover him up until he perspires. It will cease by this means.

341—*U pekil u nak uinic.*

(Mena, p. 112).

Lic u yalabal baxolil xan tumen u yal pek uinic vaso yalabal. Čha u lee *poleo* ca hučhe y tab kinal tune ca əa yokol u nak uamae max bolompiz *corales* ca a əa ich vino yuke.

*White spots on a man's abdomen.*

This is called spleen also, because a man's spleen is called *bazo* (in Spanish). Take the leaf of the *Clinopodium Brownei*, Sw. (*Poleo*) and mash it with salt while it is warm. Then apply it to the abdomen. Or else grind up nine corals<sup>1</sup> and put them in wine for him to drink.

342—*U pekil uinicob.*

(Mena, p. 112).

Le u pekil u nako(b) čha *zacleonak* yalabal xan ca čha *zixim* čha *xchonac uubpek* y hunppel haltun haa catun catun a cici cha(c) tulacal cici lačhte ca əa yichinte uamae cimez hunppel pek ca a cici tzah u mantecail ca cho tu uinclil hach malob ca u hau lay pek cu hauzic tulacal.

*White spots on men.*

These white spots (*empeines blancos*) on the abdomen: take the *zac-le-on-ak* (spider-vine), and you take the *Artemisia Mexicana*, Willd. Take the *ix-chonac*,<sup>2</sup> the *Tabernaemontana amygdalaefolia*, Jacq. (or *T. citrifolia*, L. *Jasmin de perro*) with a jar of water. Boil them all well and shred them. Then you put these in his bath. Or else you kill a dog, fry its fat well and rub it on the body. It is very good to put an end to these white spots, to stop them all.

343—*Pek yokol uinic.*

(Mena, p. 113).

U chicul le zac holal peko. Čha *xicinche* y haltunich ha, ca cici chacac, catun a uichinte bay primaе, tu yoxten a əae ti ychil ti.

<sup>1</sup> Corals. This might be the berry of the *Rivini humilis*, L. which is called coral in Spanish.

<sup>2</sup> *Ix-chonac*. Dondé calls this a *verdín*, or species of moss, which is found on stagnant water as a green scum.

*White spots on a man.*

The symptom is the white spot. Take the xicin-che<sup>1</sup> and rain-water caught in the rocks. Boil well and employ as a bath. Three times you shall administer it in his bath.

344—*Le ppichppiche.*

(Sotuta, f. 45 v.)

Cña huntul nohoch huh, ca a cña u kah ca a cici laache ppiz yemel u kikel, catun a yuult u kah le huha. Uamae u uich *puçyim*, ca u hante hoppel u uich u tak, bin utzac tumen.

*Granulation of the eyelids.*

Take one large iguana. Then you take its gall. Then you scratch (the eyelid) until the blood comes. Then you rub it with the gall of this iguana. Or else (you take) the fruit of the Colubrina Greggii, Wats. Let him eat five of its ripe fruits. He will recover by this means.

345—*U ppitil yit uinic.*

(Sotuta, f. 45 v.)

Le u ppitil yit uinic bay ppace. Ca a ment hunppel mecha, ca a choo u kab *nabai*<sup>2</sup> ca a çot tu yit ca u mukyahte. Uamae ca a ppult yit y *nabaz*.<sup>2</sup> Uamae ca a cña u nek *mostaza* ca ppult yit yetel ca yuk vino cu zasztal. Uamae ca a cña *malbas* u ppoic yit. Uamae cña hunppel ppac u taknil u uich ca a choo tu ppacil yit.

*Protruding hemorrhoids.*

This protruding rectum on a man resembles a tomato. You make a roll of soft lint and rub on the juice of the Myroxylon Pereirae, Klotsch. (*Balsamo de Peru*). Then you force it into the rectum to the extent that he is able to endure it. Or else you smoke (the rectum) with the M. Pereirae, Klotsch. (*Balsamo de Peru*). Or else you take the seed of the Sinapis niger, L. (*Mostaza*) and smoke his rectum with it. Then let him drink wine at dawn. Or else you take the Malachra palmata, Moench. (*Malvas*) and bathe the rectum with it. Or else take one tomato, the ripe fruit, and rub it on the tomato-like rectum.

<sup>1</sup> Xicin-che. Lit. tree-ear. Evidently a tree-fungus.

<sup>2</sup> Nabai and nabaz in the text are considered to be intended for nabal, which is the Balsamo de Peru.

346—*Pom kak.*

(Sotuta, f. 10 r.)

Yan xane pom kak u sacale u cheel *xkulimche* u pach y u motz *tibib ak* cocohtunbil cocohtune ca sacac ichil choco ha tibio catur yuke y chobil ti tulacal uinclil cu hual.

*Smallpox.*<sup>1</sup>

There is also smallpox. Its cure is the stalk of the *Astronium graveolens*, Jacq., its exterior, and the root of the *tibib-ak*.<sup>2</sup> These are to be pounded with a stone and put into warm water. Let (the patient) drink this and it is to be rubbed on the entire body to stop (the complaint).

347—*Pom kakob.*

(Sotuta, f. 11 r.)

C̄ha u lee *xbalche* y *xcacaltun* y *xhabancan* huč̄uc ca a choo yokol. U soce c̄ha u pach *chucum*, ca a choi.

U lak pom kak le chac solene, c̄ha u le *ixtelezku* u taa *chaac* ca huč̄uc, catur a sa tu lee yax *kutz*, ca a sa yokol lay kaake.

*Various kinds of smallpox.*

Take the leaf of the *Lonchocarpus violaceus*, H. B. K., and the *Ocimum canum*, Sims. (*Albahaca*) and the *ix-haban-can*. Let them be crushed and rubbed on the body. After that take the exterior of the *Pithecolobium brevifolium*, Benth., and rub it on.

Another kind of smallpox, a red rash: take the leaf of the *Berengena rustica* (*Solanum* sp.) and the paste of the *Maranta arundinacea*, L. (*Sagu*). Let these be placed on a green tobacco-leaf and applied to this eruption.

348—*Postema.*

(Sotuta, f. 51 r.; Mena, p. 96).

Utial ca hokoc postema yan tamil ca utzac u tookol, ca c̄habac u motz *malbas* ca silac u zol u pach ca huč̄uc ppiz u tattal ca c̄habac kanhe mucbil u heil catur yac̄itabac y le kanhee cu socele c̄habac *telciu* le eektac yoce ti cu yantal nak pakobe u a nak tunich mehen u lee bay u boc *chacal haaze* ca chaacac le u kabile utial chulbal tan u yac̄itaal ppiz u baytal cib le *malbas* y kanhee catur c̄habac u yethel (xethel) hun cax nok cici hayac tu uich nok paybe

<sup>1</sup> Pom-kak, the Maya name for smallpox, means copal-burns. The pustules resemble the burns on the hands of those making an offering of copal incense, the gum of the *Protium copal*.

<sup>2</sup> Tibib-ak. Lit. fear-vine. This may be another name for the *Bolontibi*, or *Cissus trifoliata*, L.

*malbas* y *kanhee* y *le u kab telxiu* ca *chabac unto* . . . (*nabzabil*)  
*tu uich catun abac unguento* y . . . *yokol xan ca abac le postema*  
 . . . *hobnil uince tumen auauc u cah hel u . . . tumene hemaax u*  
*kaholma le pos(tema)* . . . *ca tookoc u pujil ca ka* . . .

*Abscess.*

In order that an abscess may come out, if it is in deep, so that it may be lanced, take the root of the *Malachra palmata*, Moench. (*Malvas*), and remove the skin of its rind. Then let it be mashed until it is ground up fine. Then take the yelk of an egg that has been addled, and let (the plant) be mashed with the yelk of the egg. After that, let the *Adiantum tricholepis*, Fee. (*Culantrillo*) be taken. It becomes black at the ends and grows on walls and rocks. Its leaf is small; its odor is like that of the mamey. Let the juice of this be boiled and (the liquid) soaked up into the crushed mass, like wax, of the *Malvas* and the yelk of the egg. Let a piece of cloth be taken and let this (mass) be spread upon it or on a sheet of paper, the *Malvas*, the yelk of the egg and the juice of the *Culantrillo*. Then let grease be taken and spread on the surface (of the cloth), and let an unguent . . . and let it be applied to the abscess . . . the man's bowels, because it points . . . by anyone who recognizes this sort of abscess . . . then let the pus be lanced and . . .

349—*U sacal tacan calil, lamparones u kaba.*

(Judío, p. 105).

Ca *abac yokol yoyol nii put* y *yoyolni kunche tathuchbil* ca *pakac kuxic u yail hebin aococ u kuxic u yahil ca abac u le u tic(i)nil ychhuh u manzic yaile.*

*The remedy for scrofulous tumor of the neck, lamparones it is called (in Spanish).*

Apply to it the tender tips of the *Carica Papaya*, L., and the tender tips of the *Jacaratia Mexicana*, DC. (*Bonete*) mashed up fine. Let these be poulticed to eat away the sore. After the sore has been eaten away, apply the dried leaf of the *ich-huh*,<sup>1</sup> to carry away the sore.

350—*Tun can kak.*

(Mena, p. 89).

U le *almuy*.

<sup>1</sup> *Ich-huh*. Perhaps *Eugenia axillaris* (Swartz) Willd. Lit. Iguana-eye. "A plant half a meter high. Dark green porous leaves with an aromatic odor resembling that of cloves. Leaves are somewhat lanceolate. Small white flowers, and a clustered round fruit the size of bullets. The entire plant is used as an emollient." (Cuevas.)

*A contagious eruption like smallpox.*

(The remedy) is the leaf of the *Anona Cherimolia*, L.

351—*Uay can.*

(Judío, p. 113).

Ca *chabac* yom tan licil kum ma hach omnac ca *chabac* ti mayli ocoo kumie ca nabzabac tu yail uay can hach chacau cabin *cabaci* ca yibahun uchbenile caten oxten bin hauac.

*Sore from a caustic, or a similar sore.*

Let there be taken the froth from cooked maize, not very well steamed; let it be taken before it has turned to a paste. Then let it be anointed on the caustic sore. It is to be very hot when applied. Of however long standing (the sore is), with two or three applications it will cease.

352—*Uay can.*

(Judío, p. 113).

Zol *chacah*, *cabalchacah*, *zazactac* u lol, ca *thumtabac* yitze, ca nabzabac tu yail mac yanil uaycan, u *acal* chupil *ziyp*, ca nabzabac tu chupil huchibil.

*Caustic sore.*

Husk the *chacah*, the *cabal-chacah*;<sup>1</sup> its flower is very white. Take the drops of oozing gum and anoint it on the sore on anyone with a caustic sore. The remedy for a swelling is the *ziip*;<sup>2</sup> let it be anointed on the swelling when it is crushed.

353—*U uacal yit uinic.*

(Sotuta, f. 45 v.)

*Cha* u lee ruda y u lee *pichi* y hunppel cuchara romero, u lee *akoch*, ca a chace, catun yichinte paybe tu pachile choco, catun a ppoo yit. Bin utzac tumen.

*Protruding hemorrhoids in a man.*

Take the leaf of the *Ruda graveolens*, L. (Rue) and the leaf of the *Psidium Guajava*, L. (*Guayabo*) and one spoonful of rose-

<sup>1</sup> The *chacah* is the *Bursera simaruba*, L. This *cabal-chacah* (low *chacah*) might be the same as the *zac-chacah* (white *chacah*), which has been identified as *Euphorbia Mayana*, Millsp.

<sup>2</sup> *Ziip*. This may be intended for the *zip-che*, or *Bunchosia glandulosa*, Cav.



mary, and the leaf of the *Ricinus communis*, L. Boil these and then put them into his bath. Bathe the swelling with this, very hot, and then bathe the rectum also. He will recover by this means.

354—*Uech*.

(Sotuta, f. 51 v.; Mena, p. 74).

Le altamisa, *xhauaixiu* u kabae, ca chacac yichinte cu hauzic. Bay xan le u lee *chacah*, chacbile, ca yichinte, cu lukzic zali, salpuldido u kabae.

*An itching rash*.<sup>1</sup>

There is an artemisia called leprosy-plant (*ix-hauay-xiu*, or *Sida diffusa*, H. B. K.) Let it be boiled for a wash to put an end to it. Thus also the leaf of the *Bursera simaruba*, L., is to be boiled for a wash to remove the itching rash; it is called *sarpullido* (in Spanish).

355—*Uech kak*.

(Sotuta, f. 12 v.; Judío, p. 61).

Le uech kaaka, zazak othel, cña u lee *zulche* y u yoyol ni *taamay* y *ææec* tab ichinbil a *æaic* ti; uamae u motz *kokobak* cocohtunbil chacbile, catun chuhuci. Uamae u lee *xkoch* pacchuchbil hihiyabil u kabili. Uamae chacac u lee *xkoch*, catun a *æa* yichint kinkinal. Uamae u lee *xyat* y kultaan, catun chuche yetel y lahunpiz limones buhuhkupbil chachil y le *xyat* chocotune, ca *æabac* yichinte. Uamae u lee *æekkiwel* chacac kinkinal, ca *æabac* yichinte. Uamae u uii *xcanak*, bay u lee *ybinca*n y u lee cu bakic che cu chouactal yakil y u lee chachil chocotune, ca *æabac* yichinte. Uamae u uich *chicam* chachil ichinbil xan cu hauzic zazak othel.

*Itching eruption*.<sup>2</sup>

This itching eruption, or itching skin; take the leaf of the *Tephrosia cinerea* (L.) Pers., and the tender tips of the *Zuelania Roussoviae*, Pittier, and a little salt. It is to be employed in his bath. Or else the root of the *Aristolochia odoratissima*, L. (?) is to be pounded with a stone, boiled and then applied hot. Or else the leaf of the *Ricinus communis*, L., is to be toasted over hot coals and the juice rubbed on. Or else the leaf of the same is to be boiled and employed as a wash. Or else the leaf of the *Chamaedora*

<sup>1</sup> The Maya dictionaries define uech as *sarna*, *usagre*, *empeine*.

<sup>2</sup> Uech-kak. "An eruption, a sickness, in which certain pustules come out all over the body with much itching." (Motul.)

graminifolia, Wendl., is to be boiled for a warm bath. Or else the leaf of the *Bignonia unguis-cati*, L., is to be boiled for a warm bath. Or else the tuberous root of the ix-can-ak (snake-vine); its leaf is like that of the ibin-can; its vine winds around trees. This (root) and the leaf are to be boiled and put into a warm bath. Or else the fruit of the *Cacara erosa*, L. (*Jicama*) is to be boiled and the water used as a wash to cure this itching skin.

356—*U sacal uech kak.*

(Nah No. 77).

Ca c̄habac u yuəub *ahcool* y *payluch* y *zacchuenche* y *xpeteltun*, u motzob ua u leeob, ca h̄uchuc tulacal, caix chacaucuntabac, catun choboc tu yothel uinic, lie u hauzie uech lae.

*The remedy for itching eruption.*

Take the odorous ah-cool, the *Coutaria octomera*, Hemsl., the *zac-chuen-che*<sup>1</sup> and the *Cissampelos Pareira*, Lamark. (*Pareira brava*), their roots or their leaves. Crush them all, heat them and rub them on the man's skin to stop this itching rash.

357—*Ueez.*

(Sotuta, f. 51 v.; Judío, p. 104; Mena, p. 74; Nah No. 80).

Ca a cimez *hč̄om* catun u hante, cu əocole ca a pulchuc yalan u cama, ca u kilcab tuba, ca a choo u kilcab cu əocol u kilcabe, ca a c̄ha u le *zabacabal*, ca a chac y hun cum haa utial yichinte, bin hauac tmen u əac. Bay xan yan u lak u əac ueez; ca a c̄ha *xtzotzelak*, *xkuyuch* tu thanobe, huc̄h̄ibil u lee, ca chocotune, ca hoppoc u nanayabali, payanbe ca hibic y u le *hiail* tocbil u bacal ppiz u yemel kikele, catun pakaci cici ua ya ychil uchic lauac uakaluak tu tan yake, ca a əa yitz le *xkuyuch* ti lae.

*An itching rash or eczema.*

You kill a Black Vulture and let him eat it. Then you set a brazier of hot coals beneath his bed so he will perspire. Then you rub off the perspiration after he has perspired. Then you take the leaf of the *Spondias purpurea*, L. (*Cirueta morada*) and boil it in a pot of water for his bath. It will cease by means of the remedy. Thus also there is another remedy for this itching rash. You take the *x-tzotzel-ak* (*Ipomoea pentaphylla*, L.), also called *ix-kuyuch*. Crush the leaves and heat them. Then he will begin to obtain re-

<sup>1</sup> *Zac-chuen-che*. A small shrub with short lanceolate leaves. The branches and leaves are emollient.

lief. But first rub him with the leaf of the hiall and with a burned corn-cob until the blood comes. Then let (the crushed leaves) be poulticed. If the skin is badly cracked, apply the gum of the *Ipomoea pentaphylla*, L., to it.

358—*U sacal uez, lic yulel ti uinic.*

(Nah No. 65).

Ca chucuc *xbekech* cu ximbale, ca cici kaktabac, ca sabac ti hantal. Uamae cici chanchambil, ca u hante yetel zacaan cici mucbil cu sacole catun yuk *zinicche* lay chach ci u boce u sacal xan lic u hauzie uez ti uinic lae.

*The remedy for an itching rash which comes on a man.*

Catch a bekech<sup>1</sup> (lizard) and roast it well. Then let it be given to him to eat; cut it up well. Or let him eat it with maize-paste; cover it up well (with the paste). After that let him drink the strained zinic-che (ant-tree). Sweet is its odor. This will stop the itching rash on a man.

359—*Yan u lak ueez, ueez chi y ti pol.*

(Judío, p. 92).

U sacale kankelbil *lucum* cici tat muxbil tozbil yokol za ua chucua ua anis y escure u xak chucua cabin yuke utial u kilcabte cici pixbil cici chacbil ca ppoboc bay amal cabin sabac ukul tie yuke cici pixbil y u nok tulacal ca kil(cab) nac cu haul.

*There is another itching rash of the mouth and head.*

The remedy is yellow roasted angleworms, well ground up and sprinkled on atole or chocolate or anis with chile and mixed. He shall drink this that he may perspire. He is to be well covered. (The mixture) is to be boiled well. Bathe him every time it is given to drink. He is to be entirely covered with a cloak so he will perspire, and the (complaint) will cease.

360—*Uzan kak.*

(Sotuta, f. 9 r.)

Ca a cña u lee *op* chace catun a cho tu uinclil lay kohane catun yuk sacoc u yalil xan cu haul.

<sup>1</sup> *Ix-bekech*. "A certain lizard three or four inches long. It is coffee-colored on the back and a reluctant white on the belly. It is very flat and rather resembles a snake. They are found in wet places; sometimes in houses." (Pacheco Cruz.)

*Measles, scarletina or light smallpox.*

You take the leaf of the *Anona reticulata*, L. (Custard-apple), boil it and rub (the liquid) on the body of this patient. Then let him drink a little of the liquid also that it may cease.

361—*Xoch kak.*

(Sotuta, f. 13 v.; Judío, p. 82).

Le xoch kaak zuzuy u uakal catun chupuc. Caxant *chacnich-max* u motz y *zohbachak* u motz xan y u lee *telak*, cheche huchbil kinkinal tune ca *abaci*, bin hauac tumen. U lak xoch kaake c(u) yulel tu tuncuy uinic, ca a *chā* u kikel uacax, citac u lomol y u chachacil *tzemez* huchbile ca *abac* ichil choco kik chococinbil tune ca chuhuc u yaile.

*Cracking eruption.*<sup>1</sup>

This cracking eruption cracks around (the sore) and swells. Seek the *Tournefortia volubilis*, L., its root, and the *zoh-bach-ak*, its root also, and the leaf of the *tel-ak*. These are to be mashed raw, warmed and applied (to the sore). It will cease by this means. Another sort of cracking eruption comes on a man's heel. You take the blood of a bull, as soon as (the bull) is pierced, and a red centipede. Mash the latter and put it in the bull's blood. Heat it and apply it very hot to the sore.

362—*Xooch kak.*

(Sotuta, f. 11 r.)

Tu tan yoc uinic cu yantal tac tu tuncuy ca a *ca* u kikel uacax, uamae caxante u chacal *tzimez* huchbil ca *abac* bin utzac.

*Cracking eruptions.*

It comes on the sole of a man's foot and on his heel. You apply the blood of a bull. Or else seek a red *centipede*, mash it and apply it. He will recover.

363—*Xux can kak.*

(Sotuta, f. 10 v.)

Caxant u pak *xux* y *hkanal* y *xchamalkin* y u pak *bobote* y *ixtulixhobon*, u pak *kanpetkin* y *hocñ* canchuc huchbili ca pakal tuux yan yae bin hauac.

<sup>1</sup> Perhaps a mold infection.

*Cacochymia of the skin.*<sup>1</sup>

Seek a wasps' nest, the ah-kanal,<sup>2</sup> the ix-chamal-kin,<sup>3</sup> and the nest of the bobote, the ix-tulix-hobon (Libellula?), the nest of the kanpetkin<sup>4</sup> and the hoch.<sup>5</sup> Crush these and poultice them where the soreness is. It will cease.

364—*U sacal xux can hauay lae.*

(Judío, p. 120).

U le chiceeh, ektel, tzotzkab, zacchuenche y zak y taaceh akilancil u cah.

*The remedy for cacochymia of the skin.*

The leaf of the Chrysophyllum mexicanum, Brandweg (*Cayumito silvestre*), the ek-tel (black shin), the Mentzelia aspera, L., the zac-chuen-che,<sup>6</sup> the zak (locust) and the taa-ceh (deer-dung). These have the character of a vine.

365—*U sacal yaah (ha) uay can ueech.*

(Judío, p. 106).

Hauay u kaba zozol uakaluak licil u talahal u xinbal yokol uinice tulacal lae ca chabac u lee puc y xiu putcan bay u boc pute lay mastuerzo tat huchbil catun chacaucuntabac ca nakac ca cunpakaci nabzabil tu yail utzi tu catzuc ibob loe yan oxtzuc y lay ak zolcan lay yalile pposable y amak u lak u (kaba) huchbil ca nabzabaci tu pol uinic hemac yan chibal pol ti y kux pol lae lay xiu u sacal lae hihiyabil y u xiuil chacau chacau ca pakac tac tu ta u xiuil lae u sac chibal pol y kux pol.

*An itching eruption of pustules characterized as leprous.*

Leprosy is the name of this scab which cracks open and spreads all over the body. Let there be taken the leaf of the puc,<sup>7</sup> and a plant, called *Lepidium Virginicum*, L. (*Mastuerzo*); its odor is like that of the *Carica Papaya*, L.; it is the *mastuerzo*. It is to be ground fine, heated and plastered on, poulticed, and anointed on the sore. Good also for another (remedy) is the Lima bean. There is

1 Literally, wasp-sting-eruption.

2 Ah-kanal. See kanpetkin.

3 Ix-chamal-kin. Reported as an insect 5 or 6 inches long covered with soft spines which produce an itching sensation when touched. It is found on plants and is abundant in the rainy season.

4 Kanpetkin. A yellow wasp-like insect which builds a round flat nest and produces an inedible honey.

5 Hoch. Reported as a long-bodied ash-colored ant, living in old tree-trunks and rarely seen. Its bite causes bleeding.

6 Zac-chuen-che. A small shrub with short lanceolate leaves. The branches and leaves are an emollient.

7 Puc. This may be the same as the puc-ak, or *Salmea Gaumeri*, Greenm.

a third (remedy); it is this vine, the zol-can. Its liquid is to be used as a wash; am-ak (spider-vine) is its other name. This is to be mashed and anointed on a man's head when he has headache and slow continued headache. This plant is the remedy. It is to be rubbed on very hot and then poultice the paste of this plant as a remedy for headache and slow continued headache.

366—*Ya ya calil.*

(Nah No. 30).

U sacal castran zob yayacalil; cñabac zuhuy akzah palal ca ppoboci catun cñabac u motz *cñimay* ca zuzabac u zol u pach u chacil *cñimay* ca samac yetel akzah lay u kabile catun hibic ti yaile cu socol u betabale u ppobole catun cñabac u mumun lee *payche* ca pakabaci catun taklahac tu uich yae, u sacale.

*Sore neck.*

The remedy for Spanish buboes, sore neck. Take the urine of a virgin boy and use it as a wash. Then take the root of the *Acacia micrantha*, Humb. & Bonpl.; powder the outer skin of the red *A. micrantha*, and soak it in this urine. Then rub it on the sore. After it has been bathed, take the green leaf of the *Petiveria alliacea*, L. (*Zorillo*) and poultice it. This will cause the head of the sore to point.

367—*U sacal yaya calil, lamparon, castran zob.*

(Nah No. 29).

Ca cñabac culic yol chem ca cici chuhuc paybe catun ppoboc yetel akzah ppiz u lukul u puhil u tuil tulacal, catun pakac tu yokol yai kinalcunbil hele tantun u manele ca helabac u lee *zacbeec* ca tozocii lay bin.

*The cure for sore neck, scrofulous tumor of the neck, Spanish buboes.*

Let there be taken the bilge-water of a boat (or the sediment from a water-trough) and apply it very hot, first having bathed it with urine until the evil-smelling pus is entirely removed. Then put a hot poultice on the sore, and while changing it from time to time, sprinkle on the leaf of the *zac-beec* (*Ehretia tinifolia*, L.?)

368—*Yaya calil, lamparones.*

(Sotuta, f. 32 r.; Nah No. 38).

Zob yalabal ichil mazeual than, lic u tzayal tu cal ua tu tzem uinic. Cña u lee *zactabcan* pacchucbile ca tahaci. Uamae u uii *chacmoak*, chachac u topp u lole huchibil ca pakaci. Uamae u lee *zacbeb* ekel u polvosil, ca a tozci. Uamae u yoyol ni *xanabmucuy* y yoyol ni *zac kawil xkoch* y u lee *xkanlol*, y hun xoth *ham*, cardo santo yalabal, cici takan chachbil he cabin lahce bay medio cab yalile, ca a chach tu hunppel paño ua pañuelo, kinkinal tune, ca ppoobe yaili pio cabal kik tahab cu cocole caic u polvosil *xkochi* uaix u ticin tozic platanos *haaz* u ticinil u le toochbil u tanil ca abaci. Uamae u lee *xkoch* takbili. Uamae u lee *xochil*, yantac tu pach che licil u sacal fuente ti kabe takbili, bin utzac tumen.

*Sore neck, scrofulous tumor of the neck.*

It is called buboes in the language of the common people. It attacks the neck or the breast of a man. Take the leaf of the *zactab-can*,<sup>1</sup> and roast it well over hot coals. Or else the *chac-mo-ak* (*Alternanthera ramosissima*, [Mart.] Chod.?), which has a thick red bud, is to be crushed and poulticed. Or else the leaf of the *Pisonia macranthocarpa*, Donn. Smith. (?) (*Zarza del pais*) is to be powdered and sprinkled on (the sores). Or else the tender tips of the *Euphorbia hirta*, L. (*Yerba del pollo*), the tender tips of the white *Cecropia obtusa*, Trec., the leaf of the *Tecoma stans*, L. (*Tronadores*), and a piece of the *Argemone Mexicana*, L., called *Cardo-santo* (in Spanish) are all to be well boiled, and the measure of a *medio* of honey is to be strained through a cloth or a handkerchief. When tepid it is to be employed to wash the sore. After that you apply the powdered *Ricinus communis*, L. (*Higuerillo*), or the dry leaf of the *Musa sapientum*, L. (*Platano*) is to be burned and the ashes to be sprinkled on (the sore). Or else the leaf of the *Ricinus communis*, L., is to be poulticed. Or else the leaf of the *ix-tu-ak* (stink-vine, *Cassia* sp.?) is to be poulticed. Or else the leaf of the *Cassia sericea*, Sw., is to be poulticed. Or else the leaf of the *Philodendron lacerum*, Jacq., which will be found on the bark of trees, will be a remedy for a caustic sore on the arm. He will recover by this means.

369—*Yaya polil ti palal.*

(Sotuta, f. 31 v.)

Uaix ti nucuch uinic cu tzayal, bay zale, ma zal xani, chac nenen u bin u yail, kanan kik cu hokol he tuux cu zacal yoxele, hemax

<sup>1</sup> *Zac-tab-can*. Lit. white *tab-can*. The *tab-can* is *Cissus rhombifolia*, Vahl.

yohel halab ɔace, bin yale, he u ɔacale cña u yitz *zacchacah* ca a ɔa he tuux yan ya tu pol cu ɔocole, ca a ɔa u polvosil *xcambalhau* yokol le u yaile bin utzac tumen.

*Sore head on boys,*

or on adult men. It attacks like eczema, but it is not eczema. Red and corroding runs the sore. Much blood comes out. He who knows physic will say that this is the remedy: take the gum of the *Euphorbia mayana*, Millsp., and apply it wherever the sore is on the head. After that you apply the *Dorstenia contrajerva*, L. (*Contrayerba*) powdered on the sore. He will recover by this means.

370—*Ya polil ek pek u kaba.*

(Sotuta, f. 29 v.)

Ca a cña u lee *xpehelche* ca a ɔame, catun a cici ppo u hool yetel cu hauzic, *yax pehelche* u boc uol bay u boc pimientae.

*Sore head, called black spots.*

You take the leaf of the *Piper medium*, Jacq., and soak it (in water), then you bathe the head with it thoroughly to stop (the complaint). This is the *Piper medium*, Jacq., its odor is like that of pepper.

371—*U ɔacal yeel ton.*

(Judío, p. 101).

Ca cñabac lay xiuob lae chacbilob *hauayche romero xizim eneldo ruda manzaniya*, *punah ci* yan aliczob *chanixnucil* y *maztuerzo* lay a zule ca chacac ti cappel cuartillo bino latulah u zappal latulah u ɔappal tancoch cuartillo catun ɔabac chinchán caat ca yocez u tone ca u cña yoxou ti buc pixan bin hauac tumen ca u cñab canten ua oxten ca cñabac yabal nok pixbal ca pinmac u pix bin hauac tumen. U nup u ɔacale cñabac yakal ta tzimin ta uacax boey u kaba uacaxe ca pukuc y u kabil ci zac u le ca ɔabac yokol yeel ton cu haul tumen u ɔacal.

*The remedy for (a complaint of) the testicles.*

Let there be taken these plants and boil them: the *Ageratum littorale*, Rob., the *Rosmarinus officinalis*, L., the *Artemisia Mexicana*, Willd. (*Agenjo del país*), the *Anethum graveolens*, the *Ruta graveolens*, L., the *Helenium quadridentatum*, the *punah-ci*, there



are those who call it *chan-ix-nuc*, (*Tribulus terrestris cistoides*, Oliver, or *Abrojo de tierra caliente*) and the *Lepidium apetalum*, Willd. (*Mastuerzo*). You wet these and then let them be boiled with two pints of wine until half a pint is left. Then you put this in a small pan and you put his testicles into it so he will catch the steam in a cloth laid over it. It will cease by this means. When he has taken (the steam) three or four times, let a large cloth be taken and let him be covered with it. It will cease by this means. Another remedy is to take the liquid of horse-dung or ox-dung, a *buey* it is called (in Spanish). Let the liquid be used to dissolve the agave with a white leaf, and let it be laid on the testicles to stop the complaint by means of the remedy.

372—*U sacal zac pek.*

(Judío, p. 102; T. No. 3).

Le hach *chichibe* thululthul u le kankan (u nic) huchibil y hucxul u loobe lic u haual zac huthulhuthil tu kab uinic lay flema salada pek tu tan mazeual pakbili.

*The remedy for white ringworm (empeines blancos).*

It is this genuine *chichibe*<sup>1</sup> (*Sida acuta*, Burm.) with its dripping leaf and its yellow blossom. It is to be mashed that (the complaint) may cease, this white constricting salt-rheum on a man's arm; it is (called) *pek*<sup>2</sup> in the language of the common people. It is to be poulticed.

373—*Zac yan can ua chac onob.*

(Mena, p. 81).

U hach kazil yá ti cu hoppol u chupul tu chun yoc yinice tu cahmatil cha(c)onob licil u ximbal u sacale le xiuua *zac imahan-chun* le yan tu kab *ixilche*, yotoch kanal zibil na u habale xux y yal *xux* y *xincan*, *paccan* y *chacmolak*, *netab* y *xbulak*, bin hauac tumen ui *perezcuch* tu kab che y *bulak* xiu le *habin* ca *sabaci* u lee *tamay* le *tokaban* y u lee *zacbeec* tu sac tune *sabac* yuk y ui *xtucan tzimin* le xiuobe, ca cici *chacac*.

*Ringworm.*

This is a very poisonous sore which begins with swellings on the lower part of both legs and spreads. The remedy is this plant, the

<sup>1</sup> Genuine *chichibe* Possibly so named to distinguish it from the *zac*-(white)-*chichibe*, or *Melochia tomentosa*, L.

<sup>2</sup> *Pek*. Referring to the white spots on the native dog of Yucatan.

zac-ix-mahan-chun which is on the branches of the *Ageratum intermedium*, Hemsl., the nest of the kanal,<sup>1</sup> the nest of the wasp, the young wasps, the *Sesuvium Portulacastrum*, L. (*Verdolaga de la playa*), the paō-can, and the *Alternanthera ramosissima*, (Mart.) Chod. (?), the netab<sup>2</sup> and the ix-bul-ak (bean-vine). It will cease by this means. Also (employ) the *Croton glabellus*, L., on the branches of trees and the bul-ak plant, and this *Piscidia communis*, (Blake) Standl. Then let there be added the leaf of the *Zuelania Roussoviae*, Pittier, the leaf of the *Trixis radiale*, (L.) Lag., and the leaf of the zac-beec (*Ehretia tinifolia*, L.?). Finally give these to drink with the tuberous root of the tu-can-tzimin (*Passiflora foetida*, L.?). These plants are to be well boiled.

374—*Zal y maak.*

(Sotuta, f. 58 r.)

Le zal cu yulel yokol uinice ua ix maak, cax ti mehen palalob, empeine u kaba, cici lachte zal ua zook uacix maak, catun a cña u lee *xtamanche* cici chace ca huñe caten ua oxten, bin utzac tumen.

*Scalled-head and scab.*

This is the scalled-head which comes on men, or scab, even though it is on boys' heads. *Empeine* it is called (in Spanish). Scratch well the scab or scalled-head, or crust, and then take the leaf of the *Malvaviscus grandiflorus*, H. B. K. (*Manzanita*). Boil this well and mash it. (Apply it) two or three times and he will recover by this means.

375—*Zalam kak.*

(Mena, pp. 88 and 129).

Bay chuhule, cña u motz *akumbil*, u lak *ñilche* u zibil u labil kakche, u motz *zah ytza* y tozoc yokol saban.

*An eruption resembling a burn.*<sup>3</sup>

It is like a burn. Take the root of the *akumbil*, *ñilche* (*Ageratum intermedium*, Hemsl.) is its other name, and the dust of a rotten *Bourreria pulchra*, Millsp., and the root of the *Podopterus Mexicanus*, Humb. & Bonpl. Let these be sprinkled on a sheet.

<sup>1</sup> Kanal, or kanpetkin. A yellow wasp-like insect which builds a round flat nest and produces an inedible honey.

<sup>2</sup> Netab. A rare shrub native to the coast. Its pinnate leaves are somewhat like those of the ceiba.

<sup>3</sup> Zalam-kak means to burn a field incompletely for planting. (Motul.)

376—*Zintun kaak.*

(Sotuta, f. 11 r.)

Le zintun kaake lic u yuulel ti uinic tumenel u hau . . . kazil yaah xan c̄habac hoppel cheche hee catun a pot ææetac u hool hee ca a æa muxbil *pimienta* ichil tu hoppelil le hee y muxbil *havana yc* ca huychetaac ichil lay hee, catun a æa yuke tu pach yukice bay tancoch horae ca æabac hunppel escudilla u kab *pahal* yuke zanzam tune ca yuk haa tu pach tumen hach elel u cah, elel kinam u cah tu nak uinic hemax yanile ua u ppec cheche hee ca u zutkakte ca yuke.

## "Hot stone eruption."

This "hot stone eruption" comes on a man because he has been poisoned. Let there be taken five raw eggs and then you punch a hole in each of the five eggs and put in ground Spanish pepper and Havana-chile. Let them be well mixed inside the egg. With this you give him to drink every half hour a porringer of the juice of the pahal. Let him drink water with it each time for it is very hot, it burns a man's bowels. For anyone who has (this complaint), if he finds raw eggs distasteful, let him heat it again (each time) he drinks it.

377—*Zook.*

(Sotuta, f. 58 r.)

C̄ha u lee *xanchacche* payanbe a cici hoochic le zook catun a pak le xiu yokol. Uamae ca a æa *kankanchi* . . . Uamae u motz *bezicche*, huch̄bil ca a choo yokol bin u hauez.

*Scalped-head or scab.*

Take the leaf of the *Chiococca racemosa* L. (*Cainca*). First you scrape off the scalp thoroughly, then you poultice this plant on it. Or else you apply the *kankanchi* to it. Or else the root of the *Alvaradoa amorphoides*, Liebm. (*Palo de ormigas*) and you rub it on it. It will stop (the complaint).

378—*Zook, maak tu pol ua tu kab uinic.*

(Sotuta, f. 29 v.)

C̄ha u uich *xkoch* ca a huch̄e ca a takez. Uamae ca a c̄ha u lee *zalche* ca a yach̄ite chocotune ca a pakci tu pol uinic ua tu kab uinic cu tzayal.

*Scalped-head, scab on the head or arm of a man.*

Take the fruit of the *Ricinus communis*, L., and poultice it after having mashed it. Or else you take the leaf of the *Cassia hirsuta*, L. (or the *C. villosa*, Mill.) and crush it. Heat it and poultice it on the man's head or on the man's arm where (the complaint) attacks him.

379—*U sacal zuhuy kak.*

(Judío, p. 111).

U lol *taman* u le *ppaccan* ca hučhuc ca nabzabac tu zubtal xyblal cax ti čhuplal cax tam yan ca nabzabac y kukum tu zubtalob bay hatzcab y yocol kin caten ua oxten tu yocol kin.

*The remedy for "virgin fire,"<sup>1</sup> (apparently a venereal disease).*

The blossom of the *Gossypium herbaceum*, L., the leaf of the *Physalis angula*, L. (*Farolitos*); let them be mashed and anointed on the genital organs of a man, or even on a woman. Even though it is deep, let it be anointed with a feather on the genital organs at dawn and at sunset, two or three times at sunset.

380—*Dunuz kaak.*

(Sotuta, f. 10 v.)

Lic yulel ti yoc ua ticin čunuze. Caxantaac u *kochil* kax y u *čkochil* cah, ca a čha yoyol ni u *kuche*, catun a paki, bin utzac.

*Eruption of ulcers.*

When they come on a man's foot or dry cancer, seek the ix-koch of the forest (*Cecropia obtusa*, Trec.?) and the ix-koch of the town (*Ricinus communis*, L. *Higuerilla*). Then you take the tender tips of the *Cedrela Mexicana*, Roem. (*Cedro*) and poultice these. He will recover.

381—*Dunuz tacan yail.*

(Judío, p. 63).

U sacale čhabac u boxel *čimtok* cocohtunbil, ca čamac y u uix xibil. pal hunppel akab tzabil y chacau ziniltun kinkinal, cabin ppopoc, caix mentabac u ticin polbosil u boxel u pach *čimtok*, lay

<sup>1</sup> This name, virgin fire, or zuhuy-kak is mentioned by Cogolludo as a former nun who was the goddess of children. (Cogolludo, 16, p. 193.)

bin tozoc, cabin ppoboc, bin utzac, caix uch hoppoc yail uatub yantacobe.

*Ulcers.*

The remedy is to take the bark of the chim-tok,<sup>1</sup> mash it with a stone and soak it in the urine of a boy over night. Then let it be heated with a hot stone and let (the sores) be bathed with it. Then let a dry powder be made of the bark of the chim-tok; this shall be sprinkled on the sores, and then let them be bathed. It will heal as soon as the sores begin, wherever they may be.

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SUNSTROKE

382—*Ojo kin,*

(Mena, pp.90 and 130).

ua kin chucmail le choco u chi u lece u palil hunppel hee ca hokzabac u zac heil ca abac nak hunppel plato ca hoppoc u bokol le zac hee ca abac kukum ca nabzabac tulacal tu uinclil ca chilam-zabac u palil minan u nok yokol kak chumuc kin u tal ti ca hokoc yoxou tu hool y tu uinclil.

*Sunstroke,*

or sun-seizure. A boy's brow is very hot. (Take) an egg and take out the white. Put it on a plate and begin to beat the white of the egg. Then spread it on a feather and anoint it on the entire body. Let the boy be laid prostrate without any cover over him. It is in the middle of the day that it (the sunstroke) comes to him, when steam rises from the head and from the body.

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SWEATING

383—*Akab kilcab.*

(Mena, p. 111).

Le akab kilcabo uamatan u haul ti uinice tumen u acal y hobnil há y tulacal le xiuua u acobe catun a hun tu cit zohol cabal mozom le zohol bin u hun tu cintic catun putac u ni yocobi y u nok xan ppiz u haul u kilcabe amal yocol kin bin mentac ti cu hauzie.

<sup>1</sup> Chim-tok. Lit. flint-capsule. A thick tree called *Quebra-hacha* in Spanish. The hard wood is used for structural purposes; the bark is said to be an astringent. Probably *Krugiodendron ferreum* (Vahl) Urban.

*Night-sweats.*

This night-sweat, when it does not cease on a man by means of the remedy with "hive-water" and with all the medicinal plants. You take the short light straw which comes from winnowing. Dry him well with it and then cover the tips of his feet with a cloth also until he ceases to perspire. Every day at sunset this is to be done to stop it.

384—*Ppencech kilcab.*

(Mena, p. 105).

Ppencech kilcab ua zem kilcab ti utzem zembil cab kilcab ticin zeen kilcab le max manac u kilcabe, ca kel *almidon* y *canela* catun a cho ti tulacal uincil. Uamae y *canela*, catun a cho ti tulacal u uincil.

*Excessive perspiration.*

Excessive perspiration, perspiration with a cough from the chest,<sup>1</sup> dry-cough (whooping cough?) perspiration; for anyone suffering from this perspiration you roast starch and cinnamon, and then you rub it on the entire body. Or else it is with cinnamon only that you rub the entire body.

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 TEETH AND GUMS
385—*Chac nich maax.*

(Sotuta, f. 33 r.; Judío, p. 19; Mena, p. 133).

Le max cu yatal u bakel u chun u coe, ca a cña u uii uacix u motz *haazmaax* y u motz *chacnichmaax* y u motz *icbach*, u motz *nemaaxiu* y u motz *zohbach*, y u motz *maxak*, cocohtunbil u motz tulacal chacbil ca a ɔa hoɔit *maxic* ichil kinkinal tune, ca u ppuuc ɔabil y piɔ tu chun u co, bin utzac tumen.

*Red inflamed gums.*

For anyone suffering from the gums, you take the tuberous root or the woody root of the *haaz-maax* (mamey-chile) and the root of the *Tournefortia volubilis*, L., and the root of the *ic-bach* (partridge-

<sup>1</sup> The perspiration accompanying phthisis seems to be indicated. This entire prescription is evidently derived from European sources.

chile) and the root of the *Heliotropium parviflorum*, L. (*Rabo de mico*) and the root of the zoh-bach (partridge-cotton) and the root of the max-ak (chile-vine). The roots of all these are to be crushed with a stone. They are to be boiled, and then you add five peppers of the *Capsicum frutescens*, L. (*Chile del monte*). These are to be warmed, and let him hold it in his mouth, wrapped in cotton and applied to the gums. He will recover by this means.

386—*Chac nich maax.*

(Sotuta, f. 27 v.; Nah No. 75).

Cu labal u co uinic, ca a cña *maaxak*, *nemaax*, *kolokmaax* y *haazmaaxe* chococinbil, ca chuhuc u chun u nich uinic u sac.

*Red inflamed gums.*

This injures a man's teeth. You take the max-ak (chile-vine), the *Heliotropium parviflorum*, L. (*Rabo de mico*), the *Crataeva tapia*, L. (*Tres Marias*), and the haaz-max (mamey-chile). These are to be heated and applied very hot to the man's gums as a remedy.

387—*Chibal co.*

(Sotuta, f. 27 v.; Judío, p. 25; Nah No. 90).

Ca a cña u co ua yak *hcolomte*, tokbil ææec u chun u co, ua u co xiblale oxlahunten, ua u co cñuplale bolonten, bin ææec huppuc y u co ua yak *colomte*. Bay xan le tie che cu haçal tumen chaace, ca a ixcayte ca a too ti piø, ca a æa tu co, bin utzac tumen.

*Toothache.*

You take the bill of the DeLattre's Woodpecker and bleed the gums a little with it; if a man, thirteen times; if a woman, nine times. (The gum) shall be slightly pierced by the bill of the woodpecker. Thus also a piece of a tree struck by lightning is to be grated with a fish-skin and wrapped in cotton-wool. Then you apply it to the tooth. He will recover by this means.

388—*Chibal co.*

(Sotuta, f. 27 r.; Judío, p. 92; Mena, p. 131).

Huchbil yabacna lay cñuyencñuy t(i) koben ca teeppec t(i) piø ua paal coe, ca æabaci bin hauac u kinam. Uamae haxbil hüxcay tu co ayn ca teeppec t(i) piø ca æabac ti le co cu kiname bin hauac tumen. Uamae *taamay* zuzbil u pach æabil tab ichil, ca teeppec t(i)

pió ca çabac ti le co cu kiname bin utzac tumen. Bay xan *mucceh*; ca a çña u motz catun a hucñe ca a ça ti le tuux cu kinam u coe cu hauzie.

*Toothache.*

Crumble the soot that clings to cooking-stones and wrap it with cotton-wool, if it is a broken tooth, then let it be applied. The throbbing will cease. Or else grate with a fish-skin the tooth of a crocodile and let it be wrapped with cotton wool and let it be applied to this tooth which throbs. It will cease by this means. Or else the *Zuelania Roussoviae*, Pittier, crumble its bark, add salt and let it be wrapped with cotton-wool and applied to this tooth which throbs. He will recover by this means. Thus also the *muc-ceh* (deer-muc), take its root and mash it and apply it to wherever the tooth aches to stop it.

389—*Chibal co.*

(Sotuta, f. 26 v.; Judío, p. 27; Nah No. 109).

Yah huh kankan yalan u cal, chuybil u chi moch kaxbil tocbil cuxan nupxamachbil latulah u tantale le tun u taanile huh bin a nabez y bin a cuulte ti a uichac catun a hoç le co minan u yail tunt paybe, ti u co pek ma(i)li a hoç u co uinice y u tanil huh kankan yalan u cale.

*Toothache.*

There is an iguana that is yellow beneath its throat. Pierce its mouth, tie it up and burn it alive on a flat plate until it is reduced to ashes. These ashes of the iguana you are to anoint. You shall set your forceps and then you shall draw the tooth without pain. Try it first on a dog's tooth, before you draw the man's tooth with the ashes of the iguana which is yellow beneath its throat.

390—*Chibal co.*

(Sotuta, f. 27 r.; Judío, p. 48).

Ua ma ta hoçah u co peke catun a çña huh yayax yalan u cal tooce hebix ta mentah y le huh kankan yalan u cale cuxan hebixe, lay tun u taanil bin a hoçic u co peke payanbe a tuntic, catun a hoç u co uinic, minan u yail.

*Toothache.*

If you did not pull the dog's tooth, then you take an iguana that is dark green beneath its throat. Burn it, just as you did



with the iguana that was yellow beneath its throat, alive. In the same way then (you employ) the ashes. You shall pull the tooth of a dog first, before you attempt it, then you pull the man's tooth. There will be no pain.

391—*Chibal co.*

(Sotuta, f. 25 v).

Ca a c̄ha *xbacalac*, huč̄bil u lee ca a ɔa yokol lay co cu chibale, cu lukzic. Bay xan, ca a c̄ha u motz *chacmul*, chacbil, ca a huč̄e, catun a ɔa yokol lay co cu kiname cu hauzic. Bay xan c̄ha lay *xpeteltun*, akil u cah yac̄htabal u lee bay kiik u yitz ɔabil tu hol lay co cu kiname, cu hauzic, ma lobi lic u ɔabal yuk max u kat alancil, yac̄htabal ca yuke le matech u yalancilobe. Bay xan max yan kiik nak tie ca chacac u motz yuke, cu hauzic. Bay xan *kokobche* chacbil u motz ca huč̄uc ca ɔabac yokol uacix tu hol co cu kinam. Yan u lak xiu nictac u lee u cuch u kaba c̄h̄abil u motz ca huč̄uc ca ɔabac yokol lay co cu kiname, cu hauzic.

Bay xan ɔeɔec tab y ɔeɔec zacan ca yac̄hte catun a ɔa t(i) chuc ppiz u yeel catun a ɔa yokol u coil. Uamae chac u uii *rabano* ca a ɔa u kab tu co. Uamae c̄ha u xulub ceh, ca ixcayte, u polvosil ca a chac y vino ca a ɔa u kab ti le co, cu kiname. Pucbil u betah. Uamae c̄ha hunppel seboya ca a yeɔ u kab u puce (ppuce). Uamae c̄ha u yitz *kulche* ca a ɔa tu hol u co. Uamae c̄ha u kab u yim pek ca a hii tu co cu hauzic.

*Toothache.*

You take the ix-bacal-ac,<sup>1</sup> mash it leaf and lay it on this tooth which aches to remove (the pain). Thus also, you take the root of the chac-mul,<sup>2</sup> boil it and mash it. Then you apply it to this tooth which throbs to stop it. Thus also take the *Cissampelos Pareira*, Lamark. (*Pareira brava*), it has the character of a vine. Its leaf is to be mashed. Like blood (or rubber?) is its gum. It is to be applied to the cavity in this tooth which throbs, to stop (the pain). It is not bad for it to be given to drink to anyone who wishes to be delivered of a child. It is to be crushed and drunk by anyone who finds parturition unduly delayed. Thus also, for anyone who has bloody dysentery, let its root be boiled and drunk to stop it. Thus also, the root of the kokob-che<sup>3</sup> is to be mashed and boiled and laid on (the tooth) or in the cavity of the tooth which throbs.

<sup>1</sup> Ix-bacal-ac. A tree which bears fragrant white flowers.

<sup>2</sup> Chac-mul. *Gomphrena globosa*, L. or *G. dispersa*, Standl.(?) Millspaugh gives this as the Maya name of the *Gomphrena globosa*, L. (or *Yerba del cancer*). The botanists have usually given the Maya name as chac-mol. Chac-mul is literally "red mul" and the mul is the *Cenchrus pallidus*, Fourn. or the *C. echinatus* L. (*Guazazo* in Spanish).

<sup>3</sup> Kokob-che. Lit. Poisonous snake tree. Cuevas describes it as a shrub two meters high with small aromatic leaves. He says the root has a narcotic effect and is used in stomach disorders.

There is another plant, the thickness (nictac) of its leaf gives rise to its name. Let its root be taken and mashed and laid on the tooth which aches to stop it.

Thus also a little salt and a little maize-paste are to be crushed and you put them on the hot coals until they burn. Then you lay it on the tooth. Or else you boil the tuberous root of the radish and apply the liquor to the tooth. Or else take the horn of a deer, grate it to powder and boil it with wine. Then you apply the liquor to the tooth which throbs. It is to be held in the mouth. Or else you take an onion and squeeze out its juice and let him hold it in his mouth. Or else you take the horn of a deer, burn it until it is white and rub it on his tooth. Or else you take the gum of the *Cedrela odorata*, L. (*Cedro*) and apply it to the tooth. Or else you take milk from the teat of a dog and rub it on the tooth to stop (the pain).

392—*U sacal u hoool co.*

(Judío, p. 98).

U sacale ca a cimez ahaucan ca a xot u pol ca a cña binagre y tu ppiz u hotzol (hoool) u saay lay can lae catun a cñae ca a mache tu cappelil yal a kab ca a sa yokol lay co cu kiname catun a tuhuy (tuthuy) y ni a kab ma u cohol tu yanal ma a hooc xan ma ya bin hoobali.

*The "medicine" for pulling a tooth.*

The "medicine" is that you kill a rattlesnake and you cut off its head. Then you take vinegar and as the fang of the snake is drawn, you take it and you seize it with two fingers. Then you lay it over this tooth which aches and you pluck the latter carefully with the tips of your fingers, but do not touch (the part) where (the tooth) is not being drawn. Painlessly it will be extracted.

393—*Ukinam u co winic.*

(Sotuta, f. 26 r.)

Ca a cña u motz *uiche* yan ti lakin, u motz *zaccatzim* u motz *chimtok* cocohtuntabac ca samac ti luch cu pukuc u kabil ca a sa u co tabi catun a sa u ppuuce, caix u tub xan caten oxten ca u tube, bin utzac tumen.

*Throbbing in a man's tooth.*

You take the root of the *Pithecolobium unguis-cati*, (L.) Mart., it is found in the east, the root of the *Mimosa hemiendyta*,

Rose & Rob., the root of the chim-tok.<sup>1</sup> These are to be pounded with a stone and soaked in a gourd to dissolve the juice. Add a crystal of salt to this and let him hold it in his mouth. Then let him spit it out two or three times and he will recover by this means.

394—*U sacal labal co lae.*

(Judío, p. 48).

*U sacal cabalmuc lay chacmuc tu thanobe ca hučhuc u boxel u motz ca oīlic tu chun co lab kah lay che loe u kab tu chun co utz ix u oīlil tu holil lay chac muc lay chac muc copocnace. U sacal kux nokol tu co uinic chactzitz tulacal yalil yanil ch(a)chac u lol hučhbil y u motz u le u bacel catun oīlic tu cintanil co u sac.*

*The remedy for a decayed tooth.*

The remedy is the *Rauwolfia heterophylla*, Willd., this *chacmuc* as they call it. Mash the outside of its root and press it into the gum of the decayed tooth. The juice of this shrub is good if pressed into the cavity (of the tooth); it is this *Rauwolfia heterophylla* rolled up. The remedy for "gnawing maggots" in a man's tooth is the *Salvia coccinea*, Juss., all the liquid in it. Its blossom is red. It is to be mashed, its root, the leaf from the stalk. Then it is to be pressed into the damaged tooth for a remedy.

395—*Lucun can kik tu co uinic.*

(Sotuta, f. 55 v.; Mena, p. 63; Nah No. 87).

Cu yantal lucun can kik uacix och can kik (ti licil) u kuxul u chun u co uinic, ca a čhā *xcambalhau* y alumbre y hunōit *maxyc*, hučhbil chocotunbil ca a chuh yetel bin hauac tumen.

*"Angleworm blood in a man's tooth."*

Then there is "angleworm blood" or "och-can"<sup>2</sup> blood which causes a slow ache in a man's gum, you take the *Dorstenia contrayerba*, L. (*Contrayerba*) and alum and one pepper of the *Capsicum frutescens*, L. Mash these, heat them and apply them very hot. It will cease by this means.

<sup>1</sup> Chim-tok. The *Quiebra-hacha*, a thick tree with dull green leaves. The bark is an astringent. The wood is very hard and is used for construction. Probably *Krugiodendron ferreum* (Vahl) Urban.

<sup>2</sup> Och-can. Pio Perez defines this as a certain snake, but it may be another name for angleworm also.

396—*Naualte kak tu co uinic.*

(Sotuta, f. 26 v.; Judío, p. 46).

He u chicul naualte kak tu co uinic chaah u co uinic bay ɔooc u kuxuc yax *abal* bay taɔ man iik tu ɔuu u coe baytun bin kac etbal u kinal baytun bin pecnahi tu chun, ca banac u coil he u ɔac camaac u hoɔole ca ɔabac *emzul tzotzel yakil, tzotzicim* u lak u kaba, tuuntabil u yitz ca a ɔa tu chun u co y u xethel lab nok bin ɔabac tu co. Uamae u motz *nemaw* huchbil, kinkinal, ca ɔabac tu chun u co. Uamae, u lee *chay* zoppkabil kinal ca pacaac u chun u co tulacal, ua ppucbil y yoyol ni, chacbil, *whouen*.

*An infectious disease of the gums.*

This is the symptom of this infectious disease of a man's teeth. There is a disagreeable sensation in a man's tooth. It is as though he ate a green Yucatan plum (*Spondias lutea*, L.); as though wind passed through the inside of the tooth. There will be much aching with it, and it may move (become loose) in the gum so the teeth will come out. This is the remedy when (the tooth) is not extracted. Let there be given the *Macroscepis obovata*, H. B. K., the *tzotzel-ak* (*Ipomoea pentaphylla*, L.), its other name is the *tzotz-icim*. The gum which oozes out is to be applied to the gum with a rag of old cloth. It shall be applied to the tooth. Or else the root of the *Heliotropium parviflorum*, L. (*Rabo de mico*), is to be mashed and, when tepid, applied to the gum. Or else the leaf of the *Jatropha aconitifolia*, Mill. (*Chaya*) is to be toasted and rubbed on all the gums. Or hold in the mouth the boiled tender tips of the *Spondias purpurea*, L. (*Cirueta morada*).

397—*Utial max ya u chun u co uinic.*

(Sotuta, f. 26 r.)

*Chacnicte* ticin chacbil y vino, catun a chuh, y ua tuutac u chun u coobe, ca a puk alumbre ca u ppuce. Uamae chac u motz *chaczik* u ppuce. Ma lob u ɔac. Uamae ca u chaach *chacah* u ɔac.

*For any soreness in a man's gums.*

The dried *Plumeria rubra*, Jacq. (*Flor de mayo rojo*) is to be boiled with wine and applied very hot. If there is a pus-infection in his gums, you dissolve alum and let him hold it in his mouth. Or else you boil the root of the *Caesalpinia pulcherrima*, L. (*Flor de camaron*) and let him hold it in his mouth. The remedy is not

bad. Or else you strain the *Bursera simaruba*, (L.) Sarg., for a remedy.

398—*Utial u yatal u cham uinic.*

(Sotuta, f. 26 r.; Teabo No. 4).

Lic u hoool ma yai ca a cña u telchacil *kankilizche*, chacbil y vino ca ppucabac u yalil y ca a chac u telchacil *pakal* u ppuuce cu hauzic u yail. Bay xan ua chan ti u kinam lay coe, cña u xulub ceeh ca a zuze tanat tanate, chococinbil y vino ca u ppuuce. Ua ma chan ti u kuxuce ca ppucabac u kabil zeboya catun tocabac u xulub ceeh, ca ñabac tu chun lay coe u tanil ca a hihi u lee *oregano* tu chun u coil y tu chi tulacal, ua tun pecaan, tulacal u cham uinice cu chichtal tumen xan ca chacac lay *oregano* lae hetun ua a kat ca hoococe, ca a ña u taa keken tu hool u yail cax lik tuil uaix ca tokoc xan lae.

*For toothache in a molar.*

To draw it without pain, you take the deep red *Acacia Farnesiana*, L. (*Aroma*), boil it with wine and let it be held in the mouth. Then you boil the deep red part of an orange and let him hold it in his mouth, to stop the ache. Thus also if there is relief from the throbbing of this tooth, take deer-horn and powder it fine. It is then to be heated with wine and held in the mouth. If there is no relief from the pain, let the juice of an onion be held in the mouth. Then burn the deer-horn and apply the ashes to the gum. Then you rub it with the leaf of the *Lippia graveolens*, H. B. K. (*Orégano*) on the gum and all over the interior of the mouth. If it is loose, or if all the molar teeth are loose, the trouble is more serious also. Then let this *orégano* be boiled, but if you wish to extract (the tooth), then apply the dung of a pig to the painful cavity. Then remove the pus and let it be bled also.

399—*U ñacal u yahal u chun u co uinic.*

(Judío, p. 96).

U kah uoo cu ñabal tu cham uinic cu ñabal tu cham uinic cu hoool ma yai.<sup>1</sup>

*The remedy for pain in a man's gums.*

The gall (or some other bitter part) of a frog is to be applied to a man's molar tooth that it may be drawn without pain.

<sup>1</sup> The balance of this prescription is the same as the preceding one entitled "Utial u yatal u cham uinic."

## THROAT AND NECK

400—*Cococh calil.*

(Sotuta, f. 32 r.)

Ca a chac u lee seboya y u lee *ajo* y *poleo* ca a ɔa yuke.*Swollen neck.*You boil the leaf of the onion, and the leaf of garlic and the *Clinopodium Brownei*, Sw., and give (the liquid to him) to drink.401—*U kalal u bacel cay.*

(Mena, p. 119).

Ca chabac kinal há ti oc ca tulnac flema tu cal ca ppit chacac.

*A fish-bone lodged (in the throat).*

Let hot water be applied to the feet; then let him raise much phlegm and let him suddenly expel it.

402—*Don cal puc, chuchup calil.*

(Sotuta, f. 18 r.; Judío, p. 32).

Ca yanac a cháic u *chacil xubtok* yetel *xbolon hobon* y *chacmoak*, *anal xiu* y *chactok* huchbil ca nabzabac yokol uayom yokcabili, ukbil xan ua cal chup utz u talal u cah, uamae y *xumohoch pahalcán* ɔɛɛc cab catun ɔabac piɔ tu ni tuchub utial u ta(1)bal u cal pepeɔkabil ichil uamae u lee *ppac* y *chacmoak* huchbil u talbal u cal uamae, u yitz *zacnichte* bin talbal u cal catun yuk u motz *pakunpak*, *zabacpox* u lak u kaba huchbil ca ɔabac ɔɛɛc cab ichil ca a ɔa yuke bin uhauez.

*Inflammation of the throat or neck.*

When this shall occur, take the *Bauhinia Cavanillei*, Millsp. (Pie de venado), and the ix-bolon-hobon, *Alternanthera ramosissima* (Mart.) Chod., the *Asclepias Curassavica*, L. (*Cancerillo*) and the chac-tok (*Hamelia erecta*, Jacq.) These are to be crushed and anointed (on the sore) or on the exterior (of the throat). It is to be drunk first. If the throat is swollen, it is good to apply lightly either the *xumohoch* or the *Solanum nigrum*, L. (*Yerba mora*) with a little honey. Then put some cotton on the tip of the forefinger to touch the throat with this, pressing it on the inside. Or else the leaf of the *Lycopersicum esculentum*, Mil. (*Tomate grande*) and the *chac-mo-ak* (*Alternanthera ramosissima*?) are to

be crushed to touch the throat with them. Or else the gum of the *Plumeria alba*, L. (*Flor de Mayo blanco*) shall be applied lightly to the throat. Then let him drink (an infusion of) the *Yerba de la golondrina* (*Euphorbia dioica*, H. B. K.?), the zabac-pox (*Celosia nitida*, Vahl.) is its other name.<sup>1</sup> This shall be crushed, a little salt put into it, and then you give it to him to drink. It will stop it.

403—*Utiaal son kake ua . . .*

(Judío, p. 120).

Bin *zabac chacahé*, bin *zabac ixmahanchun*, *zabaceluoh* u *zacale*.

*For quinsy or . . .*

There shall be given the *Bursera simaruba*, (L.) Sarg.; there shall be given the *ix-mahan-chun* (*Peperomia?*) and the *zac-baceluoh*<sup>2</sup> as a remedy.

404—*Don kak.*

(Nah No. 25).

U *zagal son kak*, *xotom kak*; *licel yulel tu yak uinic xotol u cah u yak uinic tumen*. Ca *zabac takani niini ua zake*, ca *zabac tabi*, ca *zabac tu yak uinic*.

*Quinsy.*

The remedy for quinsy, cutting eruption, which comes on a man's tongue: it cuts a man's tongue. Let there be given cooked *Coccus axin* or locusts and add a little salt. Then let it be applied to the man's tongue.

405—*Don koch kak.*

(Sotuta, f. 11 v).

*Leyli son cal kake cu yulel ti uinic*, ca a *chā cabalzilil*, *zachuénche y chetulub*, ca a *huch*, ca a *pakci*. *Uamae caxant komkuch*, *polkuch y chackuch*, ca a *huchē* ca a *pakez*.

<sup>1</sup> There is an evident mistake in considering the *ix-pakunpak* and the zabac-pox the same thing.

<sup>2</sup> Perhaps the same as *zac-bacel-can*, or *Cereus Donkelaarii*, Salm-Dyck.

*Inflammation of the throat, croup or diphtheria.*

This inflammation of the throat comes to a man. Then you take the cabal-zilil (ground-palm), the zac-chuen-che<sup>1</sup> and the che-tulub.<sup>2</sup> You crush these and poultice them. Or else seek the kom-kuch,<sup>3</sup> the *Asclepias curassavica*, L., and the chac-kuch; crush and poultice them.

406—*Jon koch kak.*

(Nah No. 1).

Yan ix bocan xane huntzuc lai ɔonkoch kake tu cal uinic tu chac yulen zac yulen canil, lai bin ɔabac xiuob ɔiban canale.

*Inflammation of the throat.*

There is also a certain abscess called ɔonkoch-kak (quinsy) in a man's throat, where it is reddish or whitish. Let the plants be given which are mentioned above.<sup>4</sup>

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 THE URINARY ORGANS

407—*Chupil y uix puh.*

(Sotuta, f. 40 r.)

Caxant *kumtulub*, huchbil ca a pak ti le yae cu ɔumul, chacbil catun u yuk u kabil le max cu uixic puh.

*Inflammation, and pus in the urine.*

Seek the *Melothria pendula*, L. (*Pepinillo*), crush it and poultice it on the sore part. It is to be boiled, and then let him drink the liquor, anyone who urinates pus.

408—*Hach uixoob, chehlem uix u kaba, ua c̄uhuc uix.*

(Sotuta, f. 40 r.)

Ca a c̄ha u cuchil u uix eek yuc, keele, ca a ment u polvosil a ɔa . . . yukul, catun a c̄ha yom t . . . *catzim* a ɔa tu luch bin utzac

<sup>1</sup> Zac-chuen-che. A small shrub with short lanceolate leaves. (Cuevas.)

<sup>2</sup> Che-tulub. Probably some form of the ix-tulub, a name applied to the *Melothria pendula*, L. (*Sandia silvestre*) and other cucurbits as well.

<sup>3</sup> Kom-kuch (bulging scab), pol-kuch (head-scab) and chac-kuch (red scab) are evident examples of plants named for the complaints for which they are the remedy.

<sup>4</sup> These are the plants employed for curing tumor of the groin, etc. They are the zac-beeb, chac-ak, bul-che, the ix-che-ichi, the zac-ix-mahan-chun, the ne-tab and the bul-ak, as well as the ix-ɔuuc which we know to be the *Diphysa robinoides*, Benth.



tumen. Uamae c̄ha u cal xcax tooce, ca a ment u polvosil, catun a puk ichil haa, ziz haa, ca a ɔa yuke cu hauzic maili yuk mambale hatzcab cabin yuke. Uamae ca yuk u bacel *on* chacbil amal hatzcab, cabin yuke maili yuk baale, caten ua oxten yukin cu haul tumen.

*Strong urine, scanty urine it is called, sweet urine.*

You take the bladder of a black Yucatan Brockett (or black goat), roast it and powder it. Then put it into his drink. Then you take the froth from the catzim<sup>1</sup> in a gourd. He will recover by this means. Or else you take a chicken's neck, burn it and powder it. Then dissolve it in water, cold water, and give it to him to drink to stop (the complaint). Before he drinks anything at dawn let him drink this. Or else let him drink the boiled seed of an aguacate. Every day at dawn he shall drink it before he drinks anything else. Two or three times he shall drink it, so that (the complaint) may cease.

409—*Kal akzah.*

(Judío, p. 72).

U ɔacale *xnabanche*, u ui *chinchán cal pakam*, u ui *kuxub yc*, cu ɔocol u pakal tu chun u nak uinic, ca zintuntabac yan u ɔacal.

*Retention of urine.*

The remedy is the *Bursera graveolens*, Tri & Planch., and the tuber of the *chinchán-cal-pakam* (small-neck-tuna), and the tuberous root of the *Bixa orellana*, L. (*Achiote*), the *Capsicum annuum*, L. After these are poulticed on the man's rectum, let it be warmed with a hot stone where the remedy is placed.

410—*U ɔacal kal uix.*

(Judío, p. 72).

U ɔacale u ta c̄hoó huc̄hibil, ca ukuc lic yutztal tumenel. Uaix u ne *och* minanil tzotzel, hebin u kabilte *yanten* yaobil ca nabzabac ti yae ti yail, lic u liczic u lobol yail, ca u manez hemac yan kal uix tie u ɔacal.

*The remedy for retention of urine.*

The remedy is the excrement of a rat. It is to be mashed and drunk, that it may be remedied by this means. Or else the tail of

<sup>1</sup> Catzim. The yax-(green)-catzim is *Acacia riparia*, H.B.K.: Zac-(white)-catzim is *Mimosa hemientrya*, Rose & Rob.

a hairless didelphys. Then the juice is to be squeezed from the *Plantago major*, L. (*Llanten*) and let it be anointed on the painful part to remove the bad pain. He will pass (urine), anyone, who has anuria, with this remedy.

411—*U lak u sacal kal uix.*

(Judío, p. 72).

Chabac u taa kankan castiya ulum huuc(h̄)bil ti bay kanhee ca abac ychil vino ca yuke cax uchben hach tibil bin u puke tunich yan tu cuchil uixe.

*Another remedy for retention of urine.*

Let there be taken the dung of a Spanish fowl. It is to be mashed until it is like the yelk of an egg. Then let it be put into wine for him to drink. Even though it be a chronic case, it will dissolve the stone in his bladder.

412—*U lak u sacal kal uix.*

(Judío, p. 72).

Lay ye mengueye huchbil ukbil ca pukuc lay tunich yan tu cuchil uixe u sacal.

