

## CHAPTER V.

### SYMBOLS, PICTOGRAPHS, AND OTHER FIGURES WHICH CANNOT BE PROPERLY CLASSED AS WRITTEN CHARACTERS.

Before attempting to explain any of the written characters I will notice some other figures which are true pictures, but were not specially alluded to when speaking of the figures in the spaces; others which may be classed as pictographs, and some which appear to be true symbols.

*Foot-prints.*—These appear to have two or three different significations in the various manuscripts.

First. A journey made, denoting not the road, but the fact that some one has passed on in a given direction, that a journey has been partly or completely accomplished. This use is common in some of the Mexican Codices.

Second. That so many periods of time have elapsed. This appears to be their signification on Plates 34 to 38 of the Borgian Codex and Plates 25 to 28 of the Dresden Codex.

Third. To denote movements to be made during certain religious festivals. This appears to be one object of their use in the Manuscript Troano, as, for example, on Plates III and VI. Another is to indicate journeyings.

The machete or hatchet (*bat* in Maya) is represented in the Manuscript in two forms (Fig. 18, *a* and *b*). As it is not likely the artist intended to be strictly accurate in minor details, his only desire being to represent the implement with sufficient exactness to insure its recognition, we may not be warranted in assuming that these two forms indicate a difference in the hatchets. The one marked *a* may be the conventional figure, and *b* an

attempt at true pictorial representation; yet I suggest as possible that the latter, which was used in carving the wooden images, may represent the copper ax and the other the stone ax. Landa (Relacion §XXIX) says:

"They had little hatchets of a particular metal of this form [Fig. 18c]. These they adjusted to a handle of wood; in combat these served them as an arm; they were also *instruments used in working wood*."



FIG. 18.

The *spear* or *dart*, and one method of throwing it, is shown in Fig. 13 (page 96), heretofore referred to. I judge from this that a kind of hook or hand ballista was used to give it more force. Something similar is shown frequently in the Mexican Codices and, according to Valentini, on the Berlin stone. The instrument in the other hand may be a stick with a notch in it to guide the dart; the only reason for doubting this is the bent form given the one figured on the next plate.

The usual form of the spear as given in the Manuscript is shown in Fig. 19a. This often has the head marked with the trembling cross similar to that in Ezanab, probably denoting that it was made of flint.

The arrow, if such it be (as no bow is found in the Manuscript), is generally figured with the head in this form (Fig. 19b), indicating, if truly represented, that a flint was thrust into the split end of the shaft in the usual way; the other end of the shaft was surrounded by two feather whirls. Possibly these are darts thrown by hand and not arrows.

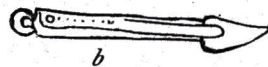


FIG. 19.

I have been somewhat surprised to find nothing in this work indicating warfare, unless it be the figures which I have heretofore interpreted as probably representing a play. Herrera, speaking of the expedition of Cordova (Dec. 2, Bk. 1, chap. 3), says that, while at Cotoche, "there appeared a multitude [of Indians] in armor made of quilted cotton, with targets, wooden swords having edges of flints, large cutlasses, spears, and slings



\* \* \* \* pouring in at the same time such a shower of stones and arrows that they wounded fifteen Spaniards."

Bernal Diaz, from whom Herrera evidently quotes, says: "These warriors were armed with thick coats of cotton, and carried besides their bows and arrows, lances, shields, and slings."<sup>1</sup>

Landa (Relacion §XXIX) says their offensive weapons were bows and arrows, which they bore in a quiver, the latter made of reeds and having the points armed with obsidian or fish-teeth, and very sharp. "They had little hatchets of a particular metal," heretofore referred to, "which, in combat, served them as an arm." "They also had lances a tois [fathom] in length, armed at the end with a silex head, very hard. And they had no other arms."

Figures in red, like that shown in Fig. 20 (the little squares only are alluded to), are found in a number of places in the Manuscript.

Brasseur interprets them as symbols for *cab*, "honey" or "honey-comb." The connection in which they are found I think proves that he is correct. We find elsewhere, as in the character for Cauac, and on articles made of wood, a similar figure, usually smaller, outlined in black, but never colored. Attention will be called to this hereafter.



FIG. 20.

A figure like that shown in Fig. 21 is also found on several plates



FIG. 21.



FIG. 22.



FIG. 23.



FIG. 24.

of the Manuscript, but never in the Codex. Sometimes it is in the hands of a priest, but in a few instances it seems to be used as a character or symbol. Brasseur's interpretation is *nen* or "mirror"; but this I think is a mistake. It is more probable that it is a figure of the *calendar wheel* mentioned by Landa.

*Mortars* used for preparing paints are represented in two forms (see Figs. 22 and 23): their *paint-pots* as in Fig. 24.

On Plate XXXIV we observe the priests in the act of painting blue that which is here shown (Fig. 25), which is probably a little adoratorio

<sup>1</sup> Hist.—Keating's Transl. p. 4.

baldachin or place in which their idols were seated in their temples. Something similar is also found elsewhere in the same work.

Houses, cabins, and other buildings, even temples in which their idols were placed, appear usually to be represented in the Manuscript by such figures as shown in cuts 26, 27, 28, and 29.

These, as will be seen by comparison, are really but slight variations from the Mexican conventional symbol for a house (*calli*).

The side wall in Fig. 29 appears to be composed of blocks of some kind placed one upon another, probably of stone, each bearing the *Muluc* character. *Mol*, the root from which most of the words commencing with *mol* and *mul* are derived, signifies "a

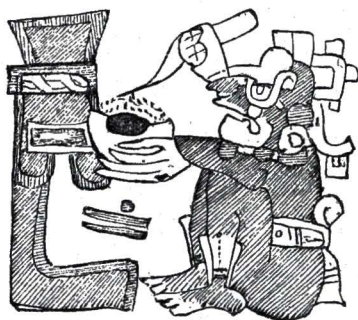


FIG. 25.



FIG. 26.

group of things united or congregated one upon another," but without reference to the material of which they are composed. It is true that in this house we see the figure of a bee, and might therefore suppose it represents the place where the hives were kept, but the officiating priest in front leads



FIG. 27.

us to believe it denotes a temple of some kind in which the ceremonies of the apiarists' festival were performed. The character at the top of the wall with a cross in it, somewhat resembling that in the symbol for *Ezanab*, is very common in these figures. This probably marks the end of the beam which was placed on the wall to support the roof. I so conclude because I find that it is wanting in the

lighter and temporary dwellings, represented in Fig. 28. The interpretation of the character as here used is doubtful. The curved line running from this to the top portion probably represents the rafter; the slender



thread-like lines (yellow in the original) the straw or grass with which the roof was thatched.

The checkered part may represent a matting of reeds or brushwood, on which the straw was placed.

The following extract from Landa will give an idea of the form and structure of the ordinary dwellings of the people as seen by him:

"HABITATIONS OF THE MAYAS.

"The manner of building the houses in Yucatan was to cover them with straw, which they had in abundance and of good quality, or with leaves of the palm trees, well suited to this purpose. They raised the roof, giving it a considerable pitch, in such a manner that the rain could not penetrate it. A wall was then erected in



FIG. 28.

the center, dividing the house lengthwise, leaving in this wall some doors for communicating with the part which was called the back of the house, where they had their

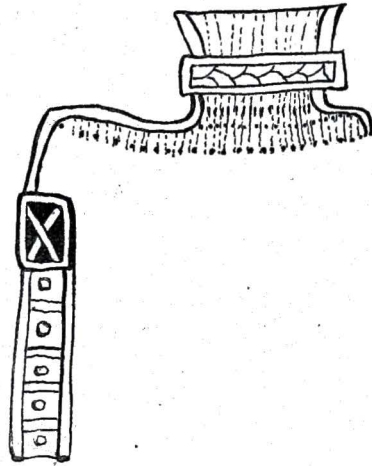


FIG. 29.

beds; the other part was carefully whitewashed with lime. In the houses of the nobles these walls were covered with pleasant pictures. It was in this part that they received and lodged their guests.

"This side had no doors, but was open the whole length of the house, the roof descending very low, in order that it might be a shelter from the sun and rain. It is also said that this was to render himself master of the enemy inside<sup>1</sup> in time of necessity.

"The common people built at their expense the houses of the nobles, and as they had no doors it was regarded as a grave fault to make the least error in the houses of others.

"They had formerly at the back a small door for the use of the common people.

<sup>1</sup>The passage is very difficult and the rendering doubtful.

"For sleeping-places they had bedsteads made in a trellis of canes, covered with mats, and on these they stretched themselves covered with their clothes of cotton. During the summer they usually slept on the front extended on their mats, principally the men."<sup>1</sup>

What is shown in Fig. 26 possibly represents a small wooden adoratorio, niche, or canopied seat, in which we see an idol. I judge the side wall to be wooden by its form and by the characters on it. That these characters are used to signify wood, and possibly a particular species, I think is evident from the following facts: Running through the Manuscript we first observe them in this figure on what we may justly assume to be an upright wooden beam. We see the crosses or  $\times\times$  on what are evidently the ends of beams in the upper division of Plate IX; and in another figure (Plate XXII\*), intended to represent the same thing, we see on the ends of the beams both the squares and crosses. They are also on a tree in the right of the upper division of Plate XV\*.

In the last-mentioned figure we notice that the tree is severed by a machete or hatchet in the hands of a priest representing the god of death. In the upper divisions of Plates XIII and XIV the same character is on the benches upon which the personages are seated. The blocks, boxes, hives, or whatever they may be, in the first division of Plate IX\*, and the blocks in the hands of the individuals figured in the middle division of Plate XXII\* are marked with the same character.