*Another remedy for retention of urine.*

This spine of the maguey (*Agave Americana*, L.) is to be crushed and drunk that it may dissolve this stone that is in his bladder with the remedy.

413—*Kal uix.*

(Judío, p. 53; Teabo No. 6).

U sacale bool u kaba payanbe cu nazic pintorob tu mehyah, catun u aa takob oro bay kancab chachac lume pukbil hukbil. U lak u sacale u ta uacax y *pixoh*, u ta tzimin y cab, *ajos* y bino, cu chacal y ix mohoch kelbil, ca ukuc y bino ua ichil zaa y chacau haa y *apazote* u le *kutz* y *mostaza xkochlee* y *tamanchich*. U sacal kal akzah *ixkumtulub* u yalil *sachahaz* caici y u motz *beb* y yoyolni *hæucul* u saci xan *perehil* y *rabano* y kax takan hee u saci xan. U sacal u uix puh ya u talel huhub u sacal uix kik y uix puc (puh) *chimtok*, *chaculubtok*, u lak u sacal kal akzah u le u kuk *chacah* u le *lec* u le *cat* u le *kumtulub* u ta yuc pakbil.

*Retention of urine.*

The remedy is bool, as it is called, which painters use and which gives a golden color to your urine like kancab, (which is) a red earth. It is to be dissolved and drunk. Another remedy is ox-dung, the *Guazuma ulmifolia*, Lam. (*Guazim*), horse-dung and honey, garlic and wine, boiled. Also the mohoch<sup>1</sup> is to be roasted and drunk with wine or in atole and hot water. Also (employ) the *Chenopodium ambrosioides*, L. (*Apazote*), tobacco-leaf and the *Sinapis niger*, Des. (*Mostaza*), the *Cecropia obtusa*, Trec., and the *Malvaviscus arboreus*, Cav. (*Manzanita*) for a remedy. The remedy for retention of urine is the *Melothria pendula*, L. (*Pepinillo*), the liquid from the *Musa paradisiaca*, L. (*Platano blanco*), the root of the *Pisonia aculeata*, L. (*Uña de gato*), and the tender tips of the *Portulaca oleracea*, L. (*Verdolaga*). Another remedy is parsley, a radish and an egg partly boiled. The remedy for pus in the urine and the remedy for blood in the urine is the chimtok<sup>2</sup> (*Quiebra-hacha*) and the *Bauhinia Cavanillei*, Millsp. (*Pie de venado*). Another remedy for retention of urine is the young sprouting leaf of the *Bursera simaruba*, (L.) Sarg., the leaf of the *Lagenaria siceraria* (Molina) Standl., the leaf of the *Parmentiera edulis*, DC. (*Pepino de arbol*), the leaf of the *Melothria pendula*, L., and the dung of a Yucatan Brockett (or a goat) is to be poulticed.

414—*U sacal kal uix.*

(Nah No. 40).

*Mukay yetel, ca chabac huntul maz huhuchbil ichil, ca kintabac, ca ukuc lae.*

*The cure for retention of urine.*

It is cochineal. Then let there be taken one cricket which is to be crushed (in the former) and heated and given to drink.

415—*U nup u sacal kal uix.*

(Nah No. 41).

*Ca chabac xux xan lay bay culic limetae tu hol muluche t(i) ek lumob yantal t(i) kax xecacili u lee yan tu nii, ca chabac u ou hunppel libra u noy, ca chacac bay hun ppul yalile, cabin xabac ti kake latuppiz zappal, bay hunppel escudia yala, cabin xabac yuk himac yanile, hoppel yahalcab bin yuke oxppel kin.*

<sup>1</sup> Mohoch. A certain sluggish wingless cricket with a neck like a friar's cowl and a thick tail like a locust. (Motul.)

<sup>2</sup> Chimtok, or *Quiebra-hacha*. Reported as a thick tree with dull green leaves and a very hard wood. The bark is said to be an astringent. Probably *Krugiodendron ferreum* (Vahl) Urban.

*Another remedy for retention of urine.*

Take some wasps, about a bottle full. Also the tips of the *Bumelia retusa*, Sw., which is found on black land in the forest, a little of the tips of the leaves. Then take one pound of the fecula (of the same plant). Let a pot of the liquid be boiled and when about a porringer is left, give it to drink to anyone who has (the complaint). For five days at dawn, it is to be administered.

416—*U sacal kal uix ti uinic*,

(Nah No. 84).

ua xiblal uaix chuplale lic yulel tie tumen yoheltic uba, uinic yetel chuplal tan u pulic u lobol kik tun yilah ua hemac ua xiblal bin kalac u uixe ca xot kuptac u ni u ne xchupul *xkix pach och* ca ticincuntabac muxbil utz ix lay u kixel u pach xane catun sabac yuke ua chuplal bin kalac u uixe u ni u ne xibil *kix pach och* yoklal ca pukuc lay tunich kalan tu bel akzahe hek lay mehen tunich kalane lay u kazil kik cu yocol tunichil lae utz ix ti uabal ti ochil xan.

*The remedy for retention of urine in a person,*

whether it is a man or a woman to whom it comes. The symptom by which it is recognized, whether in a man or woman, is the secretion of bad blood that is noted. If it is a man whose urine is impeded, cut off the tip of the tail of a female porcupine. Then it is to be dried and ground up. Good also are the spines from its back also, when they are put in his drink. If it is a woman whose urine is impeded, it is the tip of the tail of a male porcupine (that is to be employed), that it may dissolve this stone which clogs the urethra. It is poisonous blood which forms the stone. Good also is any other of the animals called och<sup>1</sup> also.

417—*U sacal kal uix ti tzimin*.

(Sotuta, f. 4 r.; Judío, p. 67).

U sacal u kalal u uix tzimin cha u le *kumcan*, u le *zactabcan* y *xkakalcab* yantacob yalan tunich (bay) u pach cane uaix bay u mac u holcabe cheche huchbil, ca pukuc ich haa ca sabac yuk tzimin kalal u uixe pukbil tab y haa ca a sa theringa ca a sa tu yit tzimin (ca) alcabanzaac u tzimin, ca uixnac. Ua xchupul tzimin kalal u uixe, ca pabac cappel ua oxppel yeil xcax ca a cha u kanheil oczabil y kab chuplil tzimin bin uixnac.

<sup>1</sup> Och. The och is the didelphys, or opossum; Holil-och is a small burrowing animal, grey in color, which lives beneath rocks and felled trees. Pay-och is a skunk; kix-pach-och (spiny-back-och) is a porcupine.

*The remedy for suppression of urine in a horse.*

The remedy for suppression of urine in a horse is to take the leaf of the *kum-can*, the leaf of the *zactabcan*,<sup>1</sup> the *ix-kakal-cab*,<sup>2</sup> these are beneath rocks. They are like the skin of a snake, like the stopper of a hive. They are to be mashed raw and dissolved in water. Then let this be given to drink to the horse, whose urine is suppressed. Dissolve some salt in water, put it in a syringe and administer it to the horse's rectum. Then let the horse run and it will pass its urine. If it is a mare whose urine is suppressed, let two or three hens' eggs be broken, and let their yolks be inserted into the mare with the hand. She will pass her urine.

418—*Uix kiik.*

(Sotuta, f. 40 r.)

Cña hun oc cheche *yaxim* ca a oam y *chicamthul* catun a huchñ yuke.

*Blood in the urine.*

Take one handful of raw maize and soak it (in water) with the Cracca Greenmanii, Millsp. (*Jicama del conejo*). Mash these and let him drink it.

419—*U oacal uix kik.*

(Nah No. 115).

Ca chābac u motz *xtuakil* lay ti lakine hunppel libra ua hach manal yanile yetel tancoch librae oocan catun a chace yetel tun tancoch ppul haa cu zappal hebix tin ualah u yaxchun ca mentace hebix uchic yn tzolice ca oabac yuke oxppel yahalcab tu hauul u kohanil u oacal lae.

*The remedy for blood in the urine.*

Let there be taken the roots of the *ix-tu-ak*,<sup>3</sup> it is in the east. (Take) one pound. If it is very strong, (take) half a pound. After that you boil it with half a jar of water until it boils away as I said at the beginning. Let it be prepared as I have directed, and let it be given to drink for three days at dawn that the disease may cease (with) the remedy.

<sup>1</sup> Zac-tab-can. Lit. white tab-can. The tabcan is the *Cissus rhombifolia*, Vahl., while the Yax- (green) tab-canil is the *Cissus sicyoides*, L.

<sup>2</sup> Ix-kakal-cab. Lit. roasted honey.

<sup>3</sup> Ix-tu-ak. Lit. stink-vine. Perhaps this is another name for the *Cassia emarginata*, L. which Millspaugh calls x-tuab.

420—*Uix puh.*

(Sotuta, f. 4 r.; Judío, p. 79).

U sacal uix puh cña zacchichibe y mul u le y u cheel, pakte y u motz takan chacbil ca a sa ti yeb kinkinal, ca a sa yuke hach hatzcab maili u kam u chie. Bay xan hach utz u suu *kumche babtun* y *siuche*, chacbil sabil seec cab ichil huc(h)bil u sac uix puh ti xaale, u le y u motz *pahca* y u ui *chaac* huchbil chacbil chachtaabac hach takan cñabil kinal ca sabac yuke hatzcab mail(i) u kam u chie ca yuke.

*Pus in the urine.*

The remedy for pus in the urine: take the *Melochia tomentosa*, L., and the *Cenchrus echinatus*, L. (*Guizaso*), their leaves and stalks together with their roots. These are to be well boiled and put out in the dew tepid, and then you give them to him to drink very early at dawn, before he takes his breakfast. Thus also, very good is the soft interior of the *Jacaratia Mexicana*, DC. (*Bonete*), the *babtun*,<sup>1</sup> and the *Pithecolobium unguis-cati*, (L.) Mart., add a little salt and crush them. The remedy for pus in the urine of a woman lying in is the leaf and root of the *Commelina elegans*, H. B. K., and the fleshy root-stock of the *Maranta Arundinacea*, L. (*Sagu*). These are to be mashed, boiled, plucked apart, taken hot and given to him to drink. At dawn before he takes his breakfast let him drink it.

421—*U sacal uix puh.*

(Nah No. 39).

Ca chabac *ixcalchacche* catun picii cab tu zol *tuk* bolonten u sabal ichil lay *calchacche* yetel u pach *abale ixhouen* ca chacaucuntac ca sabac yuk himac yanile.

*Pus in the urine.*

Let there be taken the *cal-chac-che* and then put honey in the shell of the *Acromia Mexicana*, Karw. (Cocoyol) and put this nine times into the *calchacche*, with the outside of the *Spondias purpurea*, L. (*Cirueta morada*). Let it (all) be heated and given to drink to anyone who has (the complaint).

<sup>1</sup> Babtun. A plant or shrub with broad leaves and certain ears or spikes which pigs eat; also the Indians eat them in time of famine. (Motul.)

422—*U nup u sacal uix puh.*

(Nah No. 43 and No. 116).

Ca *chabac* u lee *xuxox* lay *kikixel* u lee ca *chabac* hun lappi catun ci(cic)hac bay tancoch ppul yalile cabin *sabac t(i)* kake, yetel u pak *xux*, minan yikilil lay yantac tu kab *oxe*, hunppel *escudilla* yala cabin *sabac* yuk himac yanil uix puh lae. Heuac paybentzil a yebtic yalan u moy na y lay lo cu hual uix puh lae.

*Another remedy for pus in the urine.*

Let there be taken the leaf of the *Solanum verbascifolium*, L.; spiny are its leaves. Then let there be taken one handful of these, boil well, say, half a pot of the liquor. Then put it on the fire with a wasp's nest, but without any larvae. This (nest) is on the branch of the *Alicastrum Brownei*, Kuntze. (*Ramon*). One porringer of the liquid shall be given to drink to anyone who has pus in the urine. But first put it out in the dew under the eaves of the house. With this the pus in the urine will cease.

423—*U xiivil uix kik.*

(Judío, p. 80).

*Chimtok*, *tokaban*, *chacculubtok*, u *someltok xibkik* y *kantunbub* *chacbil* ukbil catun yethac u nak.

*The plants for blood in the urine.*

The *chimtok*,<sup>1</sup> the *Trixis radiale*, Lag. (or *Eupatorium conyzoides* Vahl.), the *Bauhinia Cavanillei*, Millsp., the *xib-kik*<sup>2</sup> and the *Sanvitalia procumbens*, Lam. (*Sanguinaria de flores negras*), are to be boiled and drunk. Then let his abdomen be pressed (massaged?)

424—*U sacal yutztal uix.*

(Judío, p. 100).

He *hauayche* *chacbil* y bino ca ukuc lic u hual cu pukul lay tunich yan tu cuchil uix lic u hual kik ti *chuplal* cabin yuke he *chuplal* tu tzayal ziz tu nake nupphomabil tu tuch ca hauac yail he *rudae* omanzabil ca *sabac* tu hol mah u naa u nak cu hual.

<sup>1</sup> *Chimtok*, or *Quiebra-hacha*. As the Spanish name indicates, the wood is very hard. It is a thick tree with dull green leaves. The bark is an astringent. Probably *Krugiodendron ferreum* (Vahl) Urban.

<sup>2</sup> *Xib-kik*. *Tetramerium scorpioides* (L.) Hemsl.? Lit. *Semen-viri*. Here, evidently a plant.

*The medicine to make the urine right.*

This is the *Ageratum littorale*, Rob. It is to be boiled with wine that it may cease, to dissolve the stone in the bladder, to stop blood in a woman when she contracts cold in the abdomen. She is to be cupped with a gourd on the navel and the complaint will cease. *Ruta graveolens*, L. (*Ruda*) is to be steamed and applied to the vagina so it will cease.

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 WOUNDS, CUTS, BRUISES AND RUPTURES
425—*Cinpahal*.

(Judío, p. 103).

Ca c̄habac unto u boxel u pach *zactah* pakaci cu haul.*Wounds.*

Let there be taken the "grease" from the bark of the *Zexmenia Costaricensis*, Bth. Oerst., and let it be poulticed that (the complaint) may cease.

426—*Cinpahal y c̄nac*.

(Sotuta, f. 33 v.; Judío, p. 32; Mena, p. 133; Nah No. 107).

Utial u cinpahal uinic caxant *ɔaycan*, *ɔincan xautzicin* oxtzuc u kaba. *Putcan*, *zabacelcan*, *zizimcan*, *kuɔubcan* y *habancan* huč̄bil tune ca pakaci cax tan yeel kinam. Bay xan u ɔac u lak cinpahal c̄nac c̄na u lee *chiople* pacchucbil ca yeɔec u kabili, choco, cabin chuhuci matan yeceɔ puh ti cinpahal laili *chiople*, mentabil u polvosil ɔabal yokol u cinpahanil xan.

*Wounds and cuts.*

For a man's wound, seek the *Sesuvium Portulacastrum*, L. (*Verdolaga de la playa*). The *ɔaycan*, *ɔincan* and *xautzicin* are its three names. The *Lepidium virginicum*, L. (*Mastuerzo*), the *Cereus Donkelaarii*, Salm-Dyck, L. (*Pitahaya*), the *zizim-can*,<sup>1</sup> the *Rivina humilis*, L. (*Coral*) and the *haban-can* are to be mashed and then poulticed even though there is a burning pain. Thus also another remedy for wounds (and) cuts is to take the leaf of the *Eupatorium aromatisans*, DC., roast it over coals, let its juice be squeezed out

<sup>1</sup> *Zizim-can*. Lit. wormwood shoots. The plant is said to resemble the rosemary shrub.



and applied very hot. Pus will not enter the wound always if the *Eupatorium aromatisans*, DC., is powdered and put on the wound also.

426-a—*Cinpahal*.

(Judío, p. 44).

U sacale u le *chiople* zopkakkbil, yeobil u kabil chacau chacau, cabin chuhucci mazamac yocol puh ti cintanil, lay *ix chiople* bin mentabac u polbosil sabal ti ya ticincunzic.

*A wound.*

The remedy is the leaf of the *Eupatorium aromatisans*, DC. It is to be toasted over a fire and the juice is to be applied hot. Whenever pus has recently entered the wound, the *E. aromatisans* shall be powdered and applied to the sore to dry it up.

426-b—*Quebradura utial u sacal haul kak u nak uinic*.

(Mena, p. 103).

Cici ppobil *chunup* ppiz u tzutzul cu haul y cu hauzic.

*Rupture of a man's abdomen.*

Bathe it well with the *Clusia flavia*, Jacq., until it closes, so it will cease, so that this will stop it.

426-c—*Utial u hokzaal u xethel che ti uinic*.

(Sotuta f. 40 r.)

Ca tuuxac u yatal u xethel che tu bakel uinice, caxant *zacsulubtok* ca a cocohtunte, catun a sa tuux ocaan le che cu hokzic, lay cu saic ahcheil uinicob tu chehal y halalil u hulob tu bakelob uchie.

*To draw a splinter of wood from a man.*

Wherever there is pain from a wooden splinter in a man's flesh, seek the *Bauhinia latifolia*, Cav., and mash it with a stone. Then you apply it where the splinter has entered to draw it out. This is what occurs to wood-cutters when they get a splinter or a reed in the flesh.

427—*Yokol (yocol) che ua chacic yoc uinic.*

(Sotuta, f. 32 v.)

Lay *zaculubtok* cocohtunbil u lee ca a ɔa tuux yan u chācmail yoce pakbili. Bay xan cha *xkantunbub* ca a hučhe ca a cici ppoo y u kab. Bay xan ca a chā lay *kikaban* bay kik u yitz ca a cici hučhe ca a cici ppoo yetel. Bay xan lay *xkoch* ca a yačhte ca a cici ppoo yetel. Ma lobi. Bay xan ca a chā *maguey* ca a pacchucte ca a ppoo y u kab, bay *xanabmucuy* ca a hučhe ca a pake. Bay xan u yitz *copo* ca a ppoo yetel. Bay xan cu ɔocol a cici ppoo yoc catun a ɔa u yitz copo tu yaile u ɔac. Bay xan u yitz *ekbalam* pakbil yokol le yae. Bay xan ca a zil u pach lay *ekbalam* catun a ɔa le tux cinpahane; ma lobi. U lak xane *puwubche* mamaxtunte ca a ɔa u kab tux ocan che cu ɔucic ca u hokez u xethel che.

*A sliver or splinter entering a man's foot.*

This *Bauhinia divaricata*, L., is to be pounded with a stone, its leaf, and you apply it where there is a cut in the foot. It is to be poulticed. Thus also take the *Sanvitalia procumbens*, Lam. (*Sanguinaria de flores negras*) and you mash it and bathe (the part) well with its juice. Thus also you take the *Castilla elastica*, Cerv., like rubber is its gum. You mash it well and bathe thoroughly with it. Thus also this *Ricinus communis*, L. (*Higuerilla*): you crush it and bathe (the part) thoroughly with it. It is not bad. Thus also you take *maguey*, roast it over hot coals, and bathe (the part) with its juice. Thus, the *Euphorbia hirta*, L. (*Yerba del pollo*, or some other small prostrate *Euphorbia*): you mash it and poultice it. Thus also the gum of the *Ficus cotinifolia*, H. B. K. (*Alamo*), you bathe (the part) with it. Thus also after you have bathed well the foot, then you apply the gum of the *Ficus cotinifolia* to the sore as a remedy. Thus also the gum of the *Croton Cortesianus*, H. B. K., is to be poulticed on this sore. Thus also you peel off the outside of this *Croton Cortesianus*, H. K. B., and then you apply it where it is injured. It is not bad. Another (remedy) is the *Oncidium ceboletta* (Jacq.) Sw., to be mashed with a stone, and then you apply its juice where the sliver has entered the foot, that he may suck it out. Thus he will draw out the splinter of wood.

428—*U ɔacal yocol chee tu yoc uinic.*

(Judío, p. 108).

*Xiu pix lumile* yan alic *cabalyaxnic* yan alic *cheel ah zuci* ɔiban tu ualal hun hach ɔac licil yocol chee ua ma lukan u cheele cabah

yaac tu hol hoic chee maxan bin manbal tumeni xiu lae lay u *cheel*  
*ah zuc* tu thanob ua el el u cahe cu chupul ziz cabin abaci.

*The remedy for a sliver entering the foot of a man.*

The xiu-pix-lumile: there are those who call it the cabalyaxnic (*Ruellia Tuberosa*, L.); some call it the cheel-ah-zuc. It has been written in the pages of the book. It is the genuine remedy for a splinter entering the foot, if the splinter has not been drawn. Let the hole be tightly squeezed to draw out the splinter. Immediately there is nothing (left) because of the employment of the plant. This is the stalk of the ah-zuc, as they say. If it burns where it is swollen, it is to be cold when it is applied.

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### UNIDENTIFIED DISEASES

429—*U chicul uucppel kohanilob.*

(Mena, p. 107).

Cu tazic hunppel planeta u kaba ychil *xhomtoloc*, *zulubtok*, u lee *macal*, *laal*, *xcozonak*, *tulcozon* y u mol *zohol* u uii *mehen mozon* y *xkanimacal*, *tanco*, *tamku* y *xkanlecay*, *xmahanchun*, *xuuczatai*, *kanizte* u kaba y *hunactzotz*, *hunpeekin* bin *picapica* uie.

*The symptoms of seven diseases,*

each named after one of the planets, as it is called. (Employ) the ix-hom-toloc (iguana-snout), the *Bauhinia divaricata*, L. (*Calzoncillo*), the leaf of the macal (one of the Araceae, perhaps *Xanthosoma violaceum*, Schott), the *Urera microcarpa*, Wedd. (*Ortiga*), the ix-cozon-ak (swallow-vine), the tul-cozon (the *Malujo*, a vine), with a handful of *algodon sagrada*, the ix-kanil-macal (yellow bulb), the tanco, the tam-ku, the *Cuscuta Americana*, L., the ix-mahan-chun (a *Peperomia*?), the ix-uuc-zatai, the kanizte, as it is called, (*Lucuma campechiana*, H. B. K., *Mamey de la tierra*), and the *Ipomoea sinuata*, Ort., the *hunpeekin*,<sup>1</sup> the *Mucuna pruriens*, L.

<sup>1</sup> Hunpeekin. A vine which climbs on the *Sabal japa*, Wright. Its leaves are said to resemble those of the henequen, but are much smaller and have no spines.

430—*Ceh yk.*

(Judío, p. 88).

U ðacale u lee *cehche*, *chiceh*, y *xulceh*, *kaxabyuc*, *mucta*, *ah-tab*, *acanceh*, *akabyom*, *kawilkoch*, *chulceh*, *xahceh*, *bulceh*, *taaceh*, *zac-neceh*, *tzotzceh* uaix *tanceh*, yantac tu pach *wan*, u le y yakilob tulacal tocbil u xulub ceh y u tzotzel ceh utial u xakinte chacbil ychinbil, catun *chābac* u pak *kukliz cab* y xnuc y yal yiklel, *hmuul*, *chōchyal*, toocbil u xulub ceh *huchbil* tulacal, ca yuke u ðacal.

## "Deer-spasm."

The remedy is the *ceh-che* (deer-tree), the *Chrysophyllum Mexicanum*, *Brandweg* (*Cayumito silvestre*), the *xul-ceh*, the *kaxab-yuc*,<sup>1</sup> the *muc-taa* (buried dung), the *ah-tab*,<sup>2</sup> the *acan-ceh*,<sup>3</sup> the *Cestrum diurnum*, L., the *Cecropia obtusa*, Trec., the *chul-ceh* (deer-wart), the *xah-ceh*, the *bul-ceh* (deer-bean), the *taa-ceh* (deer-dung), the *zac-ne-ceh* (white-tailed deer), the *tzotz-ceh* (deer-hair), the *tan-ceh* (deer-breast). These are found on the *Sabal japa*, Wright. (Take) all their leaves and vines. Burn the horn and hair of a deer. These are mixed with the boiled (plants) for a bath. Then let there be taken the nest of the *kukliz-cab* (a variety of bee?), with the old insects and the young ones, the *ah-muul*,<sup>4</sup> the larvae of the *ah-chōch* (a variety of bee). These are all to be crushed with the burned deer-horn, and let (the patient) drink the medicine.

431—*Pulbil yah.*

(Mena, p. 115).

Le *pulbil yaho* tu thanobe *caxbalac pulbil yah* tu *hobnil uinic* ca a *chā* u motz *thuhuy nictē*, *zacnictē* le yan t(i) *kaxe ppopox* u pach *uimbil chom* tu thanobe *chā* u motz ti *likine uaix pakal* y u motz u *nictēil* ca a *chā* u motz cu bin ti *lakin* u motz *xkanthiriz* te *lakine* u pachob y u motz *xchokob cat* ti *lakin* u pachob ch *chābal media libra* u motz u lee *chokob cat* y *media libra* u le u motz á ða *hunxeth santo ara* ychil y hun ual *kan hub* y *bolontul xcantil bibio* tu thanobe tulacal hoba *cici chacbil* hun ppul yalil bay cappel kub bey cappel *zazac aseiyē* ca *chuyē ocan kin* cu *zaztale* ca a *chā* bay *hunppel tumin cab* ca á ða yuke bin u xee *tuzebal aseite* ychil lae *chacbil ðace lay tie bay hunppel tumin cabe* ca á ða yuke bin u xe

1 *Kaxab-yuc*. Said to be a small vine with a handsome blue flower. It is excellent fodder for animals. Literally, "that which binds the brockett." There is a large snake of the constrictor type which is also called *kaxab-yuc*.

2 *Ah-tab*. Apparently named for a certain dark-red pheasant.

3 *Acan-ceh*. Lit. "deer-acan." A plant said to spread on the ground.

4 *Ah-muul*. A variety of wasp with yellow-tipped wings which makes its nest underground.

tuzabal uamae cña hun toch (luch) buule ca huče ca ɔa yuke bin utzac tuzabal.

*Pain caused by sorcery.*

This pain caused by sorcery as they say, or any magic pain in a man's bowels: you take the root of the *Plumeria pudica*, Jacq. (*Flor de mayo amarillo*), the *Plumeria alba*, L. (*Flor de mayo blanco*), which are in the forest. (Also take) the *Tragia nepetaefolia*, Cav. (*Ortiguilla*), the outside of the uinbil-chom, as they call it. Take its root; it is in the east. Or poultice the roots of these *Plumerias*. Then take the root which is in the east, the root of the *Acacia Farnesiana*, L. (*Aroma*), the outside and the root of the *Ipomoea carnea*, Jacq. Take half a pound of the outside of the root and leaves of the *Ipomoea carnea*, Jacq., and half a pound of the leaf and root. Then you add one piece of (wood) from a holy altar to it. Also one leaf of the kan-hub (?) and nine of the ix-cantil, bibio, as they say. All these are to be well boiled in a pot of water, with two palms full of white oil. Let it be hung (outdoors) from sunset until dawn. Then you take the quantity of a tomin (1/3 drachm) of honey and let it be given to him to drink. He will immediately vomit the oil in it. Or else take a gourd full of beans, crush them and put them in his drink. He will recover immediately.

432—*Pulbil yah toon ceh.*

(Mena, p. 117).

Ca a cña yaxim macalkuch, bey yabal hune, catun a muce cocoh-tunte, ca hoppoc a ɔaic yokol le yah chupil, cu hauzic.

*A sore caused by sorcery, deer-genitals.*

You take maize, the *Dioscorea spiculiflora*, Hemsl. (?); bury it (in hot ashes?), pound it with a stone, and then you begin to apply it to the sore which is swollen to stop it.

433—*U ɔacal tzitz mo ik ti uinic.*

(Nah No. 51).

Ca cñabac u yitz pom yetel xikmoo, ca zoppkactac u kukunil y kukmel chaccib, uaix u kukmel chactunpiliz, ua macalmac kukmel, bin caxantabac tuzabal, ca ppultabac tuzabal ichil u kab pome, catun ukuc lae.

*The remedy for spotted-parrot-spasm in a man.*

Let there be taken the gum of the Protium copal, (Schl. & Cham.) Engl. (Copal) and the wing of a macaw. Let them be applied to the fire with the feathers of the Yucatan cardinal or the feathers of the chactun-piliz (a certain small red parrot) or any feathers which may be secured immediately. Let them be smoked immediately in the copal-gum and let him drink it.

434—*Tzitz moo yk amcan moo yk u kaba.*

(Judío, p. 87).

Ti yan can, ti yan am, yayax u tan u kab y u chun u co uiničil, he u chicule lic u mochic uba. U sacale *kantemo*, *kante*, *lal* u leob, bin *chabac catzim*, *ziuche*, *xtzah*, *ziomuc*, *lalmuch*, *ppoppoax*, *molcoh*, *beeb*, *tzitz*, *choh*, *kanlol*, *halal*, u le y u cheel y yakil cici takan chachbil, ca ppoboci cici taken chachbil ca ppoboci chocouchocou hebix ti tiblile, catun tzitzatabac u chi u lec u yich u ni u chun u co y yak, ca tokoc u chun yichac y yeci tocbil *ham chinuoh*, u boxel *bau*, u xik *moo*, u macapil *halal*, *amcanxiu*, u pach *kanchunup*, *kokobche*, *canzio*, *havana yc*, huchbil kinkinal cabin yuke cu haual tulacal.

*Spotted-parrot-spasm, ant-parrot-spasm is its name.*

When there is a snake, when there is a spider, green are the palms of his hands and the gums of a man. The symptom is that the tendons contract. The remedy is the *Acacia filicioides*, (Cav.) Trel. (?), the *Ficus cotinifolia*, H. B. K., the *kante*,<sup>1</sup> the *Urera microcarpa*, Wedd. (*Ortiga*), the leaves of these. There shall be taken the *catzim*,<sup>2</sup> the *Pithecolobium uguis-cati*, (L.) Benth., the *Jatropha aconitifolia*, Mill., the *Celtis iguanea* (Jacq.) Sarg., the *Gronovia scandens*, L., the *Tragia pepetaefolia*, Cav. (*Ortiguilla*), the *Dalechampia scandens*, L., the *Pisonia aculeata*, L. (*Uña de gato*), the *Jacobinia spicigera*, (Schl.) Bailey, the *Indigofera anil*, L. (Indigo), the *Tecoma stans*, L. (*Tronadores*), the *Scirpus validus*, Vahl. The leaves, stalks and vines of all of these are to be well boiled and employed for a bath. Then let the forehead, eyes, nose, gums and tongue be sprinkled with (the liquor). Then let the base of the nails be bled. The strong solution of a burned spider, a tarantula, the shell of the *bau* (a crawfish), the wing of a macaw, the pith of the *Scirpus validus*, the *amcan-xiu* (spider-plant), the exterior of the *Thouinia paucidentata*, Radl., the *kokobche*,<sup>3</sup> the *can-zio* and *Havana chile* are all to be crushed. Let (the

<sup>1</sup> *Kante*. A tree from the roots of which they extract a coloring matter.

<sup>2</sup> *Catzim*. *Zac*-(white)-*catzim* is *Mimosa hemiendyta*, Rose & Rob. *Yax*-(green)-*catzim* is *Acacia riparia*, H.B.K.

<sup>3</sup> *Kokob-che*. Lit. Poisonous snake tree, a shrub six feet high with small aromatic leaves.

liquor) to be drunk tepid so that the entire (complaint)<sup>4</sup> may cease.

435—*U sacal yabal kohaniob ti uinicob y ixchupob.*

(Mena, p. 120).

Ca a cña u nek *chacalhaz*, ca mehenkupte, ca kelace, catun hucñuc, ca hokzabac aceite bay u hokol yek zicle, ca sabac frasco nat limene utial sabal yokol caxbalac kohaniob ua yaile, ya ich lic u lukzic bak tu uich uinic mak cu hauzic, ca sabac yokol zal tunich uinic cu hauzic nanateil sabaci xe ca chacac ul u nek *haaz* cu manzic chuc cal (chuchcal) ca a cña tun zac lai *haze* ca sa yuke ca a sa tu chi cu hauzic chibal coo ley hebix lela bay xan u nek *chacal haz* ca hokzabac u cutil ca sabac hun ual *kutz* ichil ca sabac frasco ca tacac tumen yabal bax cuic ua yani u yutzcintic ca nupzabac zah ti yah ichil cu lukzic nabzabali akab ichil cu zazcunzic uichil xan cocil cu heic u xicin uinic ca choçi ya pixil chobe cu hauzic xan. Nacan kik tu pol ca kintac ca choboc ti uinice cu chopaytic kik cu chopaytic cabal ti le max yane kik tu hole y tui u chi u lece cu hauzic chocuil tu bel uinic cu yax kinal ti uinic ca chacac u aceite ca sabac tiob.

*The remedy for many diseases of men (and) women.*

You take the pits (or seeds) of the *Lucuma mammosa*, L. (or *Mamea Americana*, L., *Mamey*). Chop them up and roast them. Then crush them to extract the oil, the way you extract it from gourd-seeds. Then let it be put in a flask to apply it to any complaint or sore. There is sore eye; it removes the pterygium from a man's eye, to stop (the complaint). Let it be applied to a man's eczema to stop it. Then let the pits of the mamey be boiled to carry away any inflammation of the throat (croup or diphtheria?). Then you take the white part of the mamey and give it to (the patient) to drink. Then you apply it to the mouth to stop toothache. Treat the pit of the mamey in this manner to draw out its oil; then put one leaf of tobacco in it and put it in the flask, so it will mix to make it bitter. When this is effected, apply it to the sore eye to remove (the soreness). It is to be anointed on a dark (spot) in the eye to clear it up. If there is deafness, it will open a man's ear, when (the oil) is warm. It is (employed) for a sore knee also to stop it. Rub it on (the knee). When the blood has mounted to the head, let this be warmed and rubbed on the body to drive the blood downward, for anyone who has blood in the head and in the temples. This will stop the fever in a man's passages,

\* The Chiam Balam of Kaua, (f. 68 v.) contains a drawing of a parrot holding a snake in its claws. This is stated to be the picture or symbol of this disease.

which first heats a man. Then let the oil be boiled and let it be administered to them.

436—*U sacal yaah.*

(Nah No. 31).

U sacal yaah privacion u hach lobol yaah, heklay zac yom can, kamazcanziz, ca a cña yitz *yax halalche* ppizbil yetel dedal yetel hunppel escudilla haa kinan ca ukuc lae lic a hauzic u kazil yaah lae.

*The remedy for poisoning.*

The remedy for poisoning, loss of consciousness, very bad poisoning, swollen abdomen,<sup>1</sup> kamaz-can-ziz.<sup>2</sup> You take the gum of the *Pedilanthus Itzaeus*, Millsp. It is to be measured with a thimble into a porringer of hot water. Then let it be drunk to stop this poisoning.

437—*Yaax moo yk.*

(Judío, p. 87).

U sacale *kantemo chacmooak kante tzicaban chacmoolche copo yaxpphelche lal* u leob tulacal *catzim itzchac ppoppoax molcoh lalmuch* y *anicab* u le y yakil tulacal hach takan u chacal yichinbil.

*Green parrot spasm.*

The remedy is the *Acacia filicioides* (Cav.) Trel., the *Alternanthera ramosissima* (Mart.) Chod. (?) the kante, the tzic-aban, the *Erythrina coralloides*, DC. (*Colorin*), the *Ficus cotinifolia*, H. B. K. (*Alamo*), the *Piper medium*, Jacq., the *Urera microcarpa*, Wedd. (*Ortiga*), the leaves of all of these. The *catzim* (*Acacia Gaumeri*, Blake), the *itz-chac*, the *Tragia nepetaefolia*, Cav. (*Ortiguilla*), the *Dalechampia scandens*, L., the *Gronovia scandens*, and *Cydista aequinoctialis* (L.) Miers. The leaves and vines of all of these are to be boiled well for a bath.

<sup>1</sup> Zac-yom-can. Lit. false pregnancy.

<sup>2</sup> Kamaz-can-ziz. See medical text No. 327.



A SURVEY OF THE ETHNO-BOTANY  
OF YUCATAN

Vocabulary of Maya terms relating to the growth, parts and environment of plants.

*Aban.* Bush.

*Ak.* Vine, something fresh and green, tongue.

*Akal.* Pond.

*Akal-che.* A forest pond, or moist ground covered by trees.

*Akil.* Vine-like.

*Bab.* Peduncle, fruit-cluster, palm-leaf.

*Bacal.* Corn-cob.

*Bob.* Flowering stalk of an agave.

*Box.* Shell, the thick skin of a fruit.

*U boxel u pach.* Bark.

*Cabal.* Low, growing close to the ground.

*Can.* Shoot, tendril, herbaceous vine, snake.

*Canal.* High.

*Col.* Corn-field.

*Chac, chachac.* Red.

*Chakan.* Savannah.

*Che.* Tree.

*Cheel.* Stalk.

*Cheen.* Well, water-tank.

*Chicil-motz.* To take root.

*Chilib.* Slender branch, withe.

*Chuch.* Flower-stalk.

*Chuhuc.* Sweet.

*Chul, chulul.* Knot, heart-wood.

*Chun.* Trunk, the thick stalk of a plant.

*Chuy.* Raceme, that which hangs.

*Ek.* Black.

*Haa.* Water.

*Holoch.* Corn-husk.

*Ich.* Fruit, eye.

*Kab.* Branch, sap, juice, arm.

*Kab-che.* Branch of a tree.

*Kah.* Bitter, gall.

*Kaknab.* Sea.

*Kan, kankan.* Yellow.

*Kax.* Forest.

*Kaxal-haa.* To rain.

*Kaxil.* Wild.

*Kinchan.* Gum of certain trees.

*Kix.* Thorn, spine.

*Kixil.* Thorny, spiny.

*Kuk.* Sucker, sprout.

*Kukul.* Dry or hard, as a fruit.

*Labal.* Decayed, spoiled.

*Laal.* Sharp, pungent.

*Lee.* Leaf.

*Lik.* To transplant.

*Lob.* Weed, bad.

*Loobol.* Weedy.

*Lol.* A large flower.

*Lothol.* Wrinkled, corrugated.

*Luk.* Mud, mire.

*Mehen.* Small, son.

*Motz.* Root.

*Munil.* Green, tender.

*Nal.* Green corn.

*Nic.* Flower, usually small.

*Nothocnac, or nonoth.* Impoverished earth.

*Noy.* The pulp of a fruit or the starchy interior of certain plants.

*Nucuch.* Thick.

*Pah.* Sour or acid.

*Pak.* To plant.

*Pakal.* Garden or orchard.

*Paap.* Sharp, pungent.

*Pay-tok.* To weed. Lit. pull out with a flint knife.

*Petel.* Round.

*Poc-che.* Thicket of small trees.

*Ppoch.* Cluster of flowers or fruit.

*Ppoppox.* Scaly or warty.

*Tab.* A prop-root, a cord.

*Takan.* Ripe, well cooked, soft.

*Topp.* Bud.

*Tu.* Fetid.

- Tzay.* To cling, as a bur or vine.  
*Tzotzel.* Pubescent, hairy.  
*Tzuy.* The soft inner part of a squash.  
*Uii.* A succulent root.  
*Uolol-uol.* Winding, as a vine.  
*Xay.* The fork of a branch.  
*Xiu.* Plant, herb.  
*Xul.* The top of a plant, end.  
*Yax.* Green, first.  
*Yih.* Ripe and hard.  
*Yoyol-ni.* Tender tips, young leaves.
- Zabac.* Dark purple, soot.  
*Zac, Zazac.* White, pale.  
*Zicil.* Squash-seed.  
*Ziz.* Cool, fresh.  
*Zol.* Husk, shell.  
*Zuu.* Thick, dense, as trees or plants.  
*Zuuc.* Grass.  
*Donot.* Cenote, a natural sink-hole.  
*Ju.* The soft inner part of a plant or fruit.  
*Juw.* Spoiled, as a fruit, to suck.

## ANNOTATED LIST OF MAYA PLANT NAMES

### ABBREVIATIONS

Gaumer. Gaumer, G. F. <i>Sinonomía científica y vulgar de las plantas yucatecas.</i>	Rel. de Yuc. <i>Relaciones de Yucatan, 1898-1900.</i>
Loes. Loesener, 1922.	San Francisco. <i>Diccionario de San Francisco.</i>
Millsp. Millspaugh, 1895-1913.	Standl. Standley, P. C., letters and unpublished material.
Motul. <i>Diccionario del Convento de Motul.</i>	Y. y H. del Yuc. <i>Yerbas y Hechicerías del Yucatán.</i>
P. P. Pio Perez.	

*Abal.* A general term applied to the various forms of the Spondias.

S. *Lutea*, L. and S. *purpurea*, L., both wild and cultivated. This is the *Cirucla*, or Yucatan-plum. Under this general name it is prescribed in the Maya medical texts for bowel complaints (122), infected gums (396) and bladder complaints (421). See Standl., 1928, Pl. 44.

*Abal-ac.* *Spondias purpurea*, L. (Standl.)

Lit. peccary-plum. "The wild ciruela and its fruit." (Motul). The English name is hog-plum; pigs like the fruit and fatten upon them. (Standl. 1920-26, p. 657). The Mayas prescribe the root for an eruption accompanied by a swelling of the head and throat (337).

*Ac.* *Andropogon* sp. *Barbon*.

"In the corn-fields grows a grass called *Ac*. In Spanish it is called *Barbon*, and in Latin, *Andropogon antillarum*. The *Barbon* belongs to the family of Gramineae. The plant grows to a height of 2 feet. Its leaves are soft, clothed with a soft hair, half an inch in breadth. The flowers are in a spike at the base of which there is a white down." (MacKinney, 1889.)

"A plant with which they roof houses and make granaries." (Motul.)

"A zacate, or grass, with a long stem and broad leaf, which grows in the savannahs and is usually employed for thatching houses." (P. P. 1866-77.)

The Maya texts prescribe it for bowel complaints (80), chills and fever (149), headache (220), biliousness and jaundice (260) and skin-diseases (308).

*Ac-aban*, or *Ac-haban*.

The name suggests a bush. An infusion of the crushed root and leaf is prescribed for a cold in the head (272).

*Acam*, or *Acan*. *Orobanche* sp.(?) (Standl.)

"A plant with an angular stem and cordiform leaves, the milk of which is employed by the Indians for the cure of toothache and snake-bite. They also call it *yaax-acan*." (Pio Perez, 1866-77.) The Maya texts also prescribe it for snake-bite (48 & 50). *Acan* was the name of the Maya wine-god.

*Acan-ceh, Acan-ceh-xiu, or Acam-xiu.*

The Maya texts describe this plant as spreading on the ground like the leaves of the cabal-yaxnic (*Ruellia tuberosa*, L.) The root is prescribed for snake-bite (54), headache (220), tumefactions (236) and its leaf, for an unidentified disease called deer-breath (430).

*Acitz.* *Thevetia peruviana* (Pers.) Standl. (1920-26, p. 1151).

T. Gaumeri, Hemsl. (Standl.) *Campanilla, Cabalonga.*

Reported as a showy tree when in flower with sweet scented flowers and a milky juice. The seeds are poisonous. In the medical texts we find it mentioned only for comparison (159).

*H-ahau-che.* *Tabebuia chrysantha* (Jacq.) Nicholson, (Standl.)

It is prescribed for abdominal pains (75), and the root is a cure for tenesmus. (Ixil, f. 64 v.) The wood is close grained and the color of walnut.

*Ajo-che.* *Oncidium cebolletta* (Jacq.) Sw. (Gaumer and Standl.)

Described as growing on decayed wood in the soil of open forests. Millsp. II, p. 32.)

*Akab-nicte, or Ix-akab-nic.* Lit. night-flower. See Akab-yom.*Akab-xiu.* *Blechnum pyramidatum*, (Lam.) Urban. (Standl.)

*B. blechoides*, Sw. (Millsp. I, 320.)

Described as an herb 2 feet high, abundant in shady places. It is prescribed for coughs (13 & 16), bleeding (62) and chills and fever (141). Lit. night-plant.

*Akab-yom.* *Cestrum diurnum*, L. *Galan de noche.* (Standl.)

Lit. night-foam. The Motul dictionary gives this as a synonym for Akab-nicte. It is a remedy for coughs (16).

*Aakal-kumche.* *Philodendron oxycardium*, Schott. (Standl.)*Akil-che.* *Lippia graveolens*, H. B. K. (Gaumer)

In the Maya texts this plant is always given under its Spanish name of *Orégano*.

*Akil-kan (Akil-can?).* *Maximowiczia tripartita*, Cogn. (Gaumer and Standl.)

Described as a vine, 6 feet, common on old walls and fences.

*Akil-kax.* *Cayaponia alata*, Cogn. (Gaumer and Standl.)

Described as a vine, 10 feet.

*Akil-macal.* *Dioscorea alata*, L. *Ñame.* (Gaumer and Standl.)

Here the old Maya name for the Araceae is applied, in a modified form, to the yam, which is an importation.

*Akil-xiu.* *Jacquemontia pentantha*, Jacq. *Sombaritas azul.* (Millsp. I, 314.)

This may be the same as the X-hakil-xiu listed by Pio Perez (1898, p. 110).

*Akil-zuuc.* *Sorghum halapense*, (L.) Pers. *Zacate de Paraná.* (Millsp. III, 21.)

Extensively cultivated as a pasture grass.

*Akumbil.* *Ageratum intermedium*, Hemsl.(?)

The Maya text prescribes this for a skin-disease and gives it as a synonym for the Oioil-che (375).

*H-am.* *Argemone mexicana*, L. *Cardo santo.*

This identification is taken from the Maya text (368) which prescribes it for buboes on the neck.

*Am-ak.* Smilax sp.(?)

"Amak. A vine like the *pasionaria*" (*Passiflora ciliata*, Ait.) (P. P. 1898, p. 103). "It resembles the *sarsaparilla* called x-co-ceh (*Smilax mexicana*, Griseb.); the vine is whitish and the fruit is almost black." (Y. y H. del Yuc. f. 125 r.) Dondé, the Yucatecan botanist, has been quoted as stating that the am-ak is a variety of sarsaparilla. The name means spider-vine and is a synonym of the zol-can. It is prescribed for spider-bites (46), dysentery (99), headache (222) and certain pustules (365).

*Amcan-ak.* Lit. amcan-vine.

The amcan is a certain poisonous spider said to fight with snakes. The plant is prescribed for an attack of hiccoughs supposed to be caused by this spider (231).

*Amcan-xiu.* Lit. amcan-plant.

it is prescribed for aching bones and convulsions (179) and hiccoughs (231).

*Anal, Anal-kak, Anal-xiu.* *Asclepias curassavica*, L. *Cancerillo*. (Loesener, 192, p. 336). Milkweed.

It is prescribed for an abscess of the breast (241).

*Anicab.* *Cydista aequinoctialis* (L.) Miers. (Standl.)

This probably the same as the chac-anicab described as "a bijuco common in the forests about Izamal, producing its gamboge-yellow flowers in April and May." (Millsp. I, 390). It is prescribed for giddiness (214).

*App-ac (App-ak?).* *Urvillea ulmacea*, H. B. K. (Standl. 1920-26, p. 699; Millsp. I, 307; Seler 1902-08, III, 566).

Described as a vine, 20 feet, abundant in brush lands about Izamal.

*Bab-ain.* Lit. alligator-foot. See zac-chuen-che.*Bab-ci.* *Agave angustifolia*, Haw. (Gaumer and Standl.)

Lit. Paddle-agave or crab-agave.

*Bab-tun.*

"A plant or small shrub with broad leaves and certain spikes (or ears) which the hogs eat. The Indians eat its root in time of famine." (Motul). It is prescribed for pus in the urine (420).

*X-bacal-ac.*

Described as a tree bearing white odorous flowers. (P. P. 1898, p. 104). It is employed for toothache (391).

*Bacal-che.* *Bourreria pulchra*, Millsp. (Gaumer and Standl.)

It is prescribed for fevers (142) and loss of speech (171).

*X-bacal-uoo.*

Described as a plant with hirsute leaves and stalk and a blue flower like that of the che-ah-zuuc. (Y. y H. del Yuc. f. 47 v.). It is prescribed for sore eyes (206) and spitting blood (121).

*Bacha-xiu.(?)* *Commelina longicaulis*, Jacq. Pajilla. (Gaumer and Standl.)*Bahab-can.(?)* *Solanum havanense*, Jacq. *Yerba mora*. (Gaumer & Millsp. I, 44).*Bak-ain.* See Zac-chuen-che.*Bak-ak.* Probably a vine.

It "grows high" and is a remedy for an abscess of the breast (288).

*Balamte.* *Theobroma bicolor*, Humb. & Bonpl. (Standl.)

"A variety of cacao." (Motul.)

*Balche.* *Lonchocarpus longistylus*, Pittier. (Standl. 1920-26, p. 513).

Described as a good sized tree with purplish flowers.

"A tree from which they make wine and become intoxicated." (Motul.)  
 "Another reason why these Indians have diminished in number is . . . because they are prevented from making a wine which they were accustomed to make which, they say, was healthy for them and which they called balche. They made it of water and honey and put into it a root which is named balche. This they put into some large vessels like big tubs which contained fifty *arrobas* (200 gallons) and more of water. It fermented and frothed there two days by itself, becoming very strong and smelling very badly. At their dances and songs, as they danced and sang them, they gave to each of those who danced and sang a small cup to drink. They gave it to them so many times that they became intoxicated with it, doing such absurd things and making such grimaces that it was a sight to behold. After they were drunk, they vomited and were purged, which left them cleansed and hungry, and then they ate with a good appetite. Some of the old men say that this was very good for them, that it was a medicine for them and cured them; because it was like a very good purge. With this they went about healthy and strong, and many grew to be very old. There were many such, and it is true, because in those times I saw plenty of them, which is not the case today." (Rel. de Yuc. II, 188). Elsewhere we read that the bark of the balche was employed in making this drink, which the Spaniards called *pitarilla*. The tree is called "Samea" by the Lacandonnes. (Tozzer, 1907, p. 177).

The Maya medical texts prescribe the crushed leaves rubbed on smallpox sores (347) and an infusion was drunk for loss of speech (171). The drink itself is mentioned in these texts (235).

*Balche-ceh.* *Harpalyce formosa*, D. C. (Standl. 1920-26, p. 465; Seler, 1902-08, III, 569).

Described as a shrub or small tree with large flowers in clusters. It is prescribed for a scrofulous tumor of the neck (331). We find bac-che given as a synonym. (P. P. 1898, p. 104).

*Balchechi*.(?) *Lonchocarpus yucatanensis*, Pittier. (Gaumer and Standl.)

Possibly the balche-cehi is intended, as listed by Pio Perez. (P. P. 1898, p. 104).

*X-bat-aban.* The *Frijolillo*. (P. P. 1898, p. 104). *Cassia occidentalis*, L.(?)

The *Frijolillo* of Yucatan is identified as *C. occidentalis*, a herbaceous or shrubby plant, sometimes 7 or 8 feet high, ill scented and bearing large showy flowers. The name itself, which means hatchet-bush, lends a little confirmation. The 16th century Motul dictionary merely mentions it as a medicinal plant. Another early source, however, describes the bat-aban as a vine which climbs on trees, has a beautiful flower and is a remedy for inflammation and fever. (Y. y H. del Yuc. f. 313 r.) One Maya medical text prescribes it as a remedy for chills and fever (153).

*Batul.* *Manihot carthaginensis*, Jacq. (Gaumer and Standl.)

Described as a sparsely branched tree or shrub, sometimes 6 meters high and also reported under the Maya name of X-cache.

*X-bayum-ak*, or *X-bayun-ak.* *Capparis flexuosa*, L. (Standl. 1920-26, p. 303).

*Beeb*, or *H-beeb*. *Pisonia acleata*, L. *Uña de gato*. (Standl. 1920-26, p. 261; Millsp. I, 296; Gaumer).

Described as a densely branched shrub, often with a thick trunk. The long drooping branches are very spiny. One early authority refers to it as a *zarza*, or bramble. It is prescribed for snake-bite (50), aching bones and convulsions (179), pustules (318 & 322), retention of urine (413) and itching rashes.

*Beec*. *Ehretia tinifolia*, L. *Saúco*. (Standl. 1920-26, p. 1227).

Millspaugh (I, 315) gives the local Spanish name as *Roble* and describes it as a large tree 90 feet high, common in the forests. The fruit is edible and the tree is often planted for shade. It is a remedy for ulcers (302).

*X-bec-che*. See *Uzté*.

*Beyan-chan*. *Lycopersicum esculentum*, Mill. (Tozzer, 1910, p. 21). See *Ppac*.

*Bez-can*.

"This plant is heating, and they give it many other names, all ending in can. It is a very handsome vine." (Y. y H. del Yuc. f. 133 r.) It is a remedy for colds and is poulticed on swollen testicles (245).

*Bezinic*, or *Bezinic-che*. *Alvaradoa amorphoides*, Liebm. *Palo de ormidas*. (Standl. 1920-26, p. 540; Millsp. I, 33 & 301; Seler 1902-08, III, 569).

"The tree, bezinic, whose leaves are like small hat-feathers, almost a deep red, white and crimsoned." (Y. y H. del Yuc. f. 44 v.) It is prescribed for heart-burn and headache (305), scab (329) ringworm (339) and scalled-head (377). *Be-zinic* means ant-path.

*Bicñ-coc*. *Bicñ* is a bird called *zaramagullón* in Spanish, perhaps the didapper.

*Coc* means asthma.

The plant is prescribed for asthma (19), aching bones and convulsions (179) and giddiness (260).

*Bilim-coc*.

Prescribed for asthma (4 & 19), abdominal pains (75) and giddiness (214).

*Bizil*. *Malvaviscus arboreus*, Cav. *Manzanita*. (Gaumer and Standl.)

Described as a shrub, 10 feet, abundant in scrub lands generally. (Millsp. I, 307).

*Bob*, or *Bob-che*. *Cocoloba Schiedeana*, Lindau. (Standl.)

"A tree, with large leaves, of this land, in which they gather dry chile." (Motul). The word, bob, also designates the flowering stalks of the henequen.

*Bob-chicñ*. Perhaps the same as the preceding.

It is prescribed for a complaint called coughing-asthma (19). The word means bird-bob.

*Bobote-ak*. Lit. bobote-vine.

The bobote is some insect which builds a nest like that of a wasp (286 & 363). The plant is described as growing in open savannahs and is employed for a certain skin-disease (286).

*Bocan-che*. Lit. Abscess tree.

It is prescribed for abscesses and ulcers (287).

*Bohom*. *Cordia gerascanthus*, L. *Baria*. (Standl. 1920-26, p. 1220).

The wood is used for construction.

*Bolol.* A variety of *Capsicum annum*, L. Chile. (Standl.)

*Bolon-couoh*, or *Bolon-uoh*. Lit. nine-spiders.

It is said to be a remedy for fevers (Y. y H. del Yuc. f. 128 r.) The Maya medical texts prescribe this plant for headache (221).

*Bolon-ek-xiu*. Lit. nine-star-plant. See *Bulum-ek-xiu*.

*X-bolon-hobon*. Lit. nine-colored.

"The yala-hobon is a vine which produces a yellow and red flower; some call it *bolon-hobon*." (Y. y H. del Yuc. f. 90 r. & 138 r.) The Maya texts prescribe it for inflammation of the throat (402) and for a cut or bruise on the head.

*X-bolon-tibi*. *Cissus trifoliata*, L. (Standl. 1920-26, p. 732).

The leaves and tuber are prescribed for headache (219), swollen knee (244) and swollen rectum (250). This vine has a purple or black fruit. The tubers and acid mucilaginous leaves are poisonous if taken internally.

*Bom*. *Sabal* sp. (Gaumer).

"A sort of *guano* (palm) of which they make hats." (Motul). *Guano* is identified as the Spanish Yucatecan name for *Sabal japa*, Wright, usually called *xaan* in Maya. (Standl. 1920-26, p. 71).

*Box-chacah*. *Euphorbia Gaumerii*, Millsp. (Standl.)

*Box-haaz*. *Musa paradisiaca*, L. (Millsp. I, 13).

*Box-kutz*. *Anthurium tetragonum*, var. *yucatanensis*, Engl. (Standl.)

Lit. black tobacco.

*Box-lol-lum*. *Lentinus villosus*, Klot. (Gaumer and Standl.)

Lit. black-flower-earth.

*Buhum-coc*, or *Buhum-kak*. Lit. *buhum*-asthma, or *buhum*-fire. *Buhum* is a "disease of women who appear pregnant and are not." (Motul).

The plant is prescribed for asthma (19), diarrhea and cramps (106), and what is called post-partum headache (227).

*Bul*. *Phaseolus vulgaris*, L. *Frijol amarillo*. (Millsp. I, 23).

Prescribed as an emmenagogue (35) for dysentery (80), tenesmus (90), sore eyes (202, 203 & 206), hiccoughs (235) and certain pains caused by sorcery (431). *Bul* is a general term for the kidney-bean. Important varieties of black beans are the small *X-coli-bul* and the larger *Tzamá*.

*Bul-ak*. Lit. bean-vine. Pio Perez has been quoted as stating that this is a species of bean. (Brasseur de Bourbourg, 1869-70, II, 123-462).

This popular medicinal plant is said to have a fresh odor like the muc (*Dalbergia cibix*, Pitt.) (222), to fruit like the *Phaseolus vulgaris*, L. (237); and its vine is said to "run like the *kokob-ak*" (*Aristolochia odoratissima*, L.) Dr. Standley notes that many Leguminosae are called *frijolito* in Spanish. The plant is prescribed for ruptures and dislocations (181), swollen neck (237), inflammation of the breast (257), ulcers and abscesses (287, 288, 289, 291 & 299), ringworm (295 & 373), and quinsy (407).

*Bul-bech̄*. *Centrosema Schottii*, (Millsp.) Schum. (Standl. 1920-26, p. 505).

Lit. quail-bean. The plant is described as climbing to a height of 3 meters. "The plant, *bulbech*, so named because the quail eats it; it resembles a bean in its



fruit; and it is notably good and fresh for dysentery. The leaf is crushed, the juice extracted and the quantity of an egg is given to the patient." (Y. y H. del Yuc. f. 129 r.)

*Buul-ceh.* Lit. deer-bean.

"This plant called deer-bean, I imagine, is the plant which in Havana they call *toston*, and in this country they call it *yerva de la playa*. It is very fresh, and they call it deer-bean, because these eat it, and it grows beside the sea." (Y. y H. del Yuc. f. 135 r.) "There is a plant on the sea-coast, especially at Tichac and Oiantun, called bulceh. It grows only on the shore where the waves almost water it. Its leaf is like a very green heart, and is pleasant to the touch. When this leaf is placed on a sore, it cleans and heals it so gently and quickly that it seems supernatural, rather than natural. This has been well tried. It is to be noted that there are two sorts, one with a small leaf, and the other with a somewhat larger one. Both will effect a cure, but the small one is the better." (Ibid. f. 62 r.) It has also been reported as the *Haba silvestre*. (Brasseur de Bourbourg, 1869-70, II, 123-462). Compare *Oay-can*.

It is probably known to the Maya medicine-men by another name as well, for the *buul-ceh* is only mentioned once in the texts (430).

*Buul-che.* Lit. Bean-tree.

It is a remedy for dislocations (181), sore eyes (196) and quinsy (406).

*Buul-ch'ich.* *Cassia procumbens*, L. (Standl.) Lit. bird-bean.

*Bulum-ek-xiu* (Bolon-ek-xiu?). *Elvira biflora* (L.) DC. (Gaumer and Standl.)

*Buy*, or *Buy-ak.* *Serjania adiantoides*, Radlk. (Standl. 1920-26, p. 694; Loesener 1923, p. 333). *S. goniocarpa*, Radl. (Gaumer and Standl.)

Lit. a film on the eye. "A vine with which they cure complaints of the eyes." (Motul). It has been described as a scandent shrub, 10 feet. The Maya text prescribes it for sore eyes (203).

*Buy-che.* *Serjania atrolineata*, Sauv. & Wright. (Standl. & Gaumer).

Prescribed for sore eyes (203). Described as a large woody vine with small white flowers. Various species of *Serjania* are used in tropical America for fish-poisons. (Standl. 1928, p. 245).

*Ca.* An edible white striped squash.

Its large seeds especially are an important article of diet and are called Topp. (Motul). These seeds play a prominent part in the Maya creation story. (Chumayel, p. 43; Martínez, 1913).

*X-cabal-ac.* *Plumbago scandens*, L. *Yerba del alacran*.

Lit. low vine or ground-vine. This evidently what is intended by Millspaugh's *Cabaac* (I, 382) and is a synonym of the *Chabak*. It is prescribed for sore eyes (203). The Judío version of this text calls it *x-cambal-ac*.

*Cabal-chacah.* Lit. low chacah.

The Maya text describes it as having a white blossom and prescribes its milky sap for a sore from some poisonous plant (352). It is also reported as a remedy for yellow fever. (P. P. in Brasseur de Bourbourg, 1869-70, II, 123-462).

*Cabal-chechem.* *Metopium Brownei* (Jacq.) Urban. (Gaumer & Standl.)

Described as varying in size from a shrub to a medium-sized tree, a relative of the poison sumac of eastern North America. (Standl. 1920-26, p. 664). "*Cabal-chechem*. This plant has this name which means *guao*. It is a small or low plant,

differing from the chechem, which is a tree. It is heating and of few virtues, but is employed with other plants for poultices." (Y. y H. del Yuc. f. 148 r.) Compare Chechem.

*X-cabal-chi*. Lit. low-chi; chi is *Malpighia glabra*.

Pio Perez is quoted as stating that it is "a plant whose milk is a potent emetic and purge." (Brasseur de Bourbourg, 1869-70, II, 123-462). The Maya text prescribes it crushed and rubbed on the skin for eruptions (326).

*Cabal-chichibe*. *Buechnera pusilla*, H. B. K. (Standl.)

Lit. low chichibe. Plentiful in the grass bordering the path at the base of the Great Pyramid, Chichen Itzá. (Millsp. I, 45).

*Cabal-chum*. *Portulaca oleracea*, L. (?) *Verdolaga*.

The Motul Dictionary identifies Cabal-chum as a *verdolaga*, which is usually called Xucul in Maya.

*X-cabal-chun-kak*. Possibly the same as Cabal-chum.

The leaf is crushed and the juice squeezed on a snake-bite (47).

*Cabal-haaz*. *Musa pigmea*, L. *Platano enano*. (Gaumer).

*Ix-cabal-homtök*.

The leaf is pounded and inhaled or poulticed on the forehead for a cold in the head (11).

*X-cabal-kak*. Lit. ground-fire.

The root is boiled and the liquor drunk for the bite of a snake or mad dog (55).

*Cabal-kax*. See *Kax*.

*Cabal-kopte*. Lit. low kopte. *Kopté* is *Cordia dodecandra*, DC.

The Maya text states that it is to be found in the forest and prescribes it for diarrhea and dysentery (80 & 84).

*Cabal-kunche*. *Asclepias longicornu*, Benth. (Standl., Gaumer & Millsp. I, 314).

The Maya text prescribes it for jaundice and biliousness (262).

*Cabal-muc*. *Rauwolfia heterophylla*, Roem. & Schult. (Standl. 1920-26, p. 1154; Millsp. I, 313; Gaumer).

"The cabal muc would be a yard high, the fruit is red, somewhat purple, and it yields a white milk. It is very good for chronic sores." (Y. y H. del Yuc. f. 64 v.) The bark is soaked in water and heated for the same purpose. The Maya text prescribes the bark and sap for a decayed tooth (394) and sore eyes (204).

*Cabal-pich*. *Desmanthus virgatus* (L.) Willd. (Gaumer & Standley).

*Aeschynomene fascicularis*, Schl. & Cham. (Seler 1902-08, III, 569).

*D. virgatus* is described as a herbaceous plant or shrub 1 to 3 meters high with white flowers. (Standl. 1920-26, p. 366). Lit. low pich.

*Cabal-pixoy*. *Guazuma polybotria*, Cav. (Gaumer).

*Cabal-put*. *Lepidium virginicum*, L. *Mastuerzo*. (?)

This identification is based on the passage in *Yerbas Y Hechicerias del Yucatán* (f. 91 v.) which refers to "the plant, cabal-put, or put-can." The Maya text prescribes it as an aid to parturition (29).

*Cabal-telcox*. *Phytolacca octandra*, L. (Gaumer & Millsp. I, 295).

Lit. low pheasant-leg.

*X-cabal-xaan.* Elytraria squamosa, (Jacq.) Lindau. (Standl.)

*Tubiflora squamosa*, Kuntze. (Millsp. I, 320).

A low annual 8 to 20 inches high. The flowering branches are covered with green overlapping bracts.

"The plant called cabalxaan is very cooling. It is called cabalxaan, which means low *guano*, because it is like the *guano* (xaan) and rises a little from the ground and has a smaller leaf. It has a very bitter taste." (Y. y H. del Yuc. f. 152 r.)

Gaumer identifies this as *Cyperus squarrosus*, Lind. but Dr. Standley suggests that while a fancied resemblance to a palm could exist in either of the plants, this description would rather indicate the *T. squamosa*, of the two. Pio Perez states that its "tallos" (bracts?) are triangular. (Brasseur de Bourbourg, 1869-70, II, 123-462).

The Maya texts prescribe the plant for dysentery (80, 123 & 124) and for what is called blood-vomit and liver-complaint (127).

*Cabal-x-tez.* Alternanthera repens, (L.) Kuntze. (Gaumer and Standl.)

*Cabal-x-tu-ak.* Lit. low stink-vine.

It is prescribed for loss of speech (170 & 171).

*Cabal-xyat.* Chamaedorea graminifolia, Wendl. See X-yat.

*X-cabal-yaxnic.* Ruellia tuberosa, L. *Yerba de la calentura*, *Maravilla del monte.* (Millsp. I, 320 & 391; Standley; Gaumer).

"This plant, cabalyaxnic, has many names which I will not enumerate. It is a plant common on the streets and in the open country, never in the forest. It has a leaf like the *yerba buena* (mint). Its flower is blue like that of the *campanilla* (an *Ipomoea*?). They call it cabalyaxnic, because its blossom is like that of the *yaxnic* (*Vitex Gaumeri*, Greenm.) It is to be noted that it is a plant, wherein it differs from the *yaxnic*, which is a tree from which the bees gather honey." (Y. y H. del Yuc. f. 316 r.) "The purple flower of a plant which in Mexican they call *xotlaton*, and in this Maya language, *ixtail*, or *cabalyaxnic*." (Ibid, f. 84 r.) It is an herb 12 to 15 inches high reported from Merida and Izamal.

The Maya texts prescribe this plant for a swollen breast (241) and sore mouth (324). It appears to have been employed in cases where European physicians would have resorted to bleeding.

*Cabal-zilil.* Lit. low zilil.

The zilil is reported to be a palm. (Letter, Juan Martínez.) Pio Perez is quoted in Brasseur de Bourbourg's vocabulary as stating that it is a slender little vine and a strong caustic. (Brass. de Bourb. 1869-70, II).

The Maya texts state that it is cooling and prescribe the crushed plant as a poultice for swellings (246), skin-diseases (306 & 333) and inflammation of the throat (405).

*Cabal-sit.* Commelina elegans, H. B. K. Day flower. (Gaumer & Standl.)

*Cabal-siz.*

The Maya text states that it grows against walls and has a leaf like that of the *Ixim-hail*, or *Wolffia braziliensis*, Wedd. (241). The crushed leaf is a remedy for swollen breast.

*X-cacal-tun.* Ocimum micranthum, Willd. *Albahaca.* (Millsp. I, 316 & Standl.)

Described as an herb 6 to 18 inches high. "There is so much basil (*albahaca*) that the woods and roads are full of it in some parts. Growing in the rocks, it is

very fresh, beautiful and fragrant." (Landa, 1900, p. 385). Compare Standl. 1928, Pl. 61.

*X-cacal-che* (X-kakal-che?). *Jatropha curcas*, L. (Standl. 1920-26, p. 640; Millsp. I, 374).

*X-caché*. *Manihot carthaginensis* (Jacq.) Muell. (Standl. 1920-26, p. 643).

*Cacau*. *Theobroma cacao*, L. (Standl. 1920-26, p. 805).

This name appears to be derived from the Nahuatl *cacahuatl*. Whether or not it dates from before the Spanish conquest is uncertain. There are indications that in the 16th century the native name of this important Maya staple was haa, giving the h a strong aspiration, and not pronouncing it lightly as in haa meaning water. (Motul, f. 59 r. & 170 r.) See Ix-ha, Dicc. de San Francisco. The Lacandone word for cacao, xau (X-hau?) may be a form of the same. (Tozzer, 1907, p. 21). The beverage itself is called chucua. The cacau is prescribed for abdominal pains (70), poisoning (278) and is often employed as a medium in which to take other remedies.

*Cahum*. *Furcraea cahum*, Trel. (Gaumer & Standl.)

*X-cambalhau*, or *Ix-cabalhau*. *Dorstenia contrajerva*, L. *Contrayerba*. (Standl.)

*Dorstenia contrajerva* *Houstonia*, Bureau. (Millsp. I, 293).

Described as an herb 10 inches high and abundant in the forests, this plant is one of the most popular and ancient Maya remedies. Lothrop has found its leaf painted on one of the temples of Tulum. (Lothrop, 1924, p. 58). "This plant, cabalhau, is the *yerba santa*, or general *contrayerba*. Its virtue is so well known that there is hardly a person in the Indies who does not know it." (Y. y H. del Yuc. f. 144 r.) "Ix-cabalhau. *Contrayerba* which is an antidote for every poison. The root is what is employed." (Motul.)

The Maya texts prescribe the plant for colds (11), pain in the heart (74), spider-bite (46), bites of other insects (58 & 61), diarrhea (68), dysentery (80), child-birth (94), blood-vomit and liver-complaint (127), and as a poultice for a swollen knee (244). The root is prescribed as an antidote for poisoning (278). Both plant and root are a cure for skin-diseases (208, 320, 333, 339, and 369). The plant is prescribed for infected gums (395). The Spanish manuscript, *Yerbas y Hechicerías del Yucatán*, prescribes the root for many of the preceding complaints, where the Maya text mentions only the upper portion of the plant.

*X-camuc-olal*. Lit. irritability.

Described as a small plant with small leaves which are "punctured" around the circumference. The violet flowers are in clusters. (Cuevas, 1913, p. 106).

The Maya text states that it is found beside roads, has a low stalk and a small leaf like that of the *poleo* (*Clinopodium Brownei*, Sw.) It is prescribed for what is called irritability, perhaps some nervous complaint (165).

*X-can-ak*. Lit. Snake-vine.

It is described as having a tuberous root and a leaf like that of the *ibin-can*, and is prescribed for certain pustules (355) and sore eyes (204 & 205).

*Canal-kax*, or *Kax*. *Randia longiloba*, Hemsl. (Gaumer & Standl.)

Lit. high kax. Described as a tree 6 to 7.5 meters high. (Standl. 1920-26, p. 1374).

*Canal-zinic-che*. Lit. high ant-tree.

The Maya text mentions it as a tree on which the *cñuy-che* is found (338).

*Canah-zihil.* *Tillandsia fasciculata*, Sw. (Gaumer & Standl.)

Lit. that which originates in a high place. Described as abundant on trees; 18 inches high; flowers a bright royal-purple." (Millsp. I, 291).

*Canbal-zac.* See X-hatz.

The Maya text gives this as a synonym for x-hatz, and prescribes it under this name for a film on the eye (209).

*Canchac-che.* *Chiococca alba* (L.) Hitchc. *Cainca.* (Standl. 1920-26, p. 1386).

Described as a shrub, sometimes scandent, with a white fruit 4 to 8 mm. long. The root is employed for snake-bites (50). The leaves or some unspecified part are prescribed for abdominal pains (75), diarrhea (92), worms in the bowels (104), vomiting blood (125), loss of speech (170 & 171), swollen rectum (250), diseases of the skin and scalp (310, 333 & 377).

*Can-che.* Lit. Snake-tree.

"This plant, canche, or coc-che, as they say, is the same as the preceding (zac-kokob-che)?" (Y. y H. del Yuc. f. 394 r.) Pio Perez (1866-77) says it is the *botoncillo* (*Conocarpus erecta*, L.), but the Maya texts indicate that this is an error. The latter is probably the kan-che. See Coc-che.

*Can-choh.* *Cereus flagelliformis*, L. *Flor de latigo.* (Standl.; Gaumer; Millsp. I, 35).

*Canta-oi.* Prescribed for blood-vomit (125).

*Can-xolob.* Can means snake; xolob, a wooden peg or nail.

The plant is boiled and given for loss of speech (170).

*X-canzel-ak.* Evidently a vine or scandent shrub.

It is described as growing in the forest, having a tuberous root and a leaf like that of the pichi. Its gum or milky sap is like that of the Chaya, (281).

*X-canzel-xiu.* Perhaps *Asclepias curassavica*, L. which is reported as zac-canzel-xiu.

The Maya text states that its flower resembles the tup and prescribes it for a certain skin-disease (281).

*Can-zuuc.* *Cynodon dactylon* (L.) Pers. *Grana.* (Gaumer; Standl; Millsp, III, 50).

Lit. snake-grass. Described as a foot high. "The plant called cantzuc in this language grows on the shores. Pull up the plant by the roots, remove all the leaves. Wash and crush it and cook half a pound in a pot of water until half is boiled away. Strain and put in a clean pot, and let anyone who suffers from urinary trouble drink the liquor. (Y. y H. del Yuc. f. 98 r.)

*Cat.* *Parmentiera edulis*, DC. *Pepino de arbol.* (Gaumer & Millsp. I, 390).

Described as a tree from 4.5 to 9 meters high, the branches armed with short stout incurved spines. It is often cultivated for its shade and fruit. The latter is eaten raw, made into pickles or preserves, and roasted in ashes. (Standl. 1920-26, p. 1323).

The Maya texts prescribe it for earache (191), the flowers for a swollen scalp (249) and the leaves for retention of urine (413). The fruit is a remedy for gonorrhoea. (Ixil, f. 63 v.)

*Cat-cuuc.* *Parmentiera aculeata* (H. B. K.) Seem. (Standl. 1920-26, p. 1323).  
*Pepino de la ardilla.*

Lit. squirrel-cat. A wild form of the *cat.* (P. P. 1866-77).

*Catzim.* *Prosopis chilensis* (Molina) Stuntz(?).

*Acacia Gaumeri*, Blake (Standl.)

Compare *Zac-catzim* and *Yax-catzim*. "This tree, the *catzim*, is heating and very useful. Its flowers provide bees with honey; its bark is employed for tanning leather. The wood is very good and splits well into shakes. The gum extracted from it is medicinal for hemorrhoids." (Y. y H. del Yuc. f. 273 r.)

*Catzim-ek.* *Prosopis chilensis* (Molina) Stuntz. (Standl. 1920-26, p. 1657 & 351).

*P. juliflora*, D. C. Mesquite. (Gaumer & Millsp. I, 368).

Prescribed in the Maya texts for bladder-complaint (408) and certain unspecified diseases (434).

*Cayumito.* *Chrysophyllum cainito*, L. (Standl. 1920-26, p. 1114; Millsp. I, 313).

Evidently a Maya corruption of the local Spanish name, *caimito*. Described as a tree 8 to 15 meters high. The fruit is called star apple in English.

*Ceh-che.* Lit. deer-tree.

An infusion of the leaves is prescribed for aching bones and convulsions (179), giddiness (214) and an unidentified disease called deer-breath (430).

*Ci.* *Agave* sp. *Maguey*.

A general term for *Agave*. The Mayas have at least nine names, all ending in *ci*, for the various species of *Agave*.

"*Ci.* If one desired to treat of the virtues of the *maguey*, it would fill this entire book. Its profitable quality is that it is both needle and thread; it is hemp and cord: every sort of the latter, tow-line or pack-thread. It adorns the churches; it is a balsam and an ointment, and finally, an antidote for every ill. It is easily sown, costs nothing to grow, and it is easy to gather its fruit. It serves for a wall around the houses with its spines; and this is the Yucatecan *maguey*. In Mexico the authors mention it as well as here. It is most useful in this land for ropes, cables and all nautical gear. Although it will not last as long as hemp, it has more strength. Suffice it to say that the *maguey*, or *henequén* is employed here on sea and land, since it is the hemp for all the aforesaid." (Y. y H. del Yuc. f. 167 r.) The town of Tulum-*ci* was fortified with a thick hedge of *maguey*. (Villagutierre y Soto-Mayor, 1701, p. 492).

The Maya texts prescribe the root for snake-bites (50) and the juice from the roasted shoots for earache and deafness (192).

*Cib-che.* *Myrica mexicana*, Willd. *Palo de cera*(?).

Pio Perez is quoted as stating that it is the shrub from the fruit of which vegetable-wax is obtained. (Brasseur de Bourbourg, 1869-70, II, Vocabulary.) *M. mexicana* is described as a shrub 2 to 6 meters high, growing in extensive thickets on the north coast and in British Honduras. The fruit is boiled in water, and a wax arises to the surface, which is skimmed off and used for candles. (Standl. 1920-26, p. 64). *Cib-che* means wax-tree.

The Maya texts state that the *cib-che* grows in the open savannahs (96) and that the *cuyum-che* is a synonym (62). It is boiled, the liquor rubbed on spider-bites and snake-bites (45 & 62) and drunk for dysentery (96).

We also find a description of what may be another *cib-che*: "This tree, the *cib-che*, is heating and very medicinal. It is called wax-tree because the Indians usually find hives (*colmenas*) in it. It is good for abscesses." (Y. y H. del Yuc. f. 376 r.) Dr. Standley notes that Pittier gives "kib" as the Kekchi name for *Trema micrantha* (L.) Blume, a tree common in Yucatan.

*Cibix*, or *Cibix-ché*. Amerimnon cibix (Pittier) Standl.

A scandent shrub, employed for bands to reinforce boxes. Cibix means soiled or dirty. See Ah-Muc.

*Cici-jin*. Manihot api, Pohl. *Yuca dulce* (Standley & Gaumer.)

The edible tuberous roots are often cooked as a vegetable. The plant is native to South America and may have been introduced into Yucatan before the Spanish conquest. Lit. sweet yucca.

*Citam-ac*. Lit. peccary-grass.

Described as a "long plant" used for thatching houses; also called kuk-zuuc. (Rel. de Yuc. I, 263). The crushed root is applied very hot to the bite of a peccary (56).

*Citam-che*, or *Citin-che*. *Caesalpinia Gaumeri*, Greenm. (Standl. 1920-26, p. 426; Loesener, 1923, p. 330).

"A tree which has the offensive smell of a peccary." (Pio Perez apud Brasseur de Bourbourg, 1869-70, II, 123-462). Described as a tree 15 to 20 meters high with yellow flowers in long racemes. The Maya texts prescribe the root, crushed and heated, for the bite of a peccary (56), and the leaves are boiled for a hot bath to cure aching bones and convulsions (179).

*Citam-ci*. *Agave minima*, D'utra. (Gaumer.) Lit. peccary-agave.

*Cüz*. *Gyrocarpus americanus*, Jacq. (Standl. 1920-26, p. 298; Millsp. I, 381). Volador.

Described as a large or medium-sized tree with a soft light wood. The Maya doctors prescribe the boiled root for ringworm (339).

*Ciz-can*. *Coralocarpus emetocatharticus*, Cogn. (Standl. & Millsp. I, 322).

Lit. carminative shoots. Described as a vine, 20 feet, abundant in brush and forest lands.

*Coc-ac*. Lit. asthma-grass, though this name is also applied to a small turtle.

Coc-ac is probably intended in the following description: "The moss, coc coc hac, which is a plant like down on the trees, particularly on the *roble* (*Ehretia tinifolia*, L.) It has the virtue that it provokes a profound sleep, when an infusion from it is drunk. (Y. y H. del Yuc. f. 43 r.) It is crushed and the juice drunk for asthma or asthmatic coughs (18 & 19).

*Coc-ak*. Lit. asthma-vine.

It is burned and a drink made from the ashes is prescribed for asthmatic coughs (27).

*Coc-che*. Lit. Asthma-tree.

Both the Maya medical text (245) and *Yerbas y Hechicerías del Yucatán* (f. 394 r.) give the Can-che and Zac-kokob-che as synonyms. The bark and leaves are prescribed for asthma, phthisis etc. (5, 12 & 19), the exterior of the stalk or trunk, for inflammation of the testicles (245) and the crushed plant for abscess of the throat (291). The leaf is said to resemble that of the *zol-can* (5), and is of a whitish color. (Ixil, f. 65 r.)

*X-coche*(?). *Capparis incana*, H. B. K. (Standl.)

*X-co-ceh*, or *X-co-ceh-ak*. *Smilax mexicana*, Griseb. *Zarzaparilla*. (Standl.)  
*S. Gaumerii*, Millsp.

"This vine, coceh, is the sarsaparilla. It is called co-ceh because its spines resemble the tooth of a deer. It is hardly to the point to treat here the qualities

of the zarza, since those who profess medicine give two hundred qualities to the zarza, and medicine is founded on its virtue. I only state that it exists in this land and how it is named. It is said to abound on the road to Bacalar (in Quintana Roo); and where there is humidity, it is not lacking. (Y. y H. del Yuc. f. 146 r.) A letter from Dr. Standley states that the only possible sarsaparilla known from Yucatan is *Smilax mexicana*, Griseb., but he doubts that this species gives sarsaparilla. He suspects the source of the sarsaparilla is *Smilax ornata*, Lam. common of the wet coast of Guatemala and possibly in Quintana Roo as well. Probably the X-co-ceh is the name of both species. An infusion of its spines with chile is prescribed for pain in the heart and gas in the stomach (76).

*C-Coli-buul.* *Phaseolus niger*. (Gaugmer.)

Lit. field-beans. This is a small black bean.

*Copal-che.* *Croton Niveus*, Jacq.(?) *Palo santo*, *Quina de la tierra*.

Lit. Copal tree. It is said to contain copalchin.

*Copal-xiu.* *Melampodium divaricatum* (L. Rich.) DC. (Standl.; Gaugmer.)

Lit. copal plant; said to be common in open places near Izamal.

*X-Copó.* *Ficus cotinifolia*, H. B. K. Alamo. (Standl. 1920-26, p. 210).

"Copo. A tree known in this land, a sort of fig-tree; and it bears certain small figs." (Motul.) This is a large tree, sometimes 45 feet high and three feet in diameter. The branches are few and spreading. The Maya texts prescribe the milky juice for an abscess of the ear (195) and a sliver in the foot (434). The leaves are also used medicinally (434 & 437). A Maya chief wore "on his head a paper band made of the bark of a tree called copo." (Rel. de Yuc. I, 82).

*X-Cotz-cab-na*, or *X-catz-cab-na*.

It is boiled for a bath to cure fever (142).

*X-Cozon-ak.* Lit. swallow-vine.

The leaves are a remedy for seven unspecified diseases corresponding to the different planets (429). See Tul-cozon.

*Cucut.* *Allium cepa*, L. (*Cebolla*. Gaugmer.)

In Peten this name is given to a mountain fruit like a small plantain. (Means, 1917, p. 191). Lit. body.

*Cucut-čhom.* *Zephrantes citrina*, Baker. *Mayito*. (Standl.) Lit. vulture-cucut.

*Cucut-macal.* *Calocasia esculenta* (L.) Schott. (Standl.)

*Cuchillo-xiu.* Evidently a corruption of Kuchil-xiu.

*Cuhuech.* *Panicum trichoides*, Swartz. (Standl.)

*Culul, Zac-culul, Chac-culul.* *Cereus yucatanensis*. (Standl.)

"Culul. A plant, or cactus, the shoots of which resemble candles." (Pio Perez, 1866-77).

*Cup.* *Calopogonium coeruleum* (Benth.) Hemsl. *Jicama cimarron*. (Standl. 1920-26, p. 506 & Gaugmer.)

Described as climbing or trailing; long spikelike racemes of violet flowers. "Cup. A kind of jicama." (P. P. 1866-77). "Cup, u uii cup. A root which is eaten in time of famine." (Diccionario San Francisco.) The Cup is practically a symbol for famine in the prophecies of the Books of Chilam Balam.



*Cup-ceh-chikin*, or *Cup-che-chikin*. Lit. deer-cup of the west, or cup-tree of the west.

The Maya text prescribes it for inflammation of the genital organs (245).

*Cup-kak*, or *Cup-che*. Lit. cup-fire, or cup-tree.

The Maya text states that it resembles the jicama (*Pachyrrhizus erosus* [L.] Urban.) and prescribes it for an inflamed tumor or ulcer (301).

*Cutziz*. *Spiranthes Galleotiana*, A. Rich. (Standl.)

*S. polyantha*, Reichb. (Gaumer.)

The latter is described as rare, 1 to 2 feet high, flowers dull red. In crevices of rocks. (Millsp. I, 293).

*Cuzum-che*. This might be translated as tree-mold or tree-rust.

The Maya text describes it as being very red and round. An infusion is prescribed for dysentery (99), vomiting blood and liver-complaint (127).

*Cuyum-che*. *Myrica mexicana*, Willd. *Palo de cerea*(?).

The Maya text gives this as a synonym for *cib-che*. The leaves are boiled and applied externally for snake-bites (62).

*Chabak*. *Plumbago scandens*, L. *Yerba del alacran*. (Standl. 1920-26, p. 1113; Millsp. I, 313).

Described as scandent, 5 feet; abundant in brush lands. "This plant, *chabak*, is fiery and poisonous. Merely to touch it, it raises blisters. It is a remedy for Peruvian itch and swollen abdomen, bathing the patient with the liquor of its infusion and afterward crushing the plant and poulticing it on the swelling. The poultice is not thick and should be changed every day." Dr. Standley believes that this description is somewhat exaggerated. Probably the leaves would have to be crushed and bound on the skin for some time to produce blisters.

*Chaban-can*. *Isocarpha oppositaefolia* (L.) R. Bro. (Millsp. III, 115; Loesner, 1923, p. 341; Gaumer.)

*Ageratum paleaceum*, Hemsl. (Gaumer.)

The Mayas crush the leaf and root and poultice it on syphilitic sores on the groin (317).

*X-Chab-xan*(?). *Cyperus uncinnatus*, Poir. (Standl.; Gaumer & Millsp. III, 68).

Perhaps *X-cabal-xaan* is intended.

*Chaac*. *Maranta arundinacea*, L. Sagú. (Standl. & Gaumer.)

P. P. 1866-77 also identifies this as the arrow-root. It is applied as a poultice for smallpox (347) and an infusion drunk for pus in the urine (420).

*Chac-ac*. Lit. red grass.

The Maya text states that it grows on the savannahs and prescribes a drink made from the raw crushed plant as a remedy for vomiting blood (81).

*Chacah*. *Bursera simaruba* (L.) Sarg. (Standl. 1920-26, p. 547; Millsp. I, 25).

Described as a tree sometimes 85 feet high with a trunk three feet in diameter, but usually smaller. The branches are thick and spreading; the bark, reddish brown, peeling off in thin sheets. The trees take root easily when placed in the ground and are planted for shade or to form hedges. *Reprod.* Standl. 1928, Pl. 40. It is called *Gumbolimbo* in Florida.

"*Chacah*. A mastic-tree of this land; it is brittle. From this tree the Indians make fire; its resin is a mastic. Its smaller leaves are good for sores, placed upon

them to dry the sores and changed three or four times a day. Its fruit and shoots are crushed, dissolved in water and drunk as an effective remedy for snake-bites. The liquor from the leaves is good for swellings; the water into which they are thrown is a remedy for rashes." (Motul.) In another 16th century source we read: "there is another tree which they call checah in their language and *almacigo* in Spanish. It serves them for hedging in anything, since, when it is green, it takes root wherever it is thrust into the ground and grows very large. When it is dry, it is very light like cork. It serves for fuel in the lime-kilns, where it burns splendidly." (Rel. de Yuc. I, 166).

The Maya texts prescribe the young leaves, crushed and boiled, for both a bath and a drink to cure asthma (19). The bark is crushed and steeped in water for spider-bites (45). The fruit is eaten for diarrhea (68); a drink made from the leaves cures blood in the stools and urine and accelerates parturition (80). A bath of the infusion of the young leaves cures fever (142) and itching rashes (354); and the crushed leaves are applied to a swollen knee (244) and to venereal and other ulcers (287, 297 & 302). The leaves are also a remedy for infected gums (397), quinsy (403) and retention of the urine (413).

*Chac-ak.* Lit. red vine.

"This vine, *chac ak*, is the food of an animal which they call *haleb* (Mexican *Agouti*), and its leaf and fruit are eaten by the *kanbul* (Curassow). It is good for sores." (Y. y H. del Yuc. f. 66 r.) Its synonym is *Zac-leum-ak*. (Ibid. f. 183 r.)

The crushed raw plant is taken for vomiting blood (81) and poulticed on ruptures and dislocations (181). The crushed root is a remedy for sores in the mouth (324), and the plant is also a remedy for quinsy (406).

*Chacal-haaz.* *Calocarpum mammosum* (L.) Pierre. *Mamey colorado*. (Standl. 1920-26, p. 1120).

*Lucuma mammosa*, L. *Mamey colorado*. (Seler, 1902-08, III, 571; Millsp. I, 37). *Mammea americana*, L. (Standl.)

This was originally called *haaz*, as we note in an account dated 1581. "There are other trees, very large, which are called *haz*. If you open the fruit, it is red inside. The fruit is an admirable sweet for eating; it has inside of it a large seed which is good for women to make them fair (*rubias*)." (Rel. de Yuc. I, 109.) Before the century had passed, however, we find the *haaz* defined as "the banana and its fruit." (Motul.) "This tree, *chac has*, is the *mamey colorado* and is fruit-bearing. It produces a large fruit, red inside; its seed is a drug, heating and an aid to digestion, of so many virtues that I refer to those who employ it. I note that it is excellent for a weak stomach and constitutional colds. Of this seed they make two sorts of oil as medicinal as oil of almonds. If anyone wishes to know how to make it, let him go to the treatise of Master Alonso." (Y. y H. del Yuc. f. 379 r.) The reference is probably to Alonso López de los Hinojos, whose *Summa y recopilacion de chirugia* was printed in Mexico in 1578.

The Maya texts prescribe the pulp of the fruit for diarrhea (82), the seeds, crushed and steamed, for scalp-disease (333) and the oil from the seeds for sore eyes (435).

*Chac-anal-kak.* *Asclepias curassavica*, L. *Cancerillo*. (Gaumer.)

*Chac-anicab.* *Cydista aequinoctialis* (L.) Miers. (Standl. 1920-26, p. 1314; Millsp. I, 390; Gaumer.)

Vine, 40 feet, frequent in forests near Buena Vista Xbac, universally used as binding in construction of thatched roofs.

*Chac-biken.* Lit. red spiral.

The young leaves form an ingredient of a drink which is a remedy for snake-bites (49).

*Chac-canal-zihil.* *Aechmea bracteata* (Sw.) Mez. de C. (Standl. & Gaumer.)  
See X-keuel.

*Chac-kankil-xiu.* *Aphelandra deppeana*, Schl. & Cham. (Standl. & Gaumer.)

Shrub 15 feet high, common in brush and forest near Izamal.

*Chac-catzim.* Lit. red catzim. Compare Catzim.

The root is boiled and the liquor drunk for diarrhea (99).

*Chac-chauay-xiu.* *Tectaria trifoliata*, L. (Gaumer.)

Possibly chac-x-hauay-xiu is intended. Compare Hauay-xiu.

*Chac-che.* *Manihot aesculifolia* (H. B. K.) Pohl. *Yuca cimarrona.* (Standl.)

*M. rhomboides*, Muell. (Millsp. I, 375 & Gaumer.)

Lit. red-tree. "The chac-che is a tree of moderate size and has the general shape of the akab-yom (*Cestrum diurnum*, L.) Its root has a pleasant odor and is somewhat bitter. It is to be scraped and the bark removed to cure dysentery by drinking it. It refreshes the liver and cures headache by binding the said bark, when crushed, on the forehead. The leaf is smooth and has the same virtue as the bark. Both are crushed and placed on the bite of the snake called kokob; after the perforation is well squeezed, it is good." (Y. y H. del Yuc. f. 91 v.) This tree, the chac-che, is what others called canchacche (*Chiococca alba*) and is its proper name." (Ibid. f. 324 r.)

It is to be conjectured that *M. carthaginensis* (Jacq.) Muell. is also designated by this name, which may be a shorter form of chaac-che. This could be translated as "arrowroot-tree."

*Chac-chom.* This might be either *Ananas magdalenae* (André) Standl. Pita floja, or *Bromelia karatas*, L. (Standley.) See chom; compare Standl. 1928, Pl. 10 & 11.

An infusion is prescribed for dysentery (80 & 96).

*Chac-haaz.* See Chacal- haaz.

*Chac-hulubte-kak.* *Asclepias curassavica*, L.

Given as a synonym for anal. (Cuevas, 1913, p. 29). Here the plant takes its name from the skin-complaint for which it is the remedy.

*Chac-ic.* *Capsicum annuum*, L. *Chile colorado.* (Standl.)

The Maya text prescribes this for blood in the stools (118).

*Chacil-xiu.* *Boerhaavia caribaea*, Jacq. (Standl.)

*Chac-kopté.* *Cordia dodecandra*, DC. *Siricote.* (Standl. & Gaumer.) See Kopté.

*Chaac-kuch.* Lit. Vulture-arrowroot.

It is crushed and poulticed on the throat for inflammation and infection of the throat, such as croup or diphtheria (405).

*Chac-kuy-che.* *Bombax ellipticum*, H. B. K. *Amapola colorado.* (Standl. 1920-26, p. 793).

*Carolinea fastuosa*, DC. (Millsp. I, 309).

Dr. Standley notes that a decoction of the bark and root is employed for tooth-

ache and to harden the gums, but it is not found in the Maya medical texts under this name.

*Chac-leon-ak*, or *Chac-leum-ak*. Lit. red spider-vine.

An infusion of the leaves is employed to wash the pustules of some eruption said to resemble smallpox (330). This spider is called leum today, and it is interesting to find the archaic form, leon, surviving in this plant-name.

*Chaclol-macal*. *Antigonum leptopus*, Hook. & Arn. (Gaumer and Standl.)

Standley gives its Spanish name as *Flor de San Diego* and notes that it is the "Confederate vine" of Florida. The Maya name, which means red blossom-tuber, is fairly descriptive. The tuber is edible and has a nutlike flavor.

*Chac-lubte-on*.

The leaf is boiled and the liquor drunk as a remedy for falling and vomiting blood (213).

*Chac-lutzubteob*. Lit. red with hooks.

The bark or exterior is an ingredient of a drink given for dysentery (99).

*Chac-mo-ak*, or *Chac-mol-ak*. *Alternanthera ramosissima* (Mart.) Chod.(?)

Dr. Standley suggests the above, which is a large vine-like plant with flower-heads like the chacmol (*Gomphrena globosa*, L. & G. dispersa, Standl.) It may, however, belong to some different group.

The Maya text states that it has a tuberous root and a thick red bud, or possibly seed. The language is ambiguous. The tuber is a remedy for sore eyes (202 & 203), the leaves or tuber, boiled or crushed raw, are a cure for tumors and abscesses (257, 287, 289, 299, 291, 363 & 315). The leaves are crushed and poulticed on the skin for ringworm (373).

*Chac-mol*. *Gomphrena globosa*, L. *Amor seco*, Globe-amaranth. (Standl.)

*G. dispersa*, Standl. (Standl.)

It seems likely that this is the Chac-mul of the Maya texts.

*Chac-mol-che*. *Erythrina americana*, Mill. *Colorin*. (Standl. 1920-26, p. 501).

Tree sometimes 30 feet high, with spiny branches and red flowers.

*E. coralloides*, Mocq. & Sesse. (Millsp. I, 299).

The Maya text prescribes the boiled leaves eaten, or the liquor drunk, for the bite of an insect called xacat-be (see fauna list). The leaf or fruit is crushed and applied for various eye-complaints (198, 202 & 208). The crushed leaves are poulticed on abscesses and ulcers (287), and the crushed fruit is applied to the skin for a disease characterized by swollen arms, legs and head (298).

*Chac-motz*. *Sicydium tamnifolium* (H. B. K.) Cogn. (Standl. & Gaumer.)

Lit. red root. "Vine 25 feet, common in stony soil and on stone fences near Izamal." (Millsp. I, 394.)

*Chac-muc*. *Rauwolfia heterophylla*, Roem. & Schult. (Standl.)

*Quassia amara*, L.(?)

"This tree, chac muc, is heating. It produces a red blossom and the fruit is very bitter." (Y. y H. del Yuc. f. 145 r.) This description agrees with *Q. amara* which may grow in the south. Another plant is indicated for the chac-muc of the Maya texts, also called chac-muc-ak and cabal-muc. This is said to wind and twist. An infusion is drunk for vomiting-blood and probably for yellow fever (125 & 394).

*Chac-muclah-kak*, or *Chac-mulah-kak*. *Oxalis latifolia*, H. B. K.(?)

"This plant, *chac-mulah-kak*, is cooling; and it is thus named because its flowers are red. Ordinarily the plant takes the beginning of its name from the color of the flower and terminates in the name of the disease for which it is applied. Thus they cure eruptions and fevers with this. They give it many names, but this is the proper one and the best known. The Cupuls call this plant *mapche*." (Y. y H. del Yuc. f. 392 r.) The Maya texts prescribe an infusion for vomiting blood and liver complaint (127) and for the disease from which it takes its name, characterized by swelling of the head, legs and arms. It is given as a synonym for *yala-elel* (298). Compare *Yala-elel*.

*Chac-mul*. Probably *Gomphrena globosa*, L. and *G. dispersa*, Standl.

"*Chacmul*. *Amor seco*." (Pio Perez, 1898, p. 105). Gaumer identifies *Amor seco* as *G. decumbens*, Jacq. "*G. globosa*, the common bachelor's button, is an American plant, but known only in the cultivated state; and *G. dispersa* is a native species." (Standl.) The botanists report these plants as *chacmul*, but the native Maya sources as well as Pio Perez give only the name, *chacmul*. It is prescribed for asthma (27), and for spitting blood (121). An infusion of the leaves and roots is drunk for fever (145) and employed as a bath for malaria (158). The boiled root is applied to a decayed tooth (391).

*Chac-ne-toloc*, of *Chac-x-ne-toloc*. *Cydista diversifolia* (H. B. K.) Miers. (Standl. 1920-26, p. 1315).

*Bignonia diversifolia*, H. B. K. (Millsp. I, 390).

Lit. red tail of the toloc-lizard. "Vine 40 to 100 feet, uncommon in the forests about Izamal, producing its purple flowers from June to Sept." It is also reported as *Zol-ak*.

*Chac-nich-max*. *Tournefortia volubilis*, L. (Standl.)

Described as a suberect or scandent shrub, and twining 10 to 15 feet over stone walls near Izamal. (Standl. 1920-26, p. 1231 & Millsp. I, 316). It is also called *chac-nich-max-che* and *chac-nich-kak-che*, and is probably a synonym for the *max-ak*. (Y. y H. del Yuc. f. 315 r.) The Maya texts prescribe it for what is called "cracking eruption" (361), and the crushed boiled root is applied to the disease of the gums for which the plant is named (385).

*Chac-nicté*. *Plumeria rubra*, L. *Flor de mayo*. (Standl. 1920-26, p. 1149).

Lit. red *Plumeria*. It is boiled with wine as a remedy for sore gums (397). See *Nicté*.

*Chac-op*. *Annona purpurea*, Moc. & Sessé. *Anona morada*. (Standl.)

*Chac-pichi*. Probably *Psidium guajava*, L. *Guava*.

Lit. red *pichi*. This appears to be the *guayaba colorada*. (Standl. 1920-26, p. 1036).

The boiled root is a remedy for dysentery (99).

*Chacté*. *Caesalpinia platyoba*, S. Wats. (Standl. 1920-26, p. 424).

*C. bijuga*, L. Brazil. (Gaumer.)

The former is described as a shrub or small tree 6 to 20 feet high, bearing yellow flowers. The reports of the 16th century settlers in Yucatan mention the *chacté* as a deep red wood, or *palo colorado*. (Rel. de Yuc. I, 84 & II, 34). "There are other trees for which the Indian name is *chigte* (*chacté*); it is a red wood and is very good for house-beams, as it is a strong wood. Cut up fine and thrown into water, it turns to blood, and the Indians make use of it for dyeing their garments." (Ibid. I, 108). Landa is evidently referring to the same tree when

he tells of "another that is a dark orange color, of which they make staffs; it is very strong, and I believe it is said to be *brasil*." (Landa, 1900, p. 389).

It is crushed and drunk for asthma (4), and the boiled root is a remedy for dysentery (99).

*Chacté-coc*. *Caesalpinia* sp.(?)

Lit. the chacté for asthma. It is prescribed for asthma (4), an infusion of the leaves is employed as a bath to cure asthma and aching bones and convulsions (19 & 179). The leaves are poulticed on certain sores on a man's breast (312).

*Chac-tez*. *Amaranthus* sp.(?)

Lit. red *Amaranthus*. See X-tez. The sap is prescribed as a remedy for "blood-vomit," probably yellow fever (125).

*Chac-tok*. Probably *Hamelia erecta*, Jacq.

Lit. red flint. It is probably the same as Standley's *chac-toc*. The *chac-tok* is crushed and employed as an ointment for inflammation of the throat (402). See X-kanan.

*Chac-tzitz*. *Salvia coccinea*, Juss. (Standl. & Gaumer.)

Herb 2 to 6 feet high, abundant in old fields. (Millsp. I, 318). This brilliant flowered species is cultivated under the names of scarlet sage and *salvia*. (Standl.) The root, stalk and leaf are crushed and pressed into the cavity of a decayed tooth (394).

*Chac-tzotz-macal*. *Alocasia cuprea*, C. Koch. *Caladio cobrizo*. (Gaumer.)

This name might be translated as red hairy tuber.

*Chac-uob*. *Cereus undatus* Haw. *Pitahaya roja*. (Standl. 1920-26, p. 913 & Gaumer.)

Lit. red frog. Described as a night-blooming *cereus* with showy flowers.

*Chac-xicin-che*, or *Xicin-che*. Lit. red-tree-ear, probably a tree-fungus.

It is crushed in water and taken as a remedy for dysentery, and blood in the stools and urine (80, 98, 124 & 128).

*Chac-x-keuel*, or *Chac-keuel*. *Loranthus calyculatus*, DC. *Muerdago*. (Standl. 1920-26, p. 235 & Gaumer.)

Described as a parasite, often three feet high, with showy red or yellow flowers. The Maya texts prescribe an infusion of the flowers and leaves for dysentery and blood in the stools and urine (80 & 124).

*Chac-xul*. *Bidens cynapiifolia*, H. B. K. (Standl. & Gaumer.)

*B. refracta*, Brandweg. (Standl. & Gaumer.)

The plant is crushed and rubbed on the forehead as a remedy for headache (229). Lit. red end, or red top.

*Chac-ya*. Lit. red zapote.

An infusion of the bark is a remedy for dysentery (99); an infusion of some unspecified part is employed as a bath for fevers (142).

*Chac-zinkin*, of *Chac-zik*. *Caesalpinia pulcherrima* (L.) Swartz. *Flor de camaron*, *Guacamayo*. (Standl. 1920-26, p. 424; Millsp. I, 298; Gaumer.)

Described as a shrub or small tree 3 to 20 feet high, with large red flowers, more or less variegated with yellow. *Chac-zinkin* is also the Maya name for Boucard's Red-breasted Chat. A decoction of the crushed root or leaf is a remedy for dysentery and blood in the stools and urine (80 & 124). The crushed leaf is

taken for spitting blood (121), for vomiting blood and liver-complaint (127). The boiled root is held in the mouth for ulcers of the mouth and sore gums (324 & 397).

*Chac-zinkin-kax.* *Jacquinia flammea*, Millsp. (Standl.)

*J. armillaris*, Jacq. (Millsp. I, 312).

Shrub 15 feet, bearing flame-colored flowers and a yellow woody fruit. Plentiful on the northern coast and rare in the interior.

*Chac-zubin-che.* Lit. red zubin-tree. Zubin-che is *Platymiscium yucatanum*, Standl.

The leaf of the chac-zubin-che is crushed and the decoction drunk for snake-bites (54) and headache (220).

*Chac-zuum.* *Tithonia diversifolia* (Hemsl.) A. Gray. (Gauger.) Compare *Zuum*.

*Chac-sam.* *Rhoeo discolor*, L. Her. (Millsp. I, 356; Gauger; Standl.)

Described as 18 to 20 inches high, flowers pure white, common on ruins and rocky places. The Maya texts prescribe the crushed plant taken internally for snake-bites (60), poulticed on swellings (240) and boiled for a bath for a certain eruption of pustules (330).

*Chac-oul.(?)* *Cosmos caudatus*, H. B. K. (Gauger.)

Described as an herb 4 feet high.

*Chac-oulub-tok.* *Bauhinia unguolata*, L. *Pato de venado*. (Standl. 1920-26, p. 416).

*B. Cavanillei*, Millsp. (Millsp. I, 364).

Shrub or small tree with reddish brown leaves and white or greenish flowers. The Maya name might be translated as "red festooned flint." According to the Maya medical texts a decoction of the crushed young leaves is either drunk or employed as a bath for asthma (19), drunk for dysentery and blood in the urine (80 & 124), and some so-called liver complaint accompanied by vomiting blood (127). The crushed plant is rubbed on an inflamed throat (402) and boiled and drunk for blood in the urine (423) and retention of urine (413). The leaves are said to have sudorific properties.

*Chal-che.* *Pluchea odorata*, L. (Standl. 1920-26, p. 1510; Millsp. I, 396; Gauger.)

The *Santa Maria* or *Salvia*, a shrub 15 feet high, is found in the salt swamps as Sisal and is widely cultivated in some parts of the interior, as it is a popular medicinal plant. The Maya texts prescribe a decoction of the leaves as a bath for aches and pains (2), pain in the lungs or pleura (9), phthisis (12), and to be taken internally for a cold in the head (11), retention of placenta (32), dysentery (80 & 128). An application to the part is made for certain complaints of the womb (38). The crushed leaves are poulticed for pain in the heart or stomach (74). The patient is steamed with the boiled leaves for diarrhea accompanied by chills (27) and chills and convulsions (151). The same decoction or the boiled sap is rubbed on the joints for malaria (154 & 158). The leaves are steeped in water and applied externally for convulsions (161) and boiled in wine and rubbed on the tongue for loss of speech (177). The leaf is chewed for a sore tongue (264), boiled for a bath for fainting (212) and giddiness (214). "Chalche. The salvia. A remedy for hoarseness and headache; for headache they boil the leaves and place them on the forehead." (Motul.)

*Chalha.* *Parthenium Schottii*, Greenm. (Standl. & Gauger.)

*Cham.*

"Certain pinuelas of this land, a well known fruit." (Motul.) See *Chom*.

*Chankalá.* *Canna edulis*, Ker-Gawl. *Lengua de dragón*. (Standl.; Gauger.)

*Chan-x-nuc.* *Tribulus cistoides*, L. *Abrojo*. (Standl. & Millsp. I, 370).

Lit. little old woman. Found on the downs at Progreso. The Maya text prescribes the punah-ci as a remedy for swollen testicles and states "there are those who call it chan-x-nuc," (371).

*Chay.* *Jatropha aconitifolia*, Mill. *Chaya*, *Picar*. (Standl. 1920-26, p. 636).

"There is another sort of tree which the Indians and Spaniards call *chayas*; they grow much like fig-trees and resemble them after a fashion. The Indians and Spaniards eat the leaves of this tree generally in the same manner as cabbages, although they are not as tasty. This tree is multiplied by cutting a branch and planting it, and it does not have to be from the root. In order that it may take root, they have to keep it after it is cut for a week without planting it, until it discharges a certain milk which forms inside of it. This once discharged, they plant it and it takes root, and in no other manner." (Rel. de Yuc. I, 56). Landa gives much the same description. (1900, p. 388).

The Maya texts prescribed the grated chay as an aid to parturition (33), the boiled juice of the crushed leaf for jaundice and biliousness (259), the crushed leaf as a poultice for hemorrhoids (319) and the roasted leaf, rubbed on the gums, for an infection of the gums (396).

*Chechebé.*(?) *Malvastrum Coromandelianum*, (L.) Garcke. (Standl.)

*Chechem.* *Rhus radicans*, L. (Standl. 1920-26, p. 667).

*Metopium Brownei*, (Jacq.) Urban? (Standl.)

The following description, however, would indicate a *Comocladia*: "Chechem. This tree is the *guao*, which is a hellish poison. Its milk, bark, leaves and roots, if you touch any of them, will inflame, burn, and cause a man to swell. It is the *grenadillo*, very good for beds, for which it is famous, because bed-bugs will not live in it. It is good for nothing else. When burned by it, one may be cured by the *chacah* and *achiote* (*Bursera simaruba* and *Bixa Orellana*). Also it is to be anointed with the milk of the zapote which is an antidote for it. In order to cut this tree, you first anoint it with ear-wax, and it loses its power." (Y. y H. del Yuc. f. 155 r.) The Spanish name, *grenadillo*, is today applied to the *zubin-che*, or *Pterocarpus Draco*, L. The wood is the color of tobacco and is used for cabinet work.

*Ix-che-ichi.*

Some part of this plant, perhaps the succulent root, is prescribed as a poultice for quinsy and for ruptures and dislocations (181 & 406).

*Chelem-ci.* *Agave Ixtli*, Karw. *Agave silvestre*. (Standl. 1920-26, p. 119).

*Che-tulub*, or *X-che-x-tulub*. Lit. tree-cucurbit.

It is crushed and employed as a poultice on inflammation of the throat (405).

*Che-zuc*, or *Cheil-ah-zuuci*. *Ruellia tuberosa*, L.(?)

"This plant called u che ah cue, which some people call cabal-yaxnic, is crushed, leaf and stalk, all together, and anointed on a swollen breast and inflammation or an eruption, which it will immediately cure. It is good for every inflammation. Some people call it *Pixulum*." (Y. y H. del Yuc. f. 97 r.) This is confirmed by the Maya text which prescribes it for a sliver in the foot and gives it as a synonym for *xiu-pix-u-lumil* (428).

*Chii.* *Malpighia glabra*, L. *Nancén*. (Standl. 1920-26, p. 566; Gaumer.)

Described as a shrub 3 to 10 feet high with pink flowers and a red fruit. The fruit is edible and the shrub sometimes cultivated. "Chij: a little fruit called



nances; and the tree is called chi. Its bark serves for tanning." (Motul.) A decoction of the root is a remedy for blood-vomit or yellow fever (122 & 123).

*Chi-abal.* *Spondias mombin*, L. (Standl. 1920-26, p. 656). *Ciruela morada.* (Gaumer.)

Described as a shrub which frequently spreads along the ground, and often becomes a small tree. "There is another (plum) which is good and which they call yx-chi-abal, which is green when it ripens and has a small seed." (Rel. de Yuc. I, 169). A decoction, probably of the fruit, is applied to an inflamed knee (263).

*Chicam.* *Pachyrrhizus erosus* (L.) Urban. *Jicama.* (Standl.)

*Cacara erosa*, L. (Millsp. I, 300 & Gaumer.)

"Chicam; the *xicama*, a root which grows underground like the turnip." (Motul.) "There is another sort of fruit which grows underground, which the Indians call chicam and the Spaniards, *Xicamas*. These are like onions, but they have the taste of a cardo (thistle?), somewhat sweeter. Of these they make a very good conserve." (Rel. de Yuc. I, 61). Described as a large herbaceous vine. (Standl. 1928, p. 218). The fruit is prescribed for a certain itching eruption of pustules (355).

*Ah-chicam-kuch.* Lit. vulture-jicama.

The tuber is described as resembling a white onion. It is dissolved in water and employed as an emmenagogue (36).

*Chicam-thul.* *Cracca Greenmanii*, Millsp. *Jicama del conejo.* (Gaumer.)

Lit. rabbit-jicama. Described as a low plant bearing numerous tubers; see reproduction Millsp. I, Pl. XIII. The distilled juice is applied to a film on the eye (208), and the plant or tuber is soaked with raw maize and taken for blood in the urine (418).

*Chiican.* *Mucuna pruriens* (L.) DC. *Picapica.* (Standl.)

This is the English cow-itch. See reproduction, Standl. 1928, Pl. 37. Described as a vine 25 feet, common in brush lands and old fields, frequently also in forests about Izamal. (Millsp. I, 368).

*Chi-ceh.* *Chrysophyllum mexicanum*, Brandweg. (Standl.) *Cayumito silvester.* (Gaumer.)

The name could be translated as deer-nancen or deer-mouth.

*Chicix-mo*, or *Chac-chicix-mo.* Lit. impudent macaw.

Described as a shrub of ordinary size with dark green leaves and containing a milky sap. (Cuevas 1913, p. 28). "This plant, *chicix-mo*, is very cooling and of many virtues. It is necessary to recognize it, because there is another which resembles it externally, but not in the roots. This one has a round leaf, is a vine and is very red outside; the roots are more so, and white inside. It is called *chicixmo*, because it is red like the macaw (*guacamaya*), and because it rises up boldly. It means shameless macaw. It is a very fitting medicine for diseases that are heating, particularly for a disease they call *chackan lah ca kak* (*chacanlah-kak*), a thick eruption characterized by beanlike swellings all over the body. The writer confirms this, because he knows it and has tried it. It produces a fruit which the Indian women are accustomed to gather for little spinning-gourds (*gicarita de hilo*), and are smaller than the other one which also serves for this purpose." (Y. y H. del Yuc. f. 389 r.)

The Maya texts prescribe the root, crushed and poulticed on pustules and ulcers (281), boiled for a wash for ringworm (339), and the crushed leaves are rubbed on ulcers and abscesses (282).

*Chicix-mo-ak*. Lit. impudent-macaw-vine.

This may be the vine mentioned above which so closely resembles the *chicix-mo*. The Maya doctors prescribe the crushed root for an inflamed breast (241) and the crushed leaves are rubbed on ulcers and abscesses (288) and on erysipelas (298 & 334).

*Chic-kuk*. See *Chit-cuuc*.

*Chichibé*. *Sida acuta*, Burm. (Standl. 1920-26, p. 765).

*S. acuta carpinifolia*, K. Schum. (Millsp. I, 307).

*Stylosanthes hamata* (L.) Taub. (Standl.)

Described as an herb 3 feet high. "Chichibe: the mallows of this land, with the same virtue as those of Spain." (Motul.) The native doctors prescribe a decoction of the leaves as a wash or bath for phthisis (12), asthma (19), fainting (212) and a sore knee (263). This is taken internally for stomach complaints (73). The crushed raw leaves are poulticed on the forehead for headache (227) and a similar poultice is employed for swollen rectum (254), ulcers (263) and skin-diseases (372).

*Chichibé-kax*. *Sida angustifolia*, Lam. (Gaumer.) Lit. forest-mallows.

*Chich-put*. *Carica papaya*, L. *Papaya silvestre*. (Standl. 1920-26, p. 851; Millsp. I, 34; Gaumer.)

Lit. bird-papaya. This is the wild form of this well known tropical fruit-tree. The fruit is smaller than that of the cultivated variety and is said to be inedible. The sap is applied to what is called a red ulcer (296). See reproduction, Millsp. I, Pl. III.

*X-chilib-taman*. Lit. cotton-withe.

The blossom is crushed and poulticed on swollen testicles (245). This may be a synonym for *X-Chilib-tux*.

*X-chilib-tux*, or *Chilib-tax*. *Acalypha unibracteata*, Muell. (Standl. 1920-26, p. 628; Millsp. I, 302; Gaumer; Loesener, 1923, p. 332).

Described as shrubby, 10 feet high, abundant in brush lands. The branches are reddish brown. The leaves are bound on the head as a remedy for headache (229). Lit. cotton-seed withe. It is the usual material for bird-cages.

*Ix-chilim*, or *Ix-chilim-kak*.

The Maya text states that it is the "contrapeste." A decoction of the leaves is taken for vomiting blood (125) and an infusion of the same, for what is called vomiting blood associated with liver-complaint (127).

*Chilim-can*.

An infusion of the crushed leaves is taken internally for snake-bites (49) and a decoction of the same, for vomiting blood and liver-complaint (127).

*Chillo-ak*. *Gaudichaudia mucronata* (Moc. & Sessé) Juss. (Standl. 1920-26, p. 571).

*G. filipendula*, Juss. (Millsp. I, 369; Gaumer.)

The name is a mixture of Maya and Spanish.

*Chimay.* *Acacia macrantha*, Humb. & Bonpl. (Standl.)

Described as a shrub or small tree, spiny, with yellow flowers. The reddish wood is used for axles. What is called the outer red husk is poulticed on scrofulous tumor of the neck (366).

*Chim-tok.* Lit. flint-capsule. Probably *Krugiodendron ferreum*, (Vahl) Urban.

Described as a thick tree with dark green leaves. (Cuevas, 1913, p. 35). The leaf is said to be large like that of the guava. (Y. y H. del Yuc. f. 88 v.) "We have woods of such extraordinary hardness that the chintok has come to deservedly acquire the name of *quiebra-hacha*, because the very steel of the axes with which it is cut, turns brittle at dividing its fibres." (P. García, 1873, p. 189). It was "the wood of which the lintels were constructed in the ancient edifices." (Solis y Rosales, 1870, quoted in Brasseur de Bourbourg, 1869-70). These wooden lintels have usually been reported as being of the wood of the *chicozapote*, but the chimtok may be indicated in the following account by Landa, who discusses the chicozapote elsewhere: There is a kind of wood, somewhat yellow and . . . (de vetoso) like the live-oak. It is marvellously strong and of much endurance, so strong that we find it in the doorways of the edifices at Izamal, set in as door-posts and carrying the construction above it." (Landa, 1900, p. 389). The wood is whitish and very heavy.

According to the Maya medical texts the boiled leaves are employed as a poultice for pleurisy (9) and a decoction or an infusion is employed for asthma (19). The crushed leaves and boiled root are taken for dysentery (80, 99 & 100). The leaves are crushed with chile for dysentery and blood in the urine (124). The bark, crushed in urine, is a wash for ulcers (381), the crushed root is held in the mouth to relieve toothache (393). Some unspecified part is boiled and taken for blood or pus in the urine (413 & 423). The bark is said to be an astringent.

*Chinchin-pol.* *Hibiscus tubiflorus*, DC. (Standl. 1920-26, p. 779; Gaumer.)

Lit. drooping head. Described as a slender shrub.

*Chiople.* *Eupatorium hemipteropodium*, Robnsn. (Standl. 1920-26, p. 1446).

*E. aromatisans*, DC. (Millsp. III, 92; Gaumer.)

Described as a robust perennial with 10-flowered heads; the leaves are used to flavor tobacco. "Chiople. Certain small shrubs or plants with odorous leaves." (Motul.)

A decoction of the leaves is employed as a bath for aching bones (2), giddiness (214) and sore knees (263). The leaves are poulticed on a swollen rectum (254), steeped in water for a bath for convulsions (161), dried and powdered on a wound (426) and a decoction taken for gas in the stomach (74 & 75). An infusion of the crushed raw leaves is taken for diarrhea (85).

*Chit.* *Thrinax argentea*, Lodd. (Millsp. I, 355).

*T. Wendlandiana*, Becc. (Gaumer.)

A palm with large fan-shaped leaves growing on the northern sea-coast.

*Chit-cuuc*, or *Chic-kuk.* *Catasetum maculatum*, Kunth. (Standl.)

"This plant, chickuk, which means squirrel-flea, is called *atula* in Mexican. It produces a paste or sap which is an admirable medicine for causing an abscess to open." (Y. y H. del Yuc. f. 300 r.) This is confirmed by the Maya texts (256 & 311).

*Chitée.* A synonym for *Naban-che*. (P. P. 1898, p. 105).

*Choo.* *Ceiba aesculifolia* (H. B. K. Britt & Baker.) (Standl. 1920-26, p. 792).

"Cho. Pochote. This tree, the cho, is very cooling, and they say it is so called because it is very spiny, and in order for one person to make a jest of another who would clear himself of some imputation, he would say he is cho. It is good medicine for burning fevers." (Y. y H. del Yuc. f. 175 r.) "Choo. A tree, the pochote, and the cotton which its fruit produces." (P. P. 1866-77). The crushed root is applied hot to a snake-bite (50) and a decoction of the leaves is employed as a bath for fainting (212).

*Choben-che.* *Trichilia arborea*, C. DC. (Standl. 1920-26, p. 556).

*T. terminalis*, Jacq. (Millsp. I, 302 & Seler 1902-08, III, 569).

"Choben-che. A tree of this name, the bark of which they say is an emetic." (P. P. 1866-77). Choben is a certain red earth with which they varnish jugs and bowls. The tree is described as 60 feet high, abundant in the forests about Izamal. The crushed root is taken for jaundice and biliousness (260) and employed as a wash for erysipelas (334). An infusion of the crushed bark is a remedy for jaundice and biliousness (262).

*Chocuil-xiu*, or *Pasmo-xiu.* *Capraria biflora*, L. *Claudiosa*. (Standl. & Gaumer.)

Lit. fever-plant. In the Maya texts this plant usually appears under its Spanish name and probably belongs to Spanish, rather than Maya, medicine. See Medical Text No. 340.

*Chooch.* *Lucuma hypoglauca*, Standl. *Zapote blanco*. (Standl.)

*Casimiroa edulis*, Llav. & Les. (Gaumer.)

"There are many other (trees) native to this land, which bear fruit for eating in time of famine, such as the choches, which outwardly resemble quinces." (Rel. de Yuc. I, 262). The Maya texts prescribe a bath made with the crushed leaves as a remedy for delirium (161).

*Choch-citam.* *Capparis oxysepala*, Wright. (Standl.) Lit. Peccary-choch.

*Choh.* *Indigofera anil*. L. (Millsp. I, 300; Standl. 1920-26, p. 440).

"There is the wood or plant from which indigo is made, which the natives of these provinces formerly employed for a blue dye or paint, hence the Spaniards availed themselves of it and started large plantations, so they have come to make large quantities in these provinces. Eight years ago it was carried to Spain, from which His Majesty derived great profit." (Rel. de Yuc. I, 55). "These Indians, it is understood, have diminished in number because of a certain profitable business in indigo which has been discovered in this land." (Ibid. II, 147). It is a shrub 3 to 8 feet high with a very small yellowish or greenish fruit.

The leaves of this shrub are crushed and put into a bath to cure convulsions (161).

*Choh-chakan.* *Oxalis* sp.

Lit. indigo of the savannah. Given as a synonym for Yala-elel.

*Chokobcat.* *Ipomoea carnea*, Jacq.

A stout woody vine with a large blossom. The leaves and roots are boiled and taken for poisoning (79) and certain pains caused by sorcery (431).

*Cholul.* See Chulul.

*Chom.* *Karatas plumieri*, E. Mart. (Millsp. I, 291; Gaumer.) *Piñuela*.

*Ananas magdalenae* (André) Standl.(?) See Standl. 1928, Pl. 11.

*Chonac*, (or *Cuxum*). *Verdin*. (Dondé.)

"The stringy substance which grows on stagnant water." (P. P. 1866-77).  
"Something very wet, and moisture." (Motul.) A decoction of the chonac is employed as a wash to cure certain white spots on the skin (342).

*X-chū*. *Tillandsia fasciculata*, Sw. *Gallito*.

*T. brachycaulos*, Schl. (Standl.)

"A parasitic plant resembling the *clavel* (pink), which grows on trees. They also call it *canazihil*." (P. P. 1866-77).

*Chub*. *Gossypium Schottii*, Walt. (Standl. 1920-26, p. 785).

"Chub. Yellow cotton. Any animal with yellow hair or fur." (P. P. 1866-77).

*X-chuc-chicil*. *Martynia diandra*, Glox, *Uña del diablo*. (Millsp. I, 319; Gaumer.)

"Herb 4 feet high, pink flowers, common along the Tecal road near Izamal."

*Chucum*. *Pithecolobium albicans*, (Kunth.) Benth. (Standl. 1920-26, p. 397).

Described as a high forest tree. The fruit is said to yield a black dye.

*Chucum-ci*. *Agave ixtli*, Karw. (Standl. 1920-26, p. 119).

*Chuch*.

"A medicinal plant, crushed green at the conjunction of the moon and put into the ear, and in the other conjunction put the juice into the other ear. It draws out abscesses and consumes them. Also it reduces swellings when crushed and poulticed on them with its juice." (Motul.) The Maya text confirms this prescription (255).

*Chuhuc ic*. *Capsicum dulce*. Hart. *Chile dulce*. (Gaumer.) Lit. sweet chile.

*Chuhuc-pakal*. *Citrus aurantium*, L. *Naranja dulce*. (Gaumer.)

Lit. sweet orange. The orange was imported and extensively planted in Yucatan during the first generation after the Spanish conquest.

*Chul*. *Croton arboreus*, Millsp. (Gaumer; Millsp. I, 303 & Pl. XV.)

*Chul-ceh*. Lit. deer-chul.

A decoction is employed as a bath for aching bones and convulsions (179), giddiness (214) and an unidentified disease (430).

*Chul-che*. *Croton arboreus*, Millsp. or *C. niveus*, Jacq.(?)

The fruit is crushed and applied to a sore eye (203).

"This little tree or *cardón* is heating. It is very handsome and is called *chulche*, which means flute-tree, because its stalk grows like a flute. Convulsions and such things are cured by means of it." (Y. y H. del Yuc. f. 341 r.) This can hardly be *C. arboreus*. Dr. Standley notes that this description suggests a *Tithonia* with inflated hollow flower-stalks, although it could hardly be called a *cardón*, or thistle.

*Chulul*. *Apoplanesia paniculata*, Presl. (Standl. & Gaumer.)

Tree sometimes 30 feet high; its small flowers form in slender racemes. (Standl. 1920-26, p. 441). "Chulul. A very strong tree of this land, from which they make bows. Its heart is the strongest of any tree." (Motul.) "The offensive arms which they (the Mayas) used in war were bows and arrows, lances with flint points, and wooden swords with two edges and a point which they made of a black wood called *chulul* and hard as a bone. These were three palms long and three fingers wide. Of the same wood they made daggers a third as long with a flint point." (Bel. de Yuc. I, 80). The same wood was also employed for shields. (Ibid. I, 55).

*Chum*, or *Chuun*. *Maximiliana vitifolia* (Willd.) Krug. & Urb. (Standl. 1920-26, p. 836). *Madera de pasta*. (Gaumer.)

Tree 30 feet and upwards with showy gold-yellow blossoms. The branches take root when stuck in the ground and are planted for hedges. The wood is soft and spongy and the bark is used to make a sort of bucket. This is probably the tree mentioned by Landa as being employed in this manner. (Landa, 1900, p. 390). Avendaño mentions another plant called chun, however, which has no resemblance to the above. At Tayasal he saw some "chunes, which are like chayotes (*Chayota edulis*, Jacq.) though without thorns." (Means, 1917, p. 145). This chun would be a herbaceous vine, apparently.

*Chun-cuy*. *Corozo*. (Pio Perez, 1898, p. 106). Evidently *Attalea cohune*, Mart.

See Standl. 1928, Pl. 6. It seems strange to find no other mention of the Maya name of this showy and useful palm. Its trunk is used for construction, the buds are edible, and the seeds are a cattle-fodder, made into sweetmeats and yield a valuable oil. It seems likely that one of the unidentified Maya plant-names also refers to the Corozo.

*Chunup*. *Clusia flava*, Jacq. (Standl. 1920-26, p. 825; Millsp. I, 380; Gaumer.)

A tree 30 feet high, said to be a remedy for syphilis.

*Ix-chuy-che*. Lit. tree cluster.

"This vine, ix chuiche, is cooling. It is so named because it means hung from a tree, which it does with its fruit, so that it appears all the same (thing). It produces handsome little blossoms and is medicinal for jaundice and other things." (Y. y H. del Yuc. f. 201 r.)

In the account of his journey to the Itzas Father Avendaño describes what may be the same plant: "Since on the trees there were some chuis which are like large edible thistles, the leaves of which preserve the water from the dew and rains for a long time, and by tapping them in the stem, the water which they have preserved comes out, although it is dirty and bad smelling; but the thirst we felt was more so. These same plants served us for food, by eating the stems of each leaf, something like two fingers of white that they have, since that part is most tender, and the rest is very bitter and very hard." (Means, 1917, p. 165).

The Maya text prescribes a drink made from the raw crushed leaves of the *chuy-che* for an epidemic characterized by headache and pain in the heart (305). The plant is also applied to the skin for a disease resembling erysipelas (339).

*Ek*. *Haematoxylon campechianum*, L. *Palo de tinta*. (Standl. 1920-26, p. 418 & Gaumer.) Logwood.

Described as a tree sometimes 50 feet high, with gnarled trunk and branches and a rough bark. "On the coast near the said town (Zinanché), and over the greater part of this land there are two trees in great quantity. One of these is called ek, which means black, and with which they make black, blue and purple dyes, and others of which a large quantity had been shipped to Spain." (Rel. de Yuc. I, 140).

*Ek-balam*. *Croton cortesianus*, H. B. K. (Standl. 1920-26, p. 619; Seler, 1902-08, III, 564).

*C. flavens*, L. (Standl.)

Described as a bushy shrub of a greenish brown appearance, often 3 to 5 feet high. A drink is made of the crushed and roasted root for diarrhea (143) and the gum or bark is applied for a sliver in the foot (427). Lit. black jaguar.

*Ek-huleb.*

A drink is made of the crushed leaves to cure a disease epidemic in the early 18th century and characterized by pain in the heart and headache (305).

*X-ek-kixil*, or *Ek-kixil-ak*. *Bignonia unguis-cati*, L. (Standl. & Gaumer.)

Lit. black thorns, or black-thorn-vine. Described as a black trailing vine with small dark-green leaves. "This vine, ek kixil, is cooling, and it is so named because it has small spines like nettles. The *bledo de espina* (*Amaranthus spinosus*, L.) is also so named for the same reason. Swellings and sores are cured with this vine." (Y. y H. del Yuc. f. 360 r.) Ek-max and ek-kixil-ak are given as synonyms. (Ibid. f. 47 r.) The Maya text prescribes the boiled leaves as a wash for a certain eruption of pustules (355).

*Ek-luum-chaac*. Lit. black earth Maranta.

The Maya text described this plant as red beneath the leaf. It is dissolved in water and applied to a sore eye (202).

*Ek-mayil-ak*, or *Ek-muyal-ak*. Lit. Blindness-vine, or black-cloud-vine.

"This vine, ek-muyal-ak, is cooling and means dark vine; and the reason is that it cures the sight of those who have sound eyes, but cannot see, and also even though they have a film (on the eye)." (Y. y H. del Yuc. f. 361 r.) The Maya text prescribes the juice for blindness (197).

*Ek-mayil-xiu*. A plant prescribed for blindness (197).

*Ek-puc-che*, or *Uk-che*. *Porophyllum punctatum* (Mill.) Blake. (Standl. 1920-26, p. 1612).

A shrubby plant common in brush lands. "This plant, ukche, is heating to a high degree. It is called louse-plant, because they kill them with it. It has certain small points which resemble lice. With it they cure abscesses, Peruvian rash, scalled-head and such things." (Y. y H. del Yuc. f. 373 r.) "This plant, ekpucche, is the same as the preceding and only differs from it a little in the leaves, but not in its virtues." (Ibid. f. 374 r.) The Maya medical text prescribes the juice of the steamed plant for scabs and states that the medicine-men give both names to the same plant (329).

*Ek-teel*. Lit. black shin.

The crushed root is poulticed on hemorrhoids (319) and the leaf is a remedy for a certain skin-disease (364).

*Ele-muy*. *Guatteria Gaumeri*, Greenm. (Standl. 1920-26, p. 278; Gaumer.) *Conejo quemado*.

A tree 30 to 50 feet high with gray bark. The leaves have an aromatic odor when crushed. The name may be a corruption of ek-lemuy. It is employed by the Spanish Yucatec doctors as an emollient for certain skin affections but does not appear in the Maya texts under this name.

*Emzul*, or *Emtzul*. *Macroscopis obvata*, H. B. K. (Gaumer.)

*M. rotata*, Decaisne in DC. (Gaumer.) Also reported as Emtzul-ak.

*Marsdenia Coulteri*, Hemsl. (Gaumer.)

*M. maculata*, Hook. (Millsp. I, 314).

This plant may be referred to one or more of the above. What is called the milky sap or gum of the emzul is prescribed in the Maya text for infected gums (396).

*Ep-che*. Lit. tree-spleen.

This may be a tree-fungus as it is said to adhere to the bark of the Tzalam (*Lysiloma latisilqua*, L.) It is crushed and taken for obstruction of the spleen (130).

*Eoen*.

"A species of *Amaranthus* of this land resembling the *Mercurialis* of Spain." (Motul.)

*Ha*, or *Haa*. *Theobroma cacao*, L. See *Cacau*.

*Habal-kax*. *Samyda yucatanensis*, Standl.

*S. rosea*, Sims. (Loesner, 1923, p. 334).

Seler is the authority for the Maya name, which he translates as burned forest. See *Puc-mucuy*.

*Habaplat*, of *U-habaplat-oil-kax*(?) *Cucumis anguria*, L. (Millsp. I, 393; Gaumer.)

*X-haban-can*.

The Maya texts indicate that this plant is red beneath the leaf and has a succulent root. It is a synonym for *ibin-can* (203 & 290). The crushed root is taken internally for snake-bites (48 & 60), poulticed on swollen testicles (245) and pustules on the groin (290). The crushed leaf is applied to a sore eye (203) and rubbed on smallpox pustules (347). The plant is also poulticed on a wound (426).

*Habin*. *Ichthyomethia communis*, Blake. (Standl. 1920-26, p. 511).

*Piscidia erythrina*, L. (Millsp. I, 368; Seler, 1902-28, III, 569). *Madera de fierro*.

Described as a large tree 50 to 80 feet high, abundant in the forests. "Habim. A tree of this land, strong like the live-oak." (Motul.) "There are also other trees called abines, which is a very strong wood for well-wheels and carts." (Rel. de Yuc. I, 108). The Maya texts prescribe a decoction of the leaves as a bath for asthma (19) and fever (142) and taken internally for ringworm (373).

*Habin-pek*. *Cassia Peralteana*, H. B. K. (Standl.)

*C. racemosa*, Mill. (Millsp. I, 366).

The latter is described as an abundant tree, 60 feet high, in brush and forest lands, producing its large globular clusters of orange-yellow flowers from February to June. Lit. dog-habin.

*Hacay-xiu*.

The Maya text refers to this *hacay-xiu* and to "hacay from the mouth of a well." The crushed plant is taken to accelerate parturition (34).

*Hacolel*. *Heteranthera limosa*, Willd. (Standl. & Gaumer.)

*H. limosa* is described as an herb 6 inches high with dark blue flowers, found in moist depressions in the soil. (Millsp. I, 292).

*Ix-haa'il*. *Ipomoea Meyeri*, (Spreng.) Don.

The fruit is crushed with salt and steeped in water to cure constipation and retention of urine (91), and the juice of the leaves is employed for earache (185).

*Halab-che*. Lit. purging-tree.

The Maya texts give this as a synonym for the *ik-che* and prescribe the crushed root for malaria (125) and what is called irritability (168).



*Halal*. *Scirpus validus*, Vahl. (Millsp. III, 79; Standl.; Loesener, 1923, p. 327).  
*Cañuto*.

Lit. arrow. "Halal. Slender canes of which the Indians make arrows." (Motul.) "The arrows are of very slender cane which grows in the lagoons and is more than six palms in length. Into the cane they insert a very strong and slender piece of wood into which the flint is inserted. They do not use or know about poison, although there is plenty of it." (Rel. de Yuc. II, 340). It is said to be employed for making mats. A decoction of the leaves is employed as a bath for phthisis (23), and of the pith, for fainting (212). The crushed pith is taken for dysentery (80 & 128), constipation and retention of urine (128) and hiccoughs (232). An infusion of the root is taken for a certain fever accompanied by an eruption of the skin (149) and poulticed on other eruptions (320).

*Halal-che*. *Pedilanthus nodiflorus*, Millsp. Slipper plant. (Standl. 1920-26, p. 606).

*Hatanal*, or *Haltanal*. *Celosia virgata*, Jacq. Cockscomb. (Millsp. I, 295 & Gaumer.)

*X-hatz*. Some small prostrate Euphorbia. See Xanab-mucuy.

"Hatz. A Euphorbia which is the so-called *yerba del pollo*. Its juice is good to stanch blood." (Motul.) "Hatz. The plant which they call *yerba del pollo*, or Xanab-mucuy." (P. P. 1866-77). Compare Lakintan. An infusion of the leaves is employed as a bath for convulsions (161). The milky sap is applied to a film on the eye and the plant is said to be also called canbalzac (209).

*Haatz-ak*. The plant is crushed and taken internally for a spider-bite (46).

*Hauay*, or *X-hauay*. *Parthenium hysterophorus*, L. *Altinisa*. (Gaumer.)

*Euphorbia hirta*, L. (Standl.)

"This plant, hauay, is the artemisia of Castile. It produces a small white flower. It is everywhere, especially in the squares which is where it grows . . . It differs from the leaf of the so-called hauay-che in that the other is a tree and this, a plant. It takes its name from the disease itself. There are two sorts, and both are heating and refining." (Y. y H. del Yuc. f. 221 r.) The Maya texts prescribe it for falling hair (217), headache (227) and a so-called leprosy characterized by ridges and welts on the skin (307). *P. hysterophorus* is an herb 18 inches high, abundant on waste lands near Ticul and common about Merida. For an account of *E. hirta* see Xanab-mucuy.

*Hauay-che*. *Ageratum litorale*, var. *hundurense*, Rob. (Standl. & Gaumer.)

Probably *Parthenium hysterophorus*, L. *Altamisa*. (Standl.) "Hauayche. An artemisia of this land, with the sap of which they cure the itch, ringworm and the leprosy called hauay. They crush the leaves and cook them in water and they rub the complaint with them." (Motul.) "This plant, the hauai-che, also is an artemisia like the preceding (hauay). It differs from it in that this is a plant or vine, but it has the same virtue. It takes its name from the disease called hauay." (Y. y H. del Yuc. f. 222 r.) The Maya texts prescribe a decoction of the plant for swollen testicles (371), a stone in the bladder and blood in the urine (434) and sore eyes (204).

*Hauay-xiu*. *Sida diffusa*, H. B. K. (Millsp. I, 308; Gaumer.)

*S. procumbens*, Sw. *Altamisa*. (Standl.)

An herb 10 inches high, frequent in barren places near Izamal. The Maya text states that it is called *altamisa* in Spanish and prescribes a decoction of it for an itching rash (354).

*Hau-che.* *Cordia globosa*, (Jacq.) H. B. K. (Gaumer.)

Described as a treelike shrub 30 feet high with greenish white flowers and a red fruit; common in brush lands about Izamal.

*Haaz.* *Musa sapientum*, L. (Millsp. I, 358).

This name was originally applied to the mamey which is now called chacal-haaz. The 16th century was little more than half over, when we read: "There are many bananas. The Spaniards have brought them, as they were not here before." (Landa, 1900, p. 391).

*X-haz-ak.* Lit. Mamey-vine. "A delicate vine with oval aromatic leaves. When these are crushed, the odor resembles that of the zapoyol (mamey). It produces flowers with purple petals, and the fruit forms in small clusters." Cuevas 1913, p. 108). It is said to be a remedy for gangrene and dysentery.

*Haaz-can.* Lit. mamey-shoot, or mamey-vine.

The root is crushed and poulticed on snake-bites (54) and the leaves crushed for a drink for headache (220).

*Haaz-maar.* Lit. monkey-mamey.