The widely different forms and the diversity of uses to which the things bearing this character are applied make it evident that if the character refers at all to the thing on which it is placed, it must be to the substance. As it is found, in some cases, on figures that we know must represent trees, the necessary conclusion is that it denotes wood. Whether it is meant as a general term, or applies to a particular species, is a question I am unable to answer with certainty.

I will call attention to the character itself and its probable interpretation a little further on.

The houses shown in Plate XVI\* (see Fig. 28) are probably the temporary cabins mentioned by Landa in which the artists manufactured their

<sup>1</sup>Landa's *Relacion*, pp. 110 and 111; see Appendix No. 4, where the original is given.



wooden idols. We observe that the character with the cross is wanting, and hence presume that the walls were too slender to bear the weight of a beam. They were probably built of slender poles or of canes, as was common in Guatemala, and covered perhaps with palm-leaves.

Instead of the figures at the top always being marked in the peculiar manner which I have supposed to indicate matting, it is sometimes marked with bent lines, similar to those on the figures representing cords or ropes.

On some of the plates, as, for example, XIII\* and XIV\*, the figure of a bent tree appears to be used to denote a dwelling of some kind, possibly only a temporary booth. It is true figures of this kind are given in a number of other places for a very different purpose, as on Plates VIII to XIII, where they are used to represent the method of capturing deer; but a little examination will show a marked difference between the two kinds.

If I am correct in reference to the houses, then it is probable the Manuscript relates to a section of country where the dwellings and the temples were of a primitive character.

But few houses or dwellings are represented in the Dresden Codex. In the lower division of Plate 8 there are figures of two, one of which is copied in our Fig. 30. These may represent temples placed on pyramids or elevated platforms ascending by steps, as indicated in the figure.

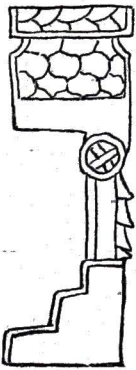


FIG. 30.

The different forms of their vases are given in our Plates I-IV (Ms. XX-XXIII).

The leg of a deer, to which allusion has already been made, is shown by the yellow figure with a double, white



FIG. 31.

band and black tips in the upper left-hand corner of the lower division of Plate I (Ms. XX).

The machine or apparatus used for, and the method of making, ropes or cords, is represented on Plate XI\* and in our Figs. 31 and 32. The first (Fig. 31) shows the method of preparing the material. Strips of the substance used, probably the inner bark of some tree, or aloe fiber, is placed on a bench of the form shown, which has pieces extending upward from

the sides, so as to retain the strips in position. A kind of hand hackle is then used, as shown in Fig. 31, to slit them to the proper fineness. After some process not given, we next find the material rolled into a ball. The



FIG. 32.

next process, that of twisting into the rope or cord, is represented in Fig. 32. A few feet having been twisted by hand, the end is fastened to a little tree or stump, the ball of ma-



FIG. 33.

terial is placed in a vessel or on a stool, while by means of a spatula-shaped instrument, doubtless of wood, the twisting is carried on. It is probable the implement is used simply to turn the ball, while the person at work gradually moves backward.

The idols, while in the process of manufacture, are usually represented by the heads only; those not yet painted or ornamented, without any other lines than those necessary to show the parts or organs, as in Fig. 33, which shows also the method of carving (see Plate XV\*); those which are painted or ornamented (Fig. 34).

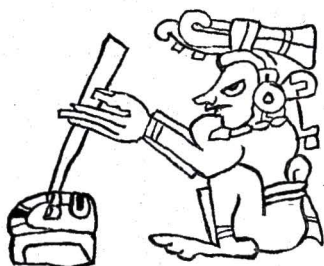


FIG. 34.

One of the implements used by them in carving their wooden images, I judge from its form, as shown in Fig. 35, was metallic.

Cloth is usually indicated by cross-hatching, as shown in the dresses of the females on Plates XVIII\*, XIX\*, and XX\*; rain and falling water by slender, usually waved blue lines, as on Plates XXIV-XXVII. In the third division of Plate XX\* the lines are blue, but not waved. Blood is shown by slender, waved red lines, as in the upper division of Plates XXII and XVIII\*.

A utensil or implement is represented on Plates XXI\* and XXII\* by a figure similar to our Fig. 36, the lower end always black, as shown in the figure. It was held by the middle or circular portion, the fingers of the



hand being thrust through the hole. I am unable even to surmise its use. In four instances it stands behind a priest, who is in a squatting posture and appears to be holding bread or maize in his hand and performing some religious ceremony. In two instances it is in the hand



FIG. 35.

of a priest clothed in black, and in a similar posture, who holds it in front of him. In all cases it extends as high as the top of the head, and the curved ends turn from the person.

A very singular implement (Fig. 37) is figured in the third division of Plate XXIII\*.



FIG. 36.

It appears from the figures in the plate to have been held, while in use, in the right hand, which grasped the hoop at *a*. Its use can only be guessed by the connection in which it is found. In each case it is held up beside a tree, which appears to have been severed at the point immediately opposite, the top not yet fallen down. On the severed end of one we see the supposed death symbol. From these facts I infer that it was used as a kind of saw, though it is possible it was employed in peeling the bark from the trees used in the manufacture of their wooden idols. If used as a saw, which I think most likely, the teeth were probably flint chips, fastened to the hoop by strings or thongs. A fact worthy of notice is that the figure immediately following (or preceding) these in the third division of Plate XXIV\* shows the use of the machete in felling trees, but here the evident intention is to represent a much larger tree, as shown by the diameter and three branches, a tree also of a different species.



FIG. 37.

An implement of the form shown in Fig. 38 is represented in the middle division of Plate XXXI\*. As this appears from the figure in the plate to be used by the individual in whose hands it is

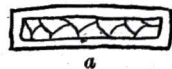


FIG. 38.

held to sever the cord which he also grasps, I presume it is a cutting instrument, probably of flint.

The personage represented by the right-hand figure in this division is the god of death, and the death

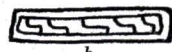


FIG. 39.

symbol is in the same compartment; therefore it is presumable that the

whole is intended as a symbolic representation of death cutting the thread of human life.

On Plate XIX\*, and elsewhere, the figures on which the individuals are seated are marked as shown in our Fig. 39<sup>a</sup>. According to Brasseur's interpretation these signify "mats." In this I think he is undoubtedly correct. He asserts that Fig. 39<sup>b</sup> also denotes a mat, but this I think doubtful, as I find it on cords, or ropes, and on the roofs of houses; possibly in the latter case it may represent a kind of matting.



FIG. 40.

Prisoners are usually represented here, as in the Mexican Codices, with their long hair in the grasp of their captors or executioners.

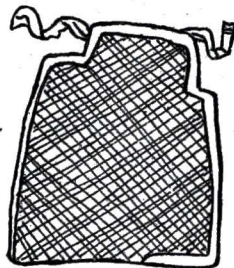


FIG. 41.



FIG. 42.

Fig. 42, found on Plate XXXII\*, and elsewhere, I think represents a block of wood to be used in the manufacture of an idol or some temple implement.

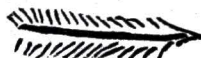


FIG. 43.

Fig. 43, found frequently in the Manuscript, is doubtless the leaf of the mimosa or some similar plant. Fig. 44—see Plate XXIX\*—may possibly represent a kind of tapestry or curtain hung over the doors or openings of the interior rooms of the temples. The interlacing and the square notches at the bottom show that it is some kind of cloth.

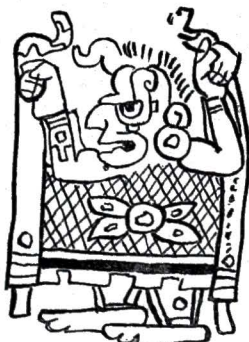


FIG. 44.



FIG. 45.

Fig. 45, found so frequently on the heads of individuals, I think, as heretofore intimated, is a time symbol



FIG. 46.



signifying the "tying of the years," and hence a period, as a luster, or Katun, or possibly the joining of two years.

The conic figure (Fig. 46), always found in the mouth of an individual, I take to be a cigar (*chamal*). On Plate XXVI\* it is represented with the larger end black at the tip, and red behind this for a short distance, which, together with the dotted lines representing smoke, show that it is on fire.<sup>1</sup>

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<sup>1</sup>The figure is not exactly correct, as it shows a narrow ring at the end of the cigar, white, with a broader black ring behind it. The white ring should be *black* and the black ring simply shaded to represent the red portion.

## CHAPTER VI.

### THE WRITTEN CHARACTERS OF THE MANUSCRIPT.

It is not my intention at present to enter into a general discussion of the ancient Maya writings, as this will be found in the introduction by Dr. Brinton. On the contrary, I shall confine myself as strictly as possible to an examination of the characters found in this, occasional reference to the Dresden Codex and the inscriptions on the ruins being made only for comparison and illustration.

The interpretation of these written characters is, as a matter of course, the chief, though not the only object of our research and examination. Although my progress in this direction has been limited, yet I trust the result will show that I have made some positive advance.

In discussing these characters there are some preliminary questions to be considered, which, if satisfactorily answered, may aid us in the attempt to decipher them:

First. The direction in which they are to be read.

Second. The order in which the parts of the compound characters are to be taken.

Third. Whether they are, in any sense, phonetic.

#### THE DIRECTION IN WHICH THEY ARE TO BE READ.

Brasseur de Bourbourg, influenced by the direction in which the figures appear to be moving and in which the faces are turned, which, in nearly all cases, is toward the left, concludes that the writing must be read by lines from right to left, and by columns from the bottom upward. His attempt at deciphering was made upon this theory, which I believe he subsequently confessed to be an error, although still retaining his theory in reference to a great geological cataclysm.

Mr. Bolloert<sup>1</sup> followed the same method, reading from the bottom upwards and from right to left.

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<sup>1</sup>Exam. of Cent. Am. Hier., p. 306.



Dr. Brinton<sup>1</sup> suggested reading by columns, first down, then up, commencing with the right-hand column.

Rosny believes the characters should be read from left to right.

Wilson believed the inscriptions were to be read in columns from top to bottom, and the manuscripts from left to right.

Mr. Holden appears to have arrived at the conclusion, by his method of examination, that the inscriptions are to be read from left to right.

It is probable that no conclusion on this point will be entirely satisfactory until the characters are interpreted; still I think we can find means of determining it with reasonable, if not absolute, certainty without waiting for them to be deciphered.

The large character at the upper left-hand corner of the Palenque tablet we may safely assume is there used much in the same way as we use capital letters, and hence that the inscription is to be read either in columns, from the top downwards, or in lines, from left to right.

But we find more direct evidence on the point in the Manuscript itself. I have shown, as I think conclusively, that the day columns, at least, are to be read from the top downwards. The natural inference, therefore, would be that the other characters are to be read in the same way. But there are good reasons for believing that, although the usual method of writing was in columns, horizontal lines were by no means uncommon. Turning to Plate XIV (our Fig. 16) we find, in the middle and lower divisions, a series of columns composed of the same characters, except the ones at the top and at the bottom. Three of these columns may be represented by letters, thus:

<i>m.</i>	<i>p.</i>	<i>n.</i>
b	b	b
c	c	c
d	d	d
7	12	9
f	h	g

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<sup>1</sup> Ancient Phonet. Alphabet of Yucatan, p. 6.

It is hardly possible that this should be read in lines, as in this case entire lines would consist of a single character repeated. If we suppose these groups to be ritualistic formulas, as they probably are, and to be read in columns, the change in the first and last characters would be consistent with this idea.

Turning to the lower division of Plate XV, shown in Fig. 47, we find



FIG. 47.

the characters arranged as here represented. Here are two short columns on the right and two on the left (day column not counted), evidently shortened to allow space for the figures of deer which are inserted there.

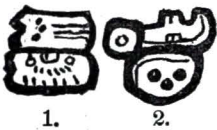
Using letters to illustrate, repeating those that represent similar characters, and placing as in the plate, we have this arrangement. In order to

<i>b</i>	<i>a</i>	<i>h</i>	<i>l</i>	<i>m</i>	<i>w</i>	<i>a</i>
<i>r</i>	<i>n</i>	<i>a</i>	<i>a</i>	<i>a</i>	<i>r</i>	<i>s</i>
		<i>r</i>	<i>r</i>	<i>r</i>		
		<i>p</i>	<i>h</i>	<i>i</i>		

make my meaning clear I have used real words: First, *barn*; second, *harp*;



third, *lark*; fourth, *mart*; fifth, *wars*; *a* corresponding with the character 1, and *r* with the character 2.



In the middle and lower divisions of Plate XIX we have also examples of this method of changing columns into lines. As I will have occasion to refer to this plate for

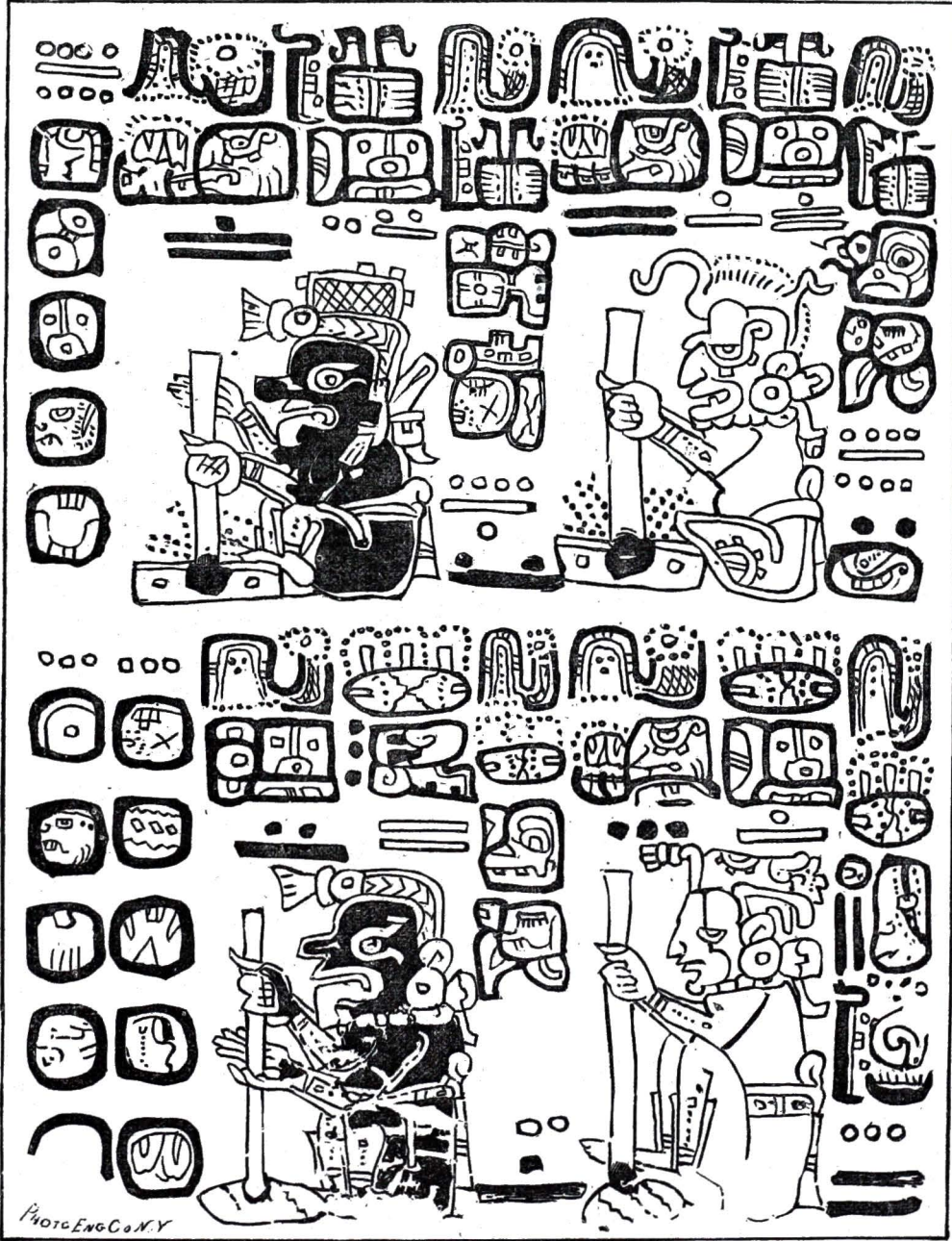


FIG. 48.

other purposes the two divisions are copied entire in Fig. 48. In each division (not counting the day columns) there are four groups, each of four compound characters, the first and second being alike. If we represent them by letters, and arrange the letters in the same order as the characters,

<i>h</i>	<i>a</i>	<i>h</i>	<i>h</i>	<i>a</i>	<i>h</i>
<i>r</i>	<i>k</i>	<i>a</i>	<i>r</i>	<i>k</i>	<i>a</i>
		<i>n</i>			<i>l</i>
		<i>d</i>			<i>t</i>

they would stand thus in the middle division (the upper one in our figure). We see by this that the first and third columns being shortened are changed into two lines, just as the first and last in Fig. 47, so that what followed downwards in the column follow from left to right in the lines. Plates VI\*, XI\*, XV\*, and some others furnish similar examples.

Although we cannot claim that this furnishes *absolute* proof of the direction in which these lines and columns are to be read, yet it will probably satisfy any reasonable mind that the columns are to be read from the top downwards, following each other from left to right, and that the lines are to be read from left to right, following each other from the top downwards; also that the usual method is in columns.

#### THE ORDER IN WHICH THE PARTS OF COMPOUND CHARACTERS ARE TO BE TAKEN.

This and the other question, "Are these characters in any sense phonetic?" are so intimately connected that I will not attempt to discuss them separately.

The day and numeral characters have already been given, and so often referred to that by this time the reader must be familiar with them. The characters for the months, as found in Landa's work, have also been given, and it only remains for us, therefore, to present Landa's hieroglyphics of the Maya letters (Fig. 49) in order that the reader may have before him the entire key with which we have to work in our attempt to decipher the Maya manuscripts.

A comparison of the three groups of characters (days, months, and



letters), using the significations given by Landa, will suffice to convince any one that it is impossible to form the day from the letter characters, even allowing the widest latitude in the representation of sounds.

Take, for example, the character for *Muluc*, as compared with those for *m* and *l*; *Ahau*, as compared with those for *a*, *h*, and *u*; *Kan*, as compared with *k* and *n*; *Chicchan*, as compared with *c*, *h*, and *n*; *Ezanab*, as compared with *e*, *z*, *n*, and *b*, &c.