"This little tree, the hazmáx, is heating. It is so named because the herbalists say that the monkeys whip their young with the branches of this tree when they anger them. It is a good medicine for convulsions and is more certain than the above (tamcazche). They even say that nature taught the monkeys to cure themselves with this tree, when they feel themselves attacked with convulsions." (Y. y H. del Yuc. f. 288 r.) The Maya text states that the leaf resembles that of the mamey and prescribes an infusion of the crushed leaves for certain skin-diseases (323 & 332). The root is boiled, crushed and held in the mouth to cure infected gums (385).

*Hebil.* *Ipomoea fastigiata*, Sweet. (Gaumer.)

Described as a vine 15 feet, common in old fields near Izamal.

*Hee-bech.* *Solanum yucatanum*, Standl.

*S. juripeba*, Rich. (Millsp. I, 389 & Gaumer.)

The latter is described as shrubby, 10 feet high, producing greenish white flowers; common in forests about Izamal. Lit. quail-egg.

*Hetzim-xiu.* *Helenium quadridentatum*, Labill. *Manzanita*. (Standl. & Gaumer.)

Lit. sneezing-plant. An erect annual, 4 feet high, common in waste places about Merida.

*Hobon-kak*, or *Hobonte-kak.* *Euphorbia heterophylla*, L. (Millsp. I, 304 & Gaumer.)

Evidently from a disease of this name, probably erysipelas.

*Ho-kab.* *Tecoma pentaphylla*, Juss. (Maler, 1910, IV, 146).

*Tabebuia pentaphylla* (L.) Hemsl. (Standl.)

Lit. five-stem. "This tree, hokab, grows in the neighborhood of the sea and also many leagues in the interior." (Y. y H. del Yuc. f. 383 r.) In northern Guatemala Maler notes that the tree is moisture loving and that "the trees are ideally beautiful when, still leafless, they unfold their pink (sometimes white or light yellow) blossoms in lavish profusion." The leaves are boiled for a bath for phthisis (12) and crushed and applied to the forehead for headache (229). A drink is made of the crushed root for hiccoughs (231).

*Hol.* *Hibiscus tubiflorus*, DC. (Standl. 1920-26, p. 779; Millsp. I, 30).

*H. clypeatus*, L. (Standl.)

*Hol-che.* *Mariscus jamaicensis* (Crantz) Britt. (Standl.)

*Hol-nuxib.* *Baccharis trinervis* (Lam.) Pers. (Standl.; Gaumer.)

Lit. old man's head, a shrub.

*X-holol.* *Hibiscus elatus*, Swartz. (Millsp. I, 378; Standl. 1920-26, p. 779).

A shrub or small tree. An infusion of the crushed leaves is drunk, or a decoction employed as a bath for asthma and coughs (19).

*X-holom-x-al*, or *X-holom-ual.* *Tillandsia streptophylla*, Scheidw. (Millsp. I, 291).

The plant is crushed and poulticed on the forehead for a headache (227).

*Homa.*

Probably a large variety of *Lagenaria siceraria* (Molina) Standl. See Lec. Dr. Standley notes that hom is the Kekchí name for *Crescentia cujete*, usually called luch in Yucatan. "Homa. A kind of long narrow gourds with a small mouth." (Motul.) The Zac-(white-) homa appears to have had a ceremonial significance in ancient times. (Chilam Balam of Chumayel, p. 4). The large homa is used to store food, such as tortillas and atole, and the smaller ones are employed medicinally for cupping.

*Homahak.* *Montanoa Schottii*, Robins. & Greenm. *Cerbatana.* (Millsp. III, 115; Standl. 1920-26, p. 1535; Gaumer.)

The name has been translated as trumpet-vine; it is a scandent shrub.

*Hom-icim.* *Schomburgkia tibicinis*, Batem. (Standl.)

Lit. owl-trumpet. This is the cow-horn orchid to which Pio Perez refers as a parasite. (P. P. 1898, p. 106).

*Hom-toloc.* Lit. iguana-trumpet.

A decoction of the boiled leaves is employed as a bath to cure fainting spells (212) and the plant is a panacea for various other diseases (429).

*Ix-houen.* *Spondias purpurea*, L. (Standl. 1920-26, p. 656). *Ciruella colorada.*

The Maya name might be translated as "every five months." "There are plums of six kinds and of different colors . . . ix-houen, or ciruela colorada." (Rel. de Yuc. I, 261). The Maya texts prescribe a drink made of the crushed or boiled skin for dysentery (122 & 123) and for pus in the urine (421). The boiled young leaves are held in the mouth for infected gums (396). See reproduction, Standl. 1928, Pl. 44.

*X-hoyen-cab*, or *X-hoyoc.* *Morinda yucatanensis*, Greenm. (Standl. 1920-26, p. 1393; Loesener, 1923, p. 339). *Piñuela.*

Described as a scandent shrub. "A plant whose root is used by the Indians to dye thread a scarlet color." (Pio Perez, 1866-77).

*Huaz.* *Crescentia cujete*, L. *Guiro.* (Standl. 1920-26, p. 1324; Millsp. I, 319).

Probably the wild form. See Luch.

*C. macrophylla*, Seem. *Guiro.* (Gaumer.)

The fruit is prescribed as a charm to reduce a swollen abdomen (116) and for blood in the stools and urine (124). It is roasted and crushed for a drink for giddiness (213) and heated to steam swollen testicles (252). The Maya medical texts rather indicate that this is not quite the same as *C. cujete*, which is well

known under the name of *luch*. It is found growing on savannahs. The vessels made of the fruit are used for cupping.

*X-hubul-ha*. *Commelina elegans*. H. B. K. (Standl.)

*Huhub*. *Pinus caribaea*, Morelet. (Standl. & Tozzer.)

The town of Chunchuhub is evidently named for this tree.

*Hul-im-kak*.

Lit. breast-piercing fire, a name given to an abscess of the breast. The Maya text prescribes it for this complaint and describes it as a plant which spreads on the ground. Its ear or spike is not long, and its leaf resembles that of the *Ruellia tuberosa*, L. (241).

*Hulub*. *Bravaisia tubiflora*, Hemsl. (Standl.)

A bush growing on the sand-hills near Progreso. The Maya text states that it grows beside the sea and its stalks are used to string fish. The bark or exterior is powdered and sprinkled on an abscess of the breast; and the split stalk is employed in a complicated charm connected with lancing the abscess (242).

*Hulub-che*. Lit. *hulub-tree*.

This may be another name for the *hulub*, as some bushes are termed trees by the Mayas. A decoction of the root is given for clots of blood in the stools ascribed to poisoning (79).

*Hulubté*. See Anal.

*Hunab-tzotz*. *Ipomoea sinuata*, Ortega.(?)

This is probably what is intended by Gaumer's "Nabtzotz" for which he gives the above identification. It is described as a vine, 10 feet, frequent in brushlands and cornfields about Izamal. The Maya text prescribes it as a panacea for a number of diseases (429).

*Hunpeokin*, or *Hunpeokin-ak*. *Tillandsia* sp.(?)

Named for the *hunpeokin-lizard*, which bites the shadow of a man's head, causing a dangerous headache which may prove fatal if not cured by means of this plant.

"The plant called *ix-hunpeokin*, or *ix-hunpeokin-ak*, which twines on the trees; the vine is yellow and the leaf long and narrow." (Y. y H. del Yuc. f. 41 v.) It is said to climb on the *Sabal japa*. Its leaf resembles that of the *henequen*, but is smaller and the spines are very soft. (Cuevas, 1913, p. 52 & Pacheco Cruz, 1919, p. 32).

Dr. Standley writes that these descriptions suggest a species of *Tillandsia*. They are so much alike that the same name might apply to several species. The Maya texts confirm the descriptions given. Under the name of *hunpeokin*, the leaf is prescribed as a poultice for gas in the bowels (113), crushed and applied for headache (225) and boiled for a bath as a remedy for fainting spells (212). Under the name, *hunpeokin-ak*, the leaf is crushed and poulticed on the head (221 & 222) or burned and the ashes employed in a similar manner (230) for a headache.

*Hunpeokin-ci*. *Aloe vera*, L. *Sabila*. (Standl. & Gaumer.)

Lit. *hunpeokin-agave*. This is a remedy for a headache caused by the lizard of this name (222). Maya women cover the breast with the leaf to wean children. (Stephens, 1843, II, 44).

*Hunpeokin-xiu.* Lit. hunpeokin-plant.

Described as spreading on the ground. The crushed leaves are poulticed on the forehead for headache (221 & 222).

*Ix-hutul-ek-xiu.*

Described as having a narrow white leaf and prescribed as a remedy for hemorrhoids (319).

*Ib.* *Phaseolus lunatus*, L.(?)

"Ib. Beans like *habillas*, and the plant (*mata*) which bears them." (Motul.) "Ib. A broad bean resembling the *haba*." (P. P. 1866-77). Dr. Standley suggests the lima-bean and does not recall any other wide bean that might be grown in Yucatan. It is crushed and poulticed on burns (136) and a certain eruption of pustules (365).

*Ibin-can*, or *Ib-can*. *Ibin* may mean placenta, umbilical cord, fabric and net.

"This vine, *ibcan*, is heating. It bears certain small fruits like *habas*, which, they say, are eaten by serpents. For this reason they call it *ibcan* which means snake-beans." (Y. y H. del Yuc. f. 235 r.) Under the name, *ibin-can*, the Maya texts prescribe it for snake bites, crushed and taken internally (48 & 60) and boiled for a wash (62). It is crushed and applied to a burn (136), a sore eye (203), swollen knees (244) and swollen testicles (245). The leaves are boiled for a wash for some skin-complaint resembling chickenpox (330). Compare *Ibin-xiu*.

*Ibin-ha.* *Pistia stratiotes*, L. *Lechuguilla*. (Gaumer.)

"The plant consists of a rosette obovate leaves 3 to 10 cm. long, with a mass of fibrous roots, and floats on the surface of quiet water." (Standl. 1928, p. 102). Compare *Xicin-chah*.

*Ibin-xiu.* *Stachytarpheta jamaicensis* (L.) Vahl. (Standl.)

*Valerianoides jamaicense*, L. (Millsp. II, 92).

This is a common tropical weed known as *Verbena* and used in various parts of Spanish America as a remedy for intestinal worms, venereal diseases, ulcers, erysipelas, yellow fever, dropsy and stomach affections. It is an herb 4 feet high, and has been exported to Europe from Brazil under the name of Brazilian tea. (Standl. 1920-26, p. 1243).

*Ic.* *Capsicum annum*, L. *Chile*. (Gaumer.)

"Ic. The *axi* or *chile*, the pepper of the Indians." (Motul.) "There is a great quantity of *chile*, which in Spain they call pepper of the Indies. There are various sorts of it, both in size and in strength, because there is a kind as long as the span from the thumb to the forefinger and another wild variety like grains of wheat (*maxic*), and this is much stronger than the large sort." (Rel. de Yuc. I, 61). Usually mixed with other ingredients, the Maya texts prescribe the *ic* for phthisis (24) delayed parturition (33 & 34), diarrhea and cramps (65, 69 & 73), blood in the stools or urine (80 & 124), vomiting blood (127), and obstruction of the spleen (180). It is applied externally for giddiness (214), earache (191) and hemorrhoids (318).

*Ic-aban.* *Croton humilis*, L. (Standl. 1920-26, p. 616).

Lit. *chile-bush*. Described as herbaceous, 18 inches high, found on open grounds and scrub lands, or at times a slender shrub. The leaves are poulticed on chronic ulcers (285) and the juice of the crushed plant is applied to syphilitic sores (331).

*Ic-bach.* Lit. bach-chile.

The bach is a bird called Chachalaca in English. The root of the plant is boiled and held in the mouth to cure infected gums (385).

*Ic-che.* Lit. chile-tree. See Ixim-che.

*Ic-mulak.*

The Maya text states that its leaf resembles that of the panoi *Suriana maritima*, (L.) and prescribes it for ulcers and abscesses (288).

*Ich-can.* *Solanum nigrum*, L. or *S. cornutum*, Lam.(?)

Ich-can might be translated as claw-shoot or nail-shoot.

The Maya text gives this name as a synonym for pahal-can and prescribes the crushed plant as a poultice for a certain eruption of pustules (309). This identification is confirmed by Pio Perez. (P. P. 1898, p. 106). Another authority refers to "this plant, pahal-can, the icican is very similar to it." (Y. y H. del Yuc. f. 39 r.)

*Ich-huh.* Perhaps *Eugenia axillaris*, (Swartz) Willd. *Granada cimarrona*, *Vaina de espada*. (Standl.)

"This plant, ichhuh, is most cooling and is so named, which means iguana-eye, because its flower resembles it. It is reddish and yellow. They call it *uaitscit* in Mexican." (Y. y H. del Yuc. f. 249 r.) The powdered root is sprinkled on atole for dysentery (100) and malarial chills (156). The crushed leaf is also a remedy for dysentery (135). The dried powdered leaves are applied to scrofulous tumor of the neck (349) and a decoction of the root is employed as a wash for hemorrhoids (319). The leaves or other portions of the plant are boiled and employed as a bath for aching bones and convulsions (179).

*Ich-luumil-tunich.* Lit. in rocky land.

A decoction of the plant is employed as a bath for convulsions and delirium (161).

*Ik-ak.* Lit. wind-vine.

A decoction of the leaves is employed as a bath for aching bones and convulsions (179).

*Ik-che.* Lit. wind-tree.

A decoction of the root is used as an emetic for what is called irritability (168).

*Ikil-ha-xiu.* *Lantana aculeata*, L. (Gauger.)

*L. camara*, L. (Standl.)

Compare *Zicil-ha-xiu* and *Petel-kin*.

*Itzimté.* *Clerodendron ligustrinum* (Jacq.) R. Bro. (Standl. 1920-26, p. 1252.)

Gauger identifies this as *C. aculeatum* (L.) Schl. which seems to be a West Indian species, and describes it as a shrub 10 feet high, common in open lands near Izamal. "Itzimté. A plant with which the Indian women season posole, camote-stew and other things." (P. P. 1866-77). The Maya text prescribes the boiled leaves as a wash for snake-bites (62).

*Itzin-can.*

The Maya text prescribes this plant for a so-called leprous disease characterized by ridges and welts (307).

*Ixim. Zea mays, L. Maiz.* (Gauger.)

"The seeds which they have for human sustenance are very good maize and of many differences and colors. Of this they garner a large quantity; and they make granaries and keep it in silos for sterile years." (Landa, 1900, p. 387). "For subsistence, they formerly made bread of maize, and they do the same today; and they drink their atole, which is a sort of pap made of a dough of crushed maize dissolved in water. They continually drink posole all day, without taking clear water, but dissolving a little ball of cooked maize in water until it thickens. This they drink, and with it they sustain themselves." (Rel. de Yuc. II, 30). "One hour before sunset it was their custom to make certain little cakes of the said dough on which they supped, dipping them in crushed chile dissolved with a little water and salt." (Ibid. I, 259).

Besides the atole and posole which is the medium for taking certain drugs, the Maya medicinal texts prescribe raw maize soaked in water for blood in the urine (418) and it is roasted and crushed with the macal-kuch to poultice a sore or swelling caused by sorcery (432).

*Ixim-che. Casearia nitida (L.) Jacq. (?)*

*Citharexylum Schottii*, Greenm. (Gauger & Standl.)

"Ixim-che. A certain plant or shrub." (P. P. 1866-77). "This tree, iximche, is moderately cooling. It is thus named, which means maize-tree, because it bears a fruit like maize. With it they cure a dangerous swelling called chacmulahkak in this land." (Y. y H. del Yuc. f. 367 r.) Dr. Standley reports that the U. S. National Herbarium has two plants from British Honduras accompanied by the name, ixim-che. One is *C. nitida*, and the other is *Andira inermis*, H. B. K. Neither particularly resembles maize, but the former is a shrub or small tree. The Maya texts give ic-che as a synonym and prescribe an infusion of the young leaves taken internally, or a decoction of them as a bath to cure asthma and coughs (19). The crushed leaves are also taken for cramps (106). The crushed root is applied externally for syphilitic sores (318), erysipelas (334) and the dangerous swelling mentioned above (337). One text refers to the red part of the plant. (Ixil, f. 56 r.)

*Ixim-ha. Lemna minor, L. (Standl.) Duckweed.*

*Wolffia braziliensis*, Wedd. (Millsp. I, 290 & Gauger.)

This aquatic plant is reported as common in water storage tanks at Izamal. The Maya text states that its leaf is somewhat like that of the cabal-ziz (241).

*Iz. Ipomoea batatas, L. Camote.* (Gauger.)

"Also there are sweet-potatoes which the Indians call Iz, but because of the dryness of the land they are small." (Rel. de Yuc. I, 61). "Iz. *batatas*, or *camotes*. They are good to eat; they almost have the flavor of *casta* . . . (chestnuts?)." (Motul.)

*Iz-ak. Lit. camote-vine.*

The Maya text states that it has a red flower like that of the chacmol-ak (287).

*Kahpakal. Citrus amara, Link. Cajel.* (Gauger.)

Lit. bitter orange. These were imported by the earliest Spanish settlers.

*Kah-yuc. Astrocasia phyllanthoides, Rob. & Millsp. (Standl. 1920-26, p. 610).*

Lit. brockett-gall; a shrub 3 to 6 feet high. Also reported as x-cabal-x-ppix-thon. See Ppix-thon-kax.

*Kak-che, or Kakal-che.* *Bourreria pulchra*, Millsp. (Standl.)

Lit. fire-tree. "Kakche, or Kakalche. Ebony." (Motul.) "Kakalche. A plant the wood of which resembles ebony." (P. P. 1866-77). The Maya text prescribes the dust of the decayed trunk as a remedy for a certain eruption of the skin resembling a burn (375).

*Kan-abal.* *Spondias lutea*, L. *Ciruella amarilla*. (Gauger.)

Lit. yellow plum. "There are plums of six kinds and of different colors . . . the kan abal, or ciruela amarilla." (Rel. de Yuc. I, 261). The Maya text prescribes the crushed bark as a remedy for diarrhea (65).

*Kanal-zin, or Kan-zin.* *Lonchocarpus rugosus*, Benth. (Standl.)

*Phaseolus elegans*, Piper. (Standl.)

*L. rugosus* is a tree with deep pink flowers. Kanal-zin and kan-zin could both be translated as yellow skirt. Pio Perez gives them as synonyms. (P. P. 1898, p. 107). The Maya texts prescribe a decoction of the leaves of the kanal-zin as a bath for phthisis (12) and asthma and coughs (19). The wood is a yellowish color.

*X-kanan.* *Hamelia erecta*, Jacq. (Standl. 1920-26, p. 1380).

*H. patens*, Jacq. (Millsp. I, 48; Seler, 1902-08, III, 565; Gauger.)

Described as a shrub or small tree, 10 feet high, noted in the suburbs of Merida and in gardens. The fruit, a red berry, is acid and edible, though we find no mention of its being eaten in Yucatan. "A plant or bush which they call that of Cuba. It is marvellous for swellings of the legs, boiled and placed on the swelling; and wash the legs with the water gently without drying them with a cloth." (Motul.) The Maya texts prescribe the boiled leaves for a bath as a remedy for coughs and asthma (19 & 27), snake-bites (62), fever (142) and giddiness (214). The crushed leaves are applied to scabs also (328).

*Kan-coc.*

The exterior, either of the plant or fruit, is a remedy for coughs and asthma (27).

*Kan-che.* *Conocarpus erecta*, L. *Mangle prieto*, *Botoncillo*, Button-mangrove. (Standl. 1920-26, p. 1029 & Gauger.) Reprod. Standl. 1928, Pl. 59.

The buttonwood is reported as a tree 30 feet high, growing in the mangrove swamps. Lit. yellow tree. Kanche is also the Maya word for bench or seat. "This tree, kanche, is somewhat more cooling than heating. It is called kanche or kanchikinche, because with it they cure certain foul yellow-colored stools called kankuxnak." (Y. y H. del Yuc. f. 206 r.). Under the name of kan-che, it is prescribed in the Maya texts as a remedy for foul yellow stools (92 & 94) and convulsions (160). The crushed root is poulticed on swollen testicles (318).

*Kanchikin-che.* *Conocarpus erecta*, L.(?)

Lit. jaundice-tree, or bile-tree. This identification is based on the reference giving kanchikin-che and kan-che as synonyms. The Maya medical texts indicate the same thing. Under the name kanchikin-che it is prescribed for foul stools (92, 93 & 94) and the leaves and root are boiled and taken for jaundice and biliousness (260).

*Kanchikin-ak.* *Cassia anisopetala*, Donn. Sm. (Petén). (Standl.)

Lit. kanchikin-vine. The Maya text states that the stem and budding flowers are yellow. The root is crushed and boiled to cure jaundice and biliousness (260).



*X-kan-chim.* *Ichnanthus lanceolatus*, Scribn. & Sm. (Millsp. III, 35.)

Lit. yellow capsule. A grass 2 feet high, common in old fields near Izamal.

*Kan-chunup.* *Thouinia paucidentata*, Radlk. (Gaumer & Standley.)

*Sebastiana adenophora*, Pax. & Hoffm. (Standl. 1920-26, p. 648).

Described as a tree or shrub 10 to 20 feet high abundant on the north coast. "This tree, kanchunup, is moderately heating. It differs from the other one called chunup in that this one produces a yellow flower and the other does not." (Y. y H. del Yuc. f. 216 r.) The root of the kan-chunup is crushed for a drink to cure snake-bites (48 & 60) and applied externally as well (50 & 54) for snake-bites and headache (220). A decoction is used as a bath for fainting spells (212).

*Kan-habin.* *Cassia Peralteana*, H. B. K. (Standl.)

*X-kanil-macal.* Lit. yellow macal.

It is prescribed as a remedy for seven unspecified diseases in the Maya text (429).

*Kanizte.* *Lucuma campechiana*, H. B. K. *Mamey de Campeche*. (Standl.)

"There is another tree which the Indians call canizte which in proportion resembles the chico-çapote (*Achras zapota*, L.) both within and without; the fruit is yellow, sweet and very similar to the yolk of a roasted egg. It has a pit of the appearance of a pigeon's egg." (Rel. de Yuc. I, 58).

*Kankan-chi.* Lit. yellow chi.

Chi, or *Malpighia glabra*, L. has a red fruit. Some part of the plant or fruit is rubbed on the head for scab or scalled-head (377).

*Kan-kiliz-che*, *X-kantiriz*, or *X-kanthiriz.* *Acacia farnesiana* (L.) Willd. (Standl. 1920-26, p. 378; Millsp. I, 298; Gaumer.)

This shrub is cultivated in southern Europe for cassie-flowers; the Spanish Yucatecs call it *Aroma*. "Kantix. Certain spiny trees with small round yellow flowers." (Motul.) "This tree, kankirixche, is the Moral. It is heating. It has handsome yellow flowers and many spines all around. Its flower resembles the Virgin, like a lily among thorns." (Y. y H. del Yuc. f. 204 r.) In this connection it is interesting to note that kantixal means a gem worn on the breast.

The Maya texts prescribe a decoction of the heart-wood for foul yellow stools (92), jaundice and biliousness (260), and the crushed root is mixed with chile and applied to the rectum for dysentery (99). What is called the red part is boiled and held in the mouth for toothache (398). A decoction of the root is drunk for abdominal pains caused by sorcery (431).

*X-kan-lecay.* *Cuscuta americana*, L. (Gaumer.)

Lit. yellow fish-snare. Described as a twining vine, 6 feet, abundant on other plants in old fields near Izamal. (Millsp. I, 314). "This plant, or vine, called kanlecay is heating and very medicinal. It is so named because it resembles the net with which they catch fish." (Y. y H. del Yuc. f. 241 r.) The Maya texts prescribe a decoction of the plant for a bath to cure phthisis (13) and an infusion is used in the same manner for fever (141) and biliousness or jaundice (259).

*X-kan-lol.* *Tecoma stans* (L.) H. B. K. *Tronadores*. (Standl. 1920-26, p. 1318; Millsp. I, 35 & 319; Gaumer.)

Described as a shrub 20 feet high, common in brush lands about Izamal. Standley reports the English names as trumpet-flower and yellow elder. Kan-lol means yellow blossom. The crushed seeds are a remedy for abdominal pains (70)

and foul yellow stools (94). A decoction of the leaves is employed as a wash for buboes (368) and other diseases (434).

*X-kan-lol-ak.* *Bignonia unguis-cati*, L. (Standl. 1920-26, p. 1314; Millsp. I, 390; Gaumer.)

Lit. yellow-flower-vine. Described as a vine, 20 feet, common in forests about Izamal. The flowers are yellow.

*X-kan-lol-xiu.* *Flaveria linearis*, Lag. (Standl.; Gaumer.)

Lit. yellow-flower-plant.

*Kan-mucuy-coc.* Lit. yellow dove for asthma.

"On the following leaf it treats of this vine . . . they give it many names, according to how it is applied, and it is the same thing. Others call it *chac ak*. (Y. y H. del Yuc. f. 161 r.) "This plant or vine, called *chaemococak*, which others call *leu(m)ak*, and others, *kannucuycoc*, is moderately heating and throws out roots of the thickness of a narrow pitcher (*perulero*). In Mexican it is called *cumpatli*." (Ibid. f. 162 r.) The Maya text prescribed it as a remedy for coughing and asthma (27).

*Kan-mucuy-che.* Lit. yellow-dove-tree.

A decoction of the root is taken for foul yellow stools (92 & 93) and employed as a bath for biliousness (260). *Kan-mucuy* is also a term applied to anemia.

*Kan-mul.* *Bidens pilosa*, var. *leucantha*, L. *Mulito*. (Gaumer; Standl.)

Lit. yellow mul, or yellow bur. This appears to be the plant described as an "herb 4 feet high, very common in waste lands, flowers pure white." Millsp. III, 131).

*Kanpetkin.*

"This vine takes its name from a red pustule or pimple which is accustomed to come on a woman's nipple or elsewhere, and which in this language is called *kanpetkin*. They say the leaf of this vine resembles the nipple of a young woman . . . For this reason, they cured this disease with it, saying that nature manifested the remedy in the same form as the disease; and he who thought of this was most reasonable. This vine is abundant in rugged country and on high hills, but it will never be found on level land." (Y. y H. del Yuc. f. 210 r.) *Kanpetkin* is also the name of a yellow insect resembling a wasp. Compare *Petel-kin*, or *Pet-kin*.

*Kan-pokol-che.* *Duranta plumieri*, Jacq. (Millsp. I, 386; Standl. 1920-26, p. 1241).

*Machaonia Lindeniana*, Baill.? (Gaumer.)

Described as a shrub or tree 20 feet high, often armed with spines and bearing white or lilac flowers in long loose racemes. A decoction is drunk for jaundice and biliousness (260).

*X-Kan-pokol-cum.(?)* *Caesalpinia yucatanensis*, Greenm.

*Kanté.*

"A tree from whose roots they obtain a yellow coloring matter." (Motul.) Dr. Standley reports *Kante* as the Kekchi name for *Gliricidia sepium*, L. (known as *Zac-yaab* in Yucatan) but does not know that this yields a dye. The leaves of the *kanté* are crushed raw as a remedy for coughs and asthma (19) and boiled for a bath for other complaints (434 & 437). See *Reprod. G. sepium*, Standl. 1928, Pl. 36. "A tree with yellow blossoms or fruit." (Maler, 1908, IV, p. 132).

Possibly an *Acacia* is intended, as it is associated with the *Kantemo* in the Maya texts (434 & 437).

*Kante-ceh*. Lit. deer-kanté.

The crushed leaves are poulticed on ulcers and abscesses (287).

*Kante-mo*. *Acacia filicioides*, (Cav.) Trel. (Standl.)

Lit. parrot-kanté. A decoction of the leaves is employed for a bath for two unidentified diseases (434 & 437). Spanish Yucatec doctors employ the same treatment for obstruction of the spleen. (Cuevas, 1913, p. 55).

*X-kantunbub*. *Sanvitalia procumbens*, Lam. *Sanguinaria de flores negras*. (Millsp. III, 111; Standl.; Gaumer.)

Lit. yellow canopy. This is probably the most widely known domestic remedy of Yucatan. "*Ix-kantunbub*. A medicinal plant and antidote for poison. It is eaten raw by itself in salad or boiled. Chiefly it is the pruner's plant (*yerva del podador*), because its juice, applied to fresh bleeding wounds, is as efficacious as balsam. Applied to swellings and dislocations of the bones, it cures them. The leaf, when eaten, arrests bloody flux and the root is a marvellous purge." (Motul.) "*Ix-kantunbub*. A plant that is admirable for wounds and poison." (Diccionario de San Francisco.) "In the said town of Motul there are many medicinal plants of great virtue, especially one which they call *cantunbus* (*kantunbub*); the Spaniards call it *corconela* (*escorzonera*). It is every where in this land. It produces a flower like that of the *manzanilla* (*chamomile*) of Spain. The juice of this plant stanches the blood of any wound and cures it in a very brief time. The liquor from it, produced by distilling or boiling, refreshes the liver, purges the stomach and has other effects of great virtue." (Rel. de Yuc. I, 86). "*Kantunbub*. This plant has the same virtues as the *Yerba de la golondrina*, *ahpakunpak*. It has a yellow flower and is a common plant on the squares and in the yards." (Y. y H. del Yuc. f. 296 r.)

The Maya texts prescribe the boiled plant for constipation and foul stools (91 & 92), spitting blood (121), dysentery (95 & 100). The leaves are boiled and poulticed on dislocations (184) and crushed raw and applied to swollen testicles (245), and a splinter in the foot (425). The plant is boiled and the decoction drunk for blood in the urine (423).

*Kan-zac-xiu*. *Malpighia glabra*, Mill. (Standley; Gaumer.)

*M. glabra* is usually called *Chi* by the Mayas. *Kan-zac-xiu* means yellow-white-plant. Compare *Zac-xiu*.

*Kan-zinkin*. *Caesalpinia pulcherrima* (L.) Swartz. (Standl. 1920-26, p. 424).

This is the yellow flowered form; see *Chac-zinkin*.

*Kax*, or *X-kax*. *Randia truncata*, Greenm. & Thompson. (Standl. 1920-26, p. 1376).

*R. xalapensis*, Mart. & Gal. (Millsp. I, 321).

"*Kax*, or *x-kax*. A certain tree so named." (P. P. 1866-77).

These *Randias* are shrubs and are also reported under the names of *mehen-kax* and *cabal-kax*, which mean small and low *kax*. It is possible that the *kax* itself is a larger tree, such as *R. longiloba*, Hemsl. See *Canal-kax*.

*Karab-yuc*. Lit. bind the brockett.

This is also the name of a snake of the constrictor type. "*Kaxabyuc*. A plant or small vine which is good fodder for horses." (Motul.) "This green plant called *kaxab yuc* is a vine that is moderately cooling. There is another which is almost red, which is sketched along with this one called *kaxab yuc*, and which is of the

same quality. They (both) produce a handsome blue flower and are the best sort of fodder for animals." (Y. y H. del Yuc. f. 309 r.) The Maya text states that this vine has a round leaf and climbs on trees. A decoction of the leaves is taken for dysentery (100) and employed as a bath for another disease (430).

*Kaxil-ix-chel.* Lit. wild ix-chel.

Ix-chel means rainbow and was the Maya goddess of medicine and child-birth. Chel is also the name of a bird called urraca (magpie?). "Kaxixchel. A plant which grows like a vine. Its root, cleansed and washed and applied somewhat hot, is a marvelous poultice for drawing the cold out of a leg or arm or hand." (Motul.) The Maya text prescribes the crushed plant as a poultice on the heart for fainting spells (210). Compare Kaxil-ix-ku.

*Kaxil-ix-koch.* *Cecropia obtusa*, Trec.(?)

Lit. wild ix-koch. "The tree, wild kooch, is called *yeuruma* in Spanish." (Y. y H. del Yuc. f. 45 v.) *Cecropia obtusa* is called *yagrumo hembra* in Cuba. (Standl. 1920-26, p. 218). See X-koch and Kochle for further discussion.

*Kaxil-ix-ku*, or *Kax-ix-ku*.

"Kaxixcu. Another medicinal plant for causing broken bones to knit." (Motul.) "This plant called kaxil ku is a vine ordinarily found along stone walls. This one is red. There is another which is green which they call kax-ix-chel, and it has the same effect. It is heating and it is a miracle(?) that nature provides this land with it, so famous is it. Nothing else could equal it for any dislocation or broken bone." (Y. y H. del Yuc. f. 301 r.) The Maya text prescribes an infusion of the plant for hair falling out and a crippled arm (218).

*Kaz-cat.* *Luehea speciosa*, Willd. (Standl. 1920-26, p. 738).

Described as a tree or shrub 6 to 48 feet high. The leaves are used to protect chile while it is drying. (Motul, 401, r.)

*Keb*, or *X-keu*. *Psittacanthus americanus* (Jacq.) Mart. (Standl. 1920-26, p. 235).

*Phoradendron vernicosum*, Greenm. parasitic on mulché. (Gaumer.)

It seems likely that keu is a contraction of keuel. See Chac-x-keuel. It is applied externally as a remedy for buboes. (Ixil, f. 66 v.)

*Kel-kuy.* *Adiantum tricholepis*, Fee.(?)

The Maya text gives this as a synonym for tel-oiu. It is crushed and steamed as a remedy for scab (329).

*Kex-ak.* *Paullinia fuscescens*, H. B. K. (Standl. 1920-26, p. 702 & Gaumer.)

Lit. binding vine, an apt name for this vine the tough stems of which are used in some parts of Mexico to bind the framework of huts.

*Kik.* See Kik-che.

*Kik-aban.* Probably *Castilla elastica*, Cerv.

Lit. rubber-bush. "This tree, kik haban, is of the same quality as the kik, or *uli*, and they say it is the same. It has the same virtues if it is not the same." (Y. y H. del Yuc. f. 207 r.) The plant is crushed and given as a remedy for what appears to be a hemorrhage of the stomach (81), and a decoction is given for dysentery (101 & 103). The toasted leaves are powdered and applied to hemorrhoids (319) and the crushed plant applied to a sliver in the foot (427).

*Kik-ak.* Lit. rubber-vine.

The sap is poulticed on an abscess or ulcer (195).

*Kik-che.* *Castilla elastica*, Cerv. *Hule.* (Standley; Gaumer.)

Lit. rubber-tree. "Kiikche. The tree which produces rubber, and also another species of tree." (P. P. 1866-77). "This tree, kikche, is cooling and somewhat different to the uli, or kik. Its gum is an admirable remedy for burns from fire." (Y. y H. del Yuc. f. 211 r.) Dr. Standley suggests that this may be merely a form of *Castilla*, perhaps the young plants. The sap, raw or boiled, or the boiled wood is prescribed in our Maya texts for dysentery (80, 95, 100, 103, 124 & 128). The gum is applied to burns (137), and the crushed leaves are poulticed on swollen knees (244).

*Kik-ni-och.* Lit. nose-bleed.

A decoction of the plant is a remedy for dysentery (103).

*X-kinin-hobon.* *Spondias lutea*, L. (Standl. 1920-26, p. 657; Millsp. I, 32).

Kinin, or kinim, is a "certain worm(?) which forms its silky cocoons which hang on the branches; also a species of local plum." (P. P. 1866-77). Hobon is a word of Carib origin. "This tree, kinim, is the hobo. It is moderately heating, and of such virtues that there is hardly a disease that is not cured by it." (Y. y H. del Yuc. f. 208 r.) See Abal.

*Kintah*, or *Kintal.* *Desmodium purpureum* (Mill.), Fawc. & Rendle. (Standl.)

*D. procumbens* (Mill.) Hitchc. Tickclover. (Standl.)

Kintah means to tell fortunes by casting lots. The plant is an herb, 10 inches or larger, common in the forests of northern Yucatan. It is crushed and poulticed to cure a headache (222). The Spanish Yucatec doctors apply the crushed leaves externally and administer an infusion as a cure for pleurisy. (Cuevas, 1913, p. 55).

*Kix-kan-lol.* *Argemone ochroleuca*, Sweet. *Cardosanto amarillo.* (Gaumer.)

*A. mexicana*, L. (Standl.)

Lit. thorny yellow flower. The seeds are a remedy for tenesmus. (Ixil. f. 64 v.) and the crushed root, for earache (188).

*Kix-lol-ak.* *Ipomoea cissoides*, Griseb. (Gaumer.)

Lit. thorny flower vine. Described as a vine, 10 feet, with satiny white flowers, it is abundant in old fields. (Millsp. I, 384).

*Kiix-pach-kuum.* *Sechium edule* (Jacq.) Swartz. Spiny fruited form. (Standl.)

Lit. spiny chayote.

*Kix-x-tez.* *Amaranthus spinosus*, L. *Bledo.* (Standl. & Gaumer.)

*Kix-zac-lol.* *Argemone Mexicana*, L. *Cardosanto blanco.* (Standl.)

Lit. thorny white flower.

*Kiis.* See Chi-abal.

*Ko.* *Sonchus oleraceus*, L.?

"Ko. Sow-thistle, or wild lettuce, a plant of this land." (Motul.) See Nabuk-ak.

*X-koch.* *Ricinus communis*, L. *Higuerilla.* (Standl. 1920-26, p. 622; Millsp. I, 306).

It seems evident that more than one plant has been designated by this name. Compare *kaxil-x-koch* and *kochlé*. "Koch, or ix-koch. *Higuerilla* which they call *infierno*, from which a medicinal oil is obtained. Its leaves are good for pain in the bowels. They are heated by fire and bound on. Poulticed on old sores, they cure them. They are changed every day and the sore is cleansed." (Motul.)

"This plant, *xkooch*, *turcuma* in Mexican, is the *higuera silvestre* (wild figtree). It differs from the *ixkochle*, which has a larger leaf and is better known, and produces a leaf like that of the *arbol del algodón* (*Ceiba pentandra*, L.?) Both of these are equally medicinal. They cure quinsy and such swellings with it." (Y. y H. del Yuc. f. 214 r.) The Maya texts distinguish between the so-called "wild *x-koch*" and the "*x-koch* of the town," and by the latter the *Ricinus communis* is plainly intended. The bean is crushed as a remedy for what is called clotted blood in a woman (40), biliousness (260) and gas in the stomach (76). A decoction of the leaves is drunk for pain in the heart (74). The leaves are wrapped about a hot stone and applied to the rectum for tenesmus (90), and the pith is crushed in water and taken for constipation (91) and hiccoughs (232). The crushed fruit is poulticed on a protuberance on the head (224), scalled-head and scab (378). The leaves are poulticed on buboes of the neck and groin (316 & 368) and ulcers (380). The toasted leaves are rubbed on certain pustules (355), and a decoction of them employed as a wash for hemorrhoids (353).

*Koch.*

"A plant or bush, marvellous for wounds, and it is better than the maguey; it resembles the *pita(h)aya* (*Cereus undatus*, Haw.)" (Motul.)

*X-koch-lé.* *Cecropia obtusa*, Trec. (Millsp. I, 358; Standl.; Gaumer.)

This is a rapid growing tree containing pith. It has been called trumpet-tree. The hollow trunks are often inhabited by ants. (Standl. 1920-26, p. 217). "This small tree or plant, *ixkochle*, is the same as the *higuera de infierno*. It only differs from it in that one has a larger leaf than the other." (Y. y H. del Yuc. f. 259 r.) "Take some leaves of the incense-tree and of the *catapucia* which they call *higuerilla de infierno*, and in Maya *kochle*." (Ibid. f. 56 r.) In this connection it must be noted that the resemblance between the *Cecropia obtusa* and the *Ricinus communis* is not very striking. We find only one mention of the *koch-le* in the Maya medical texts, where it is given as a remedy for retention of urine (413).

*Kokob-ak.* Probably *Aristolochia odoratissima*, L. or one of the species of the genus. (Standl.) Lit. snake-vine.

This has been reported from Tabasco as "*cocobá*." The Maya texts state that it has a yellow flower, and the vine resembles the *x-tab-canil* (*Cissus sicyoides*, L.) "This vine, *kokob-ak*, which others call *xtuchi tunich* . . . is a remedy for headache, any other pain in the body and rashes." (Y. y H. del Yuc. f. 370 r.) The Maya texts prescribe it for asthma (5) and dysentery (99). The sap is dropped into an ulcerated ear (195). Either the root or the plant is crushed and poulticed on the forehead to relieve a headache (222 & 225). The crushed root is heated and applied to the skin to cure a certain eruption of pustules (355). The fruit is said to be yellow. (Ixil, f. 65 r.)

*Kokob-can.* Lit. *kokob*-shoot.

The *kokob* is a certain very poisonous snake. A decoction of the plant is taken for loss of speech and falling (170).

*Kokob-che.* Lit. *kokob*-tree.

"This tree, *kokobche*, is heating to a high degree. It is so named, because when it is rubbed on a person it stings like a vexatious itch. For this reason they call it tree of the serpent *cooh* (*kokob*), a serpent which causes the entire body to exude blood with a vexatious itch and pain. It is to be noted that it must be yellow and have a thin husk or bark. This is applied for abdominal pains; but the other *kokobche*, which has a thick husk or bark like the *guayacan* (*Guaiacum sanctum*, L.) cannot be drunk, for it is a poison. The latter is only good for

anointing, and even anointing it on the outside of the body, it stings and is poisonous." (Y. y H. del Yuc. f. 370 r.) According to the Maya texts the plant, particularly the bark, is crushed and administered for abdominal pains (69 & 70) and dysentery (99). Some part of the plant is boiled and drunk for loss of speech (171) and crushed and poulticed on a dislocation (182). The boiled root is crushed and applied to an aching tooth (391). It has been described as a shrub six feet high with small aromatic leaves. (Cuevas, 1913, p. 56).

*Kokob-xiu.* *Asclepias curassavica*, L.(?)

Lit. kokob-plant. The Maya text states that this is the same as Cuchillo-xiu and prescribes the sap as a remedy for an ulcer or abscess of the ear (195).

*Kolok*, or *Koloc*. See Pichi.

*Kolok-max.* *Crataeva tapia*, L. *Tres Marias*. (Standl. 1920-26, p. 305).

*C. gynandra*, L. (Millsp. I, 297).

A tree 60 feet high, common in the brush and forests. Its three leaflets are probably the reason for its Spanish name. The yellow fruit is said to resemble a small lemon. Some unspecified part, perhaps the leaf, is a remedy for infected gums (386). The Maya name might be translated as monkey-guava.

*Kom*, or *Elom*.

Kom means a valley or hollow. Elom is an archaic form meaning "that which will burn." See Pio Perez, 1898, p. 107. "There is a flower which they call kom. It has a strong odor and burns with great heat when it strikes the nostrils. It could easily be brought here (to Spain), and its leaves are marvellously fresh and broad." (Landa, 1900, p. 386). One medical text prescribes it as a remedy for ulcers and states that it is found in wells, so it is probably the same as the Kom-ha. (Ixil, f. 51 r.)

*X-kom-ha.* *Microspora amoena* (Keutz) Raben. (Millsp. I, 286; Standl.)

Lit. water-kom. Common in water storage tanks at Izamal.

*Kom-kuch*.

"This plant, kom-kuch, is heating. It is called kom, because it is like another (plant) which puts forth a shaft (or dart) at the middle of the leaf and is odorous; and kuch, because it is a remedy for the disease called kuch, which is the Peruvian itch, and for every disease of . . . and abscesses. (Y. y H. del Yuc. f. 377 r.) The Maya text prescribes the crushed plant as a poultice for inflammation of the throat (405).

*X-kom-yaxnic.* *Solanum amazonium*, Ker. (Standl. 1920-26, p. 1300; Millsp. I, 388; Gaumer.)

Described as shrubby, 6 feet high, abundant in opens and brushlands and bearing bright blue or purple flowers. The Maya name indicates a real or fancied resemblance to the yaxnic, or *Vitex Gaumeri*, Greenm., a good-sized tree bearing bright purple flowers. Compare Kom.

*X-kop-che?* *Cordia cylindrostachya* (Ruiz & Pav.) Roem. S. Schult. (Standl. 1920-26, p. 1223; Millsp. I, 315; Gaumer.)

It seems likely that the Kopté is intended here, although *C. cylindrostachya* is a shrub 15 feet high, bearing white flowers and a red fruit.

*Kopté.* *Cordia dodecandra*, D. C. (Standl. 1920-26, p. 1221; Millsp. I, 315). Siricôte.

This is a tall tree with bright orange-red flowers, and may be really the Chac-

kopté, although it has a greenish or yellowish fruit. In connection with these Maya names of trees ending in *té*, it is of interest to note that *te* is the Chontal, Tzeltal, Tzotzil, Yocotan, Jacalteca, Chancabal and Huasteca name for tree. This has softened to *tié* in Chol, to *tze* in Ixil, Aguateca and Mame, and to *che* in Kekchí, Pokonchí, Cakquichel, Quiché and Maya; perhaps even to *chié* in Pokomam. (Stoll, 1884, p. 61 & Blom & La Farge, 1927, p. 469 & 479). All this would indicate that such northern Maya tree-names as kopté, chacté tahté, kanté, chité, uzté etc. have been borrowed from languages spoken in the south.

*Koxol-ac*. Beach-grass. (Pio Perez, 1866-77). Lit. mosquito-grass.

*Kuche*, or *Kulche*. *Cedrela mexicana*, Roem. *Cedro*, *Cedro colorado*, Spanish-cedar. (Standl.) *C. odorata*, L. (Millsp. I, 26 & Gaumer.)

"This tree, kuche, is the cedar. Its name means tree of God. . . There are in this land great forests of these trees. Their wood is famous and useful throughout the land. It is commonly used for lumber for ships, and it is very cheap because of its abundance." (Y. y H. del Yuc. f. 248 r.) Other references to the kuche occur in the Motul and Pio Perez dictionaries, Pio Perez, 1898, p. 107 and Relaciones de Yucatan (II, 55). The Maya texts give both forms of the word. The young leaves of the kuche are prescribed for dysentery (96). Under the name, kulche, the roasted young leaves are applied for earache (187) and the gum for toothache (391).

*Kuchil-xiu*. *Asclepias curassavica*, L.  
Lit. vulture-plant. See Anal.

*Kuk-che*. *Ximenia americana*, L. Tallowwood, Hogplum. (Standl. 1920-26, p. 237; Millsp. I, 294).

Described as a tree 40 feet high, common in forests. The fruit resembles a plum in appearance and is edible, raw or cooked.

*Kuk-chñel*. *Machaonia Lindeniana*, Baill. (Standl.; Gaumer.)

Lit. magpie-sprout. A shrub or tree 10 to 30 feet high bearing clusters of tiny fruits. (Standl. 1920-26, p. 1383).

*Kuk-zuuc*. See Citam-ac.

*Kulim-che*. *Astronium graveolens*, Jacq. *Palo mulato*. (Standl.)

An important timber-tree, its wood is used for furniture etc. Lit. cimex-tree. Decoctions of the leaves, roots etc. are remedies for abscesses and pustules (291, 330, 333 & 346).

*Kulim-ziz*. *Trichilia hirta*, L. (Standl. 1920-26, p. 555; Gaumer.)

Tree 40 feet high, common in the forests. It is also called *Kulim-ziz-che*. (Pio Perez, 1898, p. 107).

*Kum*, or *Kuum*. *Cucurbita moschata*, Duch. (Standl.)

*C. pepo*, L. *Calabaza*. (Gaumer.)

"There are the *calabazas* (cucurbits) of Spain, and there is also another sort of native ones, which the Indians call kum. These are yellow inside, and they eat them roasted and boiled. They also eat the seeds; the Spaniards use them instead of almonds, and they are almost the same size." (Rel. de Yuc. I, 61.) The Maya text prescribes the sap to cure a burn (136).

*Kum-tulub*, or *Kum-x-tulub*. *Melothria pendula* L. or some other Melothria.  
*Pepinillo*.

Lit. tulub-gourd. The tulub is a small coffee-colored lizard. "Kum-ix-tulub.



A plant after the manner of the leaves of the meca. It climbs high like ivy. With it they cure the swelling called chupil, crushing it and placing it on the swelling. It is boiled and the liquor only is drunk for three or four days. It immediately purges anyone who has a running of the member and ripens the matter which is of the kidneys." (Motul.) "Kum-x-tulub. A plant for curing gonorrhoea. The Indians drink it for three or four days and recover. Also the pepinillo, the fruit of the preceding." (P. P. 1866-77). "This plant, the kum-ix-tulub, is the pepinillo of this land. It grows on dry stone walls and bears certain little cucumbers as its fruit. These have the taste of the cucumbers of Castile and are of the size of plum-pits. It is a good remedy for urinary diseases." (Y. y H. del Yuc. f. 388 r.)

The Maya texts prescribe it for constipation and retention of urine (91 & 413). The crushed plant is poulticed on swellings of the head, neck and breast (240) and swollen genital organs (407). The young shoots are poulticed on hemorrhoids (319) and a decoction of the plant is drunk for pus in the urine (407).

*Kun-che*, or *Kum-che*. *Leucopremna mexicana* (A. DC.) Standl. (Standl. 1920-26, p. 850).

*Jacaratia mexicana*, DC. *Bonete*. (Millsp. I, 35).

*Pileus mexicanus* (A. DC.) *Bonete*. (Standl.)

Described as a large tree, 15 to 40 feet high, with a thick base and tapering upward. Its fruit is somewhat triangular, not unlike a large green pepper, is called bonete and has a yellow mawkish pulp which is eaten in a sort of custard.

"There is another fruit which the Indians and Spaniards and Indians call kunche (kunche). It bears a large fruit with a thick rind, so that they make a very good conserve like *diacitron* (lemon-peel preserved in sugar). The interior is soft like that of an early fig, yellow and very similar to it in taste. The seeds are like coriander seeds, which taste of common-cress. It is a thick tall tree, and the interior of the trunk is spongy and white like that of a green gourd. It is useful to the natives, because in years of scarcity they make a food and drink of it with which they sustain themselves." (Rel. de Yuc. I, 59).

The Maya texts prescribe a drink made from the young shoots for jaundice and biliousness (262). These are poulticed on buboes (349). The pith is boiled and the decoction given for pus in the urine (420).

"This tree, the kunche, is cooling and very well known. Its fruit is like a priest's cap and tastes like early figs, sometimes better. It is a remedy for skin-diseases, abscesses and buboes on the groin." (Y. y H. del Yuc. f. 226 r.)

*Kun-can*, or *Kum-can*. Lit. gourd-shoots.

The Maya texts state that it has a succulent root like that of the *ool-chakan*, and its leaf resembles that of garlic. The root is taken both internally and applied as a poultice to snake-bites (44) and poulticed on skin diseases (320). The crushed young shoots are crushed for a wash to cure skin-diseases (308) or given to a horse to drink to cure retention of urine (417).

*Kutz*. *Nicotiana tabacum*, L. *Tabaco*. (Millsp. I. 388; Gaumer.)

"This plant, *kuutz*, is the tobacco, or *piciete*. It is naturally heating and so medicinal that there is hardly a disease to which it is not applied . . . There is much of it in this land and it is gathered in great abundance." (Y. y H. del Yuc. f. 202 r.) The Maya texts confirm its popularity as a medicine, usually prescribing the green leaves. It is used for asthma (2), bites and stings (48), bowel complaints (71, 74, 76), chills and fever (157), convulsions (162), nervous complaints (171), sore eyes (203), skin-diseases (280, 292 & 347) and urinary diseases (413).

*Kutz-aban.* *Isocarpha oppositifolia*, R. Br. (Gaumer; Standl.)

Reported from Izamal and Tizimin; "herb 5 feet high among the shrubbery of the brushlands and forests." (Millsp. I, 395). The Maya text prescribed a bath prepared from this plant for fevers (142).

*Kuxub.* *Bixa orellana*, L. (Standl. 1920-26, p. 834) *Achiote.* Arnotto.

Shrub or small tree; the fruit  $\frac{3}{4}$  to  $1\frac{1}{4}$  inches in diameter is usually covered with bristles and contains seeds surrounded by a red pulp. This is the arnotto tree which yields the Butter Color of commerce. See reprod. Standl. 1928, Pl. 54.

"Kuxub. The tree from whose fruit is made the *achiote* which is thrown into stewed dishes." (Motul.) "There is a little tree which the Indians are accustomed to grow by their houses, which bears some prickly husks like chestnuts, although not so large nor so hard. These open when ripe and contain little seeds, which they employ, as do the Spaniards also, to color their stews. It gives a color like saffron, so fine a color that it gives it a deep stain." (Landa, 1900, p. 393). The Maya texts prescribe the crushed young leaves in a drink for dysentery (80), and the boiled root (100) and the pulp (128) for the same purpose. The boiled leaves are a remedy for vomiting blood (127). The young leaves are crushed and rubbed on the skin for what is probably erysipelas (295 & 298), and the red pulp is applied to hemorrhoids (319).

*Kuxub-ak.*

Lit. Kuxub-vine; evidently a vine having some real or fancied resemblance to the arnotto. The Maya text prescribes the crushed leaves as a poultice for a swollen neck (237).

*Kuxub-can.* *Rivina humilis*, L. *Coral.* (Gaumer; Standl.)

Described as an herb 6 to 18 inches high, common on cultivated lands about Izamal. The juice of its small berry yields a red dye. (Millsp. I, 295; Standl. 1920-26, p. 265). The Maya texts prescribe the red juice and an infusion of the leaves as a wash for snake-bites (47 & 62). The juice is drunk for yellow-fever (125), epilepsy (170 & 171), and applied to ringworm (339) and wounds (426). The crushed young leaves are applied for erysipelas (298).

*Kuxub-che.* *Croton*, sp. (Standl.) Reported from British Honduras.

The crushed young leaves are applied for erysipelas (298).

*Kuxub-ic.* Lit. arnotto-chile.

The Maya text prescribes the crushed succulent root as a poultice on the abdomen for retention of urine (409).

*Kuxub-tooch.* *Amerimnon cibix.* (Pittier) Standl. (Standl. 1920-26, p. 1666.)

*Dalbergia cibix.* Pittier. (Loesener, 1923, p. 343).

*Kuy-che.* *Pachira macrocarpa* (Schl. & Cham.) Walp. (Millsp. I, 30; Standl.; Gaumer.) *Amapola de Yucatán.*

Reported as a large tree with a rounded crown. The woody fruit is as large as a coconut, and contains large seeds. The tree usually grows beside streams. This Maya name and the related *chac-kuy-che* and *zac-kuy-che* do not appear in the Maya sources. A decoction of the bark and flowers is employed as an expectorant. Cuevas, 1913, p. 59).

*X-kuyuch.* *Ipomoea pentaphylla.* Jacq.(?)

This identification is based on Pio Perez (1898, p. 110) and the Maya text (357), where it is given as a synonym for *tzotzel-ak*. The crushed leaves are a remedy for eczema and other itching rashes.

*Lakintan*. Some small prostrate Euphorbia. See Xanab-mucuy.

Lit. "toward the east." "Lakintan. A medicinal plant for swellings. It is crushed when it is applied." (Motul.) "Hul im. Abscess and swelling of the nipples. Its medicine is a plant called lakintan." (Ibid.) "This plant, likintan, is the same as the plant, xanabmucui, or *yerba del pollo*. Others call it haatz, and others, ix acyitz. It is very cooling, and with it they cure every sort of heating disease, vomiting of blood and nose-bleed." (Y. y H. del Yuc. f. 129 r.) "The description indicates a species of Euphorbia of the Chamaesyce group. It is impossible to determine which, for there are many of them in Yucatan. These plants are often called *hierba del pollo*. They are used in domestic medicine, not only in Mexico but in the United States as well." (Standley letter.)

The Maya texts prescribe the crushed leaves as a poultice for an abscess of the breast and tumefactions in general (314 & 246).

*Lakintan-mo*. Lit. eastern parrot.

A poultice of the crushed plant is applied to stanch blood (63).

*Laal*, or *La*. *Urera microcarpa*, Wedd. *Ortiga*. (Standl. 1920-26, p. 219; Millsp. I, 294; Gaumer.)

*Laportea mexicana* (Liebm.) Wedd. (Standl.)

Described as a shrub 20 feet high, covered with stinging hairs and common in the forests about Izamal. "La. Nettles which have red flower-stems. This one is stronger and stings and pains more than the one called *cacla*." (Motul.) Compare this description with *Laaltzimin*.

The Maya texts prescribe a decoction of the leaves applied externally as a remedy for aching bones and loss of strength (2) and chills and fever (154) and taken internally for dysentery (128). The sap is rubbed on the forehead and soles of the feet to arrest nose-bleed (270).

*Laal-tzimin*. *Urera baccifera* (L.) Gaud. (Standl. 1920-26, p. 219; Millsp. I, 359; Gaumer.) *Ortiga de caballo*.

Lit. horse-nettle, or tapir-nettle. Described as a shrub covered with stinging hairs which cause intense pain and inflammation sometimes lasting for several days; the branches of the flower-clusters are red or purplish. The shrub is common on the ancient mounds and frequently cultivated for hedges near Izamal. The small juicy white fruit is said to be edible. *Laal-tzimin* is listed by Pio Perez as a medicinal plant (1898, p. 107) but the name does not appear in the Maya texts.

*Laal-much*. *Gronovia scandens*, L. (Millsp. I, 311; Gaumer; Standl.)

Lit. frog-nettle. A vine 10 feet, abundant in shady places near Izamal, and reported from Merida. The Maya text prescribes a bath of its decoction for some complaint characterized by staggering, falling and fever (214).

*X-laul*. *Stemmadenia insignis*, Miers. *Laurel*. (Standl. 1920-26, p. 1156; Millsp. I, 383; Gaumer.)

A tree or shrub cultivated in the parks at Merida. "There is a rose called *ix-laul* which, they have told me, is of much beauty and fragrance." (Landa, 1900, p. 386). "*Xlaul*. A tree with an aromatic blossom." (P. P. 1866-77). This flower is of especial interest as it plays a part in the Maya creation story. (Chilam Balam of Chumayel, p. 46). The gum is a remedy for sore eyes. (Ixil. f. 62 r.)

*Lec*. Probably *Lagenaria siceraria* (Molina) Standl.

"*Lec*. A species of gourd of which the Indians make dishes." (P. P. 1866-77). The leaves are employed as a poultice to relieve retention of urine (413).

*Loth-coc.*

Here the plant takes its name from the disease for which it is the remedy. An infusion of the young leaves is drunk, or a decoction employed as a bath to cure asthma (19).

*Lucum-xiu.* *Chenopodium ambrosioides*, L. *Apasote*. (Standl.; Gaumer.)

Lit. worm-plant. This is the wormseed, or Mexican wormseed, said to be an effective vermifuge. The Maya name plainly indicates that it is known as a vermifuge in Yucatan, but we do not find it in the Maya texts under this name.

*Luch.* *Crescentia cujete*, L. Calabash. (Standl. 1920-26, p. 1324; Millsp. I, 45; Gaumer.)

"Luch. Xicara, or tree-gourd, before or after it has been cut. Also the tree which bears it." (Motul.) "This so-called luch is the jicara. It is useful for household service. It serves for a jar, plate, cup, pitcher and every sort of such vessel. Many carved *jicaras* are exported to other parts." (Y. y H. del Yuc. f. 231 r.) "There are also certain trees called luch, which means cup-trees. These bear a fruit about the size of a bowling-ball, some larger and some smaller. The fruit is green and has a shell as thick as a *real de á quatro* (half dollar). It is very hard. The interior is like a melon, although it is not edible. The Indians divide this fruit through the middle, take out the interior, and without further efforts they have the cups out of which the Indians drink and which the Spaniards call *jicaras*, a Mexican word." (Rel. de Yuc. I, 56).

The Maya medical texts prescribe the juice for coughs and asthma (26) and the strained pulp for retarded parturition (34). The boiled fruit is taken for diarrhea (88) and the steamed pulp for certain skin diseases (327).

*Lukzah-tahan.* *Isotoma longiflora* (L.) Presl. (Millsp. I, 322; Standl.) *Lagrimas de San Diego*.

Lit. that which removes callus. Described as an herb a foot high, found on cultivated lands near Izamal and common in moist places.

*Macal.* *Dioscorea alata*, L. *Ñame*. (Standl.)

This, of course, is an Old World importation, but the term, macal, designated a native plant originally. In a 16th century account we read of "a root which they call macal and which directly resembles the root of a lily. These are eaten boiled, because when they are raw they have a milk and take the skin from the mouth and burn it." (Rel. de Yuc. I, 263). This description suggests one of the Araceae, possibly *Xanthosoma violaceum*, Schott., a well known food plant of Central America which apparently appears in Yucatan. (Standley letter.)

The crushed tuber is poulticed on a swollen rectum (250).

*Macal-cox.* Lit. pheasant macal.

The crushed leaves are poulticed to relieve a complaint characterized by swollen head, eyes, neck and breast (240).

*Macal-kuch.* *Dioscorea spiculiflora*, Hemsl. (Standl.)

Lit. vulture macal. The sap or crushed leaves are rubbed on hemorrhoids (319) and certain swellings supposed to be caused by sorcery (432).

*Macal-zoo*, or *Maxcal-zoo*. *Arum italicum*, Mill. (Gaumer.)

"A forest plant which, they say, they take to cause abortion. It is medicinal for a swollen cheek." (Motul.) Lit. bat-macal.

*Macap-lum.* Prescribed in the Maya text as a remedy for yellow fever (125).

*Maculan*, or *X-makulam*. *Piper auritum*, H. B. K. Momo. (Standl. 1920-26, p. 151; Millsp. I, 358; Gaumer.)

"*Maculan*, or *Ix-maculan*. Certain bushes or roses whose leaves are toasted over a fire and applied to chronic sores as a remedy." (Motul.) The 16th century settlers mention the *maculam* as one of the medicinal plants of the country. (Rel. de Yuc. II, 35). It is described as a shrub 3 to 14 feet high and said to grow in damp places. We do not find it in the Maya texts under this name, although the Spanish Yucatec doctors employ the leaves as a remedy for pleurisy. (Cuevas, 1913, p. 62).

*Mahaə*, or *Maha*. *Quaribea Fieldii*. Millsp. (Standl. 1920-26, p. 788; Millsp. I, 309; Gaumer.) Reprod. Millsp. I, Pl. XIX.

"*Mahaə*. A certain tree with odorous flowers which they throw into chocolate, and the flowers themselves." (Motul.) "A beautiful white-flowered tree 30 feet high, redolent of fenugreek." (Millsp. I, 310).

*Ix-mahan-chun*.

Perhaps the same as *mahan-chun-kak*, the reported name of a *Peperomia* much like *P. glutinosa*, Millsp. collected by O. F. Cook in Peten. The *mahan-chun* is described in the Maya texts as growing on trees, and many *Peperomias* are epiphytic. Some tuberous or succulent portion of the plant is crushed and taken for dysentery (80), the leaves are crushed and put into the patient's bath to cure convulsions (161), and a decoction is employed in the same manner for fainting spells (212). The crushed leaves are poulticed for headache (227), inflamed head and neck (338 & 340), abscesses (288, 289, 291 & 299) and quinsy (403), and taken internally as a remedy for tape-worms. (Ixil. f. 63 v.)

*H-maak*. *Annona glabra*, L. (Standl. 1920-26, p. 281).

*A. palustris*, L. *Palo de corcho*. (Millsp. I, 361 & Gaumer.)

*A. muricata*, L. (Standl.) Soursop.

The Maya text states that the wood is used to cork bottles, indicating that *A. glabra* is intended. This is a shrub or tree, sometimes 35 feet high, bearing a smooth insipid fruit and growing along the coast and in swamps and wet forest. It is found as far north as Florida. Standley gives the English names as pond-apple, alligator-apple and monkey-apple. The Maya text prescribes the crushed fruit as a remedy for hiccoughs (232). "*Mak. Corcho* (cork), the root of the tree, *xmak*." (P. P. 1866-77).

*H-mam*. *Bromelia pinguin*, L. (Millsp. I, 291). See Chom.

*Ix-mamac-lumil*.

The Maya text states that it is to be found on the bark of trees. A hot infusion is given for hiccoughs (231).

*Matzab-kuch*. *Oxalis yucatanensis* (Rose) Standl.(?)

Lit. eye-lash scab. "This plant, *matzab kuch* is a very cooling *escorzonera* (viper's grass). It is the *yalaelel* with a yellow flower. It is an antidote for poison . . . They call it *matzab kuch* because (the disease of this name) comes on the eye-lashes, and (the plant) takes name from the disease of this part." (Y. y H. del Yuc. f. 219 r.) The Maya text confirms this as a synonym for *yalal-elel* and prescribes it for scab (329).

*Ma-u-nak-lé*. *Meibomia scorpiurus*, (Sw.) Desv. Tickclover. (Standl.; Gaumer.)

Variouly described as vine, 4 feet, common in shady places near Izamal, and a too common weed almost everywhere in Central America. The pods are covered with small hooked hairs and adhere to clothing.

*Max, Max-ic, or Putun-ic.* *Capsicum frutescens*, L. *Chile del monte*. (Standl.)

*Capsicum baccatum*, L. (Millsp. I, 318).

"Ah-max, or Ah-max-ic. A species of *agi* or chile." (Motul.) In a 16th century account a description of the cultivated chile is followed by the statement: "there is another wild sort like grains of wheat, and this is much stronger than the larger sort." (Rel. de Yuc. II, 61). Mixed with salt and in combination with other drugs, the Maya texts prescribe a decoction for asthma and coughs (4, 15, 25 & 27), dysentery (119) and liver-complaint (127). It is applied externally to the abdomen for dysentery (99), used to swab the throat (129), rubbed on certain skin complaints (312), held in the mouth to cure infected gums (385) and toothache (395), and the leaves are boiled for a bath to cure a complaint characterized by aching bones and convulsions (179).

*Max-ak, H-max-ak, or Ak-max.* Lit. chile vine.

The crushed leaves are taken for asthma (18 & 19) and applied externally to cure certain skin-complaints (323 & 332). The sap is rubbed on the body for jaundice and biliousness (261) and the crushed boiled root held in the mouth to cure infected gums (385 & 386).

*Mazcab-che.* *Jussiaea suffruticosa*, L. *Cornezuelo cimarrón*. (Gaumer.)

Lit. copper tree. Described as shrubby, 10 feet high at X-cholac, and one of the most common weeds of tropical America. (Standl. 1928, p. 294; Millsp. I, 312).

*Mazcab-miz.* *Pectis linifolia*, L. (Gaumer; Standl.)

Lit. copper cat. Herb 2 feet high, uncommon, found on stone walls at Izamal. (Millsp. I, 396). Perhaps Matzab-miz (lit. cat's eye-lash) is intended.

*Mazcab-zuuc.* *Cyperus ochraceus*, Vahl. (Standl.; Gaumer.)

Lit. copper-grass. Found growing in the cenotes and aguadas at Nabulá, in standing water on the Island of Cozumel and on open lands near Izamal. (Millsp. III, 69).

*Mazeual-puhuk.* Lit. common people's puhuk. See Puhuk.

*Mehen-chicam.* *Pachyrrhizus erosus* (L.) Urban. (Standl.)

*P. bulbosus*, Kerr. *Jicama dulce*. (Gaumer.)

Lit. small jicama. See Chicam. This is probably a smaller variety of the chicam, called "sweet jicama" in Spanish.

*Mehen-ib-bech̄.* *Rhynchosia minima* (L.) DC. (Gaumer; Standl. 1920-26, p. 497).

Lit. small quail-beans. Slender vine with small yellow flowers, often striped with red outside, found in brush and forest lands near Izamal and on the Island of Mujeres.

*Mehen-kax.* *Randia truncata*, Greenm. & Thompson. (Standl. 1920-26, p. 1376).

*R. xalapensis*, Mart. & Gal. (Millsp. I, 321; Gaumer.)

Shrub 10 to 15 feet high, with spines in pairs at ends of branches; Lit. small kax.

*Mehen-tzacam-tzotz?* *Nopalea* sp. (Standl.)

Lit. small hairy cactus. This name is not found in Maya sources; *Mehen-tzacam-zoo* (small bat-cactus) may be intended.

*Mehen-uah-koh, or Chan-uah-ko.* *Aristolochia pentandra*, Jacq. (Standl.)

*A. brevipes*, Benth. (Gaumer; Millsp. I, 294).

Lit. small guaco. Vine 6 feet, abundant on stone walls about Izamal.

*Mehen-uub-pek.* *Tabernaemontana amygdalaefolia*, Jacq. (Gaumer.)

Lit. small uub-pek. See Uub-pek.

*Mehen-xaan.* Lit. small xaan.

Like the cabal-xaan, this may be a small plant bearing some real or fancied resemblance to the xaan (*Sabal japa*). The base, stem, or trunk is employed as a remedy for sore eyes (202 & 203).

*Mehen-xanab-mucuy.* *Euphorbia dioica*, H. B. K. (Standl.)

*E. adenoptera*, Bert. (Gaumer.)

Lit. small dove-shoe. Compare Xanab-mucuy.

*Mehen-x-toh-ku.* *Datura stramonium*, L. (Millsp. I, 388; Standl.)

Lit. small genuine ku. The common jimson weed of the U. S. Compare Toh-ku and Telez-ku.

*Mehen-zit.* *Lasiacis divaricata* (L.) Hitchc. (Standl.)

Lit. small zit. Compare Zit.

*Mex-nuxib.* *Clematis dioica*, L. *Barbas de viejo*. (Standl.; Gaumer.)

Described as a vine 30 feet, abundant in brush lands near Izamal. The Maya name is the equivalent of the Spanish one. The Chiapas name, *Cabeza de vieja* expresses somewhat the same idea as to its appearance. See Standl. 1920-26, p. 267. The root is said to be an astringent. (Cuevas, 1913, p. 65).

*Tillandsia usneoides*, L. *Barba Española*. (Millsp. I, 292).

This is the Spanish moss of the Southern U. S.