But it does not necessarily follow from this that Landa was wholly mistaken. The days may have retained their characters as symbols from more ancient times, before any approach to phonetic elements

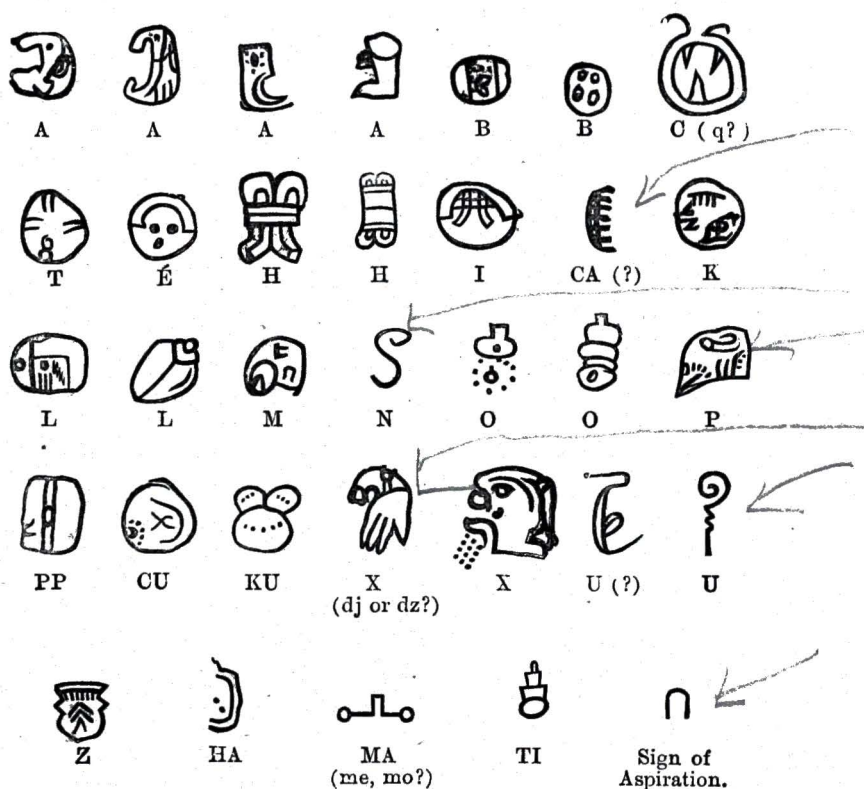


FIG. 49.—Landa's Maya Alphabet.

had been made, and hence might not present any of these elements.

As we find some of these day symbols on the Palenque Tablet, which is probably much older than the Manuscript, we have some foundation for this supposition. Another ground for this supposition is that we have good reason for believing that some at least of these characters are used in the Manuscript and Codex as denoting something quite different from the days they represent, or that which the name of the day signifies.

Notwithstanding this, there are some of the day and month characters in which we can detect, beyond doubt, some of the letter elements, showing them to be to a certain degree at least phonetic. For example, the character for *Cauac* differs but slightly from that for *cu* (qu?); *Chuen* and *Tzec*

contain the main elements of *c*; *Cimi* (Kimi) those of *k*; in *Pop* or *Poop* (Poob) we see the character for *b*; in *Zac*, both *z* and *cu*; in *Cumhu*, *cu* and some elements of *m*; in *Kayeb*, *k*; &c.

Comparing the days and months with each other, we can occasionally detect similar elements where there are similar sounds. In both *Chicchan* and *Pax* we see the interlacing, or cross-hatching, and in both the sound *ch*; in *Manik* and *Men* the three parallel strokes, possibly *m* or *n*; we also observe similar strokes in *Ymix*.

After we have carried this comparison to its utmost extent the number of cases where we find such resemblances in form where there is a similarity in sound are so few, compared with those in which we do not, that we are forced to abandon, at least to a great extent, the attempt to decipher the writings of the Manuscript by the use of these letter characters upon the theory that they are phonetic. I say "to a great extent," because, as we have seen, there is some evidence that phonetic elements were introduced to a limited degree.

I may be permitted to remark in this connection that in all the attempts to decipher these documents which have thus far been made, one very essential part of Landa's statement has been too lightly passed over, and not sufficiently considered. Speaking of the Maya writing, he says: "The people made use of certain *characters* or letters with which they wrote down in their books their ancient affairs and their sciences, and by means of these and by *certain figures*, and by *particular signs in these figures*, they understood their affairs, made others understand them, and taught them."<sup>1</sup>

It is evident, as I think, from this language that Landa does not wish to convey the idea that the native writing had reached such a degree of perfection that by means of phonetic characters alone—or, in other words, writing in the true sense—they could record historical facts and communicate with each other. And his attempt to give the characters for their letter sounds is, to a certain extent, a contradiction of his own statement. He has undertaken to pick out of their compound or syllabic characters the letter

<sup>1</sup> "Usavan tambien esta gente de ciertos carateres o letras con las quales escrivian en sus libros sus cosas antiguas, y sus sciencias, y con ellas, y figuras, y algunas señales en las figuras entendian sus cosas, y las davan a entender y enseñavan. Landa, *Relacion de Cosas*, p. 316.



elements; hence it is, that while we find it impossible to decipher the manuscripts by using them, yet we find such frequent resemblances as to compel us to admit a fundamental relationship. This theory I think is borne out by his attempt at explaining their method of spelling, which does not correspond with anything to be found either in the Troano Manuscript or the Dresden Codex, nor with his previous statement, which I have quoted. Moreover, his own language, taken in connection with his alphabet, implies that the natives with whom he was consulting found it impossible to recombine the elements he had picked out so as to form words.

This I believe to be the true explanation of his letter characters and the only one that will enable us to understand why it is impossible to read the manuscripts by means of them, and yet finding them so often agreeing with the characters we meet with in these works.

The day-characters we know he found in their books, as we see abundant evidence of this in those yet in existence.

Although the month-characters appear to be wanting in the Troano Manuscript they are to be found repeatedly in the Dresden Codex, not always in the form given by Landa, yet substantially the same, and accompanied by numerals or other particulars by which we can readily determine them. We have, then, as our only positive guide to start with, in our attempts at deciphering the written characters of the Maya manuscripts, the day and month symbols, and with no assurance that these are phonetic.

If there are any phonetic elements in this writing they must be discovered with but little reliance on Landa's letter characters.

As it is extremely doubtful whether the day and month characters in all cases correspond with the modern names applied to them, we must bring every other possible test to bear in determining the meaning and corresponding word. We have also to proceed upon the assumption that the language of the Manuscript is the same as that found in the Maya lexicons which have been given to the world, when it is possible that it is in a dialect of the Maya varying from that in the lexicons.

As the safest basis on which to found my arguments, I select a few characters, the meaning of which, I think, can be ascertained with satisfactory certainty without having to decide whether they are phonetic or not.

This character (Fig. 50) has already been referred to as occurring on Plates XX-XXIII of the Manuscript and 25-28 of the Codex, and as being used to denote the "stone heap" on which the Uayeb idols were placed. The reasons given for this belief I think warrant me in assuming it to be correct. Referring to the Lexicon we find that *piz* signifies "a stone serving to form the divisions in a cycle"; *ppic*, "stones placed one upon another, serving to count the intervals in a cycle"; *ppiz*, "a stone on a fishing line," and *tun*, stone in a general sense. As the connection in which it is found relates to the end and commencement of periods of time, I take for granted that if it represents a word it is either the first (*piz*) or second (*ppic*).



FIG. 50.

This combination (Fig. 51) found on the back of the spotted dog in Plate XXI, appears from Landa's statement, as already shown, to represent "bread of maize." The usual form of the combination, FIG. 51. which is found very often, is given in Fig. 52, but the order in which the characters are placed is frequently the reverse of that given in the figure.



FIG. 52.

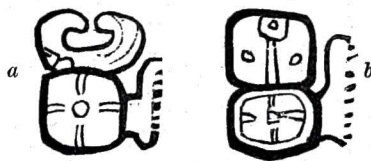


FIG. 53.

I think I have presented good reasons for believing that the characters shown in Fig. 53 are used to denote "east" and "west." The one marked *a* I have concluded denotes East—in Maya *likin* or *lakin*; the one marked *b*, West—*chikin*. Whether this conclusion be correct or not, I think there can be no doubt that one denotes one of these cardinal points, and the other the other cardinal point. This being admitted,



FIG. 55.

we are not left in doubt as to the signification of the lower part of these compound characters, as it must be the hieroglyph for *kin*, "sun" or "day."



FIG. 54.

The characters for the other cardinal points—north and south—are given in Fig. 54. As there is yet some doubt as to their assignment I pass them for the present, allowing the conclusion heretofore reached in reference to them to stand.

The character shown in Fig. 55, when placed on a figure, denotes,



sometimes at least, *che*, "wood" in a general sense, or some particular kind of wood.

As the character shown in Fig. 56 is placed on spear-heads, evidently for the purpose of indicating the substance of which they are composed, or the character of the substance, it must signify "silex," or hardness, as contrasted with the wood or material of which the shaft was composed. Whether *Ezanab* was the Maya word denoted, is not certain.



FIG. 56.



FIG. 57.

Fig. 57 is found but once in the Manuscript—in the upper division of Plate IX. As it is above the figure of an armadillo, I presume it is the symbol used to denote that animal, and hence that it is not phonetic.

Fig. 58 is on the neck of most of the vases figured in the work.



FIG. 58.

Although very common in the written portion as a prefix or suffix to other characters—as shown in Fig. 59, where it is probably used as a pronoun or article—when found on these vessels I take for granted that it is the hieroglyph for *u*, the Maya word for "vase," as also for "month" and certain pronouns.



FIG. 59.