*Mex-oul.* *Ramalina calicaris farinacea*, Schaer. (Millsp. I, 347; Gaumer.)

Lit. Spaniard's beard. A lichen found on shrubs on the downs at Progreso.

*Miz.* *Tillandsia brachycaulos*, Schl. (Millsp. I, 356; Standl.; Gaumer.)

Miz can mean either to sweep, or a cat. The former is a genuine Maya stem, and the latter, a word borrowed from Nahuatl sources, probably during the Toltec occupation of Yucatan.

*T. brachycaulos*, Schl. is an "herb 12 inches high, abundant on trees near Izamal, producing its royal purple flowers in June."

*X-mizbil.* *Acalypha alopecuroides*, Jacq. (Gaumer; Standl.)

Lit. broom. "Herb 16 inches high, common in shaded places." (Millsp. I, 370). Reported from Izamal and Chocholá.

*Miz-cax?* *Acalypha Yucatanensis*, Millsp. (Millsp. I, 371; Gaumer.)

As it stands the Maya name would mean "hen-broom." *Miz-kax*, or "forest-broom" might be intended. Reported from Progreso.

*Mizib-can.* Lit. broom-shoots.

A decoction is prescribed as a wash for certain skin diseases (330).

*Mizib-coc.* *Turnera diffusa*, Willd. (Standl. 1920-26, p. 848).

*T. diffusa aphrodisiaca* (Ward) *Urban. Damiana*. (Millsp. I, 311; Gaumer.)

This contains a volatile oil with a camphorlike taste. It is shrubby, 10 feet high, with orange-yellow flowers. Under the name of *Damiana* the dried leaves and twigs are imported into the United States. Spanish Yucatec physicians employ it as an expectorant for bronchitis and asthma. (Cuevas 1913, p. 66). *Mizib-coc* means the *mizib* for asthma. The Maya text, however, only prescribes it as a wash to cure giddiness and falling (214).

*X-mool-coh.* *Dalechampia scandens*, L. (Standl. 1920-26, p. 623; Millsp. I, 371).  
D. *Schottii*, Greenm. (Standl.)

Lit. puma-foot; the name is probably suggested by the calyx lobes which close like claws after the capsule opens. (Standl.) It is a scandent shrub, usually with some stinging hairs. The Maya texts prescribe a bath prepared from a decoction of the leaves for what is called aching bones and convulsions (179) and giddiness (214). An infusion of the crushed leaves is poulticed on the forehead to relieve headache (221).

*X-mom-nicté.* Mom means coagulated money; nicté usually indicates a *Plumeria*.

The seeds of this plant are boiled and applied to the womb after parturition (43).

*Mop.* *Acrocomia mexicana*, Karw. See Tuk. (Rel. de Yuc. II, 128).

*Muc*, or *Ah-muc.* *Dalbergia glabra*, (Mill.) Standl. (Standl. 1920-26, p. 507).

D. *cibix*. Pittier. (Gaumer.)

Lit. to cover, bury or conceal. "Muc. The inner bark of a plant of this name, so called because it serves for tying something." (P. P. 1866-77). "This plant, muc, is cooling. It is called muc, which means enchantment or deceit . . . The bees gather honey from its flowers." (Y. y H. del Yuc. f. 232 r.) The Maya texts prescribe an infusion of the crushed leaves taken internally or the external application of the decoction for asthma and coughs (19). The infusion is used as a bath to cure convulsions and delirium (161) and rubbed on the skin to cure a disease characterized by swollen head, neck and limbs (298).

*Muc-ceh.* Lit. deer-muc.

"This plant, muc ceh, is very hot (*es un fuego*) and is considered to be a great poison and enchantment. The Indians give the name, muc, to a charm which is buried underground. Thus they call it deer-enchantment. Some people say that they bury it where (the deer) is accustomed to pass, and that there it remains, and they seize it with their hands, although I well understand that this is false. It is to be noted that this is different from another (plant) which they call chac muc. The latter is very handsome and is admirable for wounds." (Y. y H. del Yuc. f. 265 r.) According to the Maya text, the crushed plant is steamed and applied hot to cure a so-called leprous eruption (306). The crushed root is applied to an aching tooth (388).

*Muc-ta.* Lit. buried excrement.

It is a remedy for a disease characterized by convulsions (430).

*Mucuy-che*, or *Mukuy-che.*

*Mucuy-che* means dove-tree. A decoction of the plant is taken for jaundice and biliousness (260) and employed as a lotion for ringworm (339).

*Mucuy-onobcan.*

Lit. the mucuy for ringworm. It is taken internally and employed in a lotion to cure this complaint (339).

*X-much-coc*, *Muc-coc*, or *Muchul-cux.* *Selaginella longispicata*, Underw. *Doradilla.* (Millsp. I, 287; Gaumer.)

A mosslike cryptogamous plant with long spikes. See Millsp. I, Pl. X. The Maya texts prescribe a decoction of the leaves and roots for yellow fever and swollen spleen (101) and the crushed plant is heated and applied to scabs (328).

*Much-coc-kax.* *Aneimia adiantifolia*, Swz. (Gaumer.)



**Much-kuch.**

"This plant, ix-much-kuch, is heating. It is thus named, meaning scabby frog, because it cures leprosy, scab, ringworm and other things of this sort." (Y. y H. del Yuc. f. 243 r.) The Maya text prescribes the steamed plant applied to the skin for a skin-disease characterized by ridges and welts (307).

**Much-nicté.** *Plumeria pudica*, Jacq.

Lit. frog *Plumeria*. The Maya text states that this is another name for X-thuhuy nicté and recommends inhaling the smoke from this plant for phthisis (7).

**Mul.** *Cenchrus pallidus*. Fourn. (Millsp. III, 40). *Guizazo*.

"Mul, or Ah-mul. A sort of small bur and the plant which bears them." (Motul.)

**Mulche.** *Bumelia retusa*, Swartz. (Standl.; Gaumer.)

Shrub 15 feet high found in brushlands near Izamal. See Puc-mucuy.

**Ix-mulix.** *Tillandsia streptophylla*, Scheidw. (Standl.)

Lit. crest or comb. There is also a bird of this name called gallina morisca in Spanish. See X-holom-x-al.

**Mul-och.** *Triumfetta semitriloba*, L. and *T. dumetorum*, Schlecht. (Standl. 1920-26, p. 743; Millsp. I, 380). Lit. opossum-bur.

Shrub 10 feet high found in brushlands near Izamal. The small fruit is covered with spines and sticks to clothing. "Mul och. A plant which turns the hair black. This plant called muloch is heating. It is so named because its flower resembles the track of the opossum." (Y. y H. del Yuc. f. 223 r.) The juice from the crushed young leaves is prescribed by the Maya texts for spider-bite (45) diarrhea (85) and cramps (106).

**Muy-ak.** *Jacquinia* sp.(?)

Lit. rabbit-vine. The Mayas sometimes use the term, vine, where we would call it a shrub. "This vine, mui ak, is a poison, some people say. At least it is the best one in the world for dogs, for it kills them in a short space of time. It is powdered and sprinkled on a little bread or meat, and when they eat it they die. It is the ordinary food of an animal called haleo (Mexican Agouti) and of the kanbul (*Crax globicera*). In Mexican they call it *campatli*. It has a small round fruit, slightly oval, which turns red when it ripens. It has many virtues. This is not the chac kak, which gives life when it is drunk. The mui ak cures chronic sores on the legs and pustules." (Y. y H. del Yuc. f. 234 r.)

**Muy-che.** *Jacquinia aurantiaca*, Ait. (Standl. 1920-26, p. 1106).

This is a shrub or small tree bearing small orange flowers and a globose fruit nearly an inch in diameter. The powdered bark is a cure for chronic sores elsewhere in Mexico and Central America and the crushed fruit is employed for poisoning fish. Compare Muy-ak.

**X-mu.** *Mimosa pudica*, L. *Sensitiva*. (Standl. 1920-26, p. 362; Gaumer.)

Lit. that which crumples or closes up. It is an apt name for the Sensitive-plant. The Maya texts prescribe a decoction of the leaves for lassitude (169), depression and epilepsy (173). The juice is dropped into the eye to remove a film (208).

**Mu-coc.** See Much-coc.**Naab.** *Nymphaea ampla*, DC. *Sol de agua*. (Gaumer; Standl.) *Ninfea*, Water-lily.

This handsome white water-lily is found in the shallow ponds near Merida and elsewhere. Naab is the distance from the end of the thumb to that of the little finger. The town of Tenabo is probably named for this plant.

*Nabá.* Myroxylon Pereirae, Klotsch. *Balsamo.* (Standl. 1920-26, p. 433).

*M. peruiferum*, L. *Balsamo de Peru.* (Millsp. I. 368; Gaumer.)

Tree, sometimes 50 feet high, with gray bark. "Naba. Balsam-trees. Yitz naba. - The liquor of the balsam-tree." (Motul.) "This tree, naba, is the balsam-tree. It is heating and a very pretty wood. It exists in the forests." (Y. y H. del Yuc. f. 266 r.) Pio Perez calls it the *Balsamillo*. (1898, p. 108). According to the Maya texts the rectum is smoked with the gum to cure hemorrhoids, especially in connection with cupping (163 & 345).

*X-nabal-che.* Phyllanthus nobilis, (L. f.) Muell. (Standl.)

Lit. ointment tree. "This tree, ix naba che . . . is called naba che which distinguishes it from the balsam-tree called naba. It only resembles it in its odor. It is a soft fragrant wood, and they make toothpicks of it." (Y. y H. del Yuc. f. 291 r.)

*Naban-ché, or X-chité.* Bursera graveolens, Tri. & Planch. (Millsp. I, 302).

*Elaphrium pubescens*, Schlecht. (Standl. 1920-26, p. 550).

Described as a tree 50 feet high, common in cultivation at Izamal. Standley suggests that this may be an introduced species in Yucatan. It is to be noted that while Naban-ché is a true Maya form, nabaan meaning anointed or stained, X-chité may be a corruption of *Copal-xochitl*, a Nahuatl form meaning copal-flower. The tree may have been introduced into Yucatan during the Toltec occupation.

The Maya texts prescribe an external application of the decoction of the leaves for lack of strength and aching bones (2), pleurisy (9) and snake-bites (52). This decoction is drunk for asthma and coughs (25), diarrhea (66) and retention of urine (409). These texts give naban-ché and x-chitee as synonyms (9 & 66).

*Nabay.* Renealmia aromatica (Aubl.) Griseb. (Standl.)

"The sterile stems of *R. aromatica* often form large clumps and are 1 to 2.5 meters high. The fruit is red or dark blue, with orange pulp." Standl. 1928, p. 119 & Pl. 16). The medical text prescribes an application of the juice to cure hemorrhoids (163).

*Nabukak.* Sonchus oleraceus, L. *Achicoria, Lechuga silvestre.* (Gaumer.)

Described as an herb 4 feet high, frequent on cultivated grounds about Izamal. (Millsp. I, 325). This Maya name does not appear in any of the Yucatecan sources, but the plant is probably the one of which Landa states: "There are very fresh *chicorias*, and they grow them on the plantations, although they have not learned to eat them." (Landa, 1900, p. 388). See Ko.

*Ix-nachbacal-che.* Lit. phthisis-tree.

"This plant, ix nechbacche, is cooling and very handsome. Its flower is like that of the *azucena* (*Lilium candidum*)." (Y. y H. del Yuc. f. 263 r.) The Maya text prescribes a decoction of this plant to bathe anyone suffering from phthisis (13). It is said to be called *habecilla* in Spanish. (Kaña, f. 146 v.)

*X-nach-lumil.* See Ouc-mohoch.

The Maya text states that this is a synonym for ouc-mohoch and is called nach-lumil (distant from the ground) "because it does not spread out close to the ground." The leaf is said to resemble that of the *Ruellia tuberosa*, or Yaxnic. A decoction is employed as a bath to cure phthisis (13).

*Nakaz.* *Thrinax argentea*, Lodd. (Gaumer.) See Chit.

*X-ne-bob.* Probably *Cereus griseus*, Haw. (Standl.)

Lit. jaguar-tail.

*Ne-maax*, or *Ne-max-xiu*. *Heliotropium parviflorum*, L., *H. fruticosum*, L. and *H. indicum*, L. *Rabo de mico*, *Alacrancillo*. (Standl.; Millsp. I, 315; Seler, 1902-08, III, 564).

Lit. monkey-tail, or monkey-tail-plant, probably named from the appearance of the curved spikes of flowers. *H. parviflorum* is an herb 2 to 4 feet high common on cultivated lands near Izamal and Merida with small white flowers. "Nemax. A plant with a white flower, whose leaves cure chronic sores. These and the roots are employed for swellings, especially those on the legs, washing them with the water in which they (the leaves and roots) have been boiled or with the juice of the said plant. After washing it, they place the leaves on the swelling. Its shoots are useful for curing St. Anthony's fire (erysipelas)." (Motul.) The Maya text prescribe a poultice of the crushed ne-max-xiu for sores on a man's breast (312) and a decoction is held in the mouth to cure infected gums (385). Under the name of ne-max, we find a similar treatment prescribed for infected gums, although it is just possible that the ne-max-ak may be intended (386 & 396).

*Ne-max-ak*, or *Ne-max*. *Tournefortia volubilis*, L.(?) See Chac-nicñ-max.

Lit. monkey-tail-vine. "This plant called nemax . . . is called nemax because it resembles a monkey's tail. It is called by another name, chac nich max che or chac nich kak che, and by virtue of this name it is applied to a disease which attacks the gums and loosens the teeth, and which is called naualbahte. This is a sort of enchantment which the Indians are said to cast, and it is cured with this plant." (Y. y H. del Yuc. f. 315 r.) The leaves and roots are crushed and poulticed on sores on a man's breast (312). *T. volubilis* is a scandent shrub, twining, 10 to 15 feet, over stone walls near Izamal. (Millsp. I, 316). The botanists report it under the Maya names of Chac-nicñ-max and Xulkin.

*Ne-miz*. *Acalypha hispida*. Burm. *Cola de gato*. (Standl.; Gaumer.)

Lit. cat-tail.

*Netab*.

"A rare shrub native to the coast. The leaves are compound with the circumstance that there are three or four leaflets similar to those of the Ceiba, only thicker." (Cuevas, 1913, p. 113).

The Maya texts prescribe a poultice of the crushed leaves for ruptures and dislocations (181), swollen rectum (250), sore nipples (257), abscesses and ulcers (290, 291, 299 & 301), eczema (310) and ringworm (373).

*X-ne-toloc*. *Pithecoctenium echinatum* (Jacq.) Schum. (Standl. 1920-26, p. 1315).

*P. hexagonum*, DC. (Millsp. I, 391).

"Vine, 50 feet, common in the forests, producing creamy white flowers in May and June." Lit. toloc-tail. The toloc is a certain crested iguana. The Maya name is reported by the botanists but does not appear in the native Maya sources; possibly it is the Hom-toloc of the Maya doctors. The moistened seeds are applied to cure headache.

*Niax*.

The Maya text prescribes an application of the steamed plant for an eruption of ridges or welts (307).

*Nicté*. *Plumeria* sp. Lit. flower-tree. Frangipani.

This is a generic name for *Plumeria*; see Chac-nicte, Zac-nicte, Zabac-nicté etc. "There is another kind of tree which they call nicté. These bear many white flowers, others, yellow, and others, almost purple. They are very fresh and fragrant, and they make gay nose-gays of them." (Landa, 1900, p. 386). The 16th

century Motul Dictionary, however, defines it simply as flower and gives as a secondary meaning indecency and carnal sin. The nicté appears to be connected with certain erotic religious practices and the worship of Macuil-xochitl introduced into Yucatan during the Toltec occupation. (Chilam Balam of Tizimin, p. 21-22).

According to the Maya texts a decoction of the flowers or leaves of the nicté is taken for dysentery (80) and the sap is applied to burns (136).

*Nicte-chom.*

*Flor de zopilote.* A large tree bearing white flowers resembling those of the *Flor de Mayo* (Plumeria). It is aromatic, has lanceolate leaves and contains a milky sap. The sap is a sedative and is employed for toothache and decayed teeth. (Cuevas, 1913, p. 69). Lit. vulture-plumeria. The wood is white and very light.

*Nii-che.* *Cocoloba uvifera* (L.). Jacq. *Uva del mar*, Seagrape. (Gaumer.) See reprod. Standl. 1928, Pl. 24.

This is the sea-grape, found on the beaches of the north coast. It is a shrub or small tree, usually branched to the base. This is evidently the fruit described by Landa: "There are in this land certain wild grapevines; they bear edible grapes, and there are many of them on the Kupil coast." (Landa, 1900, p. 391). This would be not far east of Silam on the north coast where the shrub has been reported as abundant. The pulp is a remedy for sore eyes (202).

*Nicĥ-max-che.* Reported from Peten as *Sapranthus campechianus* (H. B. K.) Standl.

Described as a tree 20 feet high; the flowers are said to have a disagreeable odor of carrion. The name plainly indicates an association with infected gums. Compare Chac-nicĥ-max-che.

*Ni-miz.* *Dicliptera assurgens* (L.) Juss. *Pensamiento*. (Standl.; Millsp. I, 320; Gaumer.)

Lit. cat-nose. A shrubby herb 6 feet high with red flowers an inch long. It is common throughout Yucatan, growing in open lands.

*Nip-cib-che, or Nicib-che.* A decoction is taken for dysentery (80).

*Ni-zoo.* *Spermacece verticillata*, L. *Manzanilla del campo*. (Millsp. I, 321; Standl.; Gaumer.)

Lit. bat-nose. Herbaceous, 3 feet high, common barren grounds about Izamal.

*Nohol-aban.*

Lit. south bush. The powdered toasted leaves are sprinkled on an ulcer (319).

*Nok-ak.* *Bacopa procumbens* (Mill.) Greenm. (Standl.; Gaumer.) (?).

Lit. cloth-vine. *B. procumbens* is a common Central American weed, usually found growing in wet places. It has a yellow flower. The Maya name is hardly descriptive of this herb. Compare Nonok. The succulent root is poulticed and poulticed on skin eruptions (320).

*Nonok.*

"It is a climbing plant. With the juice of its fruit the women wash and thoroughly clean their heads. The leaves are eaten by turtles." (Motul.) The Spanish name is said to be *Amole*, or Soaproot. (Ixil, 61 v.) It is a remedy for sore eyes.

*X-nuc-chicam* *Pachyrrhizus palmatilobus*, (Moc. & Sessé.) Benth. & Hook. *Jicama grande*. (Standl.; Gaumer.)

This is a herbaceous vine much grown for its large turnip-like roots which are eaten raw. Compare Chicam. Lit. old-woman-jicama.

*Num*, or *Num-tzutzuy*. *Acanthocereus pentagonus* (L.) Britt. & Rose. (Gaumer; Standl.)

Lit. many doves. Tzutzuy is the white-fronted Dove. This slender clambering cactus often arches and roots again at the tip. Its oblong red fruit is edible. It is often found on the beaches of Central America. The Maya texts prescribe the juice of the fruit for dysentery (128) and the exterior of the stalk is burned and sprinkled on a burn (137).

*X-och-can*. Lit. boa-constrictor.

The plant is steamed and applied to an eruption of ridges or welts (307).

*X-ochil*. *Syngonium podophyllum*, Schott. (Standl.)

*Philodendron lacerum* (Jacq.) Schott. (Gaumer; Standl.)

Both of these are epiphytic vines, called *parasitas* in Spanish America. *P. lacerum* is reported as found on the walls of a cenote at Chichen Itza. The Maya text states that the x-ochil will be found on trees. The leaves are a remedy for ulcers and sores (368).

*Ojo-ak*. See X-hoyoc.

*Om-ak*, or *X-om-ak*. *Gouania dominguensis*, L. (Standl. 1920-26, p. 711; Millsp. I, 376). Chewstick. Compare Standl. 1928, Pl. 46.

Vine 30 feet, infrequent in the forests about Izamal. Lit. froth-vine. The stem froths when macerated in water and has been exported to Europe for the manufacture of dentifrices. The May text prescribes the crushed root as a remedy for sore gums and other sores in the mouth (324). The plant is boiled and given for what is called blood-vomit and rotten liver (127).

*Omil*. *Cirsium mexicanum*, DC. *Cardo*. (Standl.)

*On*. *Persea gratissima*, Gaertn. (Millsp. I, 297; Gaumer.)

*P. americana*, Mill *Aguacate*. (Standl. 1920-26, p. 290).

"On. Aguacate; the tree and the fruit. U cheel on, the tree; u uich on, the fruit." (Motul.) "There is a large fresh tree which the Indians call on. It bears a fruit like large gourds, which is very delicate, and has a taste like butter; it is mellow and buttery. This is very nourishing. It has a large pit and a delicate rind. It is eaten, cut up like a melon and with salt." (Landa, 1900, p. 392). This, of course, is the alligator pear or avocado cultivated in Florida and California.

A drink is prepared from the roasted seed for diarrhea (82) and of the boiled seed for bladder complaints (408). The crushed young leaves are a remedy for certain eruptions of the skin (295).

*Onob-kax*. *Euphorbia graminea virgata*, Millsp. (Millsp. I, 372; Standl.)

Lit. wild ringworm. An herb 2 feet high, common in moist places near Tekax.

*Op*. *Annona reticulata*, L. Custard-apple, *Annona colorada*. (Standl. 1920-26, p. 284; Seler, 1902-08, III, 568). Reproduced Standl. 1928, Pl. 25.

This is a tree 14 to 24 feet high with a red or reddish brown fruit. "There is another tree which the natives call op and the Spaniards, *anona*, which is an island word. It has a fruit after the manner of the pine-apple, and the rind has the same marks. The interior is white and delicate and of such good flavor that many

call it blancmange. It has a quantity of black seeds, almost like those of the chico-zapote." (Rel. de Yuc. I, 58). It is difficult to reconcile this praise of the fruit with the statement in the native Maya chronicle of Nakuk Pech who tells us that annonas had never been eaten in Yucatan and that the first Spaniards were called "annona-eaters." (Brinton, 1882, p. 227).

The Maya texts prescribe the leaf burned over the perforation of a snake-bite (53). The dried leaves are powdered and put into the patient's drink for diarrhea and cramps (105). The boiled leaves are rubbed on the skin and the decoction drunk for certain eruptions of the skin (360).

*Oppol-che.* Adenocalymna Seleri, Loes. (Standl. 1920-26, p. 1317).

A scandent shrub with large pink or purple flowers in clusters. The crushed root is applied hot to the affected part as a remedy for poisoning (277).

*Opp-tzimin.* Petrea arborea, H. B. K. *Bejuco de caballo.* (Standl. 1920-26, p. 1237). Purplewreath. (Standl. 1928, p. 231).

Lit. horse-opp, or tapir-opp. Opp is the cracking, crackling or bursting of something dry and hollow. P. arborea is a large woody vine, extremely showy when in flower and sometimes cultivated as "purple wreath."

*Ox.* Brosimum alicastrum, Swartz. *Ramón,* Bread-nut. (Standl. 1920-26, p. 213; Millsp. I, 14).

"There is another very beautiful and fresh tree which never loses its foliage. It bears certain little figs which are very palatable. They call this Ox." (Landa, 1900, p. 391). This foliage is the principal green fodder of the country from June to March, and the boiled fruit is eaten alone or with honey or corn meal. The small hard pits of the fruit were placed formerly in a gourd to form the topp-ox-kab, or diviner's rattle. (Maler, 1908, IV, 55). The Maya text prescribes the milky sap as a remedy for asthma, coughs and phthisis (8).

*Ppac.* Lycopersicum esculentum, Mill. *Tomate grande.* (Gaumer.)

The Motul Dictionary confirms this identification. The medical texts prescribe the crushed leaves as a remedy for pustules, other skin complaints (280 & 322) and an inflamed throat (402).

*Ppac-can.* Physalis angula, L. *Farolitos.* (Gaumer.) Ground-cherry.

*P. pubescens, L.?*

"This so-called ppac can means the same thing as snake-tomato. It is fresh and slightly cooling. They say it is eaten by snakes. It resembles the tomato." (Y. y H. del Yuc. f. 378 r.) "Ppaccan. A sort of wild tomato. This plant is herbaceous and a perennial. Its leaves are almost round; the flower is like that of the Solanaceae, and its calyx almost covers the oval fruit, so that the latter rests, as it were, in a capsule. The juice from the leaves is used by the Indians for ear-complaints. They are also accustomed to call this Ppaccanul." (P. P. 1866-77). The Maya texts prescribe an infusion of the crushed plant for "recurrent blood-vomit" (81) and a decoction for loss of speech (170 & 171). This decoction is employed as a bath for fainting (212). The crushed plant or leaves are applied to swollen testicles (245), certain pustules (309) and venereal diseases (379).

*Ppac-can-le.* Hydrocotyle prolifera, Kellog. (Standl.)

Lit. tomato-leaf. Described as an herb 4 inches high, abundant about the aguada at Xcholac. The plants of the genus are small herbs with creeping stems.

*Ppac-canul.* Physalis pubescens, L. (Standl.) Ground-cherry.

*Pacumil-ek(?)* Physalis Lagascae, Roem. & Schult. (Standl.)

*Pahab-can*(?) *Physalis viscosa*, L. (Standl.)

*Pahal*. A small tree or bush from which ink is made. (Motul.)

*Pahal-can*. *Solanum nigrum*, L. *Yerba mora*, Black nightshade. (Gaumer; Standl.)  
*S. cornutum*, Lam.

In Central America the young shoots of the plant are generally cooked as greens; Burbank's wonderberry is a form of this plant. "Pahalcan. This is the *yerba mora*, which differs from the *ppaccan*, although this one bears a fruit like chick-peas and round, while the other is like the pod of the chick-pea. This one is better, although the other is good." (Y. y H. del Yuc. f. 381 r.) "Pahalcan. The *yerba mora*, whose crushed leaves bring buboes to a point, particularly if oil is applied." (Motul.) The Maya texts give the *ich-can* as a synonym. The decoction is a wash for snake-bites (62), and the juice of the toasted plant is squeezed into a sore eye (203). The crushed leaves are applied to tumefactions (236), swollen testicles (245), abscesses (303), skin eruptions (309) and inflammation of the throat (402).

*Pah-chuhuc*. *Tamarindus indica*, L. (Tozzer, 1907, p. 21).

Lit. bitter-sweet. Although a native of the East Indies, it appears to be thoroughly naturalized in the Maya area.

*Pah-tub*. Lit. sour saliva.

Employed as a poultice to cure an abscess of the ear (195).

*Pah-za*. *Commelina elegans*, H. B. K. (Standl.)

A decoction of the crushed root is taken for pus in the urine (420).

*Pakal*. *Citrus* sp.

A general name for orange. *Zuu-pakal* is *C. acida*; *kah-pakal*, *C. amara*; *Chuhuc-pakal*, *C. aurantium*, etc. *Pakal* means an orchard or garden, and might be applied to a tree brought from another country and transplanted. Introduced into Yucatan during the first generation after the Conquest, the orange has long been a popular remedy. The juice is drunk with salt for coughs and asthma (25) and with sugar for spitting blood (121). The steamed skin is applied to a sore ear (190), and a decoction of the leaves is employed as a bath for epilepsy (214). The pulp is rubbed on buboes (317) and the outer skin is held in the mouth to relieve toothache (398).

*Pakam*, or *Pakan*. *Opuntia Dillenii* (Gawler) Haw. (Standl. 1920-26, p. 882).

*O. tuna* (L.) Mill. *Tuna*, *Nopal*. (Millsp. I, 35; Gaumer.)

*O. Dillenii* is a low spreading bush growing in broad clumps. The *Pakam* is probably a general name for the prickly-pear. "Pakam. *Tunas* on whose leaves the cochineal is bred." (Motul.)

*Pak-can*, or *Pakal-can*. "The *yerba mora*." (Motul.) See *Pahal-can*.

*Ix-pakunpak*. Probably *Euphorbia dioica*, H. B. K. (Standley.)

"*Ix-pakunpak*. A trailing plant called *yerba de la golondrina*." (P. P. 1866-77). "This plant, *ah pakunpak*, and in Mexican the *Pepetela*, is the one which they call *Yerba de la golondrina* or *Celidonia*. It spreads on the ground and is usually found on the town squares. It has a leaf like the purslane and small white flowers. There is hardly a disease, particularly a heating one, to which it is not applied. It has been widely tried. It serves as a balm and cures a fresh wound and stanches blood with much neatness." (Y. y H. del Yuc. f. 295 r.) *Celidonia* is *Euphorbia maculata*, L.

Seler identifies pakunpak as *Nama jamaicense*, L. (1902-08, III, 365) and Millspaugh (I, 16) as *Mirabilis longifolia*, L. But the above description hardly indicates either of these. Dr. Standley notes that this might possibly be *Alternanthera repens*, L. which grows among paving stones and has white flowers, but *golondrina* is everywhere a *Euphorbia* of the *Chamaesyce* group.

The Maya texts seem to assume that everybody knows the plant and prescribes a decoction for asthma (3), dysentery (128) and as an aid to parturition (29). A hot infusion of the crushed plant is given for diarrhea (87 & 94), dysentery (80, 95, 97 & 100) and convulsions (162). The crushed plant is also a remedy for sores in the mouth (324).

*Panoil*. *Suriana maritima*, L. (Millsp. I, 370; Standl. 1920-26, p. 538; Gaumer.)

Described as a shrub or small tree, sometimes 25 feet high, found on the downs at Progresso and as far north as Florida. In the Bahamas it is called bay-cedar. It has a rough bark and small yellow flowers. "Pantzil. A small tree of the coast. Boil its roots and bark in water and wash old sores with it; it will heal and cure them. A powder made of these and drunk in atole cures bloody stools." (Motul.) "These little plants are all the same thing. They are called panoil. This is very fresh. It grows on the shores of the sea and rarely occurs except close to the very large lagoons on the coast. For this reason they say that it is of great virtue; it is an antidote for the bite of any fish." (Y. y H. del Yuc. f. 310 r.) A decoction is drunk or a poultice of the plant applied to the face for what is probably epilepsy (170 & 171).

*Pay-che*. *Petiveria alliacea*, L. *Zorillo*. (Standl. 1920-26, p. 264; Millsp. I, 295; Gaumer.)

Lit. skunk-tree. Described as an herb 6 feet high, very abundant on waste lands and producing small pink, white or green flowers and a fruit with sharp spines. "This plant, payche, is the one which they call skunk-plant, because it stinks like one." (Y. y H. del Yuc. f. 368 r.) The odor is really more like that of garlic. The patient is steamed with a decoction of the leaves (87) and the crushed root poulticed on the rectum (99) as a remedy for dysentery. The decoction is drunk to cure a cold in the head (272) and the young leaves are poulticed on buboes (366). A decoction of the leaves is also taken for dysentery. (Ixil. f. 59 v.)

*Pay-hul*. *Phyllanthus conami*, Swartz. *Ciruelillo*. (Standl. 1920-26, p. 610). *P. acuminatus*, Vahl.

Shrub or small tree 10 to 20 feet high, reported from Izamal by Gaumer as *Kay-yuc*. The Maya text prescribes a hot application of the boiled leaves of the *pay-hul* for pleurisy (9), and the decoction is taken for a certain epidemic characterized by headache and pain in the heart (223). The decoction is a remedy for asthma and coughs (19) and is also taken for a certain feverish eruption of the skin (149). The crushed leaves are applied externally to an abscess of the breast (241 & 314) and buboes (318).

*Pay-luch*. *Coutarea acamtoclada*, Robins. & Millsp. (Gaumer; Standl. 1920-26, p. 1367).

Lit. skunk-calabash. This is a shrub with a greenish yellow flower and the fruit is a capsule half an inch long. The red portion of the bark is prescribed as a remedy for scab and other skin-diseases (328 & 356).

*Pa-zak*, or *X-pa-zakil*. *Simaruba glauca*, DC. (Standl. 1920-26, p. 540; Millsp. I, 370; Gaumer.)

*Zak* means locust. The tree is 100 feet high and common in forests about Izamal, producing light green flowers in February.



*X-pech-citam*. *Randia truncata*, Greenm. & Thompson. (Standl. 1920-26, p. 1376).

Lit. garrapata-peccary. A spiny shrub 6 to 12 feet high with broad leaves. The name may be peet-citam, which means peccary-stalk. *R. truncata* is also reported under the names kax and mehen-kax.

*X-pech-ukil*. *Porophyllum punctatum* (Mill.) Blake. (Standl. 1920-26, p. 1612; Gaumer.)

Lit. garrapata-louse. Shrubby, 15 feet high, common on brushlands about Izamal. The Maya text prescribes a poultice of the crushed leaves for chronic ulcers (285). It is poulticed on the head to kill lice. (Ixil, f. 56 v.)

*X-pehel-che*, or *Yax-pehel-che*. *Piper medium*. Jacq. (Standl. 1920-26, p. 155; Gaumer.)

This might be translated as notched tree. It is a shrub 15 feet high reported from Buena Vista Xbac. (Millsp. I, 293). The steeped leaves are rubbed on the scalp for a complaint characterized by black spots (370).

*Ppelex-cuch*, *Perez-cuch*. *Croton glabellus*, L. (Standl.)

"There are found in the said place some trees, the bark of which is in smell and taste the same as the cinnamon. It is called in this idiom, Ppelizkuch." (Avendaño in Means, 1917, p. 109). "A tree which they call ppelixcuch is of moderate size. Its taste is bitter; its odor is almost that of cinnamon. It is medicinal. The exterior of the root is for sores in the mouth." (Y. y H. del Yuc. f. 61 v.) An infusion of the crushed root is drunk for asthma (4) and a decoction of the leaves used to bathe the patient (19). The crushed leaves are poulticed on ulcers and abscesses (287) and the root is a remedy for ringworm (373).

*Petel-kin*, or *Pet-kin*. *Lantana camara*, L. *Corona del sol*, *Lantana*. (Standl.; Gaumer.)

Lit. sun-crown. Shrub 8 to 12 feet high found on waste ground and brushlands, and reported from Izamal and Tekanto. It has bright colored flowers and a small juicy black fruit. Compare Kanpetkin.

*X-peet-citam*. *Bumelia retusa*, L. Swartz. (Standl.; Gaumer.)

*X-petel tun*, or *X-petel tun-ak*. *Cissampelos pareira*, L. *Pareira brava*. (Gaumer; Standl. 1920-26, p. 273).

Lit. round stone, also the name of a certain poisonous snake. Described as a scandent shrub with stinging hairs and small greenish white flowers. It is abundant on stone fences about Izamal. A decoction of the leaves is given for blood in the stools (95) and employed as a bath for aching bones and convulsions (179). The crushed leaves are a remedy for toothache (391), abscesses of the breast (241) and poisoning (277).

*Pich*. *Calliandra portoricensis* (Jacq.) Benth. (Standl. 1920-26, p. 308; Millsp. I, 298; Gaumer.)

A tree 100 feet high; abundant near Izamal and Uislimchac. "Pich. A tree of this name the fruit of which resembles large ears." (P. P. 1866-77). "There are many groves of forest trees which furnish sustenance in sterile years, such as the piches which bear (a fruit like) pine-nuts. When toasted these are very sweet and take the place of chick-peas. They are of the size of round pine-nuts and have a similar hull." (Rel. de Yuc. II, 34). The Maya text prescribes an application of the flowers to the womb after parturition (43). The wood is employed for cabinet work.

*Pichi.* *Psidium guajava*, L. *Guayabo*, Guava. (Standl. 1920-26, p. 1036; Millsp. I, 36; Gaumer.)

Shrub or tree, sometimes 30 feet high. The smooth reddish or brown bark scales off in thin sheets. A decoction of the leaves is drunk for coughs and asthma (2 & 27) or used as a wash for sore knees (263) and hemorrhoids (353) and the boiled leaves themselves are held in the mouth to cure a sore tongue (267). The juice of the raw crushed leaves is employed as an enema for flatulence (117). The juice of the crushed fruit is taken for cramps and diarrhea (105).

*Pichi-che.* *Psidium sartorianum* (Berg.) Niedenzu. (Standl. 1920-26, p. 1035).

*Calycorectes mexicanum*, Berg. (Millsp. I, 312; Gaumer.)(?)

Described as a tree 50 feet high with creamy white flowers, common in brush and forest lands about Izamal. (Millsp.) This is often planted for its greenish yellow fruit. The Maya name means guava-tree. The Maya text prescribes the crushed leaves poulticed on the abdomen for flatulence (111) and other swellings (183). A decoction of the crushed root is given for blood in the stools accompanied by pus or mucus (135). The leaves are boiled and the decoction given for epilepsy (173) or employed as a bath (214). The toasted leaves are squeezed into the ear to cure earache (193).

*Ppih.* Probably *Jatropha curcas*, L.

"*Ppih.* The *avellanas* (filberts) of this land, a purgative fruit." (Motul.) "*Ppih.* An *avellana* with which the Indians purge themselves." (P. P. 1866-77). The *J. curcas* is cultivated at Izamal, where Gaumer reports it under the name of *Zicilté* which might be translated as squash-seed-tree. The Spanish Yucatecs call it *avellanas*, and in Vera Cruz it is called *Avellanas purgantes*.

*Pim.* *Ceiba aesculifolia* (H. B. K.) Britt. & Baker. (Standl. 1920-26, p. 792).

The silky fiber enveloping the seeds was employed for weaving cloaks in Uman up to the middle of the last century, and is still used to stuff cushions. See *Yax-che* and *Pochote*.

*Pixoy.* *Guazuma ulmifolia*, Lam. (Standl. 1920-26, p. 809; Standl. 1928, Pl. 52).

*G. polybotria*, Cav. (Millsp. I, 379). *Guazim*.

A tree 40 feet high common everywhere in Yucatan. The fruit is a black woody capsule, pulpy inside and containing numerous seeds. It is covered with sharp tubercles. "*Pixoy.* A tree whose wood resembles that of the *sauco* (elderberry) and the fruit is like black olives." (Motul.) "The said town of my *encomienda* is called *Pixoy*, because above the cenote and pool where they drink there was a tree named *pixoy*, which was very large. The said tree produces a black fruit like the mulberry; and the tree serves in this land for many things because it is very flexible; and it serves for other things." (Rel. de Yuc. II, 139). This probably refers to the use of the stems in making rope and the wood for ribs of small boats. This may be the legendary *picooy*, or *picooy* tree, which the gods planted to commemorate the fabled deluge which once destroyed the world. (Chilam Balam of Chumayel, p. 43; Martinez, 1913).

The Maya texts prescribe a decoction of the *pixoy* for abdominal pains (73) and retention of urine (413) and an infusion of the crushed young shoots for diarrhea and cramps (106).

*Ppix-thon.* *Phyllanthus glaucescens*, H. B. K. (Standl. 1920-26, p. 610).

*Ppix-thon* could be translated as "to arouse those whose heads are bowed." It is a shrub bearing a capsule about an inch in diameter, reported from Campeche. "A bull-roarer is made of the dry pod or berry of a tree (*pisthon*). The pod,

which is nearly round and hollow, has three holes cut in it. When whirled in the air on the end of a string, a pleasing musical sound is made." (Tozzer, 1907, p. 77).

*Ppix-thon-chich̄.* *Ayenia pusilla*, L. (Gaumer; Standl.)

An herb 2 feet high, abundant in open lands about Izamal. The fruit is a small capsule, perhaps  $\frac{1}{4}$  inch in diameter. Lit. bird ppix-thon.

*Ppix-thon-kak.* *Ayenia fasciculata*, Millsp. (Standl.)

*A. magna*, L. (Gaumer.)

*A. magna* is a shrub 6 feet high with dark crimson flowers, growing in brushlands about Izamal. (Millsp. I, 310). Lit. Ppix-thon fire. The Maya text prescribes a poultice of the crushed leaves for abscesses of the breast (241).

*Ppix-thon-kax.* *Astrocasia phyllanthoides*, Robins. & Millsp. (Standl. 1920-26, p. 610).

Lit. Ppix-thon of the forest. Described as a shrub from 3 to 25 feet high, growing in brushlands. It is reported from Itzimna, Izamal, Temax and the Island of Cozumel.

*Pix-ulum.* *Ruellia tuberosa*, L. See Che-zuc.

*X-poch-kak.* *Passiflora ciliata*, Ait. *Pasionaria*. (Gaumer; Millsp. I, 311).

Lit. fire-cluster. Described as a vine, 6 feet, white flowers with crimson pistils and tinged with purple; common on waste lands near Izamal. The Maya name would rather suggest a Passionflower with scarlet blossoms.

*Pochote.* *Ceiba aesculifolia* (H. B. K.) Britt. & Baker. (Standl. 1920-26, p. 792).

*Ceiba Schottii*, Britt. & Baker, (Standl.)

Pochote is derived from the Nahuatl *pochotl*. The tree is also called *choo*.

*Pol-boz.* *Annona purpurea*, Moc. & Sessé. (Gaumer & Standl.)

This is the *guanábano*, or soursop, a small tree 12 to 16 feet high with a large ovoid or heart-shaped fruit. Reproduced Standl. 1928, Pl. 27.

*Pol-kokob.* Lit. snake-head.

The plant is crushed for a drink to cure snake-bites (48).

*Pol-kuch*, or *X-pol-kuchil.* *Asclepias curassavica*, L. Millsp. I, 313; Seler, 1902-08, III, 565).

This synonym for anal is prescribed as a poultice for inflammation of the throat (405). Lit. vulture-head.

*Pol-tzacam.* *Mammillaria Gaumeri* (Britt. & Rose) Standl. (Gaumer.)

*Pom.* *Protium copal* (Schl. & Cham.) Engl. *Copal*. (Standl. 1920-26, p. 543).

*P. heptaphyllum* (Aubl.) Mch. (Millsp. I, 370).

"Pom. Copal, which is the incense of this land." (Motul.) "This tree, pom, is the copal, as they call it. It is heating to a high degree and so useful a tree that its resin, which is like incense, is what they ordinarily use in the poor churches. The Indians commonly use it in their idolatries." (Y. y H. del Yuc. f: 220 r.) One of the 16th century settlers tells us: "There is a great quantity of trees called pom in their language. From these they obtained a certain resin like incense with which the natives smoked their idols and houses of idolatry. The Spaniards use it for many diseases and call it copal, which is a Mexican word." (Rel. de Yuc. I. 56). Landa adds: "It is a fresh tree, tall and of good shade and leaf, but its flower will turn the wax black, where there is any (in the honey)." (Landa, 1900, p. 389).

Maya literature is filled with references to this gum. It is called the superodor of the center of heaven (lay paynum u booc tu ou caane) and the brains of heaven (hex u somel caane, lay pome). (Chilam Balam of Chumayel, p. 36 & 38). The medical texts prescribe a decoction of the gum for coughs and asthma (25), diarrhea and biliousness (66), abdominal pains (69), sore rectum (133), diarrhea with pus or mucus (135) and swelling of the body (251). The patient is smoked with the burning gum to facilitate the delivery of a dead fetus (31) and to cure hemorrhoids (163).

*X-pomol-che.* *Jatropha Gaumeri*, Greenm. *Piñon*. (Standl. 1920-26, p. 639; Gaumer.)

In Father Avendaño's account of his journey to visit the heathen Itzas we read: "At Nohpek we found a tree which in that language is called Pomolche. This produced a fruit of the same form as the hazel-nuts of Spain, as well in the shell as in the kernel, color, smell and taste. Curiosity led us to see if they were really hazel-nuts. We ate some of the kernels for some time, without finding any difference. Quite a time passed in which there was no effect other than what we expected. Eating the said kernels caused us some thirst, giving us occasion to drink water, and we had scarcely drunk it, when we all burst out with vomitings and violent diarrhea . . . Their remedy was a draught of wine. We took the remedy and after we had purged ourselves thoroughly, we were, of a sudden, well." (Means, 1917, p. 110). Standley notes that the branches are sometimes used for making whistles. It is described as a small tree, 15 feet high, abundant in the brush and forest lands about Izamal.

The Maya medical texts prescribe the pomol-che for dysentery; an infusion of the gum is drunk (80) or a decoction of the roots (100, 122 & 123). An infusion of the gum is taken for yellow fever (125) and applied to a sore eye (203). The crushed leaves are applied to various skin complaints (240, 280 & 322).

*Pompon-zit.* *Pittiera longipedunculata*, Cogn. (Millsp. I, 393; Gaumer.)

Pompom-zith means to leap and stamp loudly on the ground. Zit is a certain reed. Described as a vine, 10 feet, rare in moist places near Tekax. Elsewhere in Central America this vine bears yellow solitary flowers on long stalks and oval gourdlike fruits, green with pale stripes and 2 inches long. This Maya name is known only from the botanists.

*Pop-che.* Lit. mat-tree.

The Maya text gives this as a synonym for the niax (307).

*Ppoppox.* *Tragia nepetaefolia*, Cav. *Ortiguilla*. (Millsp. I, 306; Gaumer.)

T. Gaumeri, Millsp. (Standl.)

T. Yucatanensis, Millsp. (Standl.)

The plant takes its name from the complaint for which it is the remedy, an ache in the limbs or gout. "Ppoppox. Nettles of this land which contain some poison. Zac-ppoppox (white ppoppox) is one kind; chac-ppoppox (red ppoppox) is another. This stings powerfully and cures pimples and warts by whipping them with it. The yax-(green-)ppoppox is still another kind." (Motul.) Ppoppox also means anything scaly or warty. The Maya text prescribes the application of the crushed plant to relieve a cough (14). A decoction of the leaves is used as a bath for aching bones and convulsions (179) and drunk for abdominal pains caused by sorcery (431).

*Ppoppox-can.* *Tragia* sp. See Ppoppox.

Pio Perez states that this is a synonym for ppoppox. (P. P. 1866-77). "This plant called ppoppoxcan is a vine. It is moderately heating. It is a little vine

which winds about the nearest tree. Others call it *colcan*, because it winds like a serpent. The stock of this vine is whitish and the shoot, green. It has no down but is smooth. Some say that it is a small tree and has a red blossom." (Y. y H. del Yuc. f. 319 r.) Under this name the Maya texts prescribe it as a remedy for what is called post-partum headache (227) and for swollen testicles (245).

*Popte*. Lit. a wooden bridge or pontoon.

A decoction of the leaves is a remedy for aching bones and convulsions (179).

*Pox*. *Annona cherimola*, Mill. *Cherimoya*. (Standl. 1920-26, p. 283; Seler, 1902-08, III, 568). Compare Zuli-pox.

"Pox. A certain large and spiny fruit, a species of *annona*." (Motul.) This is often a tree 30 feet high and is called custard-apple in English. The fruit has a white pulp and is highly prized. It is widely cultivated.

*Puc*. Probably the same as Puc-ak.

The Maya text prescribed the crushed leaves as a remedy for certain itching pustules (365).

*Puc-ak*. *Notoptera leptcephala*, Blake. (Standl. 1920-26, p. 1559).

N. Gaumeri, Greenm. (Standl. 1920-26, p. 1558). *Inciense del pais*.

These are shrubs, the latter 20 feet high bearing white aromatic flowers. Reported from near Izamal, and Xnocac. In a description of the *kan-chunup* (*Sebastiania adenophora*) we read: "with this they cure swellings of the legs as well as with the vine which winds around it, which is the *puc ak*." (Y. y H. del Yuc. f. 216 r.) The Maya text prescribes the *puc-ak* as a remedy for abscesses (287).

*Puch-ah-ci*. *Helenium quadridentatum*, Labill. (?) *Manzanilla*.

"This plant, *puch ah ci*, is heating. It is the *manzanilla*, as good as that of Spain. It is given for sweats and swollen testicles." (Y. y H. del Yuc. f. 279 r.) The *manzanilla* of Spain is the common chamomile, but in Yucatan the term is usually applied to *H. quadridentatum*.

*Pucté*. *Bucida buceras*, L. (Standl. 1920-26, p. 1030).

Maler describes this tree in southern Yucatan as picturesque with whitish flowers and succulent green foliage, which usually assume brown and fiery tints at the ends of the branches. (Maler, 1910, IV, p. 139). The tree is reported from Campeche and is said to be a valuable source of lumber, the wood being used for piling, axles, wheel-hubs etc.

*Puc-yim*, or *Pucim*. *Colubrina Greggii*, Wats. (Standl. 1920-26, p. 720).

Described as a small tree, 30 feet high abundant in scrub and brush lands. Reported from Mascab Pixoy, Izamal and Merida. The Maya texts prescribe a decoction of the young leaves as a bath for phthisis (2), asthma and coughs (19) and what is called "blood-vomit and rotten liver" (127). The fruit is a remedy for granulation of the eyelids (344). The crushed leaves are poulticed on abscesses and ulcers (287).

*Puh*. *Typha angustifolia*, L. *Espadaña*. (Standl.)

"Puh. The rush employed for mats." (P. P. 1866-77). This is the common cattail of tropical America, frequent in shallow water.

*X-puhuk*, or *Maceual-puhuk*. *Tagetes patula*, L. *Pastora*. (Millsp. I. 325; Standl.)

Described as an herb 3 to 6 feet high, very abundant in old fields near Izamal.

*Punab.* *Swietenia macrophylla*, King. *Caoba*. (Standl.)

Punab is also the name of a certain wild pigeon. In southern Yucatan, Father Avendaño reports: "There are . . . many cedar and mahogany trees, which in this tongue are called punabes." (Means, 1917, p. 132).

*Punah-ci.* *Tribulus terrestris cistoides* (L.) Oliver. See Chan-x-nuc.

*Ppuluxtakoc?* *Urvillea ulmacea*, H. B. K. (Gaumer; Standl.) See App-ac.

*Ppuluxtaa* is the Maya term for dropsy or flatulence.

*Put.* *Carica papaya*, L. *Papayo*. (Standl. 1920-26, p. 851; Millsp. I, 34 & Pl. IV.)

Tree sometimes 27 feet high, producing a large pear-shaped fruit 6 to 9 inches in diameter with a sweet salmon-colored pulp. Put means to bear a load on one's shoulders and is somewhat descriptive of this peculiar looking tree when the leaves have fallen and the fruit remains hanging on the bare trunk. "Put. The papaya, a light spongy tree, and the fruit which it bears is edible." (Motul.) "This tree, the put, and papaya in Castilian, has a very soft wood. Its fruit is like a small melon, very mellow and yellow inside." (Y. y H. del Yuc. 323 r.)

The Maya texts prescribe the juice of the cooked young shoots for a sore eye (203), hemorrhoids and other inflamed protuberances (319). The crushed young shoots are poulticed on buboes (349) and the root is crushed and poulticed on eruptions of the skin (320). See *Chich-put* for a discussion of the wild form of this plant.

*X-put-can.* *Lepidium virginicum*, L. *Mastuerzo*. (Gaumer; Standl.)

Lit. papaya-shoots. This is the Pepper-grass, an abundant weed, "the put-can-xiu, which smells like the put (*Carica papaya*) and is the mastuerzo." (Y. y H. del Yuc. f. 71 r.) *Mastuerzo* is the garden-cress of Spain. The Maya text also notes that it smells like the papaya and prescribes the seeds as a remedy for flatulence (114). The crushed leaves are poulticed on swollen knees (244), itching pustules (365) and wounds and cuts (426).

*Put-xiu.* *Lepidium apetalum*, Willd. *Mastuerzo*. (Millsp. I, 297).

*Puc-chichibe.* *Corchorus pilolobus*, Link. (Gaumer.)

Herb 1 foot high, common in moist shady places near Izamal. (Millsp. I, 307). The Maya name might be translated either as needle-chichibe or escaping chichibe.

*Puc-mucuy.* *Samyda yucatanensis*, Standl. *Aguja de tortola*. (Standl. 1920-26, p. 842).

*Bumelia retusa*, Swartz. (Ibid. p. 1117).

*Podopterus mexicanus*, Humb. & Bonpl. (Gaumer; Standl.)

*S. yucatanensis* is reported from Merida and Izamal as a tree 25 to 40 feet high with white flowers and a round fruit half an inch in diameter.

*B. retusa* has been found in brushlands near Izamal and on the Islands of Cozumel and Mugerres, and described as shrubby, 10 to 15 feet high.

*P. mexicanus* is a tree 50 feet high common in forests and brushlands near Izamal. This tree is also reported as *zac-itza*. (Millsp. I, 294). The Spanish name is a literal translation of the Maya, which is known only from the botanists and is not found in the Maya sources.

*Pucub-che*, or *Puc-che.* *Oncidium cebolleta* (Jacq.) Sw. (Standl.)

Lit. needle-tree. The Maya texts prescribe an application of this orchid to draw a sliver from the foot (427). The name also means sliver. It is found growing on decayed wood in the soil of open forests (Millsp. II, 32).

*X-tabay*. *Pithecoctenium echinatum* (Jacq.) Schum. (Standl.)

See Xache-x-tabay.

*Tab-can*, or *X-tab-canil*. *Cissus rhombifolia*, Vahl. (Standl. 1920-26, p. 732).

*Vitis rhombifolia*, Baker. (Millsp. I, 307).

Described as a vine, 30 feet, bearing a black fruit and abundant on old stone walls near Izamal. "Taab-can. Certain wild grape-vines of this land, which grow on the branches of trees from the dung of the birds and descend to the ground, where they put forth roots and then climb again." Compare Yax-tab-can.

The Maya texts prescribe an infusion of the crushed young shoots either as a drink (49) or applied externally (50) for snake bites. The crushed root is poulticed on various skin complaints (320).

*Taab-che*, or *X-tab-che*. *Rhizophora mangle*. L. *Mangle*. (Standl. 1920-26, p. 1027; Seler, 1902-08, III, 563). Mangrove.

This is the mangrove of the coast. It sends out arching props in all directions. *Tab-che* has also been identified as *Conocarpus erecta* and *C. sericea*, Forst. But these are better known as *kan-che*.

*Tabentun*.

"This plant, *tabentun*, is a vine which puts forth a white flower. It is splendid for a garden bower. Its quality is lukewarm. It has many virtues, the best known of which is for those who cannot urinate. It will open the passages, even though there is a stone." (Y. y H. del Yuc. f. 294 r.) Probably a *Convulvus*; the aromatic honey from its flower is said to be the source of a potent drink.

*Taa-ceh*. Lit. deer-dung.

The Maya text describes this as a vine and prescribes it for certain skin complaints (364). *Ta-ceh-akal* is probably a synonym.

*Ta-chac*. *Ustilago maydis*, *Tizon de mais*. (Gauger.)

Lit. lightning-smut.

*Ta-cño*. *Asagraea officinalis*, Lind.? *Cebadilla*. (Motul.)

"This plant, *ta-cño*, which is the *cebadilla*, is very heating. It is thus named because its seed resembles the excrement of a rat. It puts forth certain little bulbs (*cebollitas*) and the seed is the fruit. There is a plant which resembles the *muerte galano*, with certain little flowers that are very showy. They put it in windows. This puts forth its seed in the same manner, and they call it *tacño* for this reason, but it does not have the effect of the other one, which kills worms in animals and is a common remedy for wormy cattle. There is a great quantity of the *cebadilla* in this land on the savannahs and in moist places." (Y. y H. del Yuc. f. 218 r.) Whether or not he identifies the plant correctly, the anonymous herbalist, who wrote the above description, evidently had in mind *Asagraea officinalis*, Lind. which grows in grassy places near Vera Cruz and was well known to the early Mexican herbalists.

*Tah*. *Viguiera dentata*, var. *helianthoides* (H. B. K.) Blake. *Romerillo de la costa*. (Standl.; Millsp. I, 326 & 397; Seler, 1902-08, III, 563; Gauger.)

Lit. splinter of wood. This is an herb 2 to 5 feet high, abundant in old fields near Izamal and Xcholac. "Tah. Certain bushes or plants from the flowers of which the bees make honey; from their dry branches they make beds for sleeping and torches for lighting." (Motul.) "This plant, *tah*, is heating. It differs from the other *tah* (*zac-tah*) in its flower and leaf. The bees gather honey from this, as they do from the other one, and it possesses the same virtues." (Y. y H. del

Yuc. f. 350 r.) It is elsewhere described as "being long straight stems, 8 or 10 feet high, straight . . . having a yellow flower on the top which is a favorite food for horses." (Stephens, 1843, II, 29).

*Tahté.* A pine tree. (Berendt apud Means, 1917, p. 189.)

"A pitch pine (Maya tahte) is used for light in making journeys at night." (Tozzer, 1907, p. 20). Lit. splinter-tree. Bolontahté (Ninepines) is the name of a site southeast of Valladolid.

*X-tail.* *Ruellia tuberosa*, L. See Cabal-yaxnic.

"The plant called cabalyaxnic; others call it ix-tail. (Y. y H. del Yuc. f. 51 v.) "The purple flower of a plant which in Mexican they call *Xoxtlaton*, and in this Maya language, ixtail, or cabalyaxnic." (Ibid. f. 84 r.) This is confirmed by Pio Perez. (P. P. 1898, p. 111).

*Takob.* *Annona muricata*, L. Guanábana. (Gaumer; Standl.)

*Taman.* *Gossypium herbaceum*, L. *Algodon atabacado*. (Gaumer.)

*G. hirsutum*, L. and *G. barbadense*, L. (Standl.)

Tanam, which also means liver, is the oldest form of the word. "Tanam. Cotton in general, both the tree and its wool." (Motul.) Indeed taman still designates a number of species. Both before and after the Spanish conquest cotton was an important crop in Yucatan. "The traffic of this land is in cotton, wax, honey and salt which is carried to Mexico, the Honduras and other parts, whence they bring back cacao and garments for the Indians." (Rel. de Yuc. I, 125). The importation of garments probably refers to woolen goods and dates from after the conquest.

The Maya texts prescribe an infusion or a decoction of the crushed young shoots for asthma (19) the crushed seeds are taken for tenesmus (90). A bath of the boiled leaves is administered for aching bones and convulsions (malaria?) (179). The blossom is a cure for earache (190), and the toasted leaf is squeezed into the eye to stop twitching (200). The crushed flowers are applied hot to certain scalp-diseases (249), and the crushed leaves are poulticed on ulcers (285) and various skin diseases (300). The flowers are poulticed on the genital organs to relieve a certain venereal disease (379).

*Taman-can.* Lit. cotton shoots.

"Ix-taman-can. The sorrel-plant (*yerba acedera*) or something very similar." (Motul.) The Maya text prescribes a decoction of the plant as a wash and taken internally for ringworm (359).

*Taman-ché.* *Malvaviscus grandiflorus*, H. B. K. *Manzanita*. (Standl.) Lit. cotton-tree.

Described as a shrub 10 feet high with red flowers, growing on scrub lands near Izamal. (Millsp. I, 307). Its leaves are said to resemble those of the cotton-plant, and it bears an edible globular yellow fruit. (Cuevas, 1913, p. 94). A decoction of the leaves is prescribed by the Maya text for scalded head and scabs (374).

*Taman-chich.* *Malvaviscus arboreus*, Cav. *Manzanita*. (Standl.)

Lit. bird-cotton. The Maya texts prescribe a decoction of the leaves for aching bones and convulsions (179) and retention of urine (413).

*Tamay.* *Zuelania Roussoviae*, Pittier. *Volador*. (Standl. 1920-26, p. 843 & 1928, Pl. 55).

This is a tree 30 to 80 feet high with dense clusters of whitish flowers. The fruit is a berry-like capsule  $1\frac{1}{4}$  inches in diameter containing numerous seeds. It



has been called "the liquid-ambar tree of this land." (Y. y H. del Yuc. f. 99 v.) The name, tamay, has an ominous sound, as tamay-chii means to announce a sinister prophecy. (Motul.)

The Maya texts prescribe an infusion of the young leaves as a bath or an infusion as a drink to cure asthma and coughs (14, 16 & 19). The infusion is also taken for diarrhea and cramps (106) headache and pain in the heart (305). The decoction is drunk for ringworm (373). A poultice of the crushed roots is applied to snake-bites (54), headache (220), erysipelas (334 & 337) and buboes (318). A decoction of the leaves is employed as a bath to cure fevers (142), fainting (212) and certain itching pustules (355). The powdered bark is applied to an aching tooth (388). The Spanish Yucatec doctors administer a decoction of the bark as an emmenagogue. (Cuevas, 1913, p. 95).

*Tamcaz-che*, or *Tancaz-che*. *Zanthoxylum fagara* (L.) Sarg. (Standl.) 1920-26, p. 533). Prickly-ash.

*Z. pterota*, L. *Palo mulato*. (Gaumer.)

Described as a tree or shrub sometimes 30 feet high with yellowish green flowers. It has a strong odor and is known in the Bahamas as wild lime. "Tamcaz-che. A tree of the coast which is very medicinal. *He tamcazche u sacal lauac yaahil*. This tree cures any disease, even buboes. It has narrow leaves, and in Ecab it is called uole." (Motul.) "This plant, tamcazche, has a white flower and an angular trunk. It is somewhat odorous." (Y. y H. del Yuc. f. 99 r.) The "angular trunk" may refer to its corky projections. A small Maltese cross of the bark is worn by children as a charm to cure flatulence. (Gann, 1918, p. 19).

A decoction is prescribed by the Maya texts for fevers (142), fainting-spells (212) and a certain skin-complaint resembling chicken-pox (330). The crushed root is a cure for erysipelas (338). The Maya text also mentions a "tamcazche of the savannahs" which has a rough trunk and white flowers. An infusion of the crushed leaves or branches is sprinkled on the patient to cure convulsions (160).

*Tan-ceh*. Lit. deer-breast.

The Maya text states that this is a vine which climbs on the xaan (*Sabal japa*, Wright,) (160).

*Taan-coc*. Taan is either ashes or lime; coc means asthma.

The young shoots are crushed and the infusion drunk or the decoction employed as a bath to cure asthma (19). This is probably the plant elsewhere called *taman-coc* and described as a small bright green plant producing two leaves of ordinary size. The plant is little known. A sweetened decoction of the plant is taken internally as an anti-spasmodic. (Cuevas, 1913, p. 94).

*Taan-che*. *Croton fragilis*, H. B. K. (Standl. 1920-26, p. 619; Millsp. I, 303; Gaumer.)

A slender shrub 15 feet high with long slender racemes of brownish yellow flowers. It is abundant in brushlands about Izamal.

*Tan-ounun*. *Euphorbia* sp. (of the *Chamaesyce* group?)

Lit. kolibri-breast. "This plant, *tanounun*, is very cooling and of great virtues. It differs from the *yerba de la golondrina*, *ah pakunpak*, (*Euphorbia dioica*?) in that this has a red stem and the other, a green one. According to the herbalists it is an admirable medicine for the eyes. They say that even though the eye be broken, it will heal it." (Y. y H. del Yuc. f. 390 r.) Dr. Standley writes: "This description certainly suggests *Euphorbia*. Some of the plants are purple-red and others green, even in the same species." The Maya texts prescribe the juice of the crushed plant for dysentery (95, 98 & 100) and the fruit is applied to a sore eye (206). It is said to spread on the ground. (Ixil. f. 60 r.)

*Tatak-che.* *Citherexylum Schottii*, Greenm. (Standl.; Gaumer.)

Lit. clinging tree, or that which clings to a tree. "This vine, called tatakche, is cooling. It is the ivy of Castile, which winds about a tree; it pulls down a wall and disintegrates it. The Indian women employ the word, tatakche, to call to their husbands not to leave them, and it is a more decent expression than another one which they are accustomed to use. With it they cure sores, even though they are chronic, and it is necessary to learn the method of treatment, because it brings forth humors." (Y. y H. del Yuc. f. 357 r.) This description is difficult to reconcile with that of *C. Scbottii*, which is said to be a shrub or tree. (Standl. 1920-26, p. 1241).

*Tauch*, or *Tauch-ya.* *Diospyros ebenaster*, Retz. (Standl. 1920-26, p. 1128).

*D. ebenum*, Kóen. *Sapote negro.* (Millsp. I, 382; Gaumer.)

A large shrub or medium-sized tree with yellowish white or greenish flowers and a shining green fruit said to be rather insipid. "Tauch. The green zapote which has a black pulp; also the plant which produces it bears the same name." (P. P. 1866-77).

*X-ta-ulmil.* *Spermacoce tenuior*, Lam. (Gaumer; Standl.)

*S. tenuior* is an herb 3 feet high, common in brushlands near Izamal, Merida and Nohcacab. It is reported from elsewhere in Central America as having dense clusters of minute white flowers.

*X-ta-ulum*, or *X-ta-ulumil.* *Ageratum intermedium*, Hemsl. var. *maritimum.*

A. Gaumeri, Rob. (Standl.) *Mota morada.*

Lit. turkey-dung. *Ta-ulum* would be the singular of *ta-ulumil*. Described as an herb 2 feet high with heads of small light purple flowers. It is reported from Izamal, Merida, Chichankanab, Cozumel and elsewhere. The Maya text states that the *ta-ulumil* is an herb with a blue flower, like a small mint blossom and prescribes a poultice of the crushed plant for a blister or scald (247) and a swollen arm (180).

*Taji.* *Hippocratea Grisebachi*, Loes. (Gaumer.)

*H. celastroides*, H. B. K. (Standley, 1920-26, p. 686).

Vine or scandent shrub, 25 feet, with greenish yellow flowers and common in forests about Izamal. The Maya text prescribes an infusion of the leaves for a drink or decoction employed as a bath to cure asthma and coughs (19).

*Tek-halal.* *Arundo donax*, L. (Standl.; Gaumer.)

Lit. manati-reed. Sometimes growing to a height of 20 feet, it is common in ponds and cenotes and along the coast.

*Tel-ak.* Lit. shin-vine.

The leaves are crushed and applied to an eruption characterized by cracking skin (361).

*X-tel-cox.* *Phytolacca icosandra*, L. (Standl.) Pokeberry.

*P. octandra*, L. (Standl.) Lit. pheasant-leg.

*Tel-kuch.* *Adiantum tricholepis*, Fee.(?)

"This plant, *telkuch*, others call it *zicil pach*, is very heating. Its whitish leaf is very odorous and very good to brush the teeth and clean them." (Y. y H. del Yuc. f. 369 r.) Both Pio Perez (1898, p. 109) and the Maya text (329) state that it is a synonym of the *tel-oiu*, or *A. tricholepis*. Dr. Standley notes that the use made of the plant suggests *Gouania lupuloides* (*om-ak*), but that is a woody vine.

*Telez-ku.* Solanum sp. *Berengenilla.* (Standl.)

Lit. false ku. Compare Toh-ku, which means genuine ku. One of the Maya medical texts states that the Spanish name is *Berengenilla*, while another gives it as *Chamico* (318 & 316). The fried crushed leaves are poulticed for a spasm of the arm (180), buboes (315, 316 & 318) and smallpox (347).

*Tel-oiu*, or *Tel-xiu.* *Adiantum tricholepis*, Fee. *Culantrillo.* (Gaumer.)

Lit. cowbird-leg. "Teloiu. *Culantrillo de pozo.*" (Motul.) "This plant, teloiu, is the *culantrillo de pozo.* It is moderately heating and is very well known. There is much of it in this land. It is called tel, because its leaves resemble the crest of a cock, and oi because it has black ribs. . . It is usually to be found in wells and on pyramids and old buildings." (Y. y H. del Yuc. f. 165 r.) As a matter of fact, the Maya word for crest is thel and not tel. The Maya text prescribe the juice of this maidenhair fern as a wash for scabs (329) and abscesses (348).

*X-tez.* *Amaranthus* sp. *Bledo.* (Motul.)

"Tez-cuntah. To salute; it is an ancient word with which they saluted the great lords. Tezcuntech ix ahau." (Motul.) Tez is a generic name for the species but is probably applied chiefly to *A. dubius*, Mart. and *A. annectens*; Blake. Compare Zac-x-tez and Kix-x-tez.

*X-tez-ak.* *Buettneria aculeata*, Jacq. (Standl. 1920-26, p. 813).

*B. carthagenensis*, Jacq. (Millsp. I, 379; Gaumer.)

Lit. *Amaranthus*-vine. "Shrub 15 feet high, common in forests about Izamal, putting forth its light green flowers in August. (Millsp.) Standley's description is more in keeping with the Maya name. He reports it as a scandent or procumbent shrub with a black purple flower, sometimes prickly stems and a fruit body 7 to 10 mm. in diameter covered with long stout spines.

*Tez-mucuy.* *Amaranthus* sp. Perhaps *A. hybridus*, L. (Standl.)

Lit. pigeon-tez. "A certain small *Amaranthus* without spines." (Motul.) "This plant, tezmucui, is the *Amaranthus* (*bledo*) of which there are two sorts. The green and white ones are very cooling. The others are red, and these large spiny ones, which are called ek-kixil, are more heating, although moderately so. From these *bledos* they get an ash for soap, as they do from the saican (*Sesuvium portulacastrum*, L.) It is not so strong, and they have to strengthen it with the other and with quick-lime; but the lye is better than that of the saican for dying needle-thread so that it will not break." (Y. y H. del Yuc. f. 164 r.)

*X-tibib-ak.* Lit. fear-vine, or reverence-vine.

The crushed root is poulticed on ulcers (281) and smallpox pustules (346).

*X-tibib-xiu.* Lit. fear-plant, or reverence-plant.

The juice from the crushed leaves is applied to a sore eye (325).

*Toch-chakan.* *Oxalis* sp., perhaps *O. latifolia*, H. B. K.

This identification is based on the Maya text which states that toch-chakan is another name for yala-elel and chac-muclah-kak (298).

*Toh-ku.* *Datura innoxia*, Mill. *Chamico.* (Standl.)

Lit. genuine ku. Compare Mehen-x-toh-ku and X-telez-ku. "This plant called toh ku, or chelesk, is the *berenjenilla.* It is poisonous and greatly resembles the *berenjenilla* of Castile. They make many medicines of it for hemorrhoids. The *berenjenilla*, fried in table-oil or fried dry and strained, will cure ulcers. It

remains white like ointment. With this they anoint hemorrhoids and dry them up." (Y. y H. del Yuc. f. 298 r.) This description corresponds fairly well with the Telez-ku.