Using these, together with the day and month characters as a key, I will proceed to discuss the nature of the written characters, in order to decide, if possible, whether they are phonetic, and, if so, to what extent. That some of them are but symbols, as, for example, that shown in Fig. 57, cannot be doubted. It is also quite probable, as will appear in the course of our discussion, that a few are simple pictographs.

As the one shown in Fig. 50 is, in one form or another, of frequent occurrence in both works, let us compare these on the supposition that they are in some degree phonetic, and see what the result will be.



FIG. 60.

Comparing with Landa's character for the month


Pax (Fig. 60), we observe here the two broad perpen-

dicular bars, but in addition thereto three little rings,



FIG. 61.

or ovals, at the bottom, and a cross-hatched appendage at the left. The bars, it is true, are not solid here, but, as will be presently seen, this difference does not appear to indicate a difference in the signification.

On Plate 70 of the Codex the character shown in Fig. 61 occurs, accompanied, as here indicated, by the numeral character for "thirteen" in black. There is little, if any, room to doubt that this is here used to denote the month Pax. As it bears no resemblance to any of the day characters, the accompanying numerals would certainly lead us to believe it denoted one of the months, and, if so, the one named. Another reason for this belief is that on the same plate—in fact, in the next line—are the characters for Cumhu and Yaxkin, each accompanied by numerals. But in this case, that for the former (Cumhu) is given thus: , and that for Yaxkin thus:


, omitting the appendage added by Landa. Turning to Plate 69 of the same work, we observe what appears to be the same character in the form shown in Fig. 62. Another similar figure on the same plate has the



FIG. 62.

little upper circle cross-hatched, but this is unaccompanied by numerals, though there is another by the side of it as in Fig. 63. In the same column we can detect without doubt



FIG. 63.

the characters for the months Yaxkin, Poop, and Mac.

On Plates VII\*, IX\*, and XIX\* of the Manuscript, what appears to be the same symbol occurs in the form shown in Fig. 64, with the numeral character for five annexed in two cases (Plates VII\* and IX\*).



FIG. 64.

In one instance four bars are distinctly shown, but in the one on Plate IX\* the bar to the right is solid; the one on Plate VII\* is as represented in Fig. 64, proving, as I think, that this difference has no material significance. Can this be used here as the symbol of the month? If so, it is the only month symbol I have been able to detect in the Manuscript. The inference is therefore strongly against this assumption. The first two (Plates VII\* and IX\*) occur in that part of the Manuscript which, according to my interpretation, relates to the festival of the Bee-keepers, and in the middle division, along the lower margin of which we see what are evidently intended to denote offerings. Among them in one place immediately below the character there are two groups, one of three and the other of two red Kans in vases; in another place the leg of a deer. We also find the figure of a deer's leg in immediate connection with our character on Plate VII\*. The Maya name for a tortilla



of maize is *pecuah* (according to Perez), or *ppecuah* (according to Brasseur). May we not, therefore, with strong probability of being correct, interpret this character as above given—"five tortillas of maize"—supposing it to refer to an offering? If so, then we have three characters, denoting the three words *ppec* or *pec*, *Pax*, and *pecuah* or *ppecuah*, in which the double bars occur, which doubtless represent the labial element *p*, or *pp*, if they are phonetic. It is worthy of notice, in this connection, that *pacach*, according to Perez, also signifies "a tortilla of maize," and *pakach*, "to make tortillas of maize." It is probable, therefore, that *pecuah*, when spoken, terminated with the sound of *ch*.

Turning to Plate XXXI, first and second divisions, where the method of planting maize is indicated, we find this character (Fig. 65) forming a



FIG. 65. or "head-covering."

part of the head-dress worn. As I have already suggested,



FIG. 66.

this is probably the hieroglyph for the Maya *ppoc*, "hat"

Assuming that I am correct in these interpretations, we have then the characters for four words—*ppec* or *pec*, *Pax*, *pecuah* or *ppecuah*, and *ppoc*—in which the two perpendicular bars occur, which, in all probability, represent the labial element *p* or *pp*, if they are phonetic. The typical form of the whole character probably represents the syllable *p'c* or *p'ch*.

Fig. 66 represents the interlaced or cross-hatched character.

The character for Chicchan, as given by Landa, is represented in Fig. 67. In the Manuscript it is most frequently of the form shown in Fig. 68.



FIG. 67.

These, as will be seen, consist of two parts, the checkered portion and the loops or blocks, and the word of



FIG. 68.

two principal phonetic elements, *ch* and *n*.

Referring again to the symbol for *Pax* (or *Pash*, as the Maya *x* has the sound of *sh*, or *ch*, in machine), we see that the checkered portion is at the *left*, while in that for Chicchan it is at the *right*. As *ch* is the only phonetic element common to both words, and the cross-hatching the only portion common to both figures, we may assume as probable that this character represents the hissing, or *ch*, sound of the two words. Turning now to the Maya lexicon, we find that *chichan* signifies "little," "slender," "thin," &c.; *tzi*, which has a slightly harder hissing sound, signifies "anything that is

very little, slender, thin, or slim"; *tzil*, "divided, separated, torn, rent," &c.; *tzulche*, "trellis, lattice-work, barred," &c.; *tzic*, "to part, cut, divide," &c.; *tzack*, "to cut fine, to hash," &c.; *dzil*, "to work mosaic, to weave, plait," &c.; all of which are words that have the hissing sound as their chief phonetic element.

On Plates II, III, VI, and elsewhere we see the figure of the red-mouthed god, which we can scarcely doubt is *Chicchac-chob*. On the head-dress in the three plates designated is this same interlaced figure.

On Plate XXV, lower division, is the figure of a serpent with rattles, to which allusion has heretofore been made, which is marked with checkered or cross-hatched spots; *tzabcan*, in Maya, signifies "a serpent with rattles"; see also the serpent in the lower division of Plate V. We also see that the apron, and appendage hanging between the limbs, is marked in the same way, possibly denoting, as heretofore suggested, *zihil*, "birth," as the design appears to be to symbolize the birth of the storm-cloud.

I suggest as possible that the characters in the hand of the left figure, upper division, Plate XXX\*, one of which is the reticulated figure, the other that of Cauac, may denote *cauche*, the cultivated cocoanut. One reason for this supposition is that the figure in the other hand (Fig. 69) appears to be the hieroglyphic for *omal*, "bread," especially a certain kind of flat tortilla, used in sacrificial offerings.

In the middle and lower divisions of Plate XIX we find the character shown in Fig. 70, occurring several times.

The figures in the spaces appear to be grinding paint in stone and earthenware mortars. The pestle is straight, rather slender, and cylindrical in form, and is grasped by both hands. I venture the suggestion that the circle of dots with the little oval in the center, indicates that the pestle is to be turned or whirled round, and the changed direction of the curves denotes to the right and left, or first one way and then the other. The cross-hatching indicates a word with the sound of *ch*, *tz*, or *s*. As tending to confirm this suggestion, we find, by reference to the Maya lexicon, that *dzic* and *dzical* (adjectives) signify "left," and *dziical*, "left hand." (See Fig. 48, p. 139.)



FIG. 69.



FIG. 70.



Referring to Plate XXIII\*, we find in the middle compartment of the upper division the figure and characters represented in Fig. 71.

The lower line of the inscription over the figure consists of three characters, which I interpret as follows:

*Chehziç u cahal*: "Consumes (or destroys) his (or the) dwelling."

The eye and snout in the left-hand character, translated "consumes," I presume imply that this is done by the Chac. The parts of this compound character are taken in the same order as the others heretofore interpreted; that is, from right to left; those of the third, translated "*dwelling*," from below upwards.

It is possible that the left-hand character should be rendered *zatzic*, which has the same signification as *chehziç*, and also has the two hissing sounds, indicated by the interlaced portion.

If I am correct in my rendering of the right-hand character, it will probably enable us to determine this one (Fig. 72), which is often used in the Manuscript. I suggest *okoltba*, "prayer," and, with the numeral, "three prayers." But it is possible that the true rendering is *ocol* which, according to Perez, signifies, when joined to a number, the course or order, as of priesthood.

Adopting these suggestions, we would translate the characters in the upper right-hand corner of the middle division, Plate VII\*, Fig. 73, thus:

a.	b.	c.	d.
5 ppecuah	okoltba	hau	(?)

"Five tortillas of maize, three prayers, the leg of a deer, ?", or, "Five tortillas of maize, the third priest (or priest of the third order?), the leg of a deer." I

prefer the first rendering, as the character marked *b* frequently occurs without the numeral where the second interpretation would not apply.

Fig. 74, which is precisely like that for Caban as usually given in the Manuscript, is found on several plates and also frequently in the



FIG. 71.

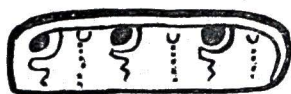


FIG. 72.



FIG. 73.

Codex; sometimes on the bench or form on which persons are seated or lying—see Plates XXXII, XXXIII, XXV\*, XXXIV\*, &c.; on the blocks or square figures on Plates II\* to X\* which relate to the festival of the apia-



a

FIG. 74.



b

rists; on the foundation or substance out of which plants and vines arise, as on Plates XXXII and XXXIII; and as a character into which the machete or hatchet is thrust (Plate XXIV\*). In the Codex it is found on the wall and base of what appears to be a kind of house, or a niche in a temple (Plates 20 and 67); on seats or benches, and in one instance on something laid on a pyramidal altar, on which a human head is placed, having the "dead eye," as though representing the act of cremation. It is evident that no one substance can be indicated in all these places.