*Tok-aban.* Eupatorium conyzoides, Mill. (Millsp. III, 94; Standl. 1920-26, p. 1441; Gaumer.)

*Trixis radialis* (L.) Kuntze. (Millsp. III, 149; Standl. 1920-26, p. 1641).

Lit. flint-bush. Some of the botanists ascribe the name tok-abal to both these shrubs, but it is not found in any of the Maya sources. The Maya texts prescribe the leaves of the tok-aban as a remedy for ulcers (373) and a decoction is drunk for blood in the urine (423). An infusion is drunk and a decoction employed as a bath for asthma (19), and a decoction of the gum is used to bathe anyone suffering from malaria (158). A decoction of the leaves is employed to bathe anyone suffering from aching bones and convulsions (179), and the juice from the crushed leaves is taken for gonorrhoea. (Ixil. f. 63 v.)

*Tok-chichibé.* Lit. flint-chichibé.

The Maya text states that it is a vine and prescribes a decoction of the leaves as a bath to cure phthisis (12) or as a drink for pain in the bowels and heart (73).

*Tok-zuuc.* Lit. flint-grass.

A decoction of the leaves and roots is prescribed by the Maya text as a remedy for phthisis, asthma and coughs (8).

*X-toloc-uayam.* See X-tulbayen.

*X-tom-pac.* Adelia oaxacana (Muell. Arg.) Hemsl. (Standl. 1920-26, p. 633; Millsp. I, 401; Gaumer.)

Shrub 20 feet high bearing a capsule 1 cm. broad.

*Toon-can.* Lit. pouch-shoot.

An infusion of the crushed leaves is drunk for snake-bites (49). The crushed plant is poulticed on swollen genital organs (252), ulcers (301) and eczema (310).

*X-ton-ceh.* Lit. deer-pouch, or deer-genitals.

A decoction of the plant is drunk to cure loss of speech (171).

*Toon-che.*

An infusion of the crushed plant is drunk or its decoction employed as a bath for asthma (19).

*Toon-paap.* Solanum verbascifolium, L. (Standl. 1920-26, p. 1295; Millsp. I, 389; Gaumer.)

Lit. jay-pouch or jay-genitals. Described as shrubby, 10 feet high, bearing white flowers and a yellowish fruit a quarter of an inch in diameter; abundant on waste places and brush lands. See Xaxox.

*Tonton-citam.* Lit. peccary genitals.

"A certain vine whose roots the Indians take to purge themselves. They also eat them in time of famine." (Motul.)

*Toon-tzimin.* Lit. tapir-pouch or tapir-genitals.

The crushed plant is poulticed on swollen genital organs (245).

*Toplan-xiu?* (Toplom-xiu?) Melanthera nivea (L.) Small. (Standl.; Gaumer.)

Herb 6 feet high, common in old fields about Izamal.

*Totop-zoo*. *Malvastrum coromandelianum* (L.) Garcke. (Standl.; Gaumer.)

A shrubby plant, 4 feet high, abundant in old fields near Izamal. (Millsp. I, 378). *Totop-zoo* might be translated as "bat-nose."

*Toxob*. *Caesalpinia vesicaria*, L. (Standl. 1920-26, p. 423).

Shrub or small tree, 10 to 15 feet high, with a yellow flower and a thick hard fruit two and a half to three inches long and half an inch wide. It is called *Palo Campeche* and *Palo negro* in Cuba.

*Toztab*, or *Taztab*.

The Maya text prescribes an infusion of the young shoots for a drink or a decoction as a bath for asthma (19).

*X-tu-ab*, or *X-tu-habin*. *Cassia emarginata*, L. *Barba de jolote*. (Standl. 1920-26, p. 410; Millsp. I, 365).

Tree 10 to 20 feet high with large orange flowers. *X-tu-habin* means evil smelling *habin*. "This little tree, the *ix-tuab* or *cadanera*, is so heating that there is no grade in which to classify it. Therefore merely the steam from this plant is very heating to anyone who suffers from convulsions or chills." (Y. y H. del Yuc. f. 380 r.)

*X-tu-ak*, or *X-tu-akil*. Lit. stink-vine.

A drink is prepared of the crushed roasted root for diarrhea (143) and a decoction taken for blood in the urine (419). The cooked leaf is poulticed on buboes (368).

*Tuu-boc*. *Passiflora foetida*, L. (Gaumer; Standl.)

Lit. evil odor; a herbaceous climber with white flowers tinged with purple. The crushed plant is poulticed on swellings (246).

*Tuc*. *Yucca eliphantipes*, Regal. (Standl.; Gaumer.)

*Y. aloifolia*, L. var. *Yucatan* (Engelm.) Trel. (Standl.)

*X-tu-can*, or *X-tu-canil*. *Passiflora foetida*, L. (?)

Lit. stink-shoots. The Maya text indicates that this is a synonym for the *tu-boc* and prescribes the crushed plant as a poultice for swellings (246) and a decoction is taken internally for ringworm (373).

*X-tu-ciz-can*. *Corallocarpus Millspaughii*, Cogn. (Standl.; Millsp. I, Pl. XX.)

Lit. evil smelling carminative shoots. Described as "a vine of considerable extent with large leaves. It produces protuberances of considerable size and density. When these are opened, they exhale a fetid odor. The plant contains a milky juice." Compare *Ciz-can*. The Maya texts prescribe a decoction taken internally or a paste made from the plant spread on the face as a remedy for loss of speech (170 & 171). It is also a cure for the bite of the uolpoch, one of the most poisonous snakes of Yucatan. (Mem. de la 2<sup>a</sup> Exp. de Yuc. p. 280).

*Tučñ*, or *X-tučñ*. Probably *Lagenaria siceraria* (Molina) Standl.

Lit. a rattle. "Tučñ. Certain wild gourds. They do not eat them; they serve as playthings for children." (Motul.) Pio Perez adds that it is a small gourd with a long narrow neck. (P. P. 1866-77).

*X-tuch-cahoy*. *Vincetoxicum barbatum* (H. B. K.) Standl.

*Gonolobus barbatus*, H. B. K. (Gaumer.)

"Vine 10 feet, common on stone fences near Izamal." (Millsp. I, 314).

*X-tuch-ci-tunich, X-tuci-tunich, Thuci-tunich.* *Aristolochia* sp.

"This plant, ix tuch ci tunich, is very cooling. Some say it is the kokob-ak, and if it is not, it is a cooling and of the same virtue. It is so named because the root resembles a navel. . . It is a medicine for pains in the head or elsewhere and it is famous as a lotion for rashes." (Y. y H. del Yuc. f. 236 r.) The Maya text states that this is a synonym for kokob-ak and prescribes it as a remedy for aches and pains (226).

*X-tuhue-xiu.* See X-thuhuy-xiu.

*X-tuhuy.* See X-thuhuy-nicte.

*Tuk.* *Acrocomia mexicana*, Karw. *Cocoyol.* (Gaumer; Maler, 1908, IV, 141). Winepalm.

"Next to the Coco, the tallest and most graceful palm of the region." (Millsp. I, 354). "There is another tree which the Indians call tuk and the Spaniards, *cocoyol*, a Mexican word. It is a variety of palm. It bears clusters of fruit like gallnuts, and when they are in season, the Indians roast them in stew-holes and eat the pulp which is on the pit. They also cook it in honey. The pit has a kernel like a very palatable hazel-nut, and this is a great benefit to the Indians in times of scarcity, because there is a great quantity of them, and they make a food and a drink that is healthy and very sustaining. Also the Spaniards make 'milk and curds' out of it." (Rel. de Yuc. I, 59). The drink is said to resemble posole. (Ibid. I, 300). The only mention of the tuk in the Maya medical texts is where honey and other ingredients are put into the shell and heated as a remedy for blood in the urine (421). Spanish Yucatec doctors employ the carbonized root in cases of diabetes. (Cuevas 1913, p. 101).

*Tul-cauich.*

"The plant which the natives in this land call tul cacau or ix tul cauich, has little shoots which climb considerably. It extends on the ground, and at other times on trees. Its flowers are like saffron. It is always fresh and is very well known as the maluco. All the Indians employ it in surgery. They cook the leaves of this plant in oil and coagulate this in wax like an ointment in order to cure all sores, fresh or old." (Y. y H. del Yuc. f. 57 r.)

*Tul-cozon, Tul-cuzam, or Turco-uzam.*

"X-tul-cozon, or Malujo. A vine with leaves that are hardly long, similar to the leaves of chile, white flowers in racemes and a small fruit." (Cuevas, 1913, p. 118). "The plant of the maluco, which they call tulcacau or tulcuzam, stanches every bloody flux." (Y. y H. del Yuc. f. 47 v.)

The Maya text prescribes the juice from the crushed stalks, leaves and roots for dysentery (97 & 100). It is also one of the remedies for seven unspecified diseases (429).

*Tulix-kik.* *Opuntia* sp.(?)

Lit. dragonfly-blood. The Maya text states that it is a *tuna*, does not grow large, and has an odor like that of the leaf of the *Sida acuta*, Burm. The crushed fruit is a remedy for snake-bites and spitting blood (48 & 120).

*X-tulub.* *Melothria pendula*, L. *Sandia silvestre.* (Millsp. I, 393). See Kum-x-tulub.

*X-tulbayen* (*X-toloc-uayam*?) *Cassia uniflora*, Mill. (Standl.)

*C. sericea*, Sw. (Millsp. I, 299; Gaumer.)

"Herbaceous, 4 feet high. Abundant in waste places about Izamal, Jan. to Dec." *Toloc* is a certain crested iguana; and *uayam* is the *guayo*, an edible fruit.

*Tulub-uayam*. *Hippocratea celastroides*, H. B. K. (Standl. 1920-26, p. 686; Millsp. I, 306; Gaumer.)

*Tulub* is a small coffee-colored lizard. *Uayam* is the *guayo*. The plant is described as a climbing shrub growing in the woodlands and bearing a greenish yellow flower.

*Tuncuy*. *Pithecolobium ligustrinum*, Klot. (Gaumer; Standl. 1920-26, p. 393; Gaumer.)

Described as a spiny tree, 10 to 16 feet high, with small white flowers. The cylindrical fruit is about 4 inches long. Standley reports it from Tabasco as the "tucuy." *Tuncuy* means heel. "Tuncuy. The heart of the habin tree, which is a sort of oak, and the habin itself after it is trimmed." (Motul.) *Habin* is *Ichthyomethia communis*, Blake.

*X-tup-kinil*, or *Tupkin*. *Hibiscus tubiflorus*, DC. (Standl. 1920-26, p. 779; Millsp. I, 307).

Lit. ear-plugs of the sun. "A shrub, 10 feet high, flowers bright crimson, abundant in the brush lands about Izamal." The roasted leaf or flower is a remedy for earache (186).

*Tuz-ik-che*. Lit. asthma tree.

Some unspecified portion of the plant is crushed and given as a remedy for hiccoughs (231 & 232).

*X-thuhuy*. *Solanum verbascifolium*, L. (Millsp. I, 318). See *Toon-pap*.

This identification is open to question.

*X-thuhuy-nicte*, or *X-thuhuy*. *Plumeria pudica*, Jacq. *Flor de Mayo amarillo*. (Gaumer; Standl.)

"Thuhuy. A species of *Flor de Mayo* which never flowers." (P. P. 1866-77). The Maya text prescribes the sap as a remedy for a swollen throat (239). A decoction of the root is taken for abdominal pains caused by sorcery (431).

*X-thuhuy-xiu*. *Lippia dulcis*, Trev. *Orozus del pais*. (Gaumer; Standl.)

"Trailing 4 feet, rarely cultivated at Izamal." (Millsp. I, 316).

*Tzacam*. "A very spiny variety of cactus." (P. P. 1866-77).

*Tzacam-ak*. *Cereus Donkelaarii*, Salm-Dyck. (Standl. 1920-26, p. 914).

Lit. cactus-vine; a climbing or trailing cactus with slender stems.

*Tzacam-kuch*. Lit. vulture-cactus.

A lotion for scabs is made from this plant (329).

*Tzacam-zoo*. *Nopalea inaperta*, Schott. (Standl. 1920-26, p. 864; Gaumer.)

Lit. bat-cactus; 15 to 20 feet high, smaller in cultivation, bearing a small red fruit.

*X-tzah*. *Jatropha aconitifolia*, Mill. See *Chay*.

"Tzah. A very spiny variety of *chaya* that is thus named." (P. P. 1866-77).

*Tzalam.* *Lysiloma bahamensis*, Benth. (Standl. 1920-26, p. 390).

*L. latisiliqua*, L. (Millsp. I, 300; Gaumer.)

Reported from forests near Izamal as a tree 80 feet high. The flowers are white and the flat fruit is 5 to 6 inches long and an inch broad. The dark reddish-brown wood is said to be used in the West Indies for making boats. The Maya texts prescribe an infusion of the leaves taken internally and a decoction used as a bath for phthisis, asthma (12 & 19).

*Tzayaltzay.* *Anoda triangularis*, D.C. *Amapolito morado*. (Gaumer.)

"Tzayaltzay. A plant which clings, when it touches a garment." (P. P. 1866-77).

*Tzayuntzay.* *Mentzelia aspera*, L. *Pegaropa*. (Gaumer.)

*Priva lappulacea* (L.) Pers. (Millsp. I, 387; Gaumer.)

Both *tzayaltzay* and *tzayuntzay* mean that which clings closely.

*Tzic-aban.*

The stalks and leaves of this plant are boiled for a lotion to cure a certain enchantment. The name indicates a bushy plant, (434).

*Tzicin*, or *X-tzicinil*. *Calea zacatechichi*, Schlecht. (Standl. 1920-26, p. 1593; Millsp. III, 134).

Described as a much branched shrub. The steamed plant is applied to the skin to cure a skin-disease characterized by ridges or welts (307).

*Tzimin-che.* Lit. tapir-tree.

"This *tzimin-che* is heating. It is so named because the ancients said it was the food for horses, that is, they were tapirs, which were called *tzimin*. Hence the name was applied to the horses of Castile, being animals which resembled them. It is a remedy for colds and humors." (Y. y H. del Yuc. f. 353 r.) The exterior is powdered and sprinkled on scabs according to the Maya text (329).

*Tzintzin-chay*, or *chinchin-chay*. *Jatropha aconitifolia*, Mill. (Standl.)

*J. urens stimulosa* (Mich.) Müll. (Millsp. I, 305).

Lit. drooping chay. "Shrubby, 20 feet high, in the forests about Izamal." Compare Chay and *X-tzah*. "Sometimes maize is lacking, and then they are accustomed to sustain themselves with plants which are the *chinchinchay*, the chay and the macal, which they boil like cabbages." (Rel. de Yuc. I, 299).

*Tzitz.* Probably *Jacobinia spicigera*, (Schlecht) Bailey. (Standl.)

Lit. to sprinkle or drain off. "Tzitz. A perennial giving a purple dye; also another herbaceous plant which is an annual." (P. P. 1866-77). *J. spicigera* is a shrub 3 to 5 feet high yielding a dark blue dye. A lotion of the boiled plant is used to cure a certain disease ascribed to enchantment (434). *Tzitz-haa* means to sprinkle with holy water, and blue was a color much used in connection with ceremonies. It seems likely that the *tzitz* was used in connection with worship.

*Tzitzil-xiu.* *Erigeron pusillus*, Nutt. (Standl.; Gaumer.)

This is an herb 3 feet high, reported from Izamal, Celestun and Cozumel. The Maya name, which means shredded plant, is somewhat descriptive.

*Tzitz-ya*, or *Oioya*. *Dipholis salicifolia* (L.) DC. (Standl.; Gaumer) Wild cassada.

A slender forest-tree 40 feet high, bearing small black fruits; also reported as *Xac-chum*. The dark hard wood is employed for carving utensils.



*Tzotz-ceh.* Lit. deer-hair.

A bath of the decoction of the stems and leaves is employed to cure loss of speech (171).

*X-tzotzel-ak, Tzotz-ak, or Tzotz-icim.* *Ipomoea pentaphylla* (L.) Jacq. (Millsp. I, 385; Gaumer.)

Lit. hairy vine, or owl-down. "Vine 20 feet, abundant on roadsides about Izamal, producing its white flowers in October." See *Ix-kuyuch*. The Maya text prescribes the sap for an abscess of the ear (195) and infected gums (396). The crushed leaves are rubbed on an itching rash (357).

*Tzotzil-day-och.* *Portulaca pilosa*, L. (Gaumer; Millsp. I, 296).

Lit. hairy opossum-tooth. "Prostrate 12 inches, abundant in crevices of rocks near Izamal." Compare *Day-och*.

*Tzotz-kab.* *Mentzelia aspera*, L. (Standl.)

Lit. hairy branch. A branched herb with pale orange flowers and brittle stems, and covered with rough barbed hairs. The leaves are a remedy for an eruption of the skin resembling wasp-stings (364).

*Tzutzuy-xiu.* *Mirabilis jalapa*, L. (Standl.) *Maravilla*, Four-o'clock.

Lit. dove-plant; an herb 5 feet high. Its showy fragrant flowers are closed during midday.

*Uacax-xiu.* Lit. cattle-plant.

The young shoots are crushed, steamed, and applied hot to a certain so-called leprous eruption (306). *Uacax* is a corruption of the Spanish *vacas*.

*Uahko.* *Aristolochia grandiflora*, Swartz. *Flor de pato*, Duckflower. (Standl.; Gaumer.)

This is a high-climbing vine. The name, *uahko*, does not appear in any of the Maya sources and is evidently a corruption of *guaco*, a word said to be of Carib origin. Most of the *Aristolochias* are considered antidotes for snake-bite. Compare *Kokob-ak*.

*Uahko-xiu.* *Mikania micrantha*, H. B. K. (Standl.)

Described as a vine, 15 feet, with white flowers which have an odor of vanilla. It is called *guaco* in some parts of Mexico.

*X-ual-canil.* *Pteridium caudatum* (L.) Maxon. (Millsp. III, 8).

Lit. fly-brush shoots or fan-shoots. A large bushy fern with pale yellow fronds. The Indians are said to make fly-whisks of them. This may be the ceremonial "caanil-ual" mentioned in the ancient Maya prophecies. (*Chilam Balam of Chumayel*, p. 13).

*Uaxim.* *Leucaena glauca* (L.) Benth. (Standl. 1920-26, p. 369; Millsp. I, 300).

"Tree 30 feet high, abundant in the brush lands about Izamal." "This tree called *uaxim* is moderately heating. If any animal with a strong-haired tail, like horses and others, eats it, immediately its mane and tail will fall out. They are accustomed to give it to animals to do them harm. It is very medicinal, and the ancient Indians fed the branches of this tree to their fowls, so that they would grow up without lice and other things which they are accustomed to have when small." (*Y. y H. del Yuc. f. 285 r.*)

The word is evidently derived from the Nahuatl *Huaxin* which is the *L. esculenta* of the highlands of Mexico and from which Oaxaca is said by Robelo to

take its name. The Maya texts prescribe the young shoots of the Uaxim, taken internally, for the bite of the xacat-be, an insect resembling a locust (61) and an infusion of the crushed leaves for a disease characterized by headache and pain in the heart (305).

*Uayabté*, or *Uayakté*.

An infusion of the young shoots is drunk or their decoction employed as a bath to cure asthma and coughs (19).

*Uayam*, or *Uayum*. *Talisia olivaeformia* (H. B. K.) Radlk. *Guayo*. (Standl. 1920-26, p. 708; Millsp. I, 403; Gaumer.)

Described as a tree 60 feet high, common in the forests and cultivated in the villages. "Uayam. A palatable little fruit of this land, and the tree which bears it." (Motul.) "There is another very fresh and beautiful tree which bears a fruit which is no more nor less than hazel-nuts, with its shell. Beneath this shell it has a fruit like cherries and a large pit. The Indians call these Uayam and the Spaniards, *Guayas*." (Landa, 1900, p. 392).

*Uayum-ak*. *Cardiospermum molle*, H. B. K. *Munditos*. (Millsp. I, 306; Standl. 1920-26, p. 700; Gaumer.)

Described as a vine, 60 feet; the fruit is an inflated bladder-like capsule half an inch to two inches in diameter.

*Uayum-kak*. See *Zac-chilib*.

*Ucan*, or *Ucan-ché*.

"The úcan-tree, which is probably unknown to botanists, has large lanceolate leaves. The wood when burned, gives an ash which the people use in making soap or tallow." (Maler, 1908, IV, 152). The above observation was made in northern Guatemala, but Pio Perez also lists this tree among the medical plants of Yucatan. (P. P. 1898, p. 109).

*Uitz*.

Maler reports a tree of this name growing on the banks of the Usumacintla River in Northern Guatemala. He states that the Aztec name is *cuauhxicuil* and that "they have blossoms formed of great white stamens and the seed forms in long green pods." (Maler, 1901, II, 110). Uitz means hill or mountain. This may be the same as the X-uizil of Yucatan, identified by Pio Perez as the *Amapola blanca* cabazona. (P. P. 1898, p. 111). Uizil means cut around or grooved so as to form a neck. *Amapola* is a term applied to various flowers resembling a poppy, and the *Amapola blanca* of Yucatan is *Bombax ellipticum*, H. B. K. (Standl. 1920-26, p. 793).

*Uk-che*. See *Ek-puc-che*.

*Uo*, or *Uoob*. *Cereus undatus*, Haw. *Pitahaya*. See *Chac-uob* and *Zac-uob*.

"Uo. Pitahayas and the plant which bears them." (Motul.) "There is another tree which is like the prickly leaves of thistles and which climbs, clinging to the other trees in the forest. The Indians call them huon (uob) and we call them *pitahayas*. They are about the size of a quince and have the appearance of artichokes. They have a deep-red skin of a very beautiful color; and the interior is white and very palatable. It has seeds embodied in it throughout like the *saragatona* (flea-wort). It is a handsome fruit and is highly esteemed." (Rel. de Yuc. I, 60). Uo or uob is the name of a certain small frog eaten by the Mayas.

*Uole*. See *Tamcaz-che*.

*Uzpiib.* *Couepia dodecandra* (DC.) Hemsl. (Standl. 1920-26, p. 345). Baboon-cap. (B. H.)

A tree 13 to 20 feet high cultivated in Yucatan, Tabasco and British Honduras for its edible fruit which is 2 to 2½ inches in length. (Standl. op. cit. & P. García, 1873, p. 188.) The crushed seed is a remedy for sore eyes (203).

*Uzté.* *Malpighia punicifolia*, L. (Standl.; Gaumer.)

A small tree or shrub bearing a red edible fruit.

*Uub-pek.* *Tabernaemontana amygdalaefolia*, Jacq. *Jasmin de perro*, or *Olfato de perro*. (Standl. 1920-26, p. 1155; Millsp. I, 313).

Lit. dog-smell; a shrub 12 feet high, common in brush and forest lands; also cultivated. "This tree or plant, uubpek, is lukewarm. Its name means odor of a dog; others call it uubyul, which means odor of the Adam's apple. It is odorous. It bears pleasing white flowers of great fragrance." (Y. y H. del Yuc. f. 348 r.) A decoction of the shredded plant is used as a lotion for various skin-complaints (342).

*Xa-balam?* *Croton flavens*, L. (Standl.) See Ek-balam.

*Xacan-lum* (X-acan-luum?) *Bacopa procumbens* (Mill.) Greenm. (Standl.)

*Xac-chum.* *Dipholis salicifolia*, A. DC. (Millsp. I, 382). See Tzitz-ya.

*Xaché-x-tabay.* *Pithecoctenium echinatum* (Jacq.) Schum. *Peine de mico*. (Standl.)

Lit. comb of the X-tabay fairy, who lured young men into the forest to their destruction. She would often be seen beside the road combing her hair with the rough exterior of the fruit. See X-ne-toloc for a description of this plant.

*Xacil-zac-xiu?* *Boerhaavia erecta*, L. *Yerba blanca*. (Millsp. I, 295).

*Xaan.* *Sabal japa*, Wright. (Standl. 1920-26, 72). *Guano*.

*Sabal mexicanum*, Mart. (Millsp. I. 355).

"Xaan. Some species of palm with the leaves of which the Indians roof houses." (Motul.) "There are also *guano*-trees, which the Indians call xan. These are the leaves with which the Indians roof their houses." (Rel. de Yuc. I, 84).

According to the Maya texts an imitation fetus made of the interior of the trunk is employed as a charm to accelerate parturition (30). The same portion of the tree is a remedy for snake-bites (48) and bites of insects (58). An infusion of the leaves (80) or of the roots (107) and a decoction of the interior of the trunk (125) are remedies for dysentery and abdominal pains. The roasted interior of the trunk is poulticed on ulcers (299) and the crushed root, on sores on a man's breast (312).

*Xanab-chich.* *Euphorbia hirta*, L.(?)

Lit. bird-shoe. The name suggests that it is a synonym for *xanab-mucuy*, or dove-shoe. The plant is crushed and the juice applied to various skin-complaints (321).

*Xanab-mucuy.* *Euphorbia hirta*, L. *Yerba del pollo*. (Standl.)

Lit. dove-shoe. It is said to be applied to a number of small prostrate species of *Euphorbia*. (Millsp. I, 304). "Xanab-mucuy. The *yerba del pollo*, for stanching blood." (Diccionario de San Francisco.) "This plant, xanab mucuy, is the *yerba del pollo*. It is very cooling and of many virtues. They call it xanab mucuy, because its stem is red and resembles the leg-bones of a dove which they call mucuy. It grows between stones, on walls and in damp places. It is small and beautiful. In order that this plant may inspire belief, I will state that I saw the head of a

chicken transfixed with an awl. Then they applied the juice of this plant, and in a short time it got up, cured. It is a remedy for bloody stools and sore eyes. It arrests strangury; it removes phlegm from the stomach; and it stanches vomiting of blood and blood from a wound." (Y. y H. del Yuc. f. 308 r.)

The Maya texts prescribe a poultice of the crushed plant to stanch blood (63). The juice is employed in an enema for diarrhea and chills (87). An infusion or a decoction is given for dysentery (100, 123 & 128). The sap or gum is a remedy for sore eyes (202 & 207); the decoction is drunk for salivation (265). The fried plant is applied to inflamed protuberances of the mouth and eyes (319). A decoction of the young shoots is applied to a scrofulous tumor of the neck (368), and a poultice of the crushed plant is applied to draw a sliver from the foot (427).

*Xau*. *Theobroma cacao*, L. (Tozzer, 1907, p. 21).

This is the Lacandone name for cacao. Compare *Cacau* and *Haa*.

*Xau-tzicin*. *Sesuvium portulacastrum*, L. *Verdolaga de la playa*. See *Daycan*.

*Xau* means instep; or the foot of a bird; *tzicin* is difficult to define. "For very pestiferous leprosy (employ) the *xautzicin* plant which is the wild *daycan* and is found in the rocks." (Y. y H. del Yuc. f. 72 r.)

*Xaax*. *Acacia angustissima* (Mill.) Kuntze. *Kantemo*. (Standl. 1920-26, p. 381).

Described as a shrub or small tree 6 to 12 feet high with white flowers and a flat brown fruit. The name seems to be applied to other closely related species, such as *A. filicina*, Willd. *Xaaxay* means a tree or plant with many forks. "This plant, *xax*, is heating and is a common medicine. It produces certain wood-lice which, when cooked, are converted into spruce-oil and which are called *niin* (*Coccus axin*). This has very great virtues and a bad odor. It is employed for swellings from sores and other sorts. It is very useful in this land for laquered trays, *jicaras*, writing-desks and other things painted with oil. It is very cheap because of the great quantity which exists. The decoction of the root is a mouth-rinse, tightens the teeth and makes them firm." (Y. y H. del Yuc. f. 243 r.) The Maya texts prescribe a decoction of the root for dysentery (99) and the crushed root is held in the mouth to cure cankers (324). The crushed plant is put into the patient's bath or made into a drink as a remedy for ringworm (339).

*Xax-ox*, or *Xux-ox*. *Solanum verbascifolium*, L. (Standl. 1920-26, p. 1295; Millsp. II, 97). See *Toon-paap*.

The Maya text prescribes a decoction of the *xux-ox* as a remedy for pus in the urine (422).

*Xayil-lol*. *Bossingaultia leptostachys*, Moq. (Standl.)

Lit. forked-blossom. Described as a vine, 40 feet, common on vacant and waste lands, where it flowers in November. (Millsp. I, 357).

*Xayulol-xiu* (*Xayil-lol-xiu*?) *Schwenkia americana*, L. (Standl.; Gaumer.)

"Herb 3 feet high growing in shady places near *Izamal*. (Millsp. I, 319).

*Xeen*. *Tillandsia vestita*, Schl. & Cham. (Standl.; Gaumer.)

"Abundant on forest trees, 6 to 10 inches high." (Millsp. I, 291).

*Xentsul*. See *X-emzul*.

*Xiat*. See *X-yat*.

*Xia-xiu* (*X-yax-xiu*?). *Evolvulus alsinoides*, L. (Millsp. I, 314).

"Prostrate 6 to 10 inches, flowers purple, common in shady places near *Izamal*." *Yax-xiu* would mean green plant.

*Xib-kiik.*

A decoction of this plant is taken for dysentery (128) and for blood in the urine (423).

*Xib-kuub.* *Tetramerium scorpioides* (L.) Hemsl. (Standl.)

This name does not occur in any of the Maya sources; possibly *xib-kiik* is intended.

*Xicin.* *Calea urticifolia* (Mill.) DC. *Yerba de la paloma.* (Gauger.)

*C. zacatechichi*, Schl. (Standl. 1920-26, p. 1593; Millsp. I, 394).

Lit. ear. See *Tzicin*. Cuevas describes a plant called *xicim*. This is a shrub with green fragile leaves. The small fruit produces a sort of cotton and contains a bitter yellow juice. The leaves and juice are a remedy for cacoehymia of the skin. (Cuevas, 1913, p. 109). The Maya medical texts prescribe the crushed plant as a remedy for what is called swollen scalp (249).

*Xicin-ceh.* Lit. deer-ear.

The Maya text prescribes a hot poultice of the tuberous root as a remedy for inflamed protuberances on the mouth and eyes (319).

*Xicin-coh.* Lit. puma-ear.

The leaves are said to resemble the ear of a puma. An infusion of the root is a remedy for hysteria. (Cuevas, 1913, p. 109).

*Xicin-chah.* *Pistia stratiotes*, L. *Lechuguilla*(?)

"An aquatic plant resembling lettuce." (Pio Perez, 1866-77). A green water-plant found in storage tanks which preserves the water from evaporation. (Stephens, 1843, II, 208). Compare *Ibin-ha*.

*Xicin-che.* Lit. tree-ear. A tree-fungus. (Beltran de Santa Rosa, 1859, p. 136).

"This fungus, the *xiycimche*, is so named because it grows on trees and looks like their ears." (Y. y H. del Yuc. f. 364 r.) It is said to be a synonym for *chac-xicin-che*. (P. P. 1898, p. 110). The Maya texts prescribe the steamed plant as a remedy for scabs (329) and the decoction is used as a lotion for white spots on the skin (343).

*Xichil-ak.* *Galactia striata* (Jacq.) Urban. (Standl. 1920-26, p. 502).

A slender climbing plant, sometimes 10 feet high, with small purple flowers.

*Tribulus maximus*, L. (Millsp. I, 301; Gauger). Prostrate, 3 feet, common in waste places near Izamal. *Xichil-ak* means tendon-vine.

*Xik-zoo.* *Passiflora coriacea*, Juss. (Reported from Peten.)

Lit. bat-wing. "The root of the *escorzonera*, which in this language they call *xik-zoo* or in ours, *sorrel*, is crushed, and its juice or milk is applied with some cotton to the eye. It is a tried remedy." (Y. y H. del Yuc. f. 8 r.)

*U-ziu-am.* *Boerhaavia caribaea*, Jacq. *Mata de pavo.* (Standl.)

An herb 3 feet high, common on cultivated ground. The infusion of the plant is rubbed on the rectum to cure diarrhea according to the Maya text (68).

*Xiu-hulub.* *Sclerocarpus divaricatus* (Benth.) Benth. & Hook. (Standl.; Gauger.)

Described as an herb 3 feet high growing in old fields near Izamal.

*Xiu-toloc.* *Milleria quinquefolia*, L. (Millsp. I, 395 & III, 105; Standl.)

Lit. *toloc*-plant. *Toloc* is the name of a certain crested iguana. The plant is a tall annual, 9 feet high, found in fields about Merida and Izamal.

*Xix-ci.* *Agave ixtli*, Karw. (Standl. 1920-26, p. 119).

Xix means something filtered, distilled or sifted; also the dregs of a liquid; ci is the general name for Agave.

*Xoco-ak*(?) *Abrus precatorius*, L. Pionía, Rosary-pea. (Standl. 1920-26, p. 492; Gaumer.)

A climbing shrub with pink or purplish flowers. The leaves and root have a flavor of licorice, and the handsome red and black seeds are poisonous, and are the jequirity-beans of commerce. The plant has been called bead-vine and wild licorice in English.

*Xooknum*(?) *Ardisia escallonioides*, Schl. & Cham. (Seler, apud Standl. 1920-26, p. 1109).

A shrub or small tree, sometimes 25 feet high, with thin grey or white scaly bark and a small black globular fruit  $\frac{1}{4}$  inch in diameter.

*Xolté-x-nuc.* *Lippia umbellata*, Cav. *Salvia poblana*. (Standl.)

Lit. old woman's staff. *L. umbellata* is a shrub or tree, reported from Izamal as 10 feet high. The flowers are yellowish, turning red. (Standl. 1920-26, p. 1246 & Millsp. I. 387).

*Hyptis pectinata* (L.) Poit. (Standl.) Herb 5 feet high on brushlands.

*H. suaveolens* (L.) Poit. (Gaumer; Standl.) Herb 3 feet high in old fields.

"Xolte xnuc, or *cominos rusticos*. This tree, xolte xnuc, is known. With it they cure night-fevers, especially in the case of babies." (Y. y H. del Yuc. f. 227 r.) "That which they call oache is the xoltexnuc. It has a branch and leaf like that of the *nagagrillo*." (Y. y H. del Yuc. f. 322 r.)

The Maya text prescribes an infusion of the crushed leaves as a remedy for dysentery accompanied by mucus or pus in the stools (135).

*Xoy.* *Melampodium divaricatum*, DC. (Standl.; Gaumer; Millsp. III, 107).

An herb 4 feet high, abundant in old fields, bearing yellow flowers. It is often mistaken for the X-kantunbub, or *Sanvitalia procumbens*. Xoy means stye. The plant is said to be used as a remedy for boils on the eyelids. The only remedy mentioned in the Maya texts for this complaint is the puc-yim, or *Colubrina Greggii* (344).

*Xoyen-cab.* See X-hoyoc.

*Xubala.* A variety of chile. (Motul.)

*Xucul*, or *H-xucul*. *Portulaca oleracea*, L. *Verdolaga*. (Millsp. I, 296; Gaumer.)

Both the Motul and Pio Perez dictionaries identify this as purslane, a prostrate herb, 18 inches, abundant as a garden weed. It is said to be a synonym for cabalchunup. According to the Maya texts the plant is crushed and rubbed on the body for phthisis (7) and the boiled plant is rubbed on the part for pain in the heart (74). The juice is given for spitting blood (121) and giddiness (213). An infusion is employed as a bath to cure convulsions (161), and the plant is a remedy for retention of urine (413).

*Xukuk*, or *Kukuk*. *Philoxerus vermicularis* (L.) R. Bro. (Standl.; Gaumer.)

This name is not found in any of the Maya sources. It is an herb 2 feet high abundant at the port of Silam.

*Xulto-xiu*(?) *Eupatorium microstemon*, Cass. (Standl.)

*E. guadalupense*, DC. (Millsp. III, 95; Gaumer.)

"Called Xultoxiu 'introduced weed' by the Mayas, who consider the species

exotic." (Millsp. op. cit.) This is evidently an error for the Maya word for foreign is *oul* and not *xul*. Compare *Oul-xiu*. The plant is an erect branching herb 3 feet high, reported from Cozumel, Pochoch and Calotmul.

*Xul*.

"A tree from which they obtain certain poles for the thatched houses." (Motul.)

*Xul-kin*(?) *Tournefortia volubilis*, L. (Standl. 1920-26, p. 1231; Millsp. I, 315; Gaumer.)

The name does not appear in any of the Maya sources, where the plant seems to be better known as *chac-nich-max*.

*Ya*. *Achras zapota*, L. *Zapote*, *Chicozapote*, *Zapote de abejas*. (Standl. 1920-26, p. 1119; Millsp. I, 382; Gaumer.)

This is a tree, sometimes 60 feet high, bearing the *sapodilla*, a well known tropical fruit. Its gum, *tziecte*, is the *chicle* of commerce. The latex is called *itz* (gum) and when ready to chew it is called *cha*. The Aztecs chewed it, but it is not known whether it was so employed by the ancient Mayas.

"*Ya*. *Niesperos* (medlars or naseberries) of this land, which are called *xicoçolles* in the Mexican language." (Motul.) "Of the fruit-bearing trees of this land the principal is the *chicoçapote*, which the natives call *ya*. It is a delicate fruit and so sweet that none of those of Spain can equal it. In color and shape they resemble the service, although somewhat larger. In the forest there is a great quantity of these trees, which are larger than pear-trees. The seed resembles that of the *Cassia fistula*, although somewhat larger and longer." (Rel. de Yuc. I, 57).

*Yacunah-ak*. *Momordica charantia*, L. (Millsp. I, 394; Gaumer.)

Lit. love-vine. This is the *Bálsamo*, *Catagera*, or *Cundeamor*, called *balsam-pear* in English. It is a slender weedy vine, 20 feet, with small yellow flowers and an orange fruit with a red pulp, said to be eaten in some parts of Central America.

*Yak-ba*. *Andira excelsa*, H. B. K. (Gaumer.) Cabbage bark.

*A inermis*, H. B. K. (Standl. 1920-26, p. 506 & 1928, Pl. 38).

A large tree with small purple or pink flowers and an oval fruit about an inch long. Lit. mole-tongue. The wood is hard and heavy and takes a high polish. The Maya text prescribes it as a poultice for *erysipelas* (334) and another skin-complaint (284). Some portion, perhaps the bark or seed, is powdered and given as a remedy for blood in the stools (95).

*Yak-ba-xiu*. Lit. mole-tongue-herb.

An infusion of the crushed plant is given as a remedy for ringworm (339).

*Yala-elel*. *Oxalis yucatanensis*, (Rose) Standl. *Agritos*. (Standl. 1920-26, p. 518).

*O. latifolia*, H. B. K. *Acederilla*, *Aleluya*. (Standl.)

*O. yucatanensis* is evidently the plant prescribed in the Maya Medical texts which repeatedly state that the flower is yellow. It is a low slender shrub and the only yellow *Oxalis* growing in Yucatan. "The *escorzonera* called *yalael* is a cure for those who are stung by a snake, viper or any poisonous thing. There are three sorts; one has a fruit beneath the ground like a sweet potato or *jicama*; the other has a root something like a small lizard. The latter should be the male, and the former is a slender shrub having no fruit except the root." (Y. y H. del Yuc. f. 62 v.) "Some people call it *chichaban* or *chehaban*." (Ibid. f. 95 r.)

The Maya texts prescribe a decoction for vomiting blood, what is called *rotten liver* (125 & 127) and *lassitude* (166). A lotion of the "red portion" of the plant is a remedy for ulcers and abscesses (288). The crushed root is rubbed on the

skin for a disease characterized by swollen head, arms and legs (298), and the steamed plant is applied to an eruption of ridges or welts (307) and scabs (329).

*X-yalah-zac*(?) *Calliandra formosa*, (Kunth.) Benth. (Standl.)

*Yam-cotil*. *Blechnum pedunculatum*, Donn. Smith. (Standl.)

*Ruellia Tweedyana* (Nees.) Griseb. (Millsp. I, 320).

Lit. among stone walls. A spreading herb 2 feet high, common in shady places.

*Yanten*. *Plantago mayor*, L. *Llanten*. (Millsp. I, 321).

Evidently a Maya corruption of the Spanish name. Although this is considered an European importation, a 16th century account of the native medicinal plants of Yucatan mentions the use of this plant. (Rel. de Yuc. II, 35).

*Yanuco*. *Punica granatum*, L. *Granado*. (Gaumer.)

*X-yat*. *Chamaedorea graminifolia*, Wendl. (Standl. 1920-26, p. 82).

A small graceful palm with green stems which are eaten as a vegetable in some parts of Central America. The Maya text prescribes a lotion made from this palm for certain eruptions of pustules (355).

*Yax-ak*. Probably the same as *yax-ek*, or *Lysiloma sabicu*, Benth.

Under this name, which means green vine, the Maya text prescribes the crushed leaves as a poultice for ulcers and abscesses (287).

*Yax-apat*. Royal palm. Peten dialect. (Berendt apud Means, 1917 F, f. 189.)

*Yax-cach*. *Bacopa monnieri*, (L.) Wettst. (Standl.)

Lit. fly. A small prostrate herb found in moist places.

*Yax-can-ak*. Lit. green snake-vine.

The milky sap is applied to a film on the eye (208). Compare *Can-ak*.

*Yax-catzim*. *Acacia riparia*, H. B. K. (Standl. 1920-26, p. 382).

Lit. green catzim. A scandent shrub armed with short spines. It has a yellowish white flower and a fruit about 3 inches long.

*Yax-ci*. *Agave sisalana*, Perrine. Bahama hemp. (Standl. 1920-26, p. 118; Gaumer.)

"Yaxci. The green hemp of this land." (Motul.) Standley notes that this is the species most extensively planted outside of Yucatan, while the *zac-ci* is the source of the larger part of the Sisal hemp of Yucatan. The *Yax-ci* of Yucatan is said to have a softer finer fibre and to be more durable than the *Zac-ci*.

*Yax-cocay-ak*. Lit. green firefly-vine.

A decoction of the leaves is employed as a bath to cure aching bones, chills and convulsions (179). *Yax-cocay-mut* is one of the names of the sky-god, *Itzamná*. (Cogolludo, 1688, p. 192).

*Yax-chacah*. Lit. green chacah.

The Maya text prescribes the crushed root applied hot to the bite of a peccary (56).

*Yax-che*. *Ceiba pentandra* (L.) Gaertn. *Ceibo*. (Standl. 1920-26, p. 791).

*C. casearia*, *Medic*. (Millsp. I, 309; Gaumer.)

Lit. first tree or green tree. An abundant tree 100 feet high with lustrous pink flowers, called silk-cotton tree in English, because of the fine silky fibre enveloping



the seeds. See illustrations in Contr. U. S. Nat. Herb. VIII, Pl. 24 & IX, Pl. 42. "There are also great ceibas, which the natives call yaxche, meaning green tree. They serve only for shade." (Rel de Yuc. I, 85). "This tree, the yaxche, is the ceiba. . . There are many of them in this land, on the squares and in the yards usually. It casts a shade ample for many people; it is salubrious because it is so cooling in a hot country. It is called yaxche meaning a leafy and green tree, which it ordinarily is. It is a mysterious thing to see the *ceibas*, one green and one dry a short distance from one another." (Y. y H. del Yuc. f. 365 r.) During his visit to the Itzas of Tayasal Father Avendaño saw a stone column, which was called, "in the name by which they worship it, Yax cheel cab, which means in their language, 'the first tree in the world,' and, as it is understood in their old songs (which few people understand) they wish to have it known they worship it because it was the tree of whose fruit our first father Adam ate, who in their language is called Ixanom." (Means, 1917, p. 135). While Avendaño may have twisted the story a little to make it conform to the Scriptural account, the Motul dictionary, written a hundred years previously tells us that Anom was "the first man, Adam."

*Yaax-ebil.* *Jacquemontia tamnifolia* (L.) Griseb. (Gaumer.)

Lit. green serrated. A vine 20 feet, common in the forests of Buena Vista Xbac. (Millsp. I, 385).

*Yaax-ek.* *Lysiloma sabicu*, Benth. (Millsp. I, 300; Standl. 1920-26, p. 390).

Lit. green star. A tree 20 feet high, common in the brush lands about Izamal. *Pithecolobium tortum*, Mart. (Standl.)

A slender shrub or tree 10 to 30 feet high, armed with stout spines. The Maya texts prescribe the decoction of the crushed leaves of the Yax-ek as a bath, or an infusion taken internally for asthma (19). See Yax-ak.

*Yaax-habin.* *Cassia Peralteana*, H. B. K. (Standl.) See Habin-pek.

*C. reticulata*, Willd. (Millsp. I, 20).

Lit. green habin. A tree 10 to 25 feet high.

*Yax-halal-che.* *Pedilanthus itzeus*, Millsp. (Millsp. I, 305; Standl. 1920-26, p. 606; Gaumer.)

Lit. green-reed-tree, or green-arrow-tree. A shrub 6 feet high, sometimes cultivated as an ornamental plant. (See illustration, Millsp. I, Pl. XVIII). Already in the 16th century Landa noted: "There is another singular plant for curing old sores, which they call yax halialche." (Landa, 1900, p. 386). The Maya texts prescribe an infusion of the gum for coughs (26) and obstruction of the spleen (108) and a lotion of the sap to reduce a swelling (248).

*Yaax-ha-viu.* *Commelina elegans*, H. B. K. *Yerba del pollo*. (Standl.; Gaumer.)

The Maya name means green water-plant; although we have it only from the botanists, and not from any of the Maya sources.

*Yax-hokab?* *Esenbeckia pentaphylla* (Macfad.) Griseb. (Millsp. I, 401; Standl. 1920-26, p. 536).

The botanists report this Maya name as Yax-hocob. Yax-ho-kab would mean green five-stemmed. It is a forest tree producing cream colored flowers.

*Yaax-hol-che.* *Abutilon Gaumeri*, Standl.

Lit. green hol-che. A small tree 14 to 20 feet high.

*Yax-ic.* A variety of *Capsicum annuum*, L. (Standl.)

Lit. green chile.

*Yax-kal.* *Convolvulus Grayi*, Rose. (Millsp. I, 314; Gaumer.)

"Extensively climbing over the bushes at Chichen Itza."

*Yax-kanan.* *Myrstiphylon horizontalis*, Sav. (Gaumer.)

*Psychobotria undata*, Jacq.?

An infusion of the plant is employed as a bath for convulsions and delirium (161) and it is crushed and poulticed on ulcers and abscesses (299).

*Yax-ku.*

"This plant, yax ku, is cooling. It has a particular virtue, which is that it causes hens to lay many eggs. Others give them chaya leaves, still others, uaxim, with which they fatten very well and are good layers, particularly those of this land (turkeys)." (Y. y H. del Yuc. f. 237 r.)

*Yax-nic.* *Vitex Gaumeri*, Greenm. (Standl. 1920-26, p. 1236; Gaumer.)

A tree 30 to 50 feet high. "This tree, the yaxnic, is heating. It is very handsome and puts forth a blue flower from which bees gather honey. The shade of this tree is very salubrious." (Y. y H. del Yuc. f. 344 r.) "The kanchunup, bohóm (and) yaxnic are trees which have a white wood." (Rel. de Yuc. I, 84). The Maya texts prescribe a decoction of the leaves as a bath to cure asthma (19) malaria (179) and chills. The crushed leaves are poulticed on ulcers and abscesses (287).

*Yaax-pakam.* *Opuntia Dillenii* (Gawler) Haw. (Gaumer.)

This is a low spreading cactus bearing a purplish pear-shaped fruit without spines. Lit. green tuna.

*Yaax-ppehel-che.* *Piper Gaumeri*, Trel. (Standl.) See Ppehel-che.

Lit. green ppehel-tree. The crushed leaves are rubbed on the head to cure a headache (229).

*Yax-puc-yim.* *Colubrina Greggii*, S. Wats. (Standl. 1920-26, p. 720).

Lit. green puc-yim, that which destroys the breast. See Puc-yim.

*Yax-ta.* *Neurolaena lobata* (L.) R. Bro. (Standl.)

The Maya name, reported from Peten, could mean either green knife or green excrement. The plant is a large coarse herb 3 to 10 feet high.

*Yax-tab-canil.* *Cissus sicyoides*, L. (Standl. 1920-26, p. 731). Compare Tab-can.

*Ampelopsis cordata*, Michx. (Gaumer.)

*Yax-tzots-macal.* *Alocasia macrorrhiza*, Schott. *Caladio verde*. (Gaumer.)

Lit. green hairy bulb.

*Yaax-x-keuel.* *Phoradendron vernicosum*, Greenm. *Caballero*. (Standl. 1920-26, p. 226). Mistletoe.

Lit. green hide. Reported as Yaax-x-keu, this is a mistletoe parasite on *Bumelia buxifolia* and other plants.

*Yax-ɔam*, or *Yax-ɔam-ha.* *Rhoeo discolor*, (L. Herm.) Hance. (Standl.)

A plant 18 to 20 inches high with white flowers, found on ruins and rocky places. (Millsp. I, 292).

*Yich-can.* *Jacobinia spicigera* (Schlecht) Bailey. (Standl. 1920-26, p. 1345; Gaumer.)

The Maya name could be translated as bath-shrub, and the leaves are said to

be used by laundresses for bleaching clothes in many parts of Central America. It is a shrub 3 to 5 feet high with red or orange flowers.

*Yoch-imil-pal.*

This might be translated as mother's milk. The Maya text prescribes the crushed plant, steeped in water, as a poultice to relieve headache (319).

*Yoch-opp-tzimin.* See *Opp-tzimin.*

*Yoc-macal.*

The Maya text prescribes the juice from the crushed leaves as a lotion for inflamed protuberances on the mouth and eyes (221).

*Yom-ha* *Pilea microphylla* (L.) Liebm. *Frescura, Hierba de la viruela.* (Standl.)

*P. muscosa*, Lindl. (Millsp. I, 294; Gaumer.)

A small weed, common in gardens, with fleshy leaves. Cultivated in greenhouses, it is called artillery plant. Lit. water-froth.

*Yuy*, or *H-yuy.* *Casimiroa tetrameria*, Millsp. (Gaumer.)

A rare tree 20 to 50 feet high with a rounded crown. The fruit is said to resemble the choch (*C. edulis*). The name, yuy, is reported from British Honduras for *Crataeva tapia*, L. probably better known in Yucatan as kolok-max.

The leaves of the yuy are crushed for a drink or boiled for a bath to cure asthma (19) and the patient is set over a pot of the steaming leaves to cure diarrhea accompanied by chills (87).

*Yuyum-can.* Lit. oriole-shoots.

The Maya text prescribes a poultice of the boiled plant as a remedy for loss of speech (170).

*Zabac-abal.* A variety of *Spondias purpurea*, L. called *Cirueta morada.* (Standl. 1920-26, p. 656 & 1928, Pl. 44).

A shrub or tree, sometimes 30 feet high. Lit. purple plum. "There are also five kinds of plums, and the largest of these is the purple variety, which the Indians call çabac abal. There is another good one which they call yxchi abal; this is green when ripe and has a small pit. The others are not so good." (Rel. de Yuc. I, 169). The Maya text prescribes a decoction of the leaves for itching rashes (357).

*Zabac-che.* *Exostema caribaeum* (Jacq.) Roem. & Schult. *Falsa quina*, Princewood. (Standl. 1920-26, p. 1366; Millsp. I, 392; Gaumer.)

*E. mexicana*, Gray. (Standl.)

A shrub or tree, sometimes 25 feet high, with white flowers. "Zabac. Black ink or dye from the smoke of a certain tree, before and after it is dissolved; the smoke itself."

"Zabac-che. Tree from the smoke of which the ink or dye is made." (Motul.)

"Thox. Gum of the tree called zabac-che, resembling balsam. The Indians formerly employed it for shaving, mixed with *Coccus axin* and tahte." (Motul.) The Maya text prescribes some unspecified portion, probably the bark, powdered and administered for fainting (210).

*Zabac-nicte*, or *Chac-zabac-nicté.* *Plumeria rubra*, L. *Flor de Mayo rojo.* (Standl. 1920-26, p. 1149; Gaumer.)

Lit. purple *Plumeria*. Described as a shrub or tree 25 feet high bearing handsome sweet-scented flowers. "This tree, zabac-nicte, is a rose-tree and bears the

best dark-red flower. It is very cooling, like the Rose of Alexandria. They make a laxative conserve of it and it is very palatable." (Y. y H. del Yuc. f. 307 r.) The Maya texts prescribe the decoction and infusion of the young shoots as a remedy for dysentery (80, 96 & 98).

*Zabac-pox.* *Celosia nitida*, Vahl. (Standl. 1920-26, p. 255).

Lit. purple scales. Described as a plant with slender stems, erect or clambering over other plants. The Maya text prescribes a drink made from the crushed plant for inflammation of the throat (402). The crushed leaves are poulticed to preserve the hair. (Ixil. f. 54 r.)

*Zac-ak.* *Arrabidaea floribunda* (H. B. K.) Loes. (Standl. 1920-26, p. 1318).

Lit. white vine. This is probably the plant which Millspaugh (I, 390) identifies as *Bignonia mollis*, Vahl. and describes as a "vine 40 feet, common in the forests about Izamal, producing its reddish-purple flowers in June."

*Zac-bacel-can.* *Cereus Donkelaarii*, Salm-Dyck. *Pitahaya*. (Standl. 1920-26, p. 914).

*Selenicereus grandiflorus*, L. (Gaumer.)

Lit. white corncob snake. Described as a creeping or climbing cactus. "This plant called sacbacalcan is heating. It is so named, because they say it resembles the round serpent with scales pitted with white and which resembles a corncob." (Y. y H. del Yuc. f. 181 r.) The Maya texts prescribe the crushed root as a poultice for snake-bites (50 & 54), headache (220), swollen rectum (250) and scabs (328). The decoction or infusion of the plant is employed to bathe snake-bites (62), and the decoction is used in the same manner to cure convulsions (161) and fainting-spells (212). The infusion of the crushed plant is a remedy for ulcers (301), ringworm (339) and wounds or cuts (426).

*Zac-bacel-uoh.* *Cereus* sp.(?)

Lit. white corncob-frog. The Maya text prescribes this as a remedy for quinsy (403).

*Zac-beeb.* *Pisonia macranthocarpa*, Donn. Smith? *Zarza del país*.

"A plant common on flat land. It must be distinguished from the Chac-beeb, in that the latter has spines and the Sac-beeb does not have them. Sac-beeb, or *Zarza del país*. Nyctaginaceae family." (Cuevas, 1913, p. 84). Dr. Standley suggests the tentative identification given above but notes that specimens of *P. aculeata* might be found without spines. The Maya name means white bramble. The medical texts prescribe the crushed plant as a remedy for ruptures and dislocations (181), buboes (368) and quinsy (406).

*Zac-beec.* *Ehretia tinifolia*, L.(?) Lit. white beec. Compare Beec.

"Béec, or *Roble*. Cupuliferae Family. A fairly high shrub of two kinds: the ordinary *Roble* which grows to a considerable height, and another known by the name of sac-béec which has small pale leaves. The latter is the one which is chosen for medicinal use. The fruit is small, appearing in racemes. The flowers are small and white, and their nectar attracts many insects which suck the juice from the calyx." (Cuevas, 1913, p. 16). While the Spanish word, *Roble*, usually means oak, it is also applied to other trees having a strong hard wood. Cuevas' statement notwithstanding, the *Roble* of Yucatan is *E. tinifolia*, called beec in Maya. The Spanish Yucatecs also apply the name *Saúco* to both this tree and, more properly, to *Sambucus mexicana*, although the latter with its soft wood could hardly be called *Roble*. The latter, with its white flowers and small pale leaves, might be the *zac-beec*, which could be translated as "pale beec."

The Mayas apply the powdered leaves of the zac-beec to buboes (367 & 368) and a certain burning eruption of the skin (280). A drink is prepared from the plant which is a remedy for ringworm (373).

*Zac-cab-ha?* *Ficus mexicanus*, Miq. (Standl.; Gaumer.)

This is a large tree, sometimes 60 feet high, with a trunk nearly 6 feet in diameter. The botanists report this Maya name as zaccabba. *Zac-cab-ha*, would mean white-earth-water, possibly referring to a milky sap.

*Zac-canzel-xiu.* *Asclepias curassavica*. L. (Standl.) See X-canzel-xiu.

*Zac-catzim.* *Mimosa hemiendyta*, Rose & Rob. (Standl. 1920-26, p. 363; Gaumer.)

A shrub 5 to 20 feet high, said to be an excellent fire-wood. The crushed root is employed to swab the throat to cure coughs (15) and its decoction is a remedy for dysentery (80). Its infusion is also a cure for dysentery and abdominal pains (80 & 107) and is held in the mouth to relieve a toothache (393). The crushed leaves are poulticed on a swollen knee (244).

*Zac-ci.* *Agave fourcroydes*, Lam. Henequen. (Standl. 1920-26, p. 119; Millsp. I, 292; Gaumer.)

Lit. white Agave. This plant is the source of most of the Sisal hemp exported from Yucatan.

*Zac-culul.* See Culul.

*Zac-chacah.* *Euphorbia Schlechtendalii*, Boiss. (Standl. 1920-26, p. 602).

*Euphorbia mayana*, Millsp. (Millsp. I, 304; Gaumer.)

Lit. white chacah. This is a shrub or small tree 3 to 15 feet high and abundant in brushlands near Izamal. The sap is said to yield a kind of rubber. According to the Maya texts the throat is swabbed with the crushed root and a decoction is taken for coughs (14 & 16). The crushed plant is poulticed on tumors or swellings (246) and made into a lotion for scalp complaints (333). The milky sap is applied to a sore head (369). Millspaugh reports that it is also employed as a purgative and emeto-cathartic. See illustration, Millsp. I, Pl. XVI.

*Zac-chechem.* Probably the same as Chechem. (Standl.)

*Elaeodendron xylocarpum* (Vent.) DC. (Standl.)

*Zac-chichibé.* *Melochia tomentosa*, L. (Standl.; Gaumer.) Malvas.

Lit. white chichibé. A shrub 10 feet high, common on brush lands. "This plant, catzucnab, is heating and purgative, as well as penetrating in cases of swollen legs and for buboes of the groin. The herbalists know this plant under the name of sac chichibe, which is the malva with a large leaf and is well known. It resembles the eneldo (*Anethum graveolens*)." (Y. y H. del Yuc. f. 327 r.) The Maya texts prescribe an infusion of the crushed leaves of the zac-chichibé as an aid to parturition (30) and a decoction as a bath for fever (142).

*Zac-ñilib.* *Tetramerium hispidum*, Nees. (Gaumer.)

Lit. white withe. Described as a shrubby herb with brittle branches, 2 feet high, and abundant in open lands about Izamal. The Maya text prescribes an infusion of the plant as a remedy for sore eyes (203).

*Zac-chucum.* *Pithecolobium* sp.(?)

Lit. white chucum; chucum is *P. albicans* (Kunth.) Benth. The zac-chucum is said to be a thick tree with aromatic compound leaves and small flowers, belonging

to the Leguminosae. The bark is an astringent and is employed as a remedy for toothache and bleeding gums. (Cuevas, 1913, p. 85).

*Zac-chuen-che.* Ah-chuen means artisan in Maya.

The plant does not appear to be a tree, as the name would indicate, but is described as a small shrub with short lanceolate leaves. (Cuevas, 1913, p. 86). The leaves are an emollient, and the Maya texts prescribe their infusion or decoction as a remedy for asthma (19) and the infusion as a bath to cure convulsions and delirium (161). A poultice of the crushed leaves is applied for headache (227), tumefactions (246), a skin-disease resembling the sting of a wasp (364) and inflammation of the throat (405).

*Zac-chuhum.* *Croton punctatus*, Jacq. *Yerba del jabalí.* (Standl.)

The Maya name is reported only by the botanists; possibly *zac-chucum* is intended, although the plant does not resemble the *chucum*. *C. punctatus* is an herb or low shrub found on sea beaches.

*Zac-halal.* *Phragmites communis*, Trin. (Standl.) *Cañoto.*

Lit. white reed. This tall reedy grass is frequently found in the swamps of Central America, growing to a height of 6 to 13 feet.

*Zac-haas.* *Musa sapientum*, L. (Standl.; Millsp. I, 13). *Platano blanco.*

The Maya text prescribes an infusion of this plant as a remedy for retention of urine (413).

*Zac-hoclub(?)* *Ardisia escallonioides*, Schl. & Cham. (Standl.; Gaumer.) See Xooknum.

*Zac-itz.* *Euphorbia Gaumerii*, Millsp. (Millsp. I, 372; Standl.; Gaumer.)

Lit. white milky sap. Described as a scandent shrub, 10 feet, found in the forest at Buena Vista Xbac.

*Zac-ix-mahan-chun.*

Some part of the plant, perhaps the root, is crushed and poulticed over a rupture or dislocation (181). See *Ix-mahan-chun*.

*Zac-itzá.* *Neomillspaughia emarginata* (Gross.) Blake. (Standl.)

*Podopterus mexicanus*, Humb. & Bonpl. (Millsp. I, 294).

Millspaugh describes the *Zac-itzá* as a tree 50 feet high, common in forests and brush lands near Izamal. Gaumer reports *P. mexicanus* under the Maya name of *Pu-mucuy*.

*Zac-kanan.* Lit. white *kanan*. *Kanan* is *Hamelia erecta*, Jacq.

The Maya text prescribes the crushed leaves of the *zac-kanan* as a poultice for abscesses and ulcers (287). Compare *Kanan* and *Yax-kanan*.

*Zac-kokob-che.* Lit. white poisonous snake tree.

"This little tree, *sac kokobche*, is very heating. It is so named to distinguish it from the *kokobche*, of which I have stated that it cannot be drunk. This one is good for colds. They call it *kokobche*, which means asthma-tree (*sic*) and because it stings. Others call it *canche*, or snake-tree." (Y. y H. del Yuc. f. 394 r.) See *Can-che* and *Coc-che*.

The Maya text prescribes a decoction of the bark for what is called asthma accompanied by abdominal pains (129), and the crushed root is poulticed on swollen testicles (245).

*Zac-kopte.* *Cordia sebestena*, L. (Standl. 1920-26, p. 1221; Millsp. I, 315).

Lit. white kopte. Described as a tree 40 feet high with bright scarlet flowers and an edible fruit, a white drupe an inch to an inch and a half long. The Spanish names, *Siricote blanco* and *anacahuite* are reported from Yucatan.

*Zac-kuy-che.* *Bombax ellipticum*, H. B. K. *Amapola blanca*. (Standl.)

This Maya name is not found in any of the Maya sources. This is a large tree with large white flowers, cultivated in various parts of Yucatan.

*Zac-lal*, or *Zac-la*. Lit. white laal. See Laal.

"Zac-la. A species of nettles." (Motul.) The liquor from the crushed steamed plant is employed as an enema to relieve gas in the bowels (114).

*Zac-leum-ak*, or *Zac-leon-ak*. Lit. white spider-vine.

A decoction of the leaves is employed as a bath to cure aching bones and convulsions (179), asthma and coughs (27), eruptions of the skin (330) and white spots (342).

*Zac-loob.* *Eugenia mayana*, Standl. (Standl. 1920-26, p. 1042; Gaumer.)

The Maya name could be translated as white or pale thicket, possibly referring to the gray branches of this species. The Maya texts prescribe an infusion or a decoction of the leaves, taken internally and employed as a bath, to cure phthisis and asthma (12 & 19).

*Zac-mizbil.* *Abutilon trisulcatum* (Jacq.) Urban. (Standl.) See *Zac-xiu*.

*Sida cordifolia*, L. (Gaumer.)

*Zac-mizib.* *Ageratum Gaumeri*, Millsp. *Altamisa*. (Gaumer.)

*Waltheria americana*, L. *Malva del monte*. (Standl.; Gaumer.)

Lit. white broom. The Maya texts repeatedly state that this is an *altamisa* (*artemisia*). Pio Perez confirms this, and adds that it is the same as the *hauay-che*. (P. P. 1898, p. 112). Dr. Standley notes that of the two identifications offered, *A. Gaumeri* is the only one which can possibly be called an *altamisa*. The Maya texts prescribe a decoction of the stalk and root, taken internally to accelerate parturition (29 & 32) and employed as a bath to cure skin complaints (330).

*Zac-muul.* *Alternanthera ramosissima* (Mart.) Chod. *Amor seco del monte*. (Standl.; Gaumer.)

Lit. white mul. Described as an herb 6 feet high abundant in brush lands and reported from the vicinities of Izamal and Merida. The roasted root is squeezed into the eye to cure pterigium. (Ixil. f. 62 v.)

*Zac-mulah-kak*, or *Zac-muclah-kak*.

The plant-name is evidently taken from that of the ulcer for which it is the remedy. The Maya text states that it is like an herb and grows high up, suggesting either a parasite or an epiphyte. A bath is prepared from the plant as a remedy (297).

*Zac-muyal-xiu.* Lit. white cloud plant.

The Maya text prescribes its succulent root as a remedy for sore eyes and states that the plant spreads on the ground, "like a rising cloud beneath its leaf" (202).

*Zac-nab.* See Nab.

*Zac-nicte.* *Plumeria alba*, L. *Flor de Mayo blanco*. (Standl. 1920-26, p. 1149).

Lit. white *Plumeria*. *P. alba* is a tree 10 to 25 feet high with a gray or whitish bark and white flowers. It is extensively cultivated in Yucatan. See *Nicte*. "This, tree, *zac nicte*, is the *cacaloxuchil* of the Mexicans. It is a rose-tree, which bears a white flower which is not large." (Y. y H. del Yuc. f. 347 r.) The *cacaloxuchil*, or *cacaloxochitl*, is *P. acutifolia*, Poir. Notwithstanding the above description, the flowers of the cultivated *Zac-nicte* are about two inches and a half in diameter. Tozzer has noted that the *chac-nicte* and *zac-nicte* are considered the father and mother of *Nohoch-chac-yum*, the head of the Lacandone pantheon. (Tozzer, 1907, p. 93).

The Maya texts prescribe the milky sap, applied to the throat, for coughs (14) and inflammation of the throat (402). A decoction of the bark is also given for coughs (16). The bark is bound on the foot as a charm to cure flatulence (116), and a decoction of the leaves is employed as a bath to cure what is called aching bones and convulsions (179).

*Zacolcom.* *Laguncularia racemosa* (L.) Gaertn. *Mangle bobo*, or *Mangle blanco*. (Standl. 1920-26, p. 1031). White-mangrove.

This Maya name is obtained from the botanists and does not appear in any of the native sources. *L. racemosa* is a shrub or tree, sometimes 60 feet high with a thick trunk and thin, scaly, reddish-brown bark. It extends to Florida and is called white mangrove or white buttonwood. *Zacol* means lungs.

*Zac-pah.* *Byrsonima crassifolia* (L.) DC. *Nancen agria*. (Standl. 1920-26, p. 564).

This name could be translated as white-sour, or slightly sour. It is an erect tree or shrub with yellow or reddish flowers and a small yellow acid fruit. An infusion of the plant is drunk, or its decoction employed as a bath to cure asthma and coughs (19).

*Zac-pay-che.* *Achyranthes aspera*, L. *Zorrillo blanco*. (Gaumer.)

A common weed, 5 feet high, reported from Izamal. Lit. white skunk-tree. Compare *Pay-che*.

*Zac-pet.* *Crotalaria incana*, L. (Millsp. I, 299; Gaumer.) Rattlebox.

Lit. white crown. It is an herb 3 feet high, common in shady woods about Izamal. Some species of *Crotalaria* are called Rattlebox because of the rattling of the dry seeds in the inflated pods.

*Zac-poc-che.* See *Ppelex-cuch*.

*Zac-pom.* *Cupania guatemalensis*, Standl.

Lit. white copal.

*Zac-puc-yim*, or *Zacpucim.* *Callicarpa acuminata*, H. B. K. (Standl. 1920-26, p. 1253; Millsp. I, 316).

Shrub 20 feet high, with small white flowers and black fruit; abundant in forest and brush lands near Izamal.

*Zac-tab-can.* *Cissus sicyoides*, L.?

Lit. white tab-can. The Maya text prescribes a decoction of the plant as a lotion for snake-bites (62). The crushed leaves are poulticed to cure certain skin complaints (284) and the roasted leaves, on buboes of the neck (368). An infusion of the crushed leaves is given for retention of urine (417). It is said to be found beneath rocks. Compare *Tab-can* and *Yax-tab-can*.



*Zac-tah*. *Zexmenia frutescens* (Mill.) Blake. (Standl. 1920-26, p. 1566).

Lit. white tah. Described as a shrubby climber, 20 feet. "This plant, çactah, and another one which they call tah differ in their flower. From it the bees take honey, and it is a product of great value in this province. It is moderately heating and has the soothing quality of rock-candy. It is applied for a cough and a cold . . . and for indigestion." (Y. y H. del Yuc. f. 184 r.) A decoction of the leaves is a remedy for hemorrhoids. (Ixil. f. 51 r.)

*Zac-tok-aban*. *Eupatorium albicaule*, Schultz. (Standl. 1920-26, p. 1456; Gaumer.)

Lit. white flint bush. Reported as a shrub, 10 feet high, frequent in brush lands about Izamal. The Maya name may be derived from the color of the cream-white branches. Compare Tok-aban. This is probably the same as the zac-tok prescribed by the Maya text as a remedy for asthma (3).

*Zac-tzitzil-che*. *Gymnopodium antigonoides* (Rob.) Blake. *Cruceto*. (Standl. 1920-26, p. 248; Gaumer.)

*Zac-uob*. *Cereus undatus*, Haw. (Standl. 1920-26, p. 912). See Uob.

*Zac-xanab-mucuy*. *Euphorbia cozumelensis*, Millsp. (Standl.)

Lit. white dove-shoe. Compare Xanab-mucuy.

*Zac-xiu*. *Abutilon trisulcatum* (Jacq.) Urban. (Standl. 1920-26, p. 753).

Lit. white plant. Described as a shrub from 3 to 7 feet high with small yellow flowers. Compare Kan-zac-xiu.