On the plates relating to the bee-keepers' festival, where it is figured thus (Fig. 75), as on Plate VIII\*, the block or vessel is red, or marked with

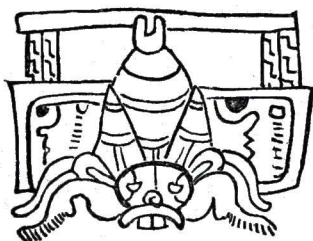


FIG. 75.

a red border, is suspended by cords, and a bee is placed across it. Here it is probable that it should be interpreted *cab*, "honey," or *cabnal*, "bee-hive." But this explanation will not answer in one out of a hundred of the other places where it is used.

Where it marks the substance out of which plants arise, as on Plates XXXII and XXXIII, it is probably used to signify the earth or soil. We find by reference to the lexicons that *cab* has also as one of its significations "earth" or "soil," and that *cabal* signifies "at the foot," "at the foundation," "at or on the ground," &c. This will furnish explanation of all those cases where "earth," "ground," or "soil" is applicable, or where it is on that out of which plants grow and on which persons are seated or lying. In the lower division of Plate XXXII are the figures of four seats or forms similar in outline to that shown at *a*, Fig. 74.; two are marked with the character interpreted *ppec*, or "stone," and two with the character represented at *a*, Fig. 74. If two are stone, as we have good reason for believing, the others must be wood or earth. The fact that persons are represented lying down at full length



upon this character furnishes a strong reason for believing it should in such cases be rendered "earth."

Turning to Plate XXIV\*, we observe, in the third division, the figure of a large brown tree, and a person standing by with hatchet in hand in the act of cutting; in the inscription immediately above is Fig. 76. There can be little, if any, doubt that this refers to cutting into the tree. The Caban character may signify a particular species, but I think it more than probable the word denoted is *cabal*, "at the foot or base," "at the ground"; and that the proper rendering is "cut with a hatchet at the base," or "at the ground." The cut or opening at the base of the brown tree appears to correspond with this interpretation, especially as the tree to the right in the same division is severed at a short distance above the base.



FIG. 76.

If my rendering of this character, in the different uses to which it is applied, be correct, it must be to some extent at least phonetic.

On the wall and base of the dwelling, or whatsoever it may be, on Plate (30) of the Codex, it is probably used to denote that it is earthen, or plastered.

This character is closely allied to the symbol for the day *Cib* (Kib), which is usually given thus in the Manuscript (Fig. 77). In each of the words we have the sound of *k* and *b*, but one of the characters has a line of dots that is wanting in the other. The inner line and the little cross-marks usually found in *Cib* in the Manuscript, and represented in Fig. 77, do not appear to be essential.



FIG. 77.

The character represented in Fig. 78 occurs in the middle division of Plate V.



FIG. 78.

As the figures in the spaces probably represent traveling merchants, it is possible that this should be rendered *u beom*—the "traveler" or "merchant."

The third division of Plate XXIX (the lower of the two shown in Fig. 79), is divided into four compartments, each with its figure and superscription, the latter consisting of four compound characters in each

case. Commencing with the upper extreme left-hand character, let us

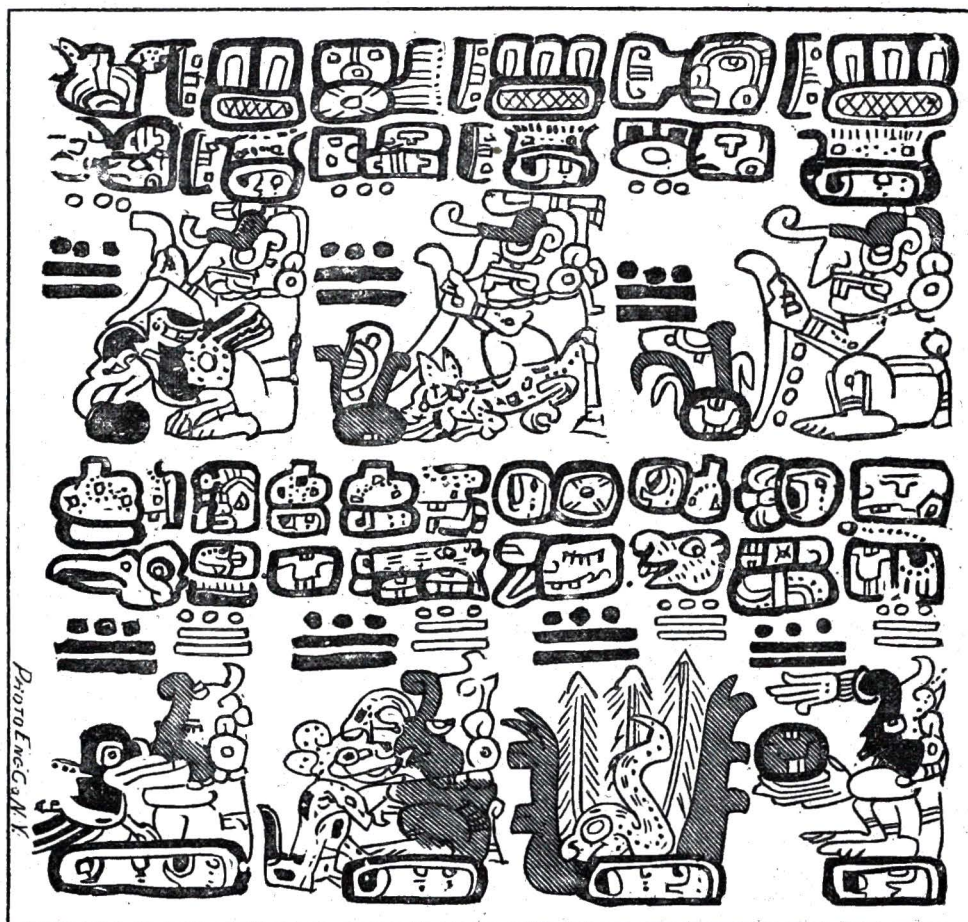


FIG. 79.

complete it (as the lower part—the loop—appears to be imperfect) thus:



This will make the whole character the same as the third and fourth to the right in the same line. The order in which they are to be taken I presume is as follows: First, the upper line over one figure, from left to right, then the next line below in the same order; next, the group over the next figure in the same way; and so on, counting the groups from left to right.

We observe that the lower left-hand character of the first or left-hand group is the head of a bird, and also that a bird is in the figure below; that the lower right-hand compound character also contains a distorted head,



somewhat human in appearance, but which may be intended to denote the quadruped in the figure below; that the lower right-hand character of the third group, although showing teeth, may be intended as the symbol of the worm-like figure beneath.

In view of these facts, and also of the additional facts that the right-hand group contains no animal head, nor is there below the figure of any animal, I am inclined to believe that these three heads are but symbols of the animals below them. We also observe that the figures are placed on *Caban* characters, and that each group of the superscription contains a *Caban* character, all doubtless having reference here to the earth or soil. If the figures with the two-colored face denote growing maize, as the attacks of the bird and quadruped indicate, we then have strong reasons for believing that the characters refer to the figures beneath them. I may also add here, what is stated elsewhere, that as a rule animals, persons, and deities, or at least idols, appear to be generally represented among the characters by the head; hence such characters cannot be phonetic.

A study of the two groups similarly arranged on the right of the lower division of Plate III\* satisfies me that they relate to the method of dealing with a swelling on the hand, caused probably by the sting of a bee or some other insect, or the bite of a serpent (observe the serpent's head on the figure below). We see here the figure of a hand in two places, and on each a protuberance or swelling distinctly marked (Fig. 80.) By

the side of each is Fig. 81, which is probably the hieroglyph for the Maya words *u-mo*, "a swelling of the flesh," or "tumor." The next character in order is the one shown in



FIG. 80.



FIG. 81.



FIG. 82.

Fig. 82, which may be interpreted *u-cab-poc*, "bathe or wash it with honey."

The character in the hand of the figure immediately under the inscription appears to agree with this interpretation (see Fig. 83): *Cab-*



FIG. 83.



FIG. 84.



FIG. 85.

*men* (*min* or *mon*). *Min* signifies that which diminishes or causes to grow less; *mon*, the same; and *moncab* (same as *momcab*), a cooling or soothing

wash.<sup>1</sup> The hand here figured I take to be simply a pictorial representation.

The characters in the right-hand compartment of the middle division of the same plate, I think probably relate to the offerings of honey and tortillas for the dead.