*Zac-xiu-thul*. *Boerhaavia erecta*, L. *Hierba blanca*. (Standl.; Gaumer.)

Lit. white rabbit-plant. An herb 3 feet high, found on cultivated lands.

*Zac-x-mahan-chun*. Lit. white x-mahan-chun.

The Maya text prescribes it for ringworm (373) and quinsy (408). It is said to be found on the branches of the oicil-che; perhaps a *Peperomia* is meant.

*Zac-x-tez*. *Amaranthus polygonoides*, L. (Millsp. I, 295; Standl.)

Lit. white x-tez. An herb 1 foot high, common in old fields. "Zac-tez. Amaranths that are white and without thorns." (Motul.)

*Zac-x-tez-xiu*. *Iresine paniculata* (L.) Kuntze. (Standl.)

*I. celosioides*, L. (Gaumer.)

Lit. white amaranth-herb. Described as an undershrub, 5 to 10 feet high, abundant in brush lands near Izamal.

*Zac-ya*. Lit. white sapote.

This is reported as the Lacandone name for the *Chicosapote*, or *Achras zapota*. It is a common wood for the foreshafts of arrows among these people. (Tozzer, 1907, p. 60). See Ya.

*Zac-yab*. *Gliricidia maculata*, H. B. K. (Standl. 1920-26, p. 482; Millsp. I, 300; Gaumer; Standl. 1928, Pl. 36).

Tree 30 feet high, with a short crooked trunk and pink flowers in racemes. The wood of the Zac-yab is heavy and said to be of a dark greenish color.

Gaumer also identifies the Zac-yab as *Amoreuxia palmatifida*, Moc. & Sesse, which is a shrub 4 feet high, reported from Progreso. (Millsp. I, 300).

*Zac-zubin-che*. *Acacia globulifera*, Safford. *Cornezuelo blanco*. (Standl.)

*A. sphaerocephalia*, Schl. & Cham. (Gaumer.)

Lit. white zubin-tree. A *sphaerocephalia* is described as a shrub 8 feet high,

with long spines and yellow flowers. The Maya name may be derived from the large pale glands on the tips of the leaflets.

*Zac-zuuc.* *Eragrostis amabilis* (L.) Wight & Ar. (Standl.)

*E. plumosa*, Link. (Gaumer.)

Lit. white or pale grass. It grows to a height of 12 or 14 inches and is common in open lands in many parts of the Peninsula.

*Zac-voil-che.* *Bumelia retusa*, Swartz. (Gaumer.)

Described as a shrub 10 to 15 feet high, abundant in brush-lands, producing dense clusters or whorls of small greenish-yellow flowers. See *Puc-mucuy*.

*Zac-utbó*, or *Zac-utóo*.

The Maya text prescribes an infusion of this plant as a drink or its decoction as a bath to cure asthma (19). The name may be an abbreviation of *zac-utulub-tok*.

*Zac-utulub-tok.* *Bauhinia divaricata*, L. (Millsp. I, 298).

*B. latifolia*, Cav. *Pata de vaca*. (Gaumer.)

*B. spathacea* D.C. (Standl.)

Lit. white festooned flint. A shrub with white flowers growing in brush and forest lands. "This little tree, *çaculubtok*, is heating. It bears a white flower, thus differing from the *chaculubtok*, which puts forth a red flower." (Y. y H. del Yuc. f. 195 r.) The Maya texts prescribe an infusion of the leaves as a drink and their decoction as a bath to cure asthma (19) and the crushed leaves are poulticed to draw a sliver from the foot (427).

*Zac-unan.*

The Maya text prescribes an infusion of this plant as a drink to cure a certain fever accompanied by red spots on the skin (146).

*Zahom*, or *Zahum.* *Zexmenia hispida*, var. *ramosissima*, Greenm. (Millsp. I, 326).

An herb 4 feet high growing in waste places near Izamal. It is said to be an excellent fodder. The Maya texts prescribe a drink made of its infusion and a bath with its decoction for asthma (19) and aching bones and convulsions (179). The boiled leaves are eaten for liver complaint (134) or put into a gruel to cure chills (151).

*Zalac-kat.* *Baltimora recta*, L. (Millsp. III, 106).

Lit. light thatch; described as an erect hirsute herb 4 feet high. "Zelekat. Poles interwoven like a lattice or iron grating." (Motul.)

*Zalat-xiu* (*Zalac-xiu?*). *Paullinia pinnata*, L. (Standl.)

Reported from Peten as a large vine. (Standl. 1920-26, p. 702).

*Zalbeetz*(?) *Hippocratea celastroides*, H. B. K. See *Tulub-uayam*.

*Zal-che.* *Cassia villosa*, Mill. (Millsp. I, 366; Gaumer.)

Described as a shrub 3 to 6 feet high with yellow blossoms.

*C. hirsuta*, L. (Millsp. I, 365).

"A common herb, 4 feet high, in waste places and on farms and open lands about Izamal, producing its chrome yellow flowers from July to December." "Zalche. A plant with which they cure the ringworm called *zal*." (Motul.)

*Zam-chac.*

An infusion of this plant is drunk, or its decoction employed as a bath to cure asthma (19).

*Zayal-bac.* Lit. dislocation of the bones.

The Maya text prescribes what is called the swollen part to be eaten to cure dysentery (100).

*Zicil-ha-xiu.* *Lantana involucrata*, L. (Gaumer.)

"Herb 16 inches high; common in shady places near Izamal." (Millsp. I, 316).

*Zicil-kum.* Probably *Cucurbita moschata*, or something very similar.

Lit. seed-squash. See Kum. *Zicil* is the name generally given to the seeds of squashes. The pulp of this fruit is poulticed on ringworm (294).

*Zicil-puuz.* *Sesamum orientale*, L. (Standl.)

*Zicil-tab.* The Maya name might be translated as thatch-cord.

The liquor from the crushed steamed plant is administered and employed as a lotion for ringworm (339).

*Zicilté.* *Jatropha curcas*, L. *Avellanas*. (Standl. 1920-26, p. 640; Millsp. I, 305; Gaumer.)

Described as a shrub 15 feet high, cultivated to some extent, for hedges. See Ppoh. A medicinal oil is extracted from the fruit.

*Zicimay.* *Tournefortia gnaphalodes* (L.) R. Bro. (Standl. 1920-26, p. 1231).

Described as a shrub, 3 feet or less, bearing a black fruit a quarter of an inch long.

*Zihom*, or *Zihum.* Probably *Sapindus saponaria*, L. (Standl.) Soap berry.

Described as a tree sometimes 50 feet high, bearing a berry half an inch in diameter. "*Zihom.* A certain tree bearing a little fruit which serves as soap." (Motul.) The temple-court was swept with the leaves of this tree in connection with the Maya baptismal ceremony in ancient times. (Landa, 1900, p. 331). The fruit, when macerated in water, produces suds like soap and is much used in Mexico for washing clothes. The seeds are employed for necklaces and rosaries.

*Zinan-che.* *Zanthoxylum caribaeum*, Lam. (Standl.)

Lit. scorpion-tree. Described as a tree 16 to 60 feet high with a spiny trunk, said to have an odor somewhat like that of a scorpion. "This tree, *çinanche*, is a fire. It is so called because it stings like a scorpion. The town of *Sinanche* has the same name, because it abounded in that country. As it stings anyone who touches it, they call it scorpion-tree." (Y. y H. del Yuc. f. 250 r.) The Maya texts prescribe the crushed young shoots as a remedy for diarrhea (85) and dysentery (98). Its decoction is a cure for spitting blood (120) and the crushed leaves are steeped in water and poulticed on the forehead to cure a headache (221).

*Ah-zinaz.* "Certain long red sweet-potatoes." (Motul.)

*Zinic-che.* Lit. ant-tree.

An infusion of the plant is administered as a remedy for an itching rash. It is said to have a fragrant odor (358).

*Zinkin-kaz.* *Jacquinia axillaris*, Oerst. (Gaumer.)

*J. flammea*, Millsp. (Standl.)

*Zip-ché.* *Bunchosia glandulosa* (Cav.) DC. *Cojon de fraile*. (Standl. 1920-26, p. 567; Millsp. I, 369; Gaumer.)

Shrub 20 feet high with bright yellow flowers, common in forests about Izamal. The Maya texts prescribe a hot application of the boiled leaves for pleurisy (9).

A bundle of the leaves is dipped in water and sprinkled on anyone suffering from convulsions (160) and the patient is bathed with an infusion of the leaves (161). The plant is also a remedy for scab (329).

*Zit.* *Lasiacis divaricata* (L.) Hitchc. (Standl.)

*Panicum divaricatum latifolium* (Rupr.) Fourn. (Millsp. III, 34).

About 4 feet high; common along old fences and in brush-lands. "Zit. A slender reed-grass or cane." (P. P. 1866-77).

*Zizal-chen*, or *Zizal-tunich*. *Asplenium pumilum*, Sw. (Millsp. I, 349).

The Maya text states that this fern grows in the cenotes and among rocks. A drink prepared from an infusion of the plant is prescribed for a certain fever accompanied by red spots on the skin (146).

*Zizal-xiu*. *Bryophyllum pinnatum* (Lam.) S. Kurz. *Siempre vive; Admirable, Sin verguenza*. (Standl.; Millsp. I, 298).

Lit. fresh plant. Described as an herb 3 to 6 feet high, abundant in and about towns. The Maya texts prescribe its decoction as an emmenagogue (35) and for spitting blood (121). It is employed for earache (185); the crushed plant is poulticed on tumefactions (246) and it is bound on the breast and the infusion drunk for dysentery (123).

*Zizal-çum-ya*.

Lit. a fresh plant which reduces swellings, perhaps another name for Çum-ya. The Maya text states that it has a leaf like that of the ib (*Phaseolus lunatus*, L.) and prescribes a poultice of the crushed leaf to cure an abscess of the breast (241).

*Zizbic*. *Vanilla fragrans* (Salisb.) Ames. (Standl.)

"Zizbic. Certain fragrant little pods." (Motul.) It is hardly necessary to describe this well known tall-climbing orchid.

*Zizbic-kax*. *Vanilla fragrans* (Salisb.) Ames. (Standl.)

*V. silvestris*, Schl. *Vainilla silvestre*. (Gaumer.)

Lit. wild vanilla, evidently a wild form of the cultivated vanilla.

*Zizim*. *Artemisia mexicana*, Willd. (Millsp. I, 323; Gaumer.) *Agenjo del país*.

*A. vulgaris*, L. (Standl.)

"Zizim. The green wormwood of this land." (Motul.) "There are wormwood plants much fresher and more fragrant than these here (in Spain). Their little leaves are longer and more slender. The Indians grow them for their fragrance and for pleasure. I have seen that they become more beautiful when the Indian women throw ashes around the base." (Landa, 1900, p. 385).

The Maya texts prescribe a hot application of the boiled plant for pleurisy (9), and its decoction is taken for coughs, asthma (25) and diarrhea (66). The plant is poulticed on the abdomen for colic (71). It is boiled and employed to steam the feet to cure chills (151) and the same treatment is used for swollen testicles (371). The decoction is employed as a lotion to cure white spots on the skin (342), and the plant is mixed with maize-paste and bound on the heart as a remedy for vertigo (178).

*Zizim-can*. Lit. wormwood-shoots.

"This plant, called çim can, is like the rosemary bush and resembles the plant, çim kuch, which is the yerba del venado, only the çim can is smaller." (Y. y H. del Yuc. f. 320 r.) The Maya text prescribes a lotion prepared from the boiled

plant for a certain eruption of small pustules (330). The crushed plant is poulticed on wounds and cuts (426).

*Zizim-kak.* *Porophyllum* sp.(?)

"This plant, *çiçimkak*, is moderately cooling. Others call it *nipcibche*. It is odorous and its shoots are purple. It is called *çiçim* because it resembles wormwood; and *kak* because it is good for inflamed swellings." (Y. y H. del Yuc. 179 r.) The Maya text refers to this plant as "that which is called *zizim-kak* or *zizim-kuch* by the medicine men," and prescribes a decoction of the roots for diarrhea (68). A decoction of the plant is a remedy for dysentery (96).

*Zizim-kuch.* *Porophyllum macrocephalum*, DC.(?) *Hierba del venado*.

"This plant, *çiçim kuch*, is the *Yerba del venado*. It is heating and is associated with many others which end their names in *kuch*. All of these cure diseases like favus, bleeding, itch, ringworm, buboes and others of the sort, all of which are called *kuch*. This is the plant eaten by deer and from which the bezoar-stone coagulates, and the principal *yerba del ambir*. There is much of it in this country." (Y. y H. del Yuc. f. 180 r.) Standley and Gaumer identify the *Yerba del venado* as *P. macrocephalum*. The Maya text prescribes its use in connection with *P. punctatum* and states that it has a sweet taste. It is a remedy for scab (329) and a decoction of the plant is given for dysentery (96).

*Ziz-uch.* *Litsea glaucescens*, H. B. K. (Standl. 1920-26, p. 288).

Reported from Chiapas as a tree or shrub sometimes 20 feet high.

*Ziz-muc.* *Celtis iguanea* (Jacq.) Sarg. (Standl.)

Described as a shrub or small tree 10 to 38 feet high, with spines, greenish yellow flowers and a yellow fruit which is said to be eaten by iguanas. See Pio Perez, 1898, p. 112.

*Zooh.* *Gossypium religiosum*, L. *Algodon sagrado*. (Standl.; Gaumer.)

Lit. that which is dry. Reported from the suburbs of Merida. (Millsp. I, 377).

*Zoh-bach.* Lit. *chachalaca-zoh*.

The Maya text prescribes the crushed root as a remedy for infected gums (385).

*Zoh-bach-ak.*

The Maya text prescribes the crushed root to cure cracks in the skin (361).

*Zol-ak.* *Cydistia diversifolia* (H. B. K.) Miers. (Standl. 1920-26, p. 1315). See Chac-ne-toloc.

*Zol-can.* The Maya texts state that this is a synonym for *Am-ak* (q. v.)

Under this name the crushed plant is prescribed for headache (222), swollen testicles (245) and a certain skin complaint (365).

*Zoon.* *Guaiacum sanctum*, L. *Guayacan*, *Palo santo*. (Standl. 1920-26, p. 523; Gaumer.) *Lignum-vitae*.

Tree, sometimes 30 feet high, with a hard light-yellow resinous wood. It is reported from the port of Silam as a tree 60 feet high. (Millsp. I, 301). "There are many trees which they say are good for the disease of buboes; they call them *zon*." (Landa, 1900, p. 389). "The tree, *guayacan*, is the one which they call *zoon*. Its quality is well known and its virtues are very famous. There is much in this land; it is the strongest wood in the world, for it wears out steel. They make many medicines of it and even vessels and curious cups; and only with the water in them they cure buboes. It will also cure horses overcome by the heat;

this I have seen." (Y. y H. del Yuc. f. 173 r.) "Zoon. The *guayacan*, or *palo sancto*; it is very medicinal for buboes." (Motul.) This is confirmed by the Chilam Balam of Ixil. (F. 66 r.) A narrow jar used in preparing chocolate is carved from the wood.

*Zoz-ci*. *Agave rigida*, Mill. (Gauger.)

"Zozci. Hemp of this land from which the spines are removed." (Motul.)

*Zozcil-chac*. *Tillandsia* sp. Called *pastli* in Aztec. (Maler, 1908, p. 142).

"Zozcil chac. This plant is moderately heating. It grows on trees. It resembles the *çoçqui* (*zozci*), and for this they thus named it, and *chac*, because it is somewhat red after it is dried. It has some uses, and its decoction, when drunk, causes sleep. In Spanish it is called *musco*. The odorous and white kind is the best . . . It stops vomiting and hemorrhage of the stomach. It restores lost appetite and is a tonic. (Y. y H. del Yuc. f. 193 r.) It is said to be a vine with white leaves, found growing on trees. (Cuevas, 1913, p. 91).

*Zubin*, or *Zubin-che*. *Acacia globulifera*, Safford. (Standl.)

*A. cornigera* (L.) Willd. *Cornezuelo*. (Standl. 1920-26, p. 374).

*Platymiscium yucatanum*, Standl. (Ibid. p. 510).

"Zubin. A spur; the spur of a cock. The *cornizuelo*, a plant which has spines like the spurs of a cock attached to its trunk." (P. P. 1866-77). The Maya text prescribes an infusion of the crushed root of the *zubin* for certain abdominal complaints (107). The wood is black. (Rel. de Yuc. I, 84).

*Zubul*. *Sapindus saponaria*, L. *Jabon-che*. See *Zihom*.

*Zuuc*. Probably *Eragrostis mexicana* (Lag.) Link. *Bayal*. (Pio Perez, 1898, p. 104).

*Zuuc* is defined as a grass or *zacate* by the Motul and Pio Perez dictionaries. The *Bayal*, or *E. mexicana*, belongs to the grass family and is 12 to 14 inches high, common on open lands.

*Zul-ché*. *Cracca cinerea* (L.) Merong. (Standl. 1920-26, p. 474).

*Tephrosia cinerea* (L.) Pers. (Millsp. I, 299; Standl.; Gauger.)

The Maya name might be translated as wet tree, or soaked tree. *C. cinerea* has narcotic properties and is used in Guiana to poison fish, like *C. virginiana*, L. in the Southeastern States. Reported as herbaceous, 6 feet high, near Izamal, and a narrow leaved form 16 inches high at Silam and Izamal. The Maya texts prescribe a decoction of the plant for jaundice and biliousness (260), and the crushed leaves are poulticed on a certain granulated eruption of the breast (312). A lotion is made of the plant to cure certain pustules (355).

*Zuli-abal*. Probably *Spondias mombin*, L. (Standl.) See *Chi-abal*.

"Zuli abal. The yellow Honduras plums and the tree which bears them. They ripen in September and October." (Motul.)

*Zuli-pox*. *Annona reticulata*, L. *Anona colorada*. (Standl.) See *Op*.

*Zuluay-xiu*. Lit. moth-plant.

The Maya texts prescribe this plant as a remedy for various itching rashes and eruptions of the skin.

*Zulup* (Oul-op?). *Justicia carthaginensis*, Jacq. (Standl.; Gauger.)

Oul-op means foreign parrot. *J. carthaginensis* is an herb bearing purple flowers in short dense spikes.

*Zuum*, or *Zuun*. *Tithonia rotundifolia* (Mill.) Blake. *Arnica*. (Millsp. I, 397; Gaumer.)

"Herb 10 feet high, abundant in old fields, producing its orange-yellow flowers from August to September." The Maya text states that it has a yellow bud or flower and prescribes an infusion of the crushed plant as a remedy for yellow fever and vomiting blood (125). Its decoction is a cure for fever. (Ixil. f. 51 v.)

*Zunil-kax*. *Wissadula amplissima* (L.) R. E. Fries. (Standl. 1920-26, p. 756).

*Zunum-bac*. See *Ounun-ppac*.

*Zutup*. *Ipomoea bona-nox*, L. *Nicua*. (Gaumer.) Reported as *Zutub*.

This is the moon-flower vine; its large showy white flowers open late in the evening. (Standl. 1920-26, p. 1201).

*Helicteres baruensis*, Jacq. (Standl.; Gaumer.) Reported by the botanists as *Outup*. Perhaps the *Outo* is intended.

*H. baruensis* is a shrub 8 feet high with a large red flower.

"This tree, the *sutup*, bears a fruit like *algarrobas* (Carob beans). It is of the same quality as the *zip-che* (*Bunchosia glandulosa*, [Cav.] DC.); it is also healing and they cure convulsions with it." (Y. y H. del Yuc. f. 290 r.) The Maya texts prescribe a bath prepared from the decoction of the young shoots as a remedy for phthisis (12), asthma and coughs (19) and giddiness or epilepsy (214).

*Zuo-keymil*, or *Zuo-keyem*. *Oxalis latifolia*, H. B. K. (Standl.; Gaumer.)

See *Yala-elel*. Lit. sour maize-paste.

*Zuo-pakal*. *Citrus vulgaris*, Risso. (Millsp. I, 301).

Lit. sour orange. Like other citrus fruits, this is a European importation. The Maya text prescribes the skin as a remedy for colic (72).

*Oab-tzitz*. See *Chac-tzitz*.

*X-ocacal-bac*. *Ruellia albicaulis*, Bert. and other *Ruellias* this form. (Seler, 1902-08, III, 567; Millsp. I, 320; Standl.; Gaumer.)

Lit. dislocation; bone remedy. It is a shrub 3 feet high, common in rocky places. The flower is purplish, and the plant has an offensive goatlike odor. "*Ix-ocacal-bac*. A plant or bush. Its root, when roasted and crushed, is good to cure broken or dislocated bones. Its flower has a very strong odor." (Motul.) The Maya text confirms this prescription (184).

*Oache*. See *Xolte-x-nuc*.

*Oalbay*. *Bromelia pinguin*, L. *Piñuela*, *Piñuelilla*. (Millsp. I, 355; Gaumer.)

*Oal* means to press; *bay* is a pack-net. This is a plant with light blue flowers, uncommon, in forests about Izamal. The fruit is eaten to cure tape-worms. (Ixil, f. 63 r.)

*Oal-chac-che*.

An infusion is prescribed by the Maya text as a remedy for pus in the urine (421).

*Oalmuy*. *Annona squamosa*, L. *Saramuyo*. (Standl. 1920-26, p. 283; Gaumer.)

Tree 14 to 18 feet high; the fruit is the size of an orange and has a sweet, creamy or custard-like pulp. The Maya text prescribes a decoction of the leaves of the *Oalmuy* for chills and fever (152). This would appear to be the fruit which a 16th century traveller in Yucatan calls the "*zulumuy*, the rind of which is green,

with certain points like those of a pineapple. The pulp is very white and very delicate, wholesome and tasty, and it is held in high esteem by everybody." (Ponce, 1875, II, p. 389).

*Day-can.* *Sesuvium portulacastrum*, L. *Verdolaga de la playa*. (Millsp. I, 296; Standl.; Gaumer.)

"Prostrate herb, 6 feet, flowers blue, Port of Silam, April." Lit. tusk-shoots. *S. portulacastrum* is found on tidal flats in many parts of Central America.

This identification of the *day-can* is brought into question by the statement in the Maya texts that it is a synonym for *oin-can* and *xau-tzicin*, found among rocks, and by the definition in the Motul Dictionary: "*Daycan*. The soapwort plant, for making soap." As a matter of fact it is the lye from the ashes that is used. The Maya texts prescribe the *Day-can* as a remedy for skin diseases (307 & 308) and it is crushed and poulticed on wounds and cuts (426).

*Day-och-can*, or *Day-och.* *Portulaca halimoides*, L. (Millsp. I, 296; Gaumer.)

Lit. opossum-tooth shoots. "Prostrate, 6 inches; flowers orange-yellow. Common in moist places near Izamal, May."

*Deb-xiu.* Lit. twisted plant.

The Maya text prescribes it as a remedy for abdominal pains (107).

*Detok.*

This might be translated as small flint knife. Pio Perez identifies it as the *Amapola blanca*, which is probably *Bombax ellipticum*, H. B. K. (P. P. 1898, p. 112).

*Dez-cat.* *Luehea speciosa*, Willd.(?)

This may be the same as the *Kaz-cat*. A decoction of the leaves is employed as a bath to cure phthisis (12).

*Oin.* *Manihot esculenta*, Crantz. *Yuca brava*. (Standl. 1920-26, p. 643; Gaumer.)

"*Oin*. The yucca from which they make cassava." (Motul.) "The natives of this province have certain roots which they plant and which grow in the ground for their food. These are produced in the winter. They are called *Yz*, which are potatoes, and *Oin*, which is the sweet yucca." (Rel. de Yuc. I, 263). These 16th century accounts may refer either to the mild variety of *M. esculenta* or the *M. dulcis* (Gmel.) Pax, now called *Cici-oin*. The *Yuca brava* has a poisonous juice which is rendered harmless by heating it. A native of South America, it was introduced into Central America in pre-Columbian times. Although it was a staple article of food among the Caribs, Oviedo states that the sweet variety was not known in the Islands. (Standl. loc. cit.) It is not unreasonable, therefore, to look to early Toltec commerce as the source of its importation into northern Central America and Mexico at least.

*Din-can.* *Sesuvium portulacastrum*, L.(?)

The Maya texts state repeatedly that the *oin-can* is the same as the *day-can* and *xau-tzicin* (q. v.), but it is described as growing among rocks (307, 308 & 426). The crushed plant is made into a drink to cure snake-bites (48 & 60), and poulticed on ulcers (281 & 301), various skin complaints (307, 308 & 373) and wounds (426). The crushed root is poulticed on swollen testicles (252), and the juice of the crushed plant is a remedy for vomiting blood (127).

*Dipil.* *Beaucarnea plabilis* (Baker) Rose. (Standl.)

Lit. that which is stripped of its husk or bark. It is described as a treelike plant with a large trunk, and long leaves. (Standl. 1920-26, p. 98).



*Diu-che*. *Pithecolobium unguis-cati* (L.) Mart. (Standl. 1920-26, p. 394; Gaumer.)

Lit. cowbird-tree. A tree, sometimes 30 feet high, with a spiny trunk, common in brush and forest lands, called cat's claw and black-bead in English. The bark is an astringent. The Maya text prescribes an infusion of the crushed root to relieve tooth-ache (393) and some unspecified part is crushed and boiled to cure pus in the urine (420).

*Dio-ya*. See *tzitz-ya*.

*Dioil-che*. *Ageratum intermedium*, Hemsl. (?)

Lit. tree from which the exterior is partially stripped. The Maya text prescribes it as a remedy for a certain skin-disease (375).

*Dol*. A variety of squash. (P. P. 1866-77).

"Dol. Certain flattish squashes, of a green color and good and palatable.." (Motul.)

*Dol-chakanil*. Lit. meadow-squash.

It is said to be a synonym for the *chach*, a plant from which a yellow dye is obtained. The plant is crushed and poulticed on the stings of insects (58).

*Domel-tok*. *Bauhinia divaricata*, L. See *Dulub-tok*.

*Dulub-may*. *Colubrina Greggii*, S. Wats. (Standl.) See *Puc-yim*.

*Dulub-ppac*. *Lycopersicum esculentum*, Mill. Small-fruited wild form. Tomato chico. (Standl.; Gaumer.) Lit. festooned tomato.

*Dulub-tok*. *Bauhinia divaricata*, L. (Standl.)

See *Zac-dulub-tok*. The Maya texts prescribe a bath with the decoction of the *dulub-tok* as a remedy for pleurisy (9) and fever (142). The plant is also a remedy for swollen head, neck and breast (249) and a decoction of the roots and flowers are given for dysentery (100 & 123).

*Dul-xiu*, or *U-cul-xiu*. Lit. the plant of the foreigners.

An infusion of the crushed plant is a remedy for vomiting blood (127).

*Dum-ya*, or *Dum-yail*. Probably *Pereskia aculeata*, Mill. (Standl.)

Lit. that which reduces a swelling. Cuevas prescribes the crushed leaves for this purpose. (Cuevas, 1913, p. 125). Described as a shrub the branches of which form vines. The flowers are white, pale yellow or pinkish, and the small yellow fruit is said to be edible. "The *cumia* is a plant (growing) into a lithe vine, with a large leaf like that of purslane, but very large; and this, when crushed, will open tumefactions." (Rel. de Yuc. I, 35).

*Dunum-ppac*. *Solanum Humboldtii*, Willd. (Millsp. I, 44; Gaumer.)

Reported by the botanists as *Zunum-bac*. Lit. humming-bird tomato.

*Dunuté*. Laurel, a mountain bush. Peten dialect. (Means, 1917, p. 191).

*Duo-mohoch*, or *Doo-mohoch*. Lit. that which the mohoch sucks.

"There is a plant which has a resemblance to this little creature (an insect called *ix-mohoch*), and this is applied for urinary diseases. It is a miracle of nature." (Y. y H. del Yuc. f. 247 r.)

*Dutó*, or *Dubto*.

The Maya text prescribe the leaves, crushed and poulticed on the bites of reptiles (55). This may be a corruption of *Dulub-tok*.

*Ducuc*, or *X-ducuc*. *Diphysa robinoides*, Benth. (Millsp. I, 367; Gaumer.)

*D. carthaginensis*, Jacq. (Standl.)

Lit. soft or delicate. Described as an abundant tree, 60 feet high, growing in brush and forest lands and bearing bright golden-yellow flowers. The Maya texts prescribe an infusion of the young leaves for asthma (19), and dysentery (80 & 155). A decoction of the leaves is employed as a bath to cure asthma, aching bones, chills and convulsions (179). The crushed leaves are applied externally for ruptures and dislocations (181) abscess of the breast (241), certain skin-diseases (295), inflamed eyes (325) and quinsy (406).

*Ducuc-che*. *Cissampelos pareira*, L. (Millsp. I, 297). See X-petel-tun.

## TABLE OF NOMENCLATURE

- Abrus precatorius*, L. Xoco-ak.  
*Abutilon Gaumeri*, Standl. Yaax-hol-che.  
*Abutilon trisulcatum* (Jacq.) Urban. Zac-mizbil, Zac-xiu.  
*Acacia angustissima* (Mill.) Kuntze. Xaax.  
*Acacia cornigera* (L.) Willd. Zubin, Zubin-che.  
*Acacia farnesiana* (L.) Willd. Kankiliz-che, X-Kanthiriz, X-Kantiriz, Kan-tix.  
*Acacia filicioides* (Cav.) Trel. Kante-mo.  
*Acacia globulifera*, Safford. Zac-zubin-che, Zubin, Zubin-che.  
*Acacia macrantha*, Humb. & Bonpl. Chimay.  
*Acacia riparia*, H. B. K. Yax-catzim.  
*Acalypha alopecuroides*, Jacq. X-Mizbil.  
*Acalypha hispida*, Burm. Ne-miz.  
*Acalypha unibracteata*, Muell. X-Chilib-tux, Chilib-tax.  
*Acalypha yucatanensis*, Millsp. Miz-cax.  
*Acanthocereus pentagonus* (L.) Britt. & Rose. Num, Num-tzutzuy.  
*Achras sapota*, L. Ya, Zac-ya.  
*Achyranthes aspera*, L. Zac-pay-che.  
*Acrocomia mexicana*, Karw. Tuk.  
*Adelia oaxacana* (Muell. Arg.) Hemsl. X-Tom-ppac.  
*Adenocalymna Seleri*, Loes. Oppol-che.  
*Adiantum tricholepis*, Fee. Tel-xiu, Tel-oiu, Tel-kuch? Kel-kuy?  
*Aechmea bracteata* (Sw.) Mez. de C. Chac-canal-zihil.  
*Agave* sp. Ci.  
*Agave angustifolia*, Haw. Bab-ci.  
*Agave fourcroydes*, Lam. Zac-ci.  
*Agave ixtli*, Karw. Chelem-ci, Chucum-ci, Xix-ci, Citam-ci.  
*Agave minima*, D'Utra. Citam-ci.  
*Agave rigida*, Mill. Zoz-ci.  
*Agave sisalana*, Perrine. Yaax-ci.  
*Ageratum Gaumeri*, Millsp. Zac-mizbil.  
*Ageratum intermedium*, Hemsl. X-Talum, X-Ta-ulumil.  
*Ageratum litorale*, Rob. Hauay-che.  
*Allium cepa*, L. Cucut.  
*Alocasia cuprea*, C. Koch. Chac-tzotz-macal.  
*Alocasia macrorrhiza*, Schott. Yax-tzotz-macal.  
*Aloe vera*, L. Hunpeokin-ci.  
*Alternanthera repens*, (L.) Kuntze. Cabal-x-tez.  
*Alternanthera ramosissima* (Mart.) Chod. Chac-mo-ak? Chac-mol-ak? Zac-muul.  
*Alvaradoa amorphoides*, Liebm. Bezinic, Bezinic-che.  
*Amaranthus* sp. Eoen, X-Tez, Tezmucuy, Chac-tez.  
*Amaranthus polygonoides*, L. Zac-x-tez.  
*Amaranthus spinosus*, L. Kix-x-tez.  
*Amerimnon cibix* (Pittier) Standl. Kuxub-tooch.  
*Andira excelsa*, H. B. K. Yak-ba.  
*Andira inermis*, H. B. K. Yak-ba.  
*Andropogon* sp. Ac.  
*Aneimia adiantifolia*, Swz. Much-coc-kax.  
*Ananas magdalenae* (André) Standl. Chac-chom, Chom?  
*Annona cherimola*, Mill. Pox.  
*Annona glabra*, L. H-Maak.  
*Annona muricata*, L. Takob, H-Maak.  
*Annona palustris*, L. H-maak.  
*Annona purpurea*, Moc. & Sessé. Chac-op, Pol-box.  
*Annona reticulata*, L. Op, Zuli-pox.  
*Annona squamosa*, L. Oal-muy.  
*Anoda triangularis*, DC. Tzayaltzay.  
*Anthurium tetragonum*, Engl. Box-kutz.  
*Antigonum leptopus*, Hook & Arn. Chac-lol-macal.  
*Aphelandra deppeana*, Schl. & Cham. Chac-kankil-xiu.

- Apoplanesia paniculata*, Presl. Chulul.  
*Ardisia escallonoides*, Schl. & Cham.  
 Zac-hoc-lub? Xook-num?  
*Argemone mexicana*, L. H-Am.  
*Argemone ochroleuca*, Sweet. Kix-kan-lol.  
*Aristolochia* sp. X-Tuch-ci-tunich.  
*Aristolochia grandiflora*, Swartz. Uahko.  
*Aristolochia odoratissima*, L. Kokob-ak.  
*Aristolochia pentandra*, Jacq. Mehen-uahko, Chan-uahko.  
*Arrabidea floribunda* (H. B. K.) Loes.  
 Zac-ak.  
*Artemisia mexicana*, Willd. Zizim.  
*Arum italicum*, Mill. Macal-zoo,  
 Maxcal-zoo.  
*Arundo donax*, L. Tek-halal.  
*Asagraea officinalis*, Lind. Ta-ñio.  
*Asclepias curassavica*, L. Anal, Anal-kak, Anal-xiu, Chac-anal-kak, Chac-hulubte-kak, Kokob-xiu, Kuchil-xiu, Pol-kuch, X-Pol-kuchil, Zac-canzel-xiu.  
*Asclepias longicornu*, Benth. Cabal-kun-che.  
*Asplenium pumilum*, Sw. Zizal-ñien, Zizal-tunich.  
*Astrocasia phyllanthoides*, Rob. & Millsp. Kah-yuc, Ppix-thon-kax.  
*Astronomium graveolens*, Jacq. Kulim-che.  
*Attalea cohune*, Mart. Čñun-cuy.  
*Ayenia fasciculata*, Millsp. Ppix-thon-kak.  
*Ayenia pusilla*, L. Ppix-thon-čičič.  
*Baccaris trinervis* (Lam.) Pers. Hol-nuxib, Hol-nohxib.  
*Bacopa monnieri* (L.) Wettst. Yaax-cach.  
*Bacopa procumbens* (Mill.) Greenm. Nok-ak.  
*Baltimora recta*, L. Zalac-kat.  
*Bauhinia cavanillei*, Millsp. Chac-olub-tok.  
*Bauhinia divaricata*, L. Oulub-tok, Zac-olub-tok, Omel-tok.  
*Bauhinia latifolia*, Cav. Zac-olub-tok.  
*Bauhinia unguolata*, L. Chac-olub-tok.  
*Beaucarnia pliabilis* (Baker) Rose. Oiiipil.  
*Bidens cynapiifolia*, H. B. K. Chac-xul.  
*Bidens pilosa*, L. Kan-mul.  
*Bidens refracta*, Brandw. Chac-xul.  
*Bignonia diversifolia*, H. B. K. Chac-ne-toloc.  
*Bignonia unguis-cati*, L. X-Ek-kixil, Ek-kixil-ak, X-Kan-lol-ak.  
*Bixa orellana*, L. Kuxub.  
*Blechum blechoides*, Sw. Akab-xiu.  
*Blechum pedunculatum*, Donn. Smith. Yam-cotil.  
*Blechum pyramidatum* (Lam.) Urban. Akab-xiu.  
*Boerhaavia caribaea*, Jacq. Chacil-xiu, U-Xiu-am.  
*Boerhaavia erecta*, L. Zac-xiu-thul, Xacil-zac-xiu?  
*Bombax ellipticum*, H. B. K. Chac-kuy-che, X-Uizil? Zac-kuy-che.  
*Bossingaultia leptostachys*, Moq. Xayil-lol.  
*Bourreria pulchra*, Millsp. Bacal-ché, Kak-ché, Kakal-che.  
*Bravaisia tubiflora*, Hemsl. Hulub.  
*Bromelia karatas*, L. Chac-chom.  
*Bromelia pinguin*, L. H-Mam, Oal-bay.  
*Brosimum alicastrum*, Swartz. Ox.  
*Bryophyllum pinnatum* (Lam.) S. Kurz. Zizal-xiu.  
*Bucida buceras*, L. Pucté.  
*Buechnera aculeata*, Jacq. X-Tez-ak.  
*Bumelia retusa* (L.) Swartz. Mul-che, X-Peet-citam, Puc-mucuy.  
*Bunchosia glandulosa* (Cav.) DC. Zip-che.  
*Bursera graveolens*, Tri. & Planch. Naban-che, X-Chité.  
*Bursera simaruba* (L.) Sarg. Chacah.  
*Byrsonima crassifolia* (L.) DC. Zac-pah.  
*Cacara erosa*, L. Chicam.  
*Caesalpinia* sp. Chacté-coc?  
*Caesalpinia bijuga*, L. Chacté.  
*Caesalpinia Gaumeri*, Greenm. Citam-che, Citin-che.  
*Caesalpinia platyoba*, S. Wats. Chacté.  
*Caesalpinia pulcherrima* (L.) Swartz. Chac-zinkin, Chac-zik, Kan-zinkin.  
*Calea urticifolia* (Mill.) DC. Xicin.  
*Calea zacatechichi*, Schlecht. Xicin, Tzicin, Tzicinil.  
*Calliandra formosa* (Kunth.) Benth. X-Yalah-oc.  
*Calliandra portoricensis* (Jacq.) Benth. Pich.

- Callicarpa acuminata*, H. B. K. Zac-puc-yim, Zac-pucim.  
*Calocarpum mammosum* (L.) Pierre. Chacal-haaz, Chac-haaz.  
*Calopogonium coeruleum* (Benth.) Hemsl. Cup.  
*Canna edulis*, Ker-Gawl. Chankalá.  
*Capparis flexuosa*, L. X-Bayum-ak, X-Bayun-ak, Payum-ak.  
*Capparis oxysepala*, Wright. Choch-citam.  
*Capraria biflora*, L. Chocuil-xiu.  
*Cardiospermum molle*, H. B. K. Uayum-ak.  
*Capsicum* sp. Xubala.  
*Capsicum annuum*, L. Ic, Yax-ic.  
*Capsicum axi*, Vell. Chac-ic.  
*Capsicum baccatum*, L. Max-ic.  
*Capsicum dulce*, Mart. Čihuc-ic.  
*Capsicum frutescens*, L. Max, Max-ic, Putun-ic.  
*Carica papaya*, L. Put, Čiči-put.  
*Carolinea fastuosa*, DC. Chac-kuy-che.  
*Casearia nitida*, (L.) Jacq. Ixim-che?  
*Cassia anisopetala*, Donn. Sm. Kanchikin-ak.  
*Cassia emarginata*, L. X-Tuab, X-Tu-habin.  
*Cassia hirsuta*, L. Zalche.  
*Cassia occidentalis*, L. X-Bat-aban.  
*Cassia Peralteana*, H. B. K. Habin-pek, Yaax-habin, Kan-habin.  
*Cassia procumbens*, L. Buul-čiči-č.  
*Cassia racemosa*, Mill. Habin-pek.  
*Cassia uniflora*, Mill. X-Tulubayen, X-Toloc-uayam?  
*Cassia villosa*, Mill. Zalche.  
*Casimiroa edulis*, Llav. & Lex. Chooch.  
*Casimiroa tetrameria*, Millsp. Yuy, H-Yuy.  
*Castilla elastica*, Cerv. Kik, Kik-che, Kik-aban?  
*Catasetum maculatum*, Kunth. Chit-cuuc, Chic-kuk.  
*Cayaponia alata*, Cogn. Akil-kax.  
*Cecropia obtusa*, Trec. X-Koch-lé, Kaxil-x-koch?  
*Cedrela mexicana*, Roem. Kuché, Kul-ché.  
*Cedrela odorata*, L.(?) Kuché, Kul-ché.  
*Ceiba aesculifolia* (H. B. K.) Britt. & Baker. Čho, Pochote, Piim.  
*Ceiba pentandra* (L.) Gaertn. Piim.  
*Celosia nitida*, Vahl. Zabac-pox.  
*Celosia virgata*, Jacq. Hatanal.  
*Celtis iguanea* (Jacq.) Sarg. Ziō-muc.  
*Cenchrus pallidus*, Fourn. Mul.  
*Centrosema Schottii* (Millsp.) Schum. Buul-beč.  
*Cereus* sp. Zac-bacel-uoh.  
*Cereus Donkelaarii*, Salm-Dyck. Tzacam-ak, Zac-bacel-can.  
*Cereus flagelliformis*, L. Can-choh.  
*Cereus griseus*, Haw. X-Ne-bob.  
*Cereus undatus*, Haw. Zac-uob, Chac-uob.  
*Cereus yucatanensis*, Standl. Culul, Chac-culul, Zac-culul.  
*Cestrum diurnum*, L. Akab-yom, Akab-nicté.  
*Chamaedorea graminifolia*, Wendl. Cabal-x-yat, X-Yat.  
*Chenopodium ambrosioides*, L. Lucum-xiu.  
*Chiococca alba* (L.) Hitchc. Canchac-che.  
*Chrysophyllum cainito*, L. Cayumito.  
*Chrysophyllum mexicanum*, Brandw. Chi-ceh.  
*Cirsium mexicanum*, DC. Omil.  
*Cissampelos pareira*, L. X-Petel-tun, X-Petel-tun-ak, Oucuc-che.  
*Cissus rhombifolia*, Vahl. Tab-can, X-Tab-canil.  
*Cissus sicyoides*, L. Yax-tab-canil.  
*Cissus trifoliata*, L. X-Bolon-tibi.  
*Citherexylum Schottii*, Greenm. Tatak-che.  
*Citrus* sp. Pakal.  
*Citrus amara*, Link. Kah-pakal.  
*Citrus aurantium*, L. Čihuc-pakal.  
*Citrus vulgaris*, Risso. Zuo-pakal.  
*Clematis dioica*, L. Mex-nuxib. Mex-noh-xib.  
*Clerodendron ligustrinum* (Jacq.) R. Bro. Itzimté.  
*Clusia flava*, Jacq. Chunup.  
*Cocoloba Schiedeana*, Lindau. Bob, Bob-che.  
*Cocoloba uvifera* (L.) Jacq. Nii-che.  
*Colocasia esculenta*, (L.) Schott. Cucut-macal.  
*Colubrina Greggii*, Wats. Puc-yim, Pucim, Yax-puc-yim, Oulub-may.  
*Commelina elegans*, H. B. K. Cabal-zit, Pah-ča, X-Hubul-ha, Yaax-haxiu.

- Commelina longicaulis*, Jacq. Bachaxiu?  
*Conocarpus erecta*, L. Kan-che, Kanchikin-che.  
*Convolvulus Grayi*, Rose. Yax-kal.  
*Corallocarpus emetocatharticus*, Cogn. Ciz-can.  
*Corallocarpus Millspaughii*, Cogn. X-Tu-ciz-can.  
*Corchorus pilolobus*, Link. Pu-chichibé.  
*Cordia cylindrostachya* (Ruiz & Pav.) Roem. & Schult. X-Kop-ché.  
*Cordia dodecandra*, DC. Kopté, Chac-kopté.  
*Cordia gerascanthus*, L. Bohom.  
*Cordia globosa*, L. Hau-che.  
*Cordia sebestena*, L. Zac-kopté.  
*Cosmos caudatus*, H. B. K. Chac-oul.  
*Couepia dodecandra* (DC.) Hemsl. Uzpib.  
*Coutarea acamtochlada*, Robns. & Millsp. Pay-luch.  
*Cracca cinerea* (L.) Morong. Zul-che.  
*Cracca Greenmanii*, Millsp. Chicamthul.  
*Crataeva gynandra*, L. Kolok-max.  
*Crataeva tapia*, L.(?) Kolok-max.  
*Crescentia cujete*, L. Luch, Huaz, Homa?  
*Crescentia macrophylla*, Seem. Huaz.  
*Crotolaria incana*, L. Zac-pet.  
*Croton* sp. Kuxub-che.  
*Croton arboreus*, Millsp. Chul, Chul-che?  
*Croton cortesianus*, H. B. K. Ek-balam.  
*Croton flavens*, L. Ek-balam, Xabalam?  
*Croton fragilis*, H. B. K. Taan-che.  
*Croton glabellus*, L. Ppex-cuch, Perez-cuch, Zac-poc-che.  
*Croton humilis*, L. Ic-aban.  
*Croton niveus*, Jacq. Copal-che?  
*Croton punctatus*, Jacq. Zac-chuhum.  
*Cucumis anguria*, L. Habaplat?  
*Cucurbita moschata*, Duch. Kum, Zicilkum.  
*Cupania guatemalensis*, Standl. Zac-pom.  
*Cucurbita pepo*, L. Kum.  
*Cuscuta americana*, L. X-Kan-le-cay.  
*Cyperus ochraceus*, Vahl. Mazcab-zuuc.  
*Cyperus uncinnatus*, Poir. X-Chab-xan?  
*Cydista aequinoctialis* (L.) Miers. Anicab, Chac-anicab.  
*Cydista diversifolia* (H. B. K.) Miers. Chac-ne-toloc, Zol-ak.  
*Cynodon dactylon* (L.) Pers. Can-zuuc.  
*Dalbergia cibix*, Pittier. Cibix, Kuxub-tooch, Muc, Ah-Muc.  
*Dalbergia glabra* (Mill.) Standl. Cibix, Kuxub-tooch, Muc.  
*Dalechampia scandens*, L. X-Mool-coh.  
*Dalechampia Schottii*, Greenm. X-Mool-coh.  
*Datura innoxia*, Mill. Toh-ku.  
*Datura stramonium*, L. Mehen-x-toh-ku.  
*Desmanthus virgatus* (L.) Willd. Cabal-pich.  
*Desmodium procumbens* (Mill.) Hitchc. Kintah, Kintal.  
*Desmodium purpureum* (Mill.) Fawc. & Rendle. Kintah, Kintal.  
*Dicliptera assurgens* (L.) Juss. Niz.  
*Dioscorea alata*, L. Macal, Akil-macal.  
*Dioscorea spiculiflora*, Hemsl. Macal-kuch.  
*Diospyros ebenaster*, Retz. Tauch, Tauch-ya.  
*Dipholis salicifolia* (L.) A. DC. Tzitz-ya, Xac-chum.  
*Diphysa carthaginensis*, Jacq. Oucuc, X-Oucuc.  
*Diphysa robinoides*, Benth. Oucuc, X-Oucuc.  
*Dorstenia contrajerva*, L. X-Cambal-hau, IX-Cabal-hau.  
*Duranta plumieri*, Jacq. Kan-pokol-che.  
*Ehretia tinifolia*, L. Beec, Zac-beec?  
*Elaeodendron xylocarpum* (Vent.) DC. Zac-chechem.  
*Elaphrium pubescens*, Schlecht. Naban-che, X-Chité.  
*Elvira biflora* (L.) DC. Bolon-ek-xiu, Bulum-ek-xiu.  
*Elytraria squamosa* (Jacq.) Lindau. X-Cabal-xaan.  
*Eragrostis amabilis* (L.) Wight & Ar. Zac-zuuc.  
*Eragrostis mexicana* (Lag.) Link. Zuuc.  
*Erigeron pusillus*, Nutt. Tzitzil-xiu.

- Erythrina americana*, Mill. Chac-mol-che.  
*Erythrina coralloides*, Mocq. & Sessé. Chac-mol-che.  
*Essenbeckia pentaphylla* (Macfad.) Griseb. Yax-hokab.  
*Eugenia axillaris* (Swartz) Willd. Ich-huh.  
*Eugenia mayana*, Standl. Zac-loob.  
*Euphorbia* sp. Canbal-zac, X-Hatz.  
*Euphorbia* sp. Lakintan.  
*Euphorbia* sp. Tan-ounun.  
*Euphorbia adenoptera*, Bert. Mehen-xanab-mucuy.  
*Euphorbia cozumelensis*, Millsp. Zac-xanab-mucuy.  
*Euphorbia dioica*, H. B. K. X-Pakunpak, Mehen-xanab-mucuy.  
*Euphorbia Gaumerii*, Millsp. Box-chacah, Zac-itx.  
*Euphorbia graminea virgata*, Millsp. Onob-kax.  
*Euphorbia heterophylla*, L. Hobonkak, Hobonte-kak.  
*Euphorbia hirta*, L. Hauay, Xanab-mucuy, Xanab-chičh.  
*Euphorbia mayana*, Millsp. Zac-chacah.  
*Euphorbia Schlechtendalii*, Boiss. Zac-chacah.  
*Eupatorium albicaule*, Schultz. Zac-tok-aban.  
*Eupatorium aromatisans*, DC. Chiople.  
*Eupatorium conyzoides*, Mill. Tok-aban.  
*Eupatorium hemipteropodium*, Robnsn. Chiople.  
*Eupatorium microstemon*, Cass. Xulto-xiu?  
*Evolvulus alsinoides*, L. Xia-xiu, X-Yax-xiu?  
*Exostema caribaeum* (Jacq.) Roem. & Schult. Zabac-che.  
*Exostema mexicana*, Gray. Zabac-che.  
  
*Ficus cotinifolia*, H. B. K. X-Copo.  
*Ficus mexicanus*, Miq. Zac-cab-ha?  
*Flaveria linearis*, Lag. X-Kan-lol-xiu.  
*Furcraea cahum*, Trel. Cahum.  
  
*Galactia striata* (Jacq.) Urban. Xichil-ak.  
*Gaudichaudia mucronata* (Moc. & Sessé.) Juss. Chillilo-ak.  
*Gliricidia maculata*, H. B. K. Zac-yab.  
  
*Gomphrena dispersa*, Standl. Chac-mol, Chac-mul.  
*Gomphrena globosa*, L. Chac-mol, Chac-mul.  
*Gonolobus barbatus*, H. B. K. X-Tuch-cahoy.  
*Gossypium herbaceum*, L. Taman.  
*Gossypium hirsutum*, L. Taman.  
*Gossypium religiosum*, L. Zooh.  
*Gossypium Schottii*, Walt. Chub.  
*Gouania dominguensis*, L. Om-ak, X-om-ak.  
*Gronovia scandens*, L. Laal-much.  
*Guaiacum sanctum*, L. Zoon.  
*Guatteria Gaumeri*, Greenm. Elemuy, Ek-le-muy?  
*Guazuma polybotria*, Cav. Pixoy, Cabal-pixoy.  
*Guazuma ulmifolia*, Lam. Pixoy, Cabal-pixoy.  
*Gymnopodium antigonoides* (Rob.) Blake. Zac-tzitzil-che.  
*Gyrocarpus americanus*, Jacq. Ciiz.  
  
*Haematoxylon campechianum*, L. Ek.  
*Hamelia erecta*, Jacq. X-Kanan, Chac-tok.  
*Hamelia patens*, Jacq. X-Kanan.  
*Harpalyce formosa* DC. Balche-ceh.  
*Helenium quadridentatum*, Labill. Hetzim-xiu, Puch-ah-ci?  
*Heliotropium parviflorum*, L. Ne-maax, Ne-max-xiu.  
*Heteranthera limosa*, Willd. Hacolel.  
*Hibiscus clypeatus*, L. Hol.  
*Hibiscus elatus*, Swartz. X-Holol.  
*Hibiscus tubiflorus*, DC. Chinchin-pol, X-Tup-kinil, Tup-kin.  
*Hippocratea celastroides*, H. B. K. Taii, Tulub-uayam, Zal-beetz?  
*Hippocratea Grisebachii*, Loes. Taii.  
*Hydrocotyle prolifera*, Kellog. Ppac-can-le.  
*Hyptis pectinata* (L.) Poit. Xolté-x-nuc.  
*Hyptis suaveolens* (L.) Poit. Xolté-x-nuc.  
  
*Ichnanthus lanceolatus*, Scribn. & Sm. X-Kan-chim.  
*Ichyomethia communis*, Blake. Habin.  
*Indigofera anil*, L. Choh.  
*Ipomoea batatas*, L. Iz.  
*Ipomoea bona-nox*, L. Zutup.  
*Ipomoea carnea*, Jacq. Chokob-cat.

- Ipomoea cissoides*, Griseb. Kix-lol-ak.  
*Ipomoea fastigiata*, Sweet. Hebil.  
*Ipomoea pentaphylla* (L.) Jacq. Tzotz-ak, X-Tzotzel-ak, Tzotz-icim, X-Kuyuch.  
*Ipomoea meyeri* (Spreng.) Don. Ix-Haail.  
*Ipomoea sinuata*, Ortega. Hunab-tzotz?  
*Iresine paniculata* (L.) Kuntze. Zac-x-tez-xiu.  
*Isocarpha oppositaefolia* (L.) R. Bro. Chaban-can, Kutz-aban.  
*Isotoma longiflora* (L.) Presl. Lukzah-tahan.  
*Jacaratia mexicana*, DC. Kum-che, Kun-che.  
*Jacobinia spicigera* (Schlecht) Bailey. Tzitz, Yich-can.  
*Jacquemontia pentantha*, Jacq. Akil-xiu.  
*Jacquemontia tamnifolia* (L.) Griseb. Yaax-ebil.  
*Jacquinia* sp. Muy-ak?  
*Jacquinia aurantica*, Ait. Muy-che.  
*Jacquinia axillaris*, Oerst. Zinkin-kax.  
*Jacquinia flammea*, Millsp. Chac-zinkin-kax.  
*Jatropha aconitifolia*, Mill. Chay, Chinchin-chay, Tzintzin-chay, X-Tzah.  
*Jatropha curcas*, L. X-Cacal-che, Zicilté, Ppih (the fruit).  
*Jatropha Gaumeri*, Greenm. X-Pomol-che.  
*Jatropha urens stimulosa* (Mich.) Muell.(?) Tzintzin-chay, Chinchin-chay.  
*Jussiaea suffruticosa*, L. Mazcab-che.  
*Justicia carthaginensis*, Jacq. Zulup, Oul-op? Oulub?  
*Karatas plumieri*, E. Mart. Chom.  
*Krugiodendron ferreum*, (Vahl.) Urban. Chimtok.  
*Lagenaria siceraria* (Molina) Standl. Lec. Tuch.  
*Laguncularia racemosa* (L.) Gaertn. Zacolcom.  
*Lantana aculeata*, L. Ikil-ha-xiu, Zicil-ha-xiu?  
*Lantana camara*, L. Petel-kin, Pet-kin.  
*Lantana involucrata*, L. Zicil-ha-xiu.  
*Laportea mexicana* (Liebm.) Wedd. Laal, La.  
*Lasiacis divaricata* (L.) Hitchc. Zit, Mehen-zit.  
*Lemna minor*, L. Ixim-ha.  
*Lentinus villosus*, Klot. Box-lol-lum.  
*Lepidium apetalum*, Willd. Put-xiu.  
*Lepidium virginicum*, L. X-Put-can, Cabal-put?  
*Leucopremna mexicana* (A. DC.) Standl. Kum-che.  
*Lippia dulcis*, Trev. X-Thuhuy-xiu.  
*Lippia graveolens*, H. B. K. X-Akil-che.  
*Lippia umbellata*, Cav. Xolté-x-nuc.  
*Litsea glaucescens*, H. B. K. Ziz-uch.  
*Lonchocarpus longistylus*, Pittier. Balché.  
*Lonchocarpus rugosus*, Benth. Kanal-zin, Kan-zin.  
*Lonchocarpus yucatanensis*, Pittier. Balche-cehi.  
*Loranthus calyculatus*, DC. Chac-x-keuel.  
*Lucuma hypoglauca*, Standl. Chooch.  
*Lucuma-mammosa*, L. Chacal-haaz.  
*Lucuma campechiana*, H. B. K. Kanizté.  
*Luehea speciosa*, Willd. Kaz-cat, Oez-cat?  
*Lycopersicum esculentum*, Mill. Ppac, Oulub-ppac.  
*Lysiloma bahamensis*, Benth. Tzalam.  
*Lysiloma latisiliqua*, L. Tzalam.  
*Lysiloma sabicu*, Benth. Yax-ek, Yax-ak?  
*Machaonia Lindeniana*, Baill. Kuk-čhel.  
*Macrosepis obvata*, H. B. K. Emzul, Emtzul.  
*Macrosepis rotata*, Decaisne in DC. Emtzul, Emtzul-ak.  
*Malpighia glabra*, L. Chii. Kan-zac-xiu.  
*Malpighia puniceifolia*, L. Uzté, X-Bec-che.  
*Malvastrum coromandelianum* (L.) Garcke. Totop-zoo, Chechebé?  
*Malvaviscus arboreus*, Cav. Taman-čiči, Bizil.  
*Malvaviscus grandiflorus*, H. B. K. Taman-che.



- Mammillaria Gaumeri* (Britt. & Rose) Standl. Pol-tzacam.  
*Manihot aesculifolia* (H. B. K.) Pohl. Chac-che.  
*Manihot aipi*, Pohl. Cici-oin.  
*Manihot carthaginensis* (Jacq.) Muell. Batul, X-Chac-che?  
*Manihot esculenta*, Crantz. Oin.  
*Manihot rhomboidea*, Muell. Chac-che.  
*Maranta arundinacea*, L. Chaac.  
*Mariscus jamaicensis* (Crantz) Britt. Hol-che.  
*Marsdenia Coulteri*, Hemsl. Emtzul.  
*Marsdenia maculata*, Hook. Emtzul.  
*Martynia diandra*, Glox. X-Chuc-chicil.  
*Maximiliana vitifolia* (Willd.) Krug. & Urb. Chum, Chuun.  
*Maximowiczia tripartita*, Cogn. Akilkan.  
*Meibomia scorpiurus* (Sw.) Desv. Ma-u-nak-lé.  
*Melampodium divaricatum*, (L. Rich.) DC. Xoy, Copal-xiu.  
*Melanthera nivea* (L.) Small. Toplan-xiu, Toplom-xiu?  
*Melochia tomentosa*, L. Zac-chichibé.  
*Melothria pendula*, L. Kum-x-tulub, Kum-tulub, X-Tulub.  
*Mentzelia aspera*, Cav. Tzotz-kab, Tzayuntzay.  
*Metopium Brownei* (Jacq.) Urban. Cabal-chechem.  
*Microspora amoena* (Keutz.) Raben. X-Kom-ha.  
*Mikania micrantha*, H. B. K. Uahko-xiu.  
*Milleria quinquefolia*, L. Xiu-toloc.  
*Mimosa pudica*, L. X-mu.  
*Mirabilis jalapa*, L. Tzutzuy-xiu.  
*Momordica charantia*, L. Yacunah-ak.  
*Montanoa Schottii*, Robins. & Greenm. Homahak.  
*Morinda yucatanensis*, Greenm. X-Hoyen-cab, X-Hoyoc.  
*Mucuna pruriens* (L.) DC. Chiican.  
*Musa paradisiaca*, L. Box-haaz.  
*Musa pigmaea*, L. Cabal-haaz.  
*Musa sapientum*, L. Haaz, Zac-haaz.  
*Myrica mexicana*, Willd. Cib-che, Cuyum-che.  
*Myroxylon Pereirae*, Klotsch. Nabá.  
*Myrstiphylon horizontalis*, Sav. Yax-kanan.  
*Neomillspaughia emarginata* (Gross.) Blake. Zac-itzá.  
*Neurolaena lobata* (L.) R. Bro. Yax-ta.  
*Nicotiana tabacum*, L. Kutz.  
*Nopalea* sp. Mehen-tzacam-tzotz.  
*Nopalea inaperta*, Schott. Tzacam-zoo.  
*Notoptera Gaumeri*, Greenm. Puc-ak.  
*Notoptera leptoccephala*, Blake. Puc-ak.  
*Nymphaea ampla*, DC. Naab, Zac-nab.  
*Ocimum micranthum*, Willd. X-Cacal-tun.  
*Oncidium cebolletta* (Jacq.) Sw. Puc-che, Pucub-che, Ajo-che.  
*Opuntia* sp. Tulix-kik?  
*Opuntia Dillenii* (Gawler) Haw. Pakam, Pakan, Yaax-pakam.  
*Orobanche* sp. Acam?  
*Oxalis* sp. Cñoh-chakan, Toñ-chakan.  
*Oxalis latifolia*, H. B. K. Zuó-keyem, Zuó-keymil, Chac-muclah-kak?  
*Oxalis yucatanensis* (Rose) Standl. Yala-elel, Matzab-kuch?  
*Pachira macrocarpa* (Schl. & Cham.) Walp. Kuy-che.  
*Pachyrrhizus erosus* (L.) Urban. Chicam.  
*Pachyrrhizus palmatilobus* (Moc. & Sessé.) Benth. & Hook. X-Nuc-chicam.  
*Panicum divaricatum latifolium* (Rupr.) Fourn. Zit.  
*Panicum trichoides*, Swartz. Cuhuech.  
*Parmentiera aculeata* (H. B. K.) Seem. Cat-cuuc.  
*Parmentiera edulis*, DC. Cat.  
*Parthenium hysterophorus*, L. Hauay.  
*Parthenium Schottii*, Greenm. Chalha.  
*Passiflora ciliata*, Ait. X-Poch-kak.  
*Passiflora coriacea*, Juss. Xik-zoo.  
*Passiflora foetida*, L. Tuu-boc, X-Tucan?  
*Paullinia fuscescens*, H. B. K. Kex-ak.  
*Paullinia pinnata*, L. Zalat-xiu.  
*Pectis linifolia*, L. Mazcab-miz, Matzab-miz?  
*Pedilanthus itzeus*, Millsp. Yax-halal-che.  
*Pedilanthus nodiflorus*, Millsp. Halal-che.  
*Peperomia* sp. Mahan-chun-kak, Ix-Mahan-chun? Zac-x-mahan-chun?

- Pereskia aculeata*, Mill. Dum-ya, Dum-yail.  
*Persea americana*, Mill. On.  
*Persea gratissima*, Gaertn. On.  
*Petiveria alliacea*, L. Pay-che.  
*Petrea arborea*, H. B. K. Opp-tzimin, Yoch-opp-tzimin.  
*Phaseolus elegans*, Piper. Kan-zin, Kanal-zin.  
*Phaseolus lunatus*, L. Ib.  
*Phaseolus vulgaris*, L. Buul, X-Coli-buul.  
*Philodendron oxycardium*, Schott. Aakal-kumche.  
*Philodendron lacerum* (Jacq.) Schott. X-Ochil.  
*Philoxerus vermicularis* (L.) R. Bro. Xukuk, Kukuk.  
*Phoradendron vernicosum*, Greenm. Yaax-x-keuel, Yaax-x-keu.  
*Phragmites communis*, Trin. Zac-halal.  
*Phyllanthus conami*, Swartz. Pay-hul.  
*Phyllanthus glaucescens*, H. B. K. Ppix-thon.  
*Phyllanthus nobilis*, (L. F.) Muell. X-Nabal-che.  
*Physalis angula*, L. Ppac-can.  
*Physalis Lagascae*, Roem. & Schult. Pacunil-ek?  
*Physalis pubescens*, L. Ppac-canul.  
*Physalis viscosa*, L. Pahab-can?  
*Phytolacca icosandra*, L. X-Tel-cox.  
*Phytolacca octandra*, L. Cabal-tel-cox.  
*Pilea microphylla* (L.) Liebm. Yom-ha.  
*Pinus caribaea*, Morelet. Huhub.  
*Piper auritum*, H. B. K. Maculan, X-Makulam.  
*Piper medium*, Jacq. X-Pehel-che, Yax-pehel-che.  
*Piscidia erythrina*, L. Habin.  
*Pisonia aculeata*, L. Beeb.  
*Pisonia macranthocarpa*, Donn. Smith. Zac-beeb?  
*Pistia stratiotes*, L. Ibin-ha, Xicin-chah?  
*Pithecoctenium echinatum* (Jacq.) Schum. X-Ne-toloc, X-Tabay, Xache-x-tabay.  
*Pithecolobium* sp. Zac-chucum?  
*Pithecolobium albicans* (Kunth.) Benth. Chucum.  
*Pithecolobium ligustrinum*, Klot. Tuncuy.  
*Pithecolobium tortum*, Mart. Yaax-ek. Yaax-ak?  
*Pithecolobium unguis-cati* (L.) Mart. Oiu-ché, Oib-ché?  
*Pittiera longipedeunculata*, Cogn. Pompon-zit.  
*Plantago major*, L. Yanten.  
*Platymiscium yucatanum*, Standl. Zubin, Zubin-ché.  
*Pluchea odorata*, L. Chalché.  
*Plumbago scandens*, L. X-Cabal-ac, Chabak.  
*Plumeria* sp. Nicté.  
*Plumeria alba*, L. Zac-nicté  
*Plumeria pudica*, Jacq. Much-nicté, X-Thuhuy-nicté.  
*Plumeria rubra*, L. Chac-nicté, Chac-zabac-nicté, Zabac-nicté.  
*Podopterus mexicanus*, Humb. & Bonpl. Zac-itzá? Pua-mucuy.  
*Porophyllum* sp. Zizim-kak?  
*Porophyllum macrocephalum*, DC. Zizim-kuch.  
*Porophyllum punctatum* (Mill.) Blake. Ek-puc-ché, X-Pech-ukil, Uk-ché.  
*Portulaca halimoides*, L. Day-och-can, Day-och.  
*Portulaca oleracea*, L. Cabal-chum, Xucul, H-Xucul.  
*Portulaca pilosa*, L. Tzotzil-day-och.  
*Priva lappulacea* (L.) Pers. Tzayuntzay.  
*Prosopis chilensis* (Molina) Stuntz. Catzim-ek, Catzim?  
*Prosopis juliflora*, D. C. Catzim-ek.  
*Protium copal* (Schl. & Cham.) Engl. Pom.  
*Psidium guajava*, L. Pichi, Kolok, Chac-pichi.  
*Psidium sartorianum* (Berg.) Niedenbu. Pichi-ché.  
*Psittacanthus americanus* (Jacq.) Mart. Keb, X-Keu, X-Keuel?  
*Psychotria undata*, Jacq. Yax-kanan.  
*Punica granatum*, L. Yanuco.  
*Quaribea Fieldii*, Millsp. Maha. Maha.  
*Quassia amara*, L. Chac-muc?  
*Randia longiloba*, Hemsl. Canal-kax.  
*Randia truncata*, Greenm. & Thompson. Mehen-kax, Kax, X-Pech-citam.

- Randia xalapensis*, Mart. & Gal. Kax.  
*Rauwolfia heterophylla*, Roem. & Schult. Cabal-muc.  
*Renalmia aromatica* (Aubl.) Griseb. Nabay.  
*Rhizophora mangle*, L. Taab-che, X-Tab-che.  
*Rhoeo discolor*, (L. Herm.) Hance. Chac-ɔam, Yax-ɔam.  
*Rhus radicans*, L. Chechem, Zac-chechem.  
*Rhynchosia minima* (L.) DC. Mehen-ib-bech̄.  
*Ricinus communis*, L. X-Koch.  
*Rivina humilis*, L. Kuxub-can.  
*Ruellia albicaulis*, Bert. X-ɔacal-bac.  
*Ruellia tuberosa*, L. X-Cabal-yaxnic, Che-zuuc, Cheil-ah-zuuci, Pix-ulum.
- Sabal* sp. Bom.  
*Sabal japa*, Wright. Xaan.  
*Sabal mexicanum*, Mart.? Xaan.  
*Salvia coccinea*, Juss. Chac-tzitz, ɔab-tzitz.  
*Samyda yucatanensis*, Standl. Puɔ-mucuy, Habal-kax.  
*Sanvitalia procumbens*, Lam. X-Kantunbub.  
*Sapindus saponaria*, L. Zihom, Zihum, Zubul.  
*Sapranthus campechianus* (H. B. K.) Standl. Nic̄-max-che.  
*Schomburgkia tibicinis*, Batem. Hom-icim.  
*Schwenkia americana*, L. Xayulol-xiu, Xayil-lol-xiu?  
*Scirpus validus*, Vahl. Halal.  
*Sclerocarpus divaricatus* (Benth.) Benth & Hook. Xiu-hulub.  
*Sebastiania adenophora*, Pax. & Hoffm. Kan-chunup.  
*Secchium edule* (Jacq.) Swartz. Kiix-pach-kuum.  
*Selaginella longispicata*, Underw. X-Much-coc, Muɔ-coc, Muchul-cux.  
*Serjania adiantoides*, Radlk. Buy, Buy-ak.  
*Serjania atrolineata*, Sauv. & Wright. Buy-ché.  
*Sesamum orientale*, L. Zicil-puuz.  
*Sesuvium portulacastrum*, L. Jay-can, ɔin-can? Xau-tzicin.  
*Sicydium tamnifolium* (H. B. K.) Cogn. Chac-motz.
- Sida acuta*, Burm. Chichibé.  
*Sida angustifolia*, Lam. Chichibé-kax.  
*Sida diffusa*, H. B. K. Hauay-xiu.  
*Sida procumbens*, Sw. Hauay-xiu.  
*Simaruba glauca*, DC. Pazak, X-Pazakil.  
*Smilax* sp.? Am-ak.  
*Smilax Gaumerii*, Millsp. X-Co-ceh, X-Co-ceh-ak.  
*Smilax mexicana*, Griseb. X-Co-ceh, X-Co-ceh-ak.  
*Smilax ornata*, Lem. X-Co-ceh, X-Co-ceh-ak.  
*Solanum* sp. Telez-ku.  
*Solanum amazonium*, Ker. X-Kom-yaxnic, X-Kon-yaxnic.  
*Solanum cornutum*, Lam. Ich̄-can.  
*Solanum havanense*, Jacq. Bahab-can?  
*Solanum Humboldtii*, Willd. ɔunum-ppac.  
*Solanum juripeba*, Rich. Hee-bech̄.  
*Solanum nigrum*, L. Ich̄-can, Pahal-can, Pak-can, Pakal-can.  
*Solanum verbascifolium*, L. X-Thuhuy, Xux-ox, Xax-ox, Toon-paap.  
*Solanum yucatanum*, Standl. Hee-bech̄.  
*Sonchus oleraceus*, L. Nabuk-ak.  
*Sorghum halapense* (L.) Pers. Akil-zuuc.  
*Spermacoce tenuior*, Lam. X-Ta-ulmil.  
*Spermacoce verticillata*, Sw. Ni-zoo.  
*Spiranthes polyantha*, Reichb. Cutziz.  
*Spondias* sp. Abal.  
*Spondias lutea*, L. Kan-abal, X-Kininhobon.  
*Spondias mombin*, L. Chi-abal, Kiiz, Zuli-abal.  
*Spondias purpurea*, L. Abal-ac, Ix-Houen, Zabac-abal.  
*Stachytarpheta jamaicensis* (L.) Vahl. Ibin-xiu.  
*Stemmadenia insignis*, Miers. X-Laul.  
*Stylosanthes hamata* (L.) Taub. Chichibé.  
*Suriana maritima*, L. Panɔil.  
*Swietenia macrophylla*, King. Punab.  
*Syngonium podophyllum*, Schott. X-Ochil.
- Tabebuia chrysantha* (Jacq.) Nicholson. H-Ahau-ché.  
*Tabebuia pentaphylla* (L.) Hemsl. Hokab.

- Tabernaemontana amygdalaefolia* Jacq.  
 Uub-pek, Mehen-uub-pek.  
*Tagetes patula*, L. X-Puhuk, Maceual-  
 puhuk.  
*Tamarindus indica*, L. Pah-chuñuc.  
*Tecoma pentaphylla*, Juss. Ho-kab.  
*Tecoma stans* (L.) H. B. K. X-Kan-  
 lol.  
*Tectaria trifoliata*, L. Chac-chauay-xiu.  
*Tephrosia cinerea* (L.) Pers. Zul-ché.  
*Tetramerium hispidum*, Nees. Uayum-  
 kak, Zac-chilib.  
*Tetramerium scorpioides* (L.) Hemsl.  
 Xib-kuub, Xib-kiik?  
*Theobroma bicolor*, Humb. & Bonpl.  
 Balamté.  
*Theobroma cacao*, L. Cacau, Xau, Haa.  
*Thevetia Gaumeri*, Hemsl. Acitz.  
*Thevetia peruviana* (Pers.) Standl.  
 Acitz.  
*Thouinia paucidentata*, Radlk. Kan-  
 chunup.  
*Thrinax argentea*, Lodd. Chit, Nakaz.  
*Thrinax Wendlandiana*, Becc. Chit.  
*Tillandsia* sp. Zoecil-chac.  
*Tillandsia brachycaulos*, Schl. X-Chu,  
 Miz.  
*Tillandsia fasciculata*, Sw. X-Chu.  
 Canah-zihil.  
*Tillandsia streptophylla*, Scheidw. Ix-  
 Mulix, X-Holom-x-al.  
*Tillandsia usneoides*, L. Mex-nuxib,  
 Mex-noh-xib.  
*Tillandsia vestita*, Schl. & Cham. Xeen.  
*Tithonia diversifolia* (Hemsl.) A.  
 Gray. Chac-zuum.  
*Tithonia rotundifolia* (Mill.) Blake.  
 Zuum, Zuum.  
*Tournefortia gnaphalodes* (L.) R. Bro.  
 Zici-may.  
*Tournefortia volubilis*, L. Chac-nich-  
 max, Xulkin, Ne-max? Ne-max-ak?  
*Tragia* sp. Ppoppox-can.  
*Tragia Gaumeri*, Millsp. Ppoppox.  
*Tragia nepetaefolia*, Cav. Ppoppox.  
*Tragia yucatanensis*, Millsp. Ppoppox.  
*Tribulus cistoides*, L. Chan-x-nuc,  
 Punah-ci.  
*Tribulus maximus*, L. Xichil-ak.  
*Trichilia arborea*, C. DC. Choben-ché.  
*Trichilia hirta*, L. Kulim-ziz.  
*Trichilia terminalis*, Jacq. Choben-che.  
*Triumfetta semitriloba*, L. Mul-och.  
*Trixis radialis* (L.) Kuntze. Tok-aban.  
*Tubiflora squamosa* (Jacq.) Kuntze.  
 X-Cabal-xaan.  
*Turnera diffusa*, Willd. Mizib-coc.  
*Typha angustifolia*, L. Puh.  
*Urera baccifera* (L.) Gaud. Laal-  
 tzimin.  
*Urera microcarpa*, Wedd. Laal, La.  
*Urvillea ulmacea*, H. B. K. App-ac,  
 Ppuluxtakoc.  
*Ustilago maydis*. Tah-chac.  
*Valerianoides jamaicense*, L. Ibin-xiu.  
*Vanilla fragrans* (Salisb.) Ames. Zizbic,  
 Zizbic-kax.  
*Viguiera dentata*, Var. *helianthoides*  
 (H. B. K.) Blake. Tah.  
*Vincetoxicum barbatum* (H. B. K.)  
 Standl. X-Tuch-cahoy.  
*Vitex Gaumeri*, Greenm. Yax-nic.  
*Vitis rhombifolia*, Baker. Tab-can, X-  
 Tab-canil.  
*Waltheria americana*, L. Zac-mizib.  
*Wissadula amplissima* (L.) R. E. Fries.  
 Zunil-kax, Junil-kax.  
*Ximenia americana*, L. Kuk-ché.  
*Yucca aloifolia*, L. var. *yucatanana*  
 (Engelm.) Trel. Tuc.  
*Yucca eliphantipes*, Regal. Tuc.  
*Zanthoxylum caribaeum*, Lam. Zinan-  
 ché.  
*Zanthoxylum fagara* (L.) Sarg.  
 Tamcaz-che, Tancaz-che, Uole.  
*Zea mays*, L. Ixim.  
*Zephrantes citrina*, Baker. Cucut-chom.  
*Zexmenia frutescens* (Mill.) Blake.  
 Zac-tah.  
*Zuelania Roussoviae*, Pittier. Tamay.

## ANNOTATED LIST OF MAYA FAUNA NAMES

*Ac.* The male peccary. See Citam and Keken.

"The wild boar of this land. This is the one which leads the others, which are called u kekenil kax." (Motul.)

*Ac.* "Turtle, tortoise." (Motul.)

"Ac, or ac-ek. The three stars which are close together in the sign of Gemini and which, with others, form a turtle." (Motul.)

*Ahau-can*, or *Tzab-can*. Probably *Crotalus basilicus* or *C. terrificus*. (Tozzer & Allen, 1910, p. 312).

Lit. king-snake, or rattlesnake. "Ahau-can. A snake with rattles on its tail, the bite of which is fatal. There are four varieties of these, and they are zac-(white-)ahaucan, ek-(black-)ahaucan, chac-(red-)ahaucan and kan-(yellow-)ahaucan." (Motul.) "Tzab. The seven Pleiades, a constellation of seven stars; also the rattles of a snake." (Motul.) See medical texts 44, 283 & 392.

*Ain*, or *Chiuan*. Probably the crocodile, as the alligator is not found in Yucatan. (Tozzer & Allen, 1910, p. 321).

"Ayn. A cayman, or large lizard, a species of crocodile." (Motul.) "They worshipped the crocodile, a creature without a tongue." Lizana, 1893, f. 23 v.

*Akab-max*. *Potos flavus aztecus*, Thomas, the kinkajou of the region. (Goldman.)

Lit. night-monkey. It is called *Mico de noche*, has dull yellow fur, a round head and no protruding snout. It sleeps all day and is active at night. (Maler, 1908, p. 140).

*Am.*

"Certain small black spiders with red spots on the back; they are very small and are deadly. There are others which are white, zac-am, and others which climb high, canal-am." (Motul.) "It stings with its tail which is red." (Rel. de Yuc. I, 301). This spider is associated with Ix-Chel, the goddess of medicine. The medicine-men employed certain divining stones called am in connection with her worship during the month of Zip, according to Landa. An invocation of this character has survived in a Maya manuscript in the possession of William Gates, called the Ritual of the Bacabs. The bites of this spider are treated in medical texts 45 & 46.

*Am-can*. Lit. snake-spider.

"A certain poisonous spider which fights with snakes." (Motul.)

*Azul-ceh*.

A large flying insect like a locust. It has long antennae and strong teeth with which it cuts a tree like a saw." (Motul.)

*Ba.* *Heterogeomys torridus*, Merriam, or *Orthogeomys scalops*, Thomas, possibly both. (Goldman.)

The local Spanish name of this gopher is *Tusa*. "There are other animals,

which the Indians call baa, like a large rat. They are bred underground and live on roots. They catch them with snares at the outlets of their holes, and they are good food for the Indians. (Rel. de Yuc. I, 171). See medical text 284.

*Ah-Bacen-chulul.*

"A bird the size of a chicken which screams like a jaguar." (Motul.)

*Bach.* *Ortalis vetula pallidiventris*, Ridgway. Yucatan Chachalaca. (Gaumer, 1917, p. 115.)

*Bac-ha.* A white crane. (Pio Perez, 1866-77).

*Baclam.* *Trichechus manatus*, Linnaeus. (Goldman.) Manati.

*Balam.* *Felis hernandesii goldmani*, Mearns. (Goldman.) Jaguar. (Motul.)

This term was also applied to the native priests and town officials. (Motul.)

*Balam-chan.* See *Ix-Petel-tun*. The name is an importation from Guatemala.

*Ix-Bau.* Crab. (Pio Perez, 1866-77). Medical text 434.

*Baa.* *Alouatta palliata mexicana*, Merriam. (Goldman.) *Saraguato*. (Gaumer, 1917, p. 308).

*A. villosa*, Gray. Villous Howler. (Gaumer, 1917, p. 309; Goldman.)

*Bech*, or *Ubech*. *Eupsychortyx nigrogularis*, Gould. Yucatan Bob-white.

*Dactylortyx thoracicus sharpei*, Nelson. Yucatan Long-toed Grouse. (Bull. Mus. Comp. Zool. Harvard, Vol. L. 1906 p. 116.) Codorniz. (P. P. 1866-77).

*Bech-ha.* Lit. water-quail.

"An aquatic bird the size of a quail and similarly marked. It moves on the sea as though on land and does not dive. (Pacheco-Cruz, 1919, p. 30).

*Bekech.*

A lizard 3 or 4 inches long, coffee-colored on the back and relucient underneath. It somewhat resembles a snake and lives in wet places usually, though sometimes in houses. It is aggressive. (Pacheco-Cruz, 1919, p. 32). Medical text 358.

*Bich*. *Zaramagullon*, (Pio Perez, 1866-77). Didapper?

*Ah-Bil*, or *Kik-bil*. *Canis caribaeus*, L. (Gaumer, 1917, p. 197). *Perro mudo*.

"Bil. Hairless dogs." (Motul.) "These were used to hunt birds and deer and were also eaten." (Rel. de Yuc. I, 63; Landa, 1900, p. 400).

*Boo.* "A certain variety of ants." (Pio Perez, 1866-77).

*Bobil-che.* *Felis hernandesii goldmani*, Mearns. (Goldman.)

A general name for the jaguar. (Rel. de Yuc. I, 169).

*Boc.* Oyster. (Dicc. de San Francisco.)

*Ah-Bool.* "Wild bees which make honey and do not sting." (Motul.)

*Bokol-och.* *Marmosa murina mexicana*, Merriam. (Goldman.) *Tlacuazin raton*. (Gaumer, 1917, p. 7). Murine Opossum.

*Bolay.* See *Chac-bolay*.

*Bolon-chac.*

A "quail, the plaintive call of which in the silence of the night or in early morning is heard at a great distance." (Maler, 1901-3, p. 200).

*Box*, or *Box-cay*. Bagre. (Motul; Pacheco Cruz, 1919, p. 40).

*Box-och*. *Didelphis yucatanensis*, Allen. (Goldman.) *Zorro*. (Gaumer, 1917, p. 9).  
Lit. black opossum.

*Buch*. "A chicken louse and a certain corn-worm." (Motul.)

*Ah-Buhum-chakan*. Certain large noisy snakes. (Motul.)

*Ah-Buk*. A certain sea-crab. Medical text 293.

*Buluc-luch*. Whale. (Pio Perez, 1866-77).

*Cab-coh*, or *Ah-Cab-coh*. *Potas flavus aztecus*, Thomas. (Goldman.) *Oso melero*.  
(Gaumer, 1917, p. 220) Aztec Kinkajou.

The mention of this animal in the Maya prophecies probably refers to an order of Toltec warriors. (Chilam Balam of Tizimin, p. 26).

*Calam*.

A snake sometimes 3 feet long with black and dark yellow rings on its back. Its bite is dangerous. (Pacheco Cruz, 1919, p. 35).

*Ceh*. *Odocoileus toltecus*, Saussure. Yucatan deer. (Goldman; Gaumer, 1917, p. 79).

Powdered deer-horn and the bezoar stone are often used in Maya medicine. Medical texts, 28, 138, 145, 210, 398 & 430. The baked liver is a remedy for sore eyes. (Ixil, f. 62 r.)

*Ah-Cencen-bac*. "Merlin, kestrel, or bird of prey like a hawk." (Motul.)

*Ah-Cib*. Lit. the wax-eater.

"A small animal resembling the Ah-Cab-coh, although it has the color of a puma." (Motul.)

*Cip-choh*. *Piaya cayana thermophila*, Sclater. Long-tailed Cuckoo. (Bull. Mus. Comp. Zool. Harvard, Vol. L, p. 129, 1906).

Its cry was an augury of an unlucky outcome to whatever the hearer was doing. (Aguilar, 1900, p. 83).

*Citam*. *Pecari angulatus yucatanensis*, Merriam. Collared peccary. (Goldman; Gaumer, 1917, p. 62).

The name is also applied to *P. nanus*, Merriam, which is confined to the Island of Cozumel. (Gaumer, 1917, p. 65). See Medical text 56. "There are swine, small animals and very different from our own, for they have the navel on the back and stink greatly." (Landa, 1900, p. 400).

*Cizay*.

Certain small black and ash-colored insects usually found in the guava. (Pacheco Cruz, 1919, p. 48). Lit. evil smelling.

*Ah-Coo-akab*, or *Ah-culte*. *Otus choliba thompsoni*, sub. sp. nov. Cole. Yucatan Screech-owl. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 123).

Lit. mad one of the night. "A nocturnal bird of the forest which has a cry like that of an owl and screams like a child." (Motul.)

*Coc-ac*. A certain small turtle. (Seler, 1923, p. 654). Coc means a dry gourd.

*Cocay.*

Firefly. (Motul.) The god, Itzamna, may be associated with the firefly, as one of his names was Yax-cocay-mut. (Cogolludo, 1688, p. 192).

*Cocochan.* A small species of Trogon. (Maler, 1908, p. 151).

*Coh.* *Felis concolor*, L. Puma. (Gaumer, 1917, p. 181). Medical text 138.

A piece of the skin is worn tied to the belt to cure cramps.

*Coh-ha.* Seal. (Pio Perez, 1866-77). Lit. water-puma.

*Ah-Col-cay.* The *sargo* (*Sparus sargus*), a sea-fish. (Motul.)

*Ah-Colonté*, or *Colonté.* *Ceophloeus scapularis*, Vigors.

Delattre's Woodpecker. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 130). Medical text 387.

*Coot.* The red eagle. (Motul.) Ah-uay-coot is a sorcerer.

*Couoh*, or *Chiuoh.* Tarantula. (Pacheco Cruz, 1919, p. 44).

*Coz.* *Dactylortix thoracicus*, Sharper. (Tozzer, 1907, p. 22).

*Penelope purpurascens*, Wagl. *Cojolito.* (Proc. Zool. Soc. Lond. 1883, p. 459).

"A black pheasant. (Motul.) "The male is black as jet and has a very pretty crown of curly feathers. Its eyelids are yellow." (Landa, 1900, p. 397).

*Coz*, or *Ek-pip.* *Micrastur melanoleucus*, Vieillot. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 121).

"A bird of prey which catches chickens and cries like a child." (Motul.)

*Cuuc.* *Sciurus yucatanensis*, Allen. *Ardilla.* (Gaumer, 1917, p. 100) Yucatan Squirrel.

*Cuceb.* Squirrel. (Pio Perez, 1866-77).

*Ix-Cucut-cip*, or *Cucut-ci.* *Columba flavirostris*, Wagler. Red-billed pigeon. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 116).

*Cutz.* *Agriocharis ocellata*, Cuvier. Ocellated turkey. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 115).

Seler states that the cock is called *ulum* and the hen *ix-tux*. (Seler, 1923, p. 616).

*Cutz-haa.* A duck or goose of this land. (Motul.)

"They also raise the native ducks of this land. They make use of their plumage in weaving their garments and eat them as well. It is good food." (Rel. de Yuc. I, 67).

*Ah-Cuy.* "A species of owl." (Motul.)

*Cuzam*, or *Cozon.* *Chaetura Gaumeri*, Lawrence. Gaumer's Chimney-swift. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 127).

*Stelgidopteryx ridgwayi*, Nelson. (Ibid. p. 134). See Medical texts (167 & 174).

*Ah-Chab.* *Tamandua tetradactyla mexicana*, Saussure. *Hormiguero.* Three-toed Anteater. (Goldman; Gaumer, 1917, p. 17).

"There is also an animal the size of a rabbit which the Indians call *ah-chab*, meaning the sweater. It has a very small mouth, just large enough to contain its tongue which is like a long worm. It lives only on ants . . . but the Indians do not eat its flesh, for they do not consider it good." (Rel. de Yuc. I, 64). Medical text 185.



*Chac-bolay, Chac-mol, Chac-ekel, Zac-bolay, or Zac-ekel.*

*Felis hernandesii goldmani*, Mearns. *Tigre*. Hernandez's Jaguar. (Goldman; Gaumer, 1917, 168 & 174). Medical text 138. Chac-bolay was also the name of a certain evil spirit, and the spreading of the skin of the jaguar in the marketplace was a symbol of war, famine and pestilence. (Chilam Balam of Tizimin, p. 30).

*Chac-ib-can.*

"The *coralillo*. A slender red snake 18 inches long or smaller. It has two black spots and one yellow one on the head. The bite may be fatal." (Pacheco Cruz, 1919, p. 34). The name might be translated as red-bean-snake, possibly referring to the spots.

*Chac-piliz, Chactun-piliz, Chac-piliz-mo.*

A certain small red parrot. (Y. y H. del Yuc. f. 160 r.) Lit. red-embroidered-parrot. Medical texts 125 & 433.

*Chac-pol-čhom.* *Cathartes aura*, L. Turkey Vulture. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 120).

Lit. red-head-vulture. This is evidently the Čhom of the Motul Dictionary: "A species of vulture with a red head, larger than the kind called kuch."

*Chac-zinkin.* *Granatellus sallaei boucardi*, Ridgway. Boucard's Red-breasted Chat. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 138).

*Chac-zoo.* *Nycteris borealis mexicana*, Saussure. (Goldman.) *Murciélago rojo*. (Gaumer, 1917, p. 273). Lit. red bat.

*Chac-oiuib.* *Cardinalis cardinalis yucatanicus*, Ridgway. Yucatan Cardinal. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 141).

Lit. red painted. Medical texts 125, 128 & 433.

*Čhahum, or Čhuhun.* *Melanerpes dubius*, Cabot. Uxmal Woodpecker. (Ibid. p. 130).

"A crested magpie or woodpecker with a red head." (Motul.) "It has talons and a short tail . . . and destroys fruit-trees." (Pacheco Cruz, 1919, p. 21).

*Čhamac, or Čhomac.* *Urocyon cinereoargenteus fraterculus*, Elliot. *Gato montez, Zorra*, Grey Fox. (Goldman; Gaumer, 1917, p. 199).

This is probably Stoll's Čhumac, which he identifies as the coyote. (Stoll, 1884, p. 56).

The Čhamac appears to have been the insignia of one of the Toltec military orders in Yucatan. (Chilam Balam of Tizimin, p. 26).

*Ix-Chamal-kin.*

"An insect 5 or 6 inches long. Its body is covered with variegated spines which produce an itch when they touch the skin. They live on plants and abound in the rainy season." (Pacheco Cruz, 1919, p. 49). Medical text 363.

*Chapat.* Centipede. (Pio Perez, 1866-77).

"An insect which enters the ear and kills." (Beltran, 1859, p. 228). A mythological character named Ah-uuc-chapat (seven centipedes) is mentioned in one of the Maya texts. (Chilam Balam of Tizimin, p. 2).

*Cheh-bac, or Chech-bac.* A sardine. (Motul; Pio Perez, 1866-77).

*Čhel.* *Cyanocitta yucatanica*, Dubois.

It is said to destroy corn-fields and certain fruit. (Proc. Zool. Soc. Lond. 1883, p. 446). *Urraca*. (Pacheco Cruz, 1919, p. 21).

*Cñib-cay.*

"The robalo, a well known sea-fish with two black stripes on its sides from head to tail; it is thin." (Motul.)

*Chiic*, or *Ah-Max-chic*. *Nasua narica yucatanica*, Allen. *Cuati, Pisote*. (Goldman; Gaumer, 1917, p. 217). Coati.

"There is another kind of animal which the Indians call chic, and the Spaniards, *pijote*, a Mexican word. These are like badgers and the Indians eat them." (Rel. de Yuc. I, 64). "It is a playful little animal." (Motul.)

*Chicbul*. *Crotophaga sularostris*, Swainson. Groove-tailed Ani. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 146).

This name recalls that of a legendary Itza leader, said to have come from Mexico and called Tan-u-pol-chicbul (he who has an ani on the front of his head). (Brinton, 1884, p. 120).

*Chico*. *Mimus gilvus gracillis*, Cabot. Yucatan Mockingbird. (Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 146).

These are sometimes domesticated for their song.

*Ix-Chinchin-bacal.*

*Gilguero*, or canary of this province. (Beltran, 1859, p. 229).

*Chiuoh*. See Couoh.

*Choo*. A general name for rat. (Motul.)

*Cñocñ*. A species of bee or honey-fly. (Pio Perez, 1866-77) Medical text 430. Seler identifies this insect as a variety of beetle. (Seler, 1923, p. 729).

*Ah-Cñocñoc-che*. "Nightingale, a bird very similar to that of Spain." (Motul.)

*Ah-Cñom*. *Catharista urubu*, Vieillot. *Sopilote*, Black Vulture. (Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 118). Medical text 357.

*Chop.*

"Lizards which have black and red bands on the body; these are males. The females are mottled." (Pacheco Cruz, 1919, p. 31; Chilam Balam of Chumayel p. 31).

*Ah-Chuah-cab*. "Certain wild bees." (Motul.)

*Chulul*. *Felis glauca*, Thomas. *Tigrillo*. Margay. (Goldman; Gaumer, 1919, p. 179).

*Ah-Cñuy.*

"The kite. These are birds of prey with a beak like that of the owl and a long tail and wings. They eat every kind of birds, including small barn-yard fowl. Although they fly at a considerable height, their cry is distinctly heard." (Pacheco Cruz, 1919, p. 28). Lit. he who carries something suspended.

*Ah-Cñuy-tun*. "Hawk, osprey or kite of this land." (Motul.)

*Ah-Cñuyum-thul.*

"A more used term for the same. It carries a rabbit in its talons." (Motul.)

*Ek-much*. *Felis fossata*, Mearns. *Jaguarondi*. (Goldman.)

*Ek-pay*. *Conepatus tropicalis*, Merriam. *Zorrillo*. (Goldman.)

Lit. black skunk.

*Ek-pip*. See Coz. The flesh is eaten to cure buboes. (Ixil, f. 66 v.)

*Ek-xux*, or *Ah-Ek-xux*.

"Wild-cats, small tigers." (Motul.) Lit. black wasp. "There are wild-cats and they call them ek-xux." (Rel. de Yuc. I, 300).

*Haleb*, or *Haleu*. *Dasyprocta punctata yucatanica*, Goldman. Mexican Agouti.

"Also there are other animals which the Indians call haleo, which is a very important food. Of the size of a large cat, it has short legs and a spotted skin like a new-born fawn." (Rel. de Yuc. I, 171). This may be *Cuniculus paca nelsoni*, Goldman.

*Hoch*.

A long-bodied ash-colored ant found in old tree-trunks. Medical text 363.

*Holil-och*. Gaumer has identified this as *Marmosa gaumeri*, Osgood. splnov. (Gaumer, 1917, p. 3).

Another Yucatecan writer describes this animal as resembling the opossum and having a small grey body. They burrow under stones and fallen tree-trunks and are said to show fight when molested. (Pacheco Cruz, 1919, p. 14). The animal is of interest as it was the symbol of one of the orders of warriors, possibly of the invading Toltecs. (Chilam Balam of Tizimin, p. 30).

*Holom*, or *Holon*.

"Insects resembling the wasp, but larger and of a different color. They build their nests of fine earth or clay on walls, timbers, cloth, books etc. so solidly constructed that they are destroyed with difficulty. Their sting is severe. (Pacheco Cruz, 1919, p. 47). Medical text 167.

*Hom-xan*, or *Hom-xanil*. *Icterus prothemelas*, Strickland. Lesson's Oriole. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 140).

*Hom-xan* means to smother a fire.

*Huh*. Iguana. (Motul.) A general term for this type of lizard. Medical texts 344 & 390.

*Huun-cay*. The pollack. (Beltran, 1859, p. 230).

*Ah-hun-kute*, *Hun-kuk*, *Balam-hun-kuk*.

"The royal eagle, the size of the local turkey, with a crown and very long talons." (Motul.) The flesh is eaten to cure buboes. (Ixil, f. 66 v.)

*Ix-hunpeokin*. *Heloderma horridum*. (Seler, 1923, p. 674).

"Lizards 3 or 4 inches long with horizontal bands, black, rose and ash-colored on the body, and rose-colored beneath. They often enter houses. It is said that they . . . not only attack with the mouth and also with the tail, but by biting the shadow of a person's head they produce a headache so severe that it will be fatal if not immediately cured. (Pacheco Cruz, 1919, p. 32).

"It is so poisonous that when it touches a person, even the garment, without biting or stinging, it kills completely and in a brief time." (Rel. de Yuc. I, 65). Medical texts 222 & 230.

*Ahii*. "A certain hawk." (Motul.)

*Ah-Iia.* See Ah-Ya.

*Ibach.* *Dasyopus novemcinctus mexicanus*, Peters. (Goldman.) *Armadillo*. (Motul.)

*Icim*, or *Icin.* *Bubo virginianus mayensis*. Yucatan Horned Owl. (Tozzer & Allen, 1910, p. 336).

"A certain owl, a nocturnal bird and an omen of the Indians." (Motul.)

*Ah-Iila.* A fish-eagle. (Motul.)

*Ilib-ceh.* "Certain fierce mottled ants." (Motul.)

*Itzam-cab-ain.* A whale. (Beltran, 1859, p. 230). A mythical earth-monster. (Chilam Balam of Chumayel, p. 44).

*Iz-cay.* A ray. (Pio Perez, 1866-77).

*Kamaz.*

"A species of white ants which construct their nests on the branches of trees. These are of earth, in the form of a volcano and sometimes half a meter in height and circumference. Others construct them on the surface of the ground. These live together with the Kul-zinic." (Pacheco Cruz, 1919, p. 52). Medical texts 305 & 339.

*Kan-bolay.* A reddish wild-cat. (Beltran, 1859, p. 227).

*Kanbul.* *Crax globicera*. (Gaumer, 1917, p. 170). Curassow.

"There is a bird as large as the fowls there and which they call Cambul. It is extremely handsome, of great boldness and is good to eat." (Landa 1900, p. 397). "The Indians domesticate them." (Motul.)

*Kan-coh.* *Felis fossata*, Mearns. (Goldman.) Lit. yellow puma.

*Kanil<sup>s</sup>-coz.* *Rupornes ruficauda griseicauda*, Ridgway. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 121). Yucatan Grey-tailed Hawk. Lit. yellow hawk.

*Kanpetkin*, or *Kanal.*

"An insect resembling the Holon, yellow and larger. Their nests are constructed in a round flat shape. They produce an inedible honey and have a visible sting." (Pacheco Cruz, 1919, p. 43). Medical texts 58, 93, 231, 363 & 373.

*Kantaan*, or *Kataan.* The pompano or palometa. (Beltran, 1859, p. 230).

*Ah-Kan-xoc.* *Globicephalus melas*, Traill. (Gaumer, 1917, p. 32). Pilot or Caaing Whale.

*G. Brachypterus*, Cope. (Ibid. p. 35). Short-finned Blackfish.  
Lit. yellow haunch.

*Ix-kan-oul-op.*

A variety of parrot abounding in the State of Tabasco. (Pacheco Cruz, 1919, p. 30). Seler considers this a short-tailed variety. (Seler, 1923, p. 552). Lit. yellow foreign parrot.

*Kau*, or *Kauis.* *Megaquiscalus major macrourus*, Swainson. Great-tailed Grackle. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 141).

"A jackdaw of this land." (Motul.)

*Kaxab-yuc.*

"Snakes from 4 to 5 meters in length and 7 or 8 inches in thickness. They are mottled green and light grey. They feed on every sort of animal including calves. Their bite is dangerous." (Pacheco Cruz, 1919, p. 36). "They strangle their victims like a boa." (Pio Perez, 1866-77). Lit. that which binds the brockett.

*Keek.*—A variety of moharra (Motul.)

*Keken.*

"There are three sorts of wild hogs; some call them citam and others, u-kekenilche. The former are smaller." (Rel. de Yuc. I, 300). Today the term, Keken-che is applied to the peccary, and Keken to the domestic hog.

*Kikbil.* See Bil.

*Kikliz*, or *Kiliz.* *Falco albigularis*, Daudin. White-throated Falcon. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 122).

*Kip-choh.* See Cip-choh.

*Ah-Küx-pach-och*, or *Küx-och.* *Hystrix mexicanum*, Kerr. L. (Gaumer, 1917, p. 134).

*H. prehensilis*, Schreb. *Puerco-espin.* (Ibid. 138). Coendu yucataniae, Thomas. Tree Porcupine. "Certain little foxes resembling hedgehogs." (Motul.)

Lit. spiny-back-opossum. Medical text 416.

*Ix-Kochol.*

"Certain large wingless crickets. They are sluggish and have a neck like a monk's cowl, and a stiff tail like that of the locust. Crush one or two as needed, and it will cause anyone who retains his urine to urinate with notable effect. They are toasted in an earthen pan and crushed." (Motul.)

*Ix-Kok*, or *X-Kokob-ta.* *Merula grayi* Bonaparte. Gray's Thrush. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 135).

"The *ropa-sucia*, a song-bird." (Pio Perez, 1866-77). Kokol means soiled and ta, filth.

*Kokob.*

"There are other kinds of snakes called Kokob, 3 or 4 yards long and thick as a lance; they are very poisonous. Anyone who is bitten exudes blood from the whole body and from the eyes, as with the Taxinchan, and the Indians use the same remedy. Formerly when they were pagans, they cured this poisoning with spells and enchantments. They were great sorcerers and they had their books to charm and enchant them. With the few words they recited, they charmed and tamed poisonous serpents; they caught them and held them in their hands without injury." (Rel. de Yuc. I, p. 66). "In the tail they have a very sharp point with which they also sting." (Ibid, p. 170). Medical text 44.

*Ah-Kota.*

"Parrots with large beaks which are also called *guacamayas.*" (Motul.)

*Ah-Kotzoo.* Turkey-cock. (Motul.)

*Koxol.* A mosquito or fly. (Pio Perez, 1866-77).

*Kuch.* A species of vulture. (Motul.)

One of the Maya terms for pestilence was *oc-na-kuchil*, literally, when the vultures enter the houses.

*X-Kuk-zooch*, or *Zoh*.

A certain spiny fish called the jurel. (Pio Perez, 1866-77).

*Kulim*.

"A variety of garrapata with a flat rectangular body. They are almost invisible, and their sting causes swelling and much itching. (Pacheco Cruz, 1919, p. 48).

*Kulim-pic*. See Pic.

*Kulu*, *Culu*, or *Kuleb*. *Procyon lotor hernandezii*. Wagler. *Tejon*. Common Raccoon. (Goldman; Gaumer, 1917, p. 211).

*Kuluch*.

"This little creature is the cockroach of Castile and in this language is called ix-kuluch and ix-mohoch. It does not sting or do any harm unless they put the end of a candle on its head and it climbs up into the thatch and burns it. It has the virtue of curing hemorrhoids and earache. (Y. y H. del Yuc. f. 312 r.) Medical texts 190, 319 & 413.

*Kumkumil*. *Geococcyx affinus*, Hartlaub. Mexican Roadrunner. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 129).

*Leon*, *Leum*, *Ah-Leum*. A general term for spider. (Motul.)

*Ah-Lo*. The guacamaya, a species of parrot. (Motul.)

*Ah-Luu*. The fresh-water bagre. (Motul.)

*Lucum*, or *Lucum-can*. An earth-worm. (Motul.) Medical text 359.

*Macech*.

"Certain wingless beetles with shells. When dried the Indian women put them on children's necks and wrists." (Motul.)

*Maach*. Crow. (Pio Perez, 1866-77).

*Maax*. "A species of small monkeys, micos or ximios." (Motul.)

The name seems to be applied generally to the smaller varieties of monkeys.

*Maax-cay*. A cuttle-fish. (Pio Perez, 1866-77).

*Maxix*.

"There are other small ducks of great beauty which are called Maxix. They are tame, and if they are raised in the house, they will not try to escape." (Landa, 1900, p. 399).

*Maz*. A cricket. (Motul.) Medical text 414.

*Ix-Mech*. "A lizard which moves about on houses and walls." (Motul.)

*Mehen-och*. *Marmosa mayensis*, Osgood. (Gaumer, 1917, p. 5).

*Mex*. Spider-fish. (Pio Perez, 1866-77).

"I sometimes saw a fish on the coasts which, as it was all shell, I allowed it to be set down here. It is of the size of a small turtle and covered on the upper side by a round delicate shell of beautiful shape and a very light green. It has a tail with the same thin shell resembling a punch and as long as the span from the forefinger to the thumb. Below it has many feet. It is full of minute eggs. Only the eggs are edible and the Indians eat them in quantity. In their language they call it mex." (Landa, 1900, p. 381).

- Miz.* This name is now applied to the domestic cat. Medical text 194.
- Ix-Mohoch.* See Ix-Kochol.
- Moo.* A general name for large macaws. (Seler 1923, p. 552).
- Mucuy.* *Columbigallina rufipennis*, Bonaparte. Ground Dove. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 117).
- Much.* A general name for frogs and toads. Medical texts 276.
- Mukay.* Cochineal. Medical texts 128 & 414.
- Ah-Muul.* A wasp with yellow-tipped wings. Its nest is deep underground. (Pacheco Cruz, 1919, p. 42). Medical text 430.
- Ix-Mulix.* *Gallina morisca*. (Beltran, 1859, p. 229). Lit. the crested one.
- Mut.* A bird of the Cracidae family. (Maler, 1908, p. 132).
- Muy.* *Sylvilagus floridanus yucatanicus*, Miller. (Goldman.) See Thul.  
"They call the rabbit this because it eats with its front teeth. (Motul.)
- Ah-Nab-nok.*  
"The maize-worm which eats the leaves. When it moves it arches itself and appears to be measuring the distance." (Motul.)
- Niin.* *Coccus axin*. (Standley, 1920-26, p. 641).  
"There is a red insect of which they make a very good yellow ointment for tumefactions and sores only by pounding and kneading them. It serves as an oil for painting dishes and fixes the color." (Landa, 1900, p. 383). Medical texts 253, 337 & 404.
- Nok, or Nokol.* A worm. (Motul.)
- Nom.* *Crypturus sallaei goldmani*, Nelson. Yucatan Tinamou. Perdiz. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 114).  
"A partridge of this land which much resembles those of Spain." (Motul.) Its cry is a symbol of drought. (Chilam Balam of Tizimin.)
- Nucuch c̄hoo.* *Rattus rattus*, L. (Gaumer, 1917, p. 106). Lit. big rat.
- Och.* A general name for the Didelphis. (Maler, 1908, p. 123).  
"Certain little foxes (*zorrillos*) which kill and eat chickens and pretend death when they are struck. The females protect their young in a sort of pouch which they have on the belly, within which they have their teats. Their young have been found attached to the dugs firmly, the size of lentils and even smaller, so it is understood that they are produced there. It is said that they mate as birds do." (Motul.) "Certain little bells with opossums' faces which they put on children." (Ibid.) Medical text 410. The fresh blood is applied externally to cure suppression of the urine. (Ixil. f. 60 r.)
- Och-can.* Boa. (Pacheco Cruz, 1919, p. 85). Lit. opossum-snake.
- Ix-Oop.* Guacamayo. (Ibid. p. 29).
- Ah-Pac̄h.* "A certain crested iguana." (Pio Perez, 1866-77).
- Pam, or Ah-Pam.* "A bird with a long broad beak; the toucan or pito real." (Ibid.)
- Paap.* *Psilorhinus mexicanus vociferus*, Cabot. Yucatan Brown Jay. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 188).

*Ah-pat.* Dogfish. The eye is a remedy for coughs. (Kaua, f. 76 v.)

*Ah-Pax-ulum.* Codfish. (Motul.)

*Pay*, or *Pay-och.* *Conepatus tropicalis*, Merriam. (Goldman.) *Zorrillo.*

"There is an animal which they call pay and we call it *zorrillo*. It is colored white and black. When one tries to catch it, it gives forth such a perverse and bad odor that no one can endure it." (Rel. de Yuc. I, 171).

*Pech.* "A general name for the garrapata." (Motul.)

*Pek.* "A general name for the dog." (Ibid.) See *Ah-Bil.*

"None of these animals was domesticated except the dogs which cannot bark nor do harm to man." (Landa, 1900, p. 400). Medical texts 55, 57, 59, 216 & 390.

*Pepem*, or *Pepen.* "A general name for the butterfly." (Motul.)

*Ix-petel-tun.*

"This serpent, *ix-petel-tun*, which others call *balan-chan* because its snout resembles that of the jaguar, is poisonous." (Y. y H. del Yuc. f. 400 r.) Lit. round stone.

*Pic*, or *Ah-Pic.* The local cimex. (Pacheco Cruz, 1919, p. 46). "Large bedbugs which fly." (Motul.)

*Pican.* "Certain large bugs which, they say, fiercely sting serpents." (Motul.)

*Pich*, or *Pichum.* Dives dives, Lichtenstein. Pueblo Blackbird. (Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 141).

"Certain little thrushes of this land. *Bech pichum*, or *yan u yaah pichum tech*. Thou are like these little thrushes; thou hast their character, art a great blather-skite, talker and windbag." (Motul.)

*Ppilan-Keuel.* *Titra semifasciata*, Spix. Mexican Titra. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 133).

*Pokoz.* Fresh-water fish, or *mojarras*. (Motul.)

*Polpoch*. "Certain serpents which leap in order to sting. They are mottled red and black." (Motul.)

*Ppoppox-can.* "Other ants which sting." (Beltran, 1859, p. 277). This is also the name of a species of *Tragia*.

*Pucil.* *Mus musculus*, L. House Mouse. (Gaumer, 1917, 112).

*Puhuy.* *Nyctidromus albicollis yucatanensis*, Nelson. Parauque. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 127).

"The *pajaro-pluma*, a nocturnal bird." (Pacheco Cruz, 1919, p. 25). "The *gallina-ciega*, or *engaña-pastor*; the Indians consider it a bird of omen." (Motul.)

*Putenput.* *Heteromys gaumeri*, Allen & Chapman. Gaumer's Spiny Rat. (Gaumer, 1917, p. 131). Lit. the carrier.

*Ah-Tab* See Cox.

*Ix-Tacab.*

A variety of wasp with a flat body. The rear portion is yellow and the remainder black. They build nests in empty pans, although they are rarely encountered." (Pacheco Cruz, 1919, p. 42). Lit. wedge.



*Ix-Tacay.* *Myiozetetes similis superciliosus*, Bonaparte. Mexican large-billed tyrant, Couch's Kingbird. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 133).

*Taxinchan.*

"Serpents growing to a meter in length and marked with black and green stripes. They are dangerous but flee when they meet a man." (Pacheco Cruz, 1919, p. 35). "There is a snake which the natives call taxinchan. Its length is a *tercia*. To move, it fixes its head on the ground and gives a jump, moving by leaps. Its back, head and the tip of the tail are golden-yellow. It lives in the forest. When it bites a person, it causes him to exude blood from every pore like a bloody sweat, and if no remedy is applied, he will die in a day." (Rel. de Yuc. I, 66). "This snake, the taxinchen, is of four varieties according to its color. Hence some of the young resemble the mother and others are different. They are poisonous in various degrees, since the different varieties interbreed, and those (of mixed breed) are the worst." (Y. y H. del Yuc. f. 398 r.) Medical text 60.

*Tek.* The manati. (Pio Perez, 1866-77). Perhaps *Trichechus manatus*, L. (Goldman.)

*Ix-Toc.* Sardines. (Motul.)

*Toh, or Tah.* *Eumomota superciliaris*, Swainson. Red-backed Motmot. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 126).

*Ix-Toloc.* "An ash-colored lizard with a crest on its head. It constantly moves, even while resting." (Pacheco Cruz, 1919, p. 31).

*Ix-Toyil.* A certain house-spider. (Pio Perez, 1866-77). Medical text 232.

*Ix-Tuch.* *Ateles neglectus*, Reinhardt. *Mono*. Mexican spider-monkey. (Goldman; Gaumer, 1917, p. 312). Tuch means navel.

*Tulix.* Libellula. (Pacheco Cruz, 1919, p. 46).

This is probably the Ix-Tulix-hobon mentioned in Medical text 363.

*Ix-Tulub.*

"Small coffee-colored lizard with white bands on the body and a rose-colored tail. It is frequent on the edges of roads and walks and in houses." (Pacheco Cruz, 1919, p. 32).

*Tun-culuchhu.* *Asio magellanicus mayensis*, Nelson. Yucatan Horned Owl. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 122).

*Strix flammea*, L. (Proc. Zool. Soc. Lond. 1883, p. 456).

*Ix-Tuzil.* A clothes-moth. (Motul.) Medical texts 125 & 232.

*Ah-Thau.* A young turkey-cock. (Pio Perez, 1866-77).

*Thoth.* Coffee-colored frogs which attain various sizes. (Pacheco Cruz, 1919, p. 38).

*Thul.* *Sylvilagus gaffi truei*, Allen and perhaps *S. floridanus yucatanicus*, Miller. (Goldman.) Thul seems to be a general name for rabbit; the word also means narrow.

*Thuuth.* *Amazona albifrons nana*, Miller. Yucatan White-fronted Parrot. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 125).

The term is also applied to a scanty-haired man.

*Thuyul*. "A certain white ant, or termite." (Pio Perez, 1866-77).

A variety of beetle. (Seler, 1923, p. 729).

*Ah-Tzab-can*. See Ahau-can.

*Tzapatan*. *Synallaxis erythrothorax*, Sclater. (Proc. Zool. Soc. Lond. 1883, p. 449).

*Tzau*. "Large fresh-water mojarras." (Motul.)

*Tzimez*. Centipede. (Motul.)

Probably a species of Scolopendra. (Tozzer & Allen, 1910, p. 303). Medical texts 361 & 362.

*Tzimin*. *Tapirella dowi*. (Goldman.)

The Mayas call the horse tzimin from its fancied resemblance to the tapir.

*Ah-Tzoo*. A turkey-cock. (Motul.)

*Tzotzim*, or *Baclam*. The macabi. (Beltran, 1859, p. 230).

*Tzotzim-pek*. "A dog of this land with very short hair." (Motul.)

"Also the Indians have another sort of dogs which have hair, but they do not bark either, and are of the same size as the others (hairless dogs)." (Rel. de Yuc. I, 63). Lit. hairy dog.

*Tzub*. *Dasyprocta punctata yucatanica*, Goldman. Spotted Agouti.

"There is a small animal of a very sad disposition. It always goes about in caverns and under cover at night. To catch it the Indians set a certain trap. It is like a hare and moves with leaps and timidly. It has very long thin front teeth, and the canine-tooth is even smaller than that of the hare . . . It is marvellously mild and gentle and they call it zub." (Landa, 1900, p. 401). Medical texts 40 & 41.

*Tzul*. The domestic dog. (Dict. San. Francisco.)

*Tzula*. *Monachus tropicalis*, Gray. West Indian Seal, or Foca. (Gaumer, 1917, p. 243). *Lobo-marino*. (Pio Perez, 1866-77). Lit. water-dog.

*Tzutzuy*. *Leptotila fulviventris*, Lawrence. White-fronted Dove. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 118). *Paloma torcaz*.

*Ah-Uay-mi*.

"Wild-cat which goes about on trees and brings up its young in its pouch." (Motul.) The "*gato-montes*" of the 16th century writers cannot always be taken literally.

*Uayuc*. *Bassaricus sumichrasti*, Saussure. *Mico de noche*. (Gaumer, 1917, p. 208).

Uayuc may be a corruption of uayak, which means a fleeting vision of the night.

*Ucum*. A rare variety of gray wild pigeon with a white neck. (Pacheco Cruz, 1919, p. 29).

*Ah-Uuc-Chapat*. A serpent with seven heads. (Beltran, 1859, p. 227).

Lit. seven centipedes. See Chilam Balam of Tizimin p. 1.

*Uech*, or *Ah-Uech*. *Dasyopus novemcinctus mexicanus*, Peters. (Goldman.) Nine-banded Armadillo. Perhaps also *Cabassous centralis*, Miller.

"There is another animal which they call ix-uech. We call them *armados*, because they have certain shells and are enclosed by them. There are two sorts,

because one does harm to anyone who eats it, and the other is very good. They recognize them by the shells, although they are of one fashion. The only difference is that the bad one has six stripes across its body, and the good one has eight or nine. They are of one color, which is between white and red." (Rel. de Yuc. I, 302).

*Uk.* "The louse found on man and quadrupeds." (Motul.)

*Ul.* A snail. (Seler, 1923, p. 752).

"Ul. Certain little snails which live among bushes and in rocky places." (Motul.)

*Uo, or Uoh.*

"Certain frogs containing much fat and grease and good to eat." (Motul.) They are small and are found beneath stones and in wet places. The Maya name is said to be derived from their cry. (Pacheco Cruz, 1919, p. 38). Medical texts 2, 162, 217, 276, 399 & 404.

*Uolpoch.* "Serpents which leap in order to sting." (Dicc. de San Francisco.)

This is perhaps the most poisonous of the snakes of Yucatan, and one of the few which will attack without being molested. It is dark grey and about a yard long. To the fact that it is blunt at both ends is probably due the belief that it is able to sting with its tail. (Pacheco Cruz, 1919, p. 33).

*Uxcil.* A certain vulture. (Seler, 1923, p. 598).

*Xac, or Ah-Xac.* The mojarra, a fish. (Motul.)

*Xacat-be*

"Ash-colored insects resembling a locust, only larger. They are so named because they jump in such a way as to deceive anyone trying to catch them. They are common." (Pacheco Cruz, 1919, p. 49). Medical texts 61 & 230.

*Xex-cay.* Shrimps. (Beltran, 1859, p. 230).

*Xoch.* *Strix fratricola*, Bonaparte. American Barn Owl. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 125).

"The owl, a nocturnal bird and an omen of the Indians." (Motul.)

*Xot.* *Melania levissima*, an edible fresh-water snail. (Maler, 1903, p. 17).

*Ah-Xuul.* The skate. (Beltran, 1859, p. 230).

*Xulab.* "Ants which sting seriously." (Motul.)

They are reported to move in battalions and invade houses at night. They have long legs, are found in dry places and destroy the leaves of plants. (Pacheco Cruz, 1919, p. 50). These are the ants whose sting was believed to cause an eclipse of the moon. (Aguilar, 1900, p. 83).

*Xux.*

"Wasps. Well known insects whose sting causes inflammation. They construct their nests on the branches of trees and the eaves of houses. The nests are called *u pak xux*. Their honey and the young wasps are edible." (Pacheco Cruz, 1919, p. 41). Medical texts 244, 259, 363, 373, 415 & 422.

*Ah-Ya.* *Myiarchus yucatanensis*, Lawrence. Yucatan Crested Flycatcher. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 133).

*Platypsarisagliaiae*, Lafresnaye. Rosy-throated Becard. (Ibid. p. 134).

"A bird which eats bees." (Motul.) A bird of omen. (Chilam Balam of Tizimin, p. 2).

*Yal-chamil.*

"There is a little bird with so sweet a song like that of a nightingale that they call it *Ix-yal-chamil*. It moves about on the walls of houses where there are gardens and in the trees." (Landa, 1900, p. 395). "A variety of nightingale." (Pio Perez, 1866-77).

*Yam-cotil.* *Thryomanes albinucha*, Cabot. Cabot's wren. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 135). Lit. between the stones of a wall.

*Yax-bay.* The dogfish. (Beltran, 1859, p. 280).

*Yax-cach.* A general name for flies. (Motul.)

*Yax-icil.* Green iguanas. (Motul.)

*Yilkil-cab.* Probably *Melipona fulvipes* or *domestica*. (Tozzer & Allen, 1910, p. 298). Lit. honey-insect.

*Yuc.* *Mazama pandora*, Merriam. (Gaumer, 1917, p. 83). *Tunkas Brockett*. *Odocoileus truei*, Merriam. (Ibid. 83). *Sartori's Brockett*.

"There are wild goats which the Indians call *yuc*. They have only two horns like goats and are not as large as deer which have many branches on their antlers." (Rel. de Yuc. I, p. 63). Medical texts 74, 77, & 408. The Indians also apply this name to the European goat.

*Yuyum.* *Icterus mesomelas mesomelas*, Wagler. Orange Oriole. (Bull. Mus. Comp. Zool. Harvard, 1906, p. 140).

*Zabin*, or *Zabim.* *Mustela tropicalis*, Merriam. *Comadreja*. (Goldman.)

"There are other animals which are of no use, such as the *zabin*, which is like a ferret." (Rel. de Yuc. I, 302). "A ferret or weasel of this land; it is drab or brown (*parda*)."  
(Motul.) The name symbolized a certain hated military class, probably of Toltecs. (Chilam Balam of Tizimin, p. 26). The "weasels of the army" were the scouts and spies. (Motul.)

*Zac-boc.* A white heron. (Beltran, 1859, p. 229).

*Zac-bolay.* See *Chac-bolay*.

*Zac-ekel.* See *Chac-ekel*.

*Zac-leum.* "A species of spiders which sting much." (Motul.) Lit. white spider.

*Zac-och.* *Didelphis yucatanensis*, Allen. Yucatan Opossum. (Goldman). Lit. white opossum.

*Zac-pacal.* *Melopera leucoptera*, L. White-winged Dove. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 116).

"Certain white doves of this land." (Motul.)

*Zac-pay.* *Conepatus tropicalis*, Merriam. White-backed Skunk. *Zorrillo*. (Goldman.) Lit. white skunk.

*Zac-pib-och.* "Large opossums. They are white and carry their young in a pouch on the belly." (Motul.)

*Zac-tan-kiki.* *Leucopternis Ghiesbreghtii.* (Maler, IV, 27). Lit. white breasted falcon.

*Zac-xicin.* *Felis pardalis, L.* Ocelot. *Tigrillo, Ocelote,* (Gaumer, 1917, p. 176). Lit. white ear.

*Zak.* The locust. (Motul.) Medical text 364.

*Zam-hol.* *Tayra barbara senex.* Thomas. (Goldman.) Possibly also *Galictis canaster, Nelson,* or Nelson's Grison. *Oso colmenero.* (Beltran, 1859, p. 228).

"There is another animal which they call çamhol, which is a bear the size of a dog. They eat nothing but honey, of which there is a large quantity. As people keep hives outside of town, if they neglect them, these animals will destroy them." (Rel. de Yuc. I, 303).

*Ah-Zay.*

"Certain large ants." (Motul.) They are light red and covered with spines. Their sting is painful. They are found in wet places, particularly in wells, where they will spoil the water if allowed to remain." (Pacheco Cruz, 1919, p. 50).

*Ah-Zao.*

"Certain large worms which the Indians eat. They live on the ceiba and pixoy trees." (Motul.) Lit. the extended one.

*Zezi, or Zezip.* *Xanthoura luxuosa guatemalensis, Bonaparte.* Guatemalan Green Jay. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 137).

*Zib-cay.* The *bufeo, or tonina;* a fish. (Pio Perez, 1866-77).

*Zibic.* A dolphin. (Beltran, 1859, p. 230).

*Zil-uoh.*

"Certain lizards 4 to 5 inches long and of an attractive color. They have a head like that of a turtle and a short tail, and are usually found on stone walls, branches of trees and the eaves of houses. These reptiles gnaw through the belly of the mother at birth. They are of a canary-color under the throat." (Pacheco Cruz, 1919, p. 32). "A mottled green lizard." (Pio Perez, 1866-77).

*Zinaan.*

"A scorpion; also the Scorpion, the sign in the heavens." (Motul.) The latter is also known as *Zinan-ek.* There are two large scorpions in Yucatan: *Centuroides margaritatus* and *C. gracilis.* (Tozzer & Allen, 1910, p. 305). *Zinaan* means stretched out or extended. See Medical texts 86 & 139.

*Zinic.* A general name for ants. (Motul.)

The larvæ are a cure for coughs. (Kaua. f. 76v.)

*Ziio, Ziio-kuch, or Ah-Ziio-kuch.* A certain well known vulture. (Motul.)

Lit. greedy vulture.

*Ah-Zob.* "Certain green birds." (Motul.)

*Zoo.* *Myotis californicus, Aud. & Bach.* Little California Bat. (Gaumer, 1917, p. 271). This species is uncertain. *Zoo* appears to be a general name for bat.

*M. Nigricans, Max.* (Ibid. p. 270). *Dasypterus intermedius, H. Allen.* (Ibid. p. 274). See Medical texts 194 & 217).

*Zuluay*. A nocturnal white butterfly. (Pio Perez, 1866-77).

*Dim-cay*. Dogfish. (Pio Perez, 1866-77). The eye is a cure for coughs. (Kaua, 76 v.)

*Ditun*.

"Certain poisonous red spiders which move about on the walls." (Motul.) "They have eight long legs and also a pair of long tentacles. They breed in wet places and are even found in houses. Their sting is dangerous. They have three stings, visible only when they attack. The young are coffee-colored with a small white ball on each side." (Pacheco Cruz, 1919, p. 48).

*Diu, or Diuan*. *Tangavius aeneus involucratus*, Lesson. Red-eyed Cowbird. (Bull. Mus. Comp. Zool. Harvard, 1906, Vol. L, p. 127). Medical text 127.

*Dunuun*. *Amazilia cinnamonea*, Lesson. Cinnamon Hummingbird. (Ibid. p. 128).

## THE CLIMATE AND FOOD SUPPLY OF YUCATAN

The medical prescriptions which have been translated and discussed in this volume have been obtained in the northern portion of the Yucatecan peninsula, comprising the entire State of Yucatan and the adjoining parts of Campeche and Quintana Roo. It is mostly a low level country of limestone formation covered with a thin layer of dry soil. There are practically no streams and the drainage is subterranean, water being obtained from natural sink-holes (*zonot*), wells (*ch'en*) and caves (*actun*). During the rainy season in some localities a certain amount of surface-water collects in natural depressions called *aguadas* in Spanish and *akal-ché* in Maya. Usually, however, the rain-water filters away rapidly through the porous limestone substratum, giving the country a dry appearance and stunting the forest growth, although large trees are occasionally seen.

A report from the Corporation of the City of Merida written in 1579 gives the following account of the climate: "Generally this land is hot and dry, and the waters which give nourishment to the soil are those which fall from the heavens. God provides that they begin each year in May and the most efficacious of them last until the end of August. During these four months they raise their principal products which are maize, chile, beans and cotton. The crops depend on whether the rains are scanty or plentiful and come in or out of season. If water is lacking the soil immediately dries up, as it does not retain moisture. The prevailing wind is from the north-east, we call it the *brisa*, and it is the healthiest which sweeps the land, though the same is true of the east and south-east winds. But when it comes toward the south from east-north east or north, it has an effect on the native people and the Spaniards. The reason is that these are cold winds which come from the sea. Coming unexpectedly and finding the pores open from the ordinary heat, they cause sickness and death. More people die after the northers commence, and these last from September until February. Some years they are so violent that they blow down the Indians' houses and uproot great trees, and if they

happen to blow at the end of July and in August they beat down the maize, bringing great famines in some years."<sup>1</sup>

January and February are pleasant and there are only a few light rains. In January timber is cut for purposes of construction, such as cedar (*kuché*), *Cordia dodecandra* (*kopté*), *C. gera-scanthus* (*bohom*) *Lignum-vitae* (*zoon*), *Ichthyomethia communis* (*habin*), *Apoplanesia paniculata* (*chulul*), *Pithecolobium albicans* (*chucum*), Brasil (*chacté*), *Vitex Gaumeri* (*yaanic*), etc. Certain cucurbits are now planted (*kum* and *x-mehen-kum*) as well as Lima beans (*ib*), wormwood (*zizim*) and the custard-apple tree (*poa*). In February fruit-trees are grafted and chile (*ic*) is transplanted. It is now time to build the granaries on their low platforms. These are thatched with leaves of the guano-palm (*xaan*) which were cut in January and are now dry. In some places bark is used for this purpose. It is also time to cut trees in the new corn-fields.

March is hot and dry, although an occasional norther cools the air and brings on a light rain. The wild flowers have disappeared but many forest trees are now in blossom. Corn (*ixim*), which until now has been only gathered as needed, is cut and carefully stored in the granaries (*chilil*). Chayotes (*kiix-pach-kum*) are planted, beans (*buul*) are picked and clearing continues in the new fields. Toward the end of the month the cut trees and brush are set on fire.

April and May are also hot and dry. The air is filled with smoke from the burning brush. Gardens are prepared in April and in May they plant more chayotes, tomatoes (*ppac*), squashes (*kum*) and certain gourds called *lec*, probably *Lagenaria siceria*, used for making dishes. Henequen, or sisal (*zac-ci*), is planted during the full moon in May.

Early in June the rains begin and wild flowers bloom again. Corn is planted in the burned fields, fertilized by the ashes. They also plant beans and cotton (*taman*) and transplant tobacco (*kutz*). *Yucca* (*cin*) and sweet potatoes (*iz*) are planted between the corn.

July and August are hot wet months. Weeds are cut in the fields in July during the waning moon, and in August new seed-plots are prepared for vegetables and tobacco.

September is cooler but the rains continue, sometimes accompanied by storms. Flowers are abundant. Aguacates (*on*) are planted and tobacco is transplanted. The slender corn-stalks are now bent over to keep the ears dry.

October continues cool and there is still some rain. The thicker corn-stalks are now bent over to keep the water out of the ears.

<sup>1</sup> Rel. de Yuc. I, 45.



Tobacco and another corn crop are planted in soil that is likely to retain moisture.

In November there is less rain. Weather continues cool with an occasional warm day. Corn is now ripe, but is gathered only as needed, as the ears will keep better in the fields than in the granaries at this time.

There is not much rain in December, but the weather is often uncomfortably cool.<sup>1</sup>

Except for their European clothing and the general use of the hammock, a West Indian importation, the domestic life of the Mayas has not changed greatly since the Spanish conquest. People still live in the oblong houses (*na*) with rounded ends which we find described in the reports of the 16th century colonists. "Ordinarily the natives make their houses of wood. They plant thick forked uprights (*ocomil*) in the ground, above which they frame the timber-work of the roof crosswise (*uincil-che*) and lengthwise (*holna-che*) after the manner of a tiled house. They roof it with *guano* (*xaan*), which consists of certain palm-leaves (*Sabal japa*). The sides are enclosed with poles and plastered with mud (*pak-luum*) on the outside . . . Other houses are thatched with straw (probably a grass called *ac*), and these last five or six years without being renewed."<sup>2</sup> Cooking is still done over a three-stone triangular fire-place (*koben*) and food is eaten from the same low table (*wileb-che*) now called *mesa*.

Although certain foods of European origin have been added to the modern Maya's diet, the observations of the first Spanish settlers still hold good on the whole. Breakfast consists of a hot drink of corn-gruel (*za*) or chocolate (*cacau*).<sup>3</sup> "As to the meals which they ate in the time of their antiquity, they eat the same today. This is corn boiled in water and crushed. When made into dough (*zacan*), they dissolve it in water for a drink, and this is what they ordinarily drink and eat. An hour before sunset it was their custom to make certain tortillas (*uah*) of the said dough. On these they supped, dipping them into certain dishes of crushed peppers (*ic*) diluted with a little water and salt. Alternately with this they ate certain boiled beans of this land which are black. They call them *buul* and the Spaniards, *frijoles*. This was the only time they ate during the day, for at other times they only drank the dissolved dough mentioned above."<sup>4</sup> We might add such vegetables as squashes (*ca*), pumpkins (*kuum*), chayotes (*kiix-pach-kuum*), sweet potatoes (*iz*), chaya (*chay*), Lima beans (*ib*), tomatoes

<sup>1</sup> Espinosa, 1928.

<sup>2</sup> Rel. de Yuc. I, 100.

<sup>3</sup> Ibid. I, 118.

<sup>4</sup> Rel. de Yuc. I, 259.

(*ppac*) and jicamas (*chicam*), not to mention such foreign innovations as peas, yams (*x-akil-macal*) and plantains (*box-haz*). Popular fruits are the papaya (*put*), aguacate (*on*), Yucatan plum (*abal*), ciricote (*kopté*), sapote (*ya*), mamey (*chacal-haz*), prickly pear (*pakam*), cherimoya (*pox*), soursop (*mak*), sweetsop (*calmuy*), guava (*pichi*), custard-apple (*op*) and baboon-cap (*uzpib*), as well as such foreign fruits as the orange (*pakal*) and banana (*haz*).

In early times a certain hairless dog (*bil*) and the turkey (*cutz*) formed almost the only domestic source of meat, although the curassow (*kanbul*) and duck (*cutz-haa*) were sometimes domesticated. Pork, beef and chicken are the results of European intercourse, and the Spanish missionaries soon abolished dog-meat as a food. Yucatecan agricultural methods of letting the land go back into jungle after cultivating it a year or two have tended to preserve the game which consists of the deer (*ceh*), brockett (*yuc*), peccary (*citam*), rabbit (*thul*), pisote (*chiic*), agouti (*haleb*) and armadillo (*uech*). The iguana (*huh, toloc*), formerly a popular article of diet, is now little eaten in the north. Important game birds are the wild turkey (*cutz*), wild pigeons (*cucut-ci, mucuy, tzutzuy, zac-pacal, ucum*), quail (*becñ*), tinamou (*nom*), curassow (*kanbul*), guan (*cox*), chachalaca (*bach*) and duck (*cutz-haa*). Near the coast fish naturally are an important food. They are caught with hook and line, seine and fish-traps. Although a number of Maya names of fish are given in the fauna-list, these are largely in disuse today and the fish are mostly known by their local Spanish names.

Closely connected with Maya agriculture was the peculiar system according to which certain days were considered especially suitable for planting certain crops. This was largely based on the belief that the rain gods would favor such days with water for the newly planted seeds. It will be of interest to examine a portion of this *native farmer's almanac* which we find in the *Book of Chilam Balam of K'aua* and which covers two of the uinals, or twenty day months, into which the Maya year was divided. The predictions associated with the days recorded here indicate that they fall during the rainy season; and since a day with the same name and number will recur every two hundred and sixty days, it is obvious that the prediction does not depend entirely on the name and number of the day, but that the year-bearer must be taken into account as well. Some note must also have been taken of intercalary days, although these do not ostensibly figure in the Maya calendar; otherwise hardly a generation would pass before a calculation based on the year-bearer would begin to be out of accord with the seasons.

<sup>1</sup>"This is the record of the bearers of the year, of the uinal, as it is called . . . each division recorded at length. These are Kan, Muluc, Hiix, Cauac, distributed at the four corners of the heavens. (Here are) twenty (days) by themselves, their bearer and their reputation.

- |    |           |  |
|----|-----------|--|
| 9  | Kan.      | Good; not bad. The destiny of the year is not evil.  |
| 10 | Chicchan. | Bad, evil, but not very evil also.   |
| 11 | Cimi.     | Bad. With a rain incantation, <sup>2</sup> there is a good downpour.                                     |
| 12 | Manik.    | Good, not evil. The year is a good one.  |
| 13 | Lamat.    | Good, not evil. It is a day for jicamas, Lima beans, beans, cotton, seed-squashes, yams, sweet potatoes. |
| 1  | Muluc.    | Good, not bad; half heavy rain.  |
| 2  | Oc.       | Bad also; also it is not (bad); it is the beginning day of the Burner.                                   |
| 3  | Chuen.    | Bad; rain will fall; a day when the burden of the priests will fall; vigil is kept.                      |
| 4  | Eb.       | Good, not bad for jicamas, Lima beans, sweet potatoes and everything; heavy rain.                        |
| 5  | Been.     | Good; heavy rain from the northern sky, half . . .   |
| 6  | Hiix.     | Good; heavy rain; the day of the Burner; jicamas, beans, Lima beans, everything.                         |
| 7  | Meen.     | Bad day; it can be made a good one also.   |
| 8  | Cib.      | Good; incantation for a full rain and a year of fullness. <sup>3</sup>                                   |
| 9  | Caban.    | Good; heavy rain, food for planting anything.  |
| 10 | Eonab.    | Good; incantation for rain; it is a good year.   |
| 11 | Cauac.    | Good, not bad for jicamas, sweet potatoes, yams, <sup>4</sup> beans, Lima beans.                         |
| 12 | Ahau.     | Bad; it is not a good day (but) its content may be good also.  |
| 13 | Imix.     | Good; a day for corn for eating; not bad.  |
| 1  | Ik.       | Good; bad also. A day for a hurricane, as for beans also.  |
| 2  | Akbal.    | Bad, not good. A cloudy year; slightly good.   |

<sup>1</sup> Kana, pp. 276-278

<sup>2</sup> *Ti siyan chac*. This probably corresponds to the *cha-chac* ceremony. *Siyán* may be translated as incantation, offering, or time of birth.

<sup>3</sup> *Balam habil*. A stereotyped phrase of the prophecy; literally jaguar year.

<sup>4</sup> The term, *macal*, is now applied to the yam, but formerly it designated a native food-plant with a bulb resembling that of the lily.

*It turns back again—*

- |    |                  |   |
|----|------------------|---|
| 3  | Kan.             | Good, not bad. A day for corn; a day for heavy rain.  |
| 4  | Chicchan.        | Bad. The day of the Burner; a long day.   |
| 5  | Cimi.            | An incantation for rain; heavy rain is its fulfillment. The deer die.   |
| 6  | Manik.           | A good year for planting also.  |
| 7  | Lamat.           | A day of rain; a day for beans, jicamas, sweet potatoes, Lima beans, yams.  |
| 8  | Muluc.           | Good, not bad. Half northern sky (north wind?)  |
| 9  | Oc.              | Bad; the Burner also. The sun (sunshine?) is its charge.  |
| 10 | Chuen.           | Bad; it may rain.   |
| 12 | Eb. <sup>1</sup> | Good; bad also. Wind is its charge . . .  |
| 13 | Ben.             | Good; not bad for planting.   |
| 1  | Hiix.            | Good also is the day also. It is not a bad year, like . . .   |
| 2  | Men.             | Bad; the Burner; drought; deer die; the speaker; it is not suitable for men to become mad <sup>2</sup> . . .              |
| 3  | Cib.             | Good; not bad. It can be made a day of heavy rain.  |
| 4  | Caban.           | Good day for bees, as in the forest it is good for animals.   |
| 5  | Eonab.           | Not bad. An incantation for rain, heavy rain; Lima beans, beans, watermelons, muskmelons, sweet potatoes, plant them all. |
| 6  | Cauac.           | Good. Heavy rain. Plant everything also.  |
| 7  | Ahau.            | Bad, not a good day. North sky (north wind?) is its charge.   |
| 8  | Imix.            | Good; a day of heavy rain for corn, beans, Lima beans and everything else.  |
| 9  | Ik.              | Good also. Wind is its charge; heavy rain.  |
| 10 | Akbal.           | Bad, not good. Thunder and lightning without rain. It may be good also.   |

It seems likely that this farmer's calendar covers the first two uinals, Pop and Uo, of the year 9 Kan, which would fall in July and August. The single mention of such introduced fruits as melons tends to place the year in Spanish colonial times, prior to 1789, the date of the compilation. During this long period the year 9 Kan recurred in 1589, 1641, 1693 and 1745. Both the phraseology and the fact that introduced plants are mentioned only once indicate a fairly early date.

<sup>1</sup> There is a break in the sequence of days. The next day should be 11 Eb.

<sup>2</sup> Probably referring to certain religious feasts described by Landa and others where there was much drinking and mad behaviour.

If we compare this fragment with the more complete annual calendars in the Books of Chilam Balam of Tizimin, Kaua and Tekax, we shall see that this is the only one in which the uinals begin with one of the proper days, which are Kan, Muluc, Ix and Cauac. In the other calendars the uinals commence with Imix and Cimi, which is an impossible combination according to the Maya chronological system; consequently they must have been compiled at a comparatively late date.

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