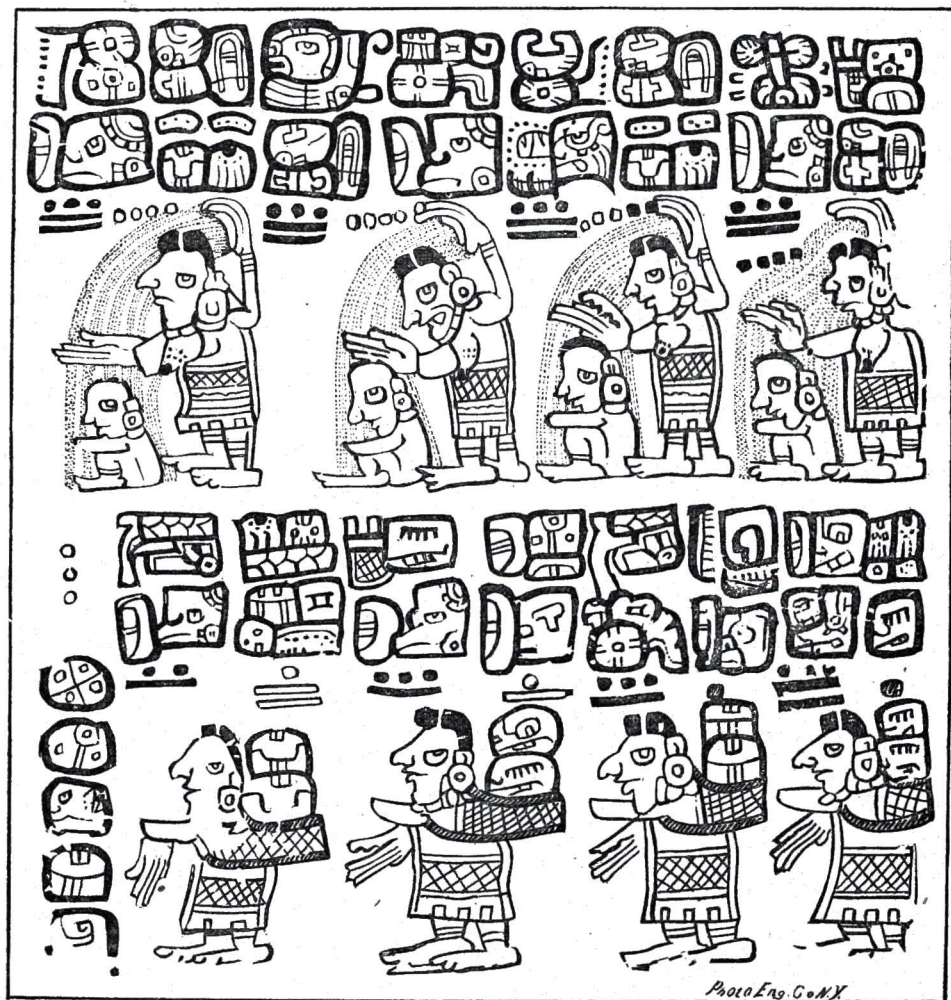


FIG. 86.

The character represented in Fig. 84, found so frequently on Plates I\* to X\* and elsewhere, may denote pieces of honey-comb, or a kind of drink made of honey, as Brasseur says (note in Landa's Relacion), "honey that has passed into the state of hydromel, which was their ordinary wine."

<sup>1</sup> I follow, in most cases, the interpretation given by Brasseur in his Maya lexicon, and make no attempt to give oblique forms, as my knowledge of the Maya language is too limited for this.



As heretofore stated, I have concluded that Fig. 85 signifies *likin*, "east," "eastward," "at or toward the east"; literally "the rising sun." If this is correct, then, as before intimated, the lower character with the alar appendage must represent the latter syllable *kin*, "sun" or "day"; and the upper, the first, *li*, derived from *likil*, "to arise," "to be lifted up or elevated."

Turning to Plate XX\* we see in the third division the figures of four females, each apparently engaged in sprinkling water on a child in front of her (Fig. 86). Above them are two rows of characters, apparently grouped by fours (counting each compound character as one), two of the upper and two of the lower line to each female figure. In the first group to the left is the character I have heretofore interpreted as signifying west; immediately to the right of it, in the same group, is this character (Fig. 87). In the second group is the character heretofore interpreted as signifying north, but with an arm-like appendage; immediately below it, in the same group, is the character shown in Fig. 87; the third group has the character for east and this also; and the fourth or last group to the right the same character (Fig. 87), and that heretofore interpreted as denoting south.



FIG. 87.

As we find the same character in Fig. 87 as in Fig. 85, we may assume it stands for the same sound, *li*, and accepting Brasseur's interpretation of the lower left-hand character as signifying *ha* or *haa*, "water," and the added character to the right as Landa's *i*, we have *li-ha-i* or *lila-i*, "to sprinkle the child with water," *lila* meaning "to sprinkle with water," and *i* child. As *lil* signifies "to shake," "to toss," &c., a better rendering may be *haa-lil i*, "the water shake (or dash) on the child."

Commencing with the left-hand group and taking the four characters in the order heretofore adopted, the upper two from left to right and then the lower two in the same way, and taking the groups from left to right, I obtain the following result:

First group: "Toward the west; sprinkle water on the child; (———?); tortillas."

Second group: "Toward the north; (———?); sprinkle water on the child; (———?)."

Third group: "Toward the east; sprinkle water on the child; (———?); tortillas."

Fourth group: "Toward the south, (*ichintzah*) give a bath; (———?); sprinkling water on the child."

This character (Fig. 88), found in the first, second, and fourth groups, I am unable to interpret. The larger right-hand portion may be a variant of *chicchān*, and the whole stand for the words *a* or *u* *chichān*, "a little," or *ha-chen*, "water from the senote or well"



FIG. 88.



FIG. 89.

The third character in the third group (Fig. 89) is also one I have been unable to interpret. The smaller figures to the left may possibly denote the words *ca-chuc*, "a cuff" or "blow." The peculiar eye in the right portion I think refers to some particular deity.

I am aware that this interpretation of these groups hangs on a very slender thread which, if broken, lets the whole thing fall to the ground, and hence have given it with a feeling of considerable doubt. But the four similar figures and the symbols of the cardinal points agree very well with this conclusion.

As I have already intimated, there are good reasons for believing that the compound character shown in Fig. 90 denotes "bread of maize" or



"corn bread." As will be seen, this consists of the characters for *Imix* (or *Ymix*) and *Kan*; as *ixim* signifies "maize," we may assume, without great liability of being in error, that this is the equivalent of *Imix*.



FIG. 91.

But I am inclined to believe the latter symbol (that for *Kan*) is used not only to denote bread (tortillas), but that in the pictorial portion it is also frequently given to represent corn (maize).

The combination shown in Fig. 91, and found so frequently on the plates of the Manuscript and Codex, probably denotes "cakes" or "two cakes," or "tortillas of maize." The two are found combined as in Fig. 90 and with the accompanying characters on Plate III\*.

Turning to Plates VIII\* and IX\* of the Manuscript, we notice along the lower border of the middle division what are evidently offerings; some are pictorial representations and some perhaps symbols; among these we



see vessels of different kinds, on which are Kan symbols of a reddish or orange color. As heretofore stated, we find over one of the groups (left side of Plate IX\*), a character accompanied by the numeral five, which I have supposed denotes the Maya word *ppecuah*, *pecuah*, or *pacach*, "a tortilla of maize." That these symbols could have no legitimate signification, if interpreted by any of the meanings of Kan found in the lexicon, is apparent to any one. The fact that they are in vessels—in one case a vase with the usual vase mark, in another a kind of platter, &c.—indicates that they are offerings that can be appropriately presented in vessels of this kind.

In the lower division of Plate XXI we observe a bird in the act of eating one of these Kan characters. Although this is probably a symbolic representation relating to time, still the figure itself is intended as a representation of that which is used as the symbol—a bird eating something, doubtless corn or bread.

On Plate XXVIII, second and fourth divisions, we notice, as I have previously stated, the figure of a deity, which probably signifies the earth, looking up in a supplicating manner, bearing in his hands, or in the hands of the little figures he holds, Kan symbols. As there is good reason for believing these are symbolic representations of the parched earth pleading for rain, it is more than probable that the Kan characters here denote corn or maize. This supposition is rendered almost certain by the fact that the one in the right hand of the lower figure presents a little opening blade or leaf, showing that it has been planted and is sprouting; in the other hand is the bread symbol.

The two combined, or the *Kan* singly, are of frequent occurrence in the hands of the priests in the Manuscript, where apparently engaged in religious ceremonies. The *kans* in the baskets carried by females (lower divisions of Plates XIX\* and XX\*) I have already alluded to; there can be scarcely any doubt that here they signify corn or bread, more likely the former. I think it quite likely that here, and where not in the written portion, these figures have more the character of pictographs than hieroglyphics, as they are both tolerably fair representations of a grain of maize.



FIG. 92.

Fig. 92, copied from the upper division of Plate IX, is, I think, beyond doubt the symbol for the armadillo figured in the same division. There are characters somewhat closely resembling it found in other parts of the Manuscript, but none of them have the posterior border of scale-marks, and at the same time the peculiar eye that is used throughout the Manuscript to mark quadrupeds.



FIG. 93.

Fig. 93, which has for its only characteristic the same figure as Landa's *ca*, is found frequently in the Manuscript, so placed as to lead me to believe it represents some fruit or vegetable product that is useful as food, or in some other way in domestic life, and that was also considered an appropriate offering to the gods.

For example, we see it carried in baskets by women—lower division of Plates XIX\* and XX\*; in the hand of the bird figure—middle division, Plate II; in the hands of the priest, apparently as an offering, on a number of plates; on the back of figures representing persons traveling—Plate V; marked on (as though denoting something in) a vase—lower division, same plate; in the symbol of the day *Cimi*; and also in Landa's character for *k*.

I presume from these facts that, if phonetic, the word or syllable it represents has as its chief phonetic element the sound of *k*. As the Maya word *ca* signifies a species of squash or calabash used for food in Yucatan, I presume this is what it denotes in these pictorial representations, especially as this interpretation does not appear to be inconsistent with its use in any of them. But that it also has other significations is evident from the fact that it is found in *Cimi*, and also as an eye-mark. The same idea is doubtless embraced in both, that is, "death," and the chief phonetic element *k*.

In close relation to this, and which should be considered with it, is the character represented in Fig. 94. Brasseur has taken it throughout as one form of the *Cimi* symbol; but there are some reasons for believing



FIG. 94.

there is, at least, a slight difference in the signification of the two, as on Plates XIX\* and XX\*, in the basket of the woman at the left, we see both characters. As the other burdens are represented by the duplication of one character, the bringing of these two together here shows their close relationship to each other. It is also worthy of notice



that the relative position of the two is exactly the reverse on one plate from what it is on the other.

As the burdens of two of these females evidently consist of their household gods, it is possible that those of the two just alluded to may consist of the bones of their dead. If so, Fig. 94 may represent the skull and the Cimi symbol the other bones. In the inscription above the head of the left-hand female, lower division Plate XX\*, we find this character (Fig. 95), which, according to the explanation of the parts so far as given,

should probably be interpreted (reading from right to left) *cimen-ich*, "the dead children." In this interpretation the right-hand character is given its usual signification; the reticulated portion, *ch*; and the two lines running upward from this, *i*. Still it is possible that this explanation is very wide of the mark, as these characters may represent certain fruits or other articles of food, perhaps different kinds of calabashes.




FIG. 95.

The character represented in Fig. 96 is very closely related to, if not a variant of, the Cimi symbol. It is found very frequently throughout the Manuscript in the spaces containing the figures or pictorial representations. As in a large proportion of these cases the figures have some reference to death, the gods of death, or of the lower regions, and as the character appears to be a variant of Cimi, I have designated it the "death symbol."



FIG. 96.

It is found in connection with the supposed god of death in the following places: Lower division of XXXV (when joined with XXXIV); lower division of II\*; upper division of VIII\*; second and lower divisions of XI\*; second division of XXII\*; middle division of XXIX\*, of XXX\*, XXXI\*, and XXXIV\*. It is also found equally often with the god and goddess with this eye: . It is also found with the god that has the dark stripe across the face, as in the lower division of Plate III. Hence I am inclined to believe that this and the other two are to be classed with the deities of the underworld. We also find this character in several places where the idea of death or destruction is evidently intended to be conveyed. For example, in the upper division of Plates VII and XXV; second and third

divisions of Plate XXXII; third division of XXXIII; upper division of VIII\*, XX\*, and XXIX\*.

The next group I refer to is found in the upper division of Plate X, and consists of one perpendicular column and two transverse lines, as shown in Fig. 97. Taking the column at the left, proceeding from the top down-

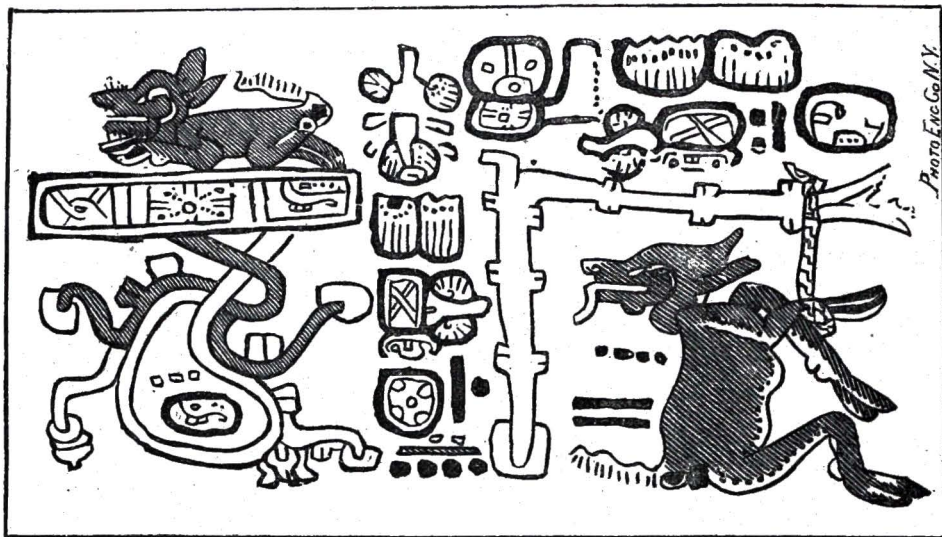


FIG. 97.

wards, I suggest the following interpretation of the four compound characters :

“South, tortilla of maize, vase, or pan, of burnt clay, turn 6 (times).”

The characters here interpreted *yam* and *xam*, I am aware, are apparently identical; but the former, which is a part of that heretofore interpreted “south,” is one in reference to which I have been, and still am, in great doubt, especially as it may well be interpreted *xamin*, “north.” The two *Imix* characters here translated *ixim* are doubtless used more as symbols than as word characters. The vase, or *u* character, is, I think, simply added to render definite that to which it is attached. The lowest character (Landa’s *b*) may be *heb*, “to turn over” or “revolve”; *eb*, “to elevate”; *be*, “to march”; or *pe*, also “to march.”

The transverse lines reading from left to right, I would interpret thus:

“West, tortilla of maize, pan of burnt clay, 7 (times), deer ?.”



A free translation of the column would then be about as follows:

"Facing the south, place the tortilla of maize on the pan of burnt clay and turn it six times (or elevate it, or march with it six times)."

The meaning of the transverse lines is similar, except as to direction, until we reach the last character, which I have reason to believe refers to the deer. But it also contains another element, represented by the circle at the lower margin inclosing little dots, probably the equivalent of the *b*-character of the column.

The line and column in the upper division of Plate XI appear to be of similar import, but varied in the cardinal points and in one of the characters. I am not prepared to attempt an interpretation of this group, but am inclined to believe, from the presence of the *ik* symbol, that it refers to exorcising the evil spirit.

The groups in the middle and lower divisions of Plate XIV (Fig. 16, p. 99), which are to be taken in columns, and read from the top downwards, are evidently of similar import.

Take, for example, the second (third, if the day column is counted) from the left of the middle division, I would suggest something like the following interpretation (reading from the top downwards):

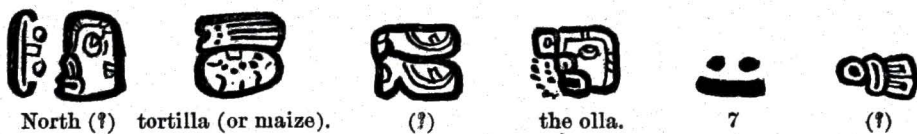


FIG. 98.

The third compound or double character is possibly a pictograph to represent venison, or deer hams. Brasseur supposes it to be a variant of the Cimi character, but this I think very doubtful.

## CHAPTER VII.

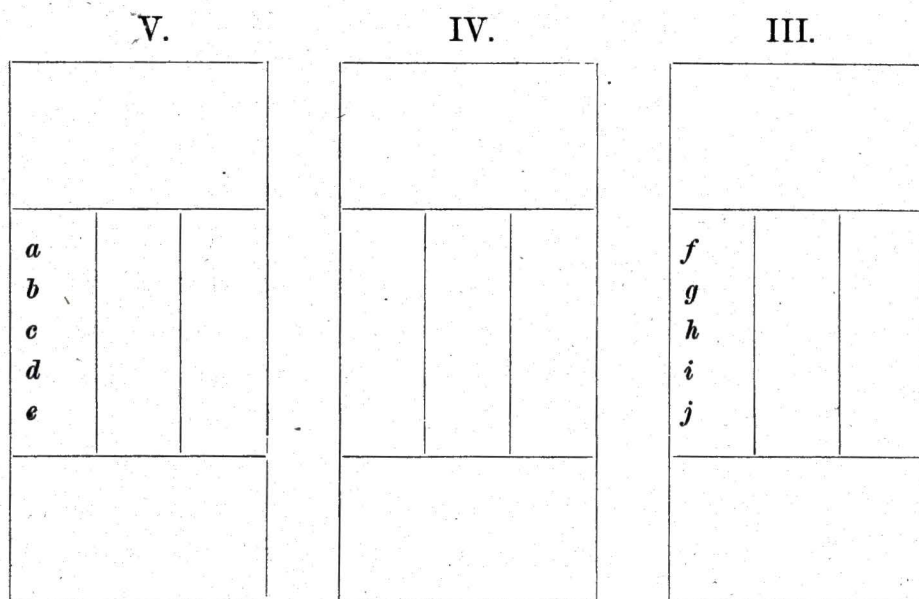
### ILLUSTRATIONS OF THE DAY COLUMNS AND NUMBERS IN THE FIRST PART OF THE MANUSCRIPT.

In order that as much of the material contained in this Manuscript as can be given without *fac-simile* representations may be placed before the reader, I will now give the names of the days as found in the day columns of some of the plates; this will enable him to test my interpretation of the numerals. As my object in doing this is to give an opportunity to all into whose hands this paper may fall to test the correctness of the theories I have advanced, I will give the different divisions of the plates, each with its own days and numbers. It is to be understood that where there is more than one division on a plate, as is usually the case, they will be numbered consecutively from the top downward, first, second, third, &c. In giving the numerals, the Roman represent the red or day numerals, the Arabic the black or month numbers. The red numerals usually found over the day columns will also be placed over them here. Those in the spaces will also be given in the spaces here, and by pairs as in the Manuscript. In the first example a few explanatory words will be placed in parentheses; afterwards these will be omitted.

Plates I-XIX all contain three divisions, separated from each other by broad, transverse red or brown lines. It is therefore to be understood, when no special mention is made of the number of the divisions, that there are three on each plate. The upper or top division I will designate as the first, the middle as the second, and the bottom as the third. These divisions are again divided into compartments, usually differing in the color of the ground, which is white, reddish-brown, or blue. In some cases the subject-matter of a division is continued into the second or even the third plate. These do not follow each other in the usual order of pages. Where it



extends over upon the next page or plate, it is always to be understood that the one which precedes is to have its left margin placed to the right margin of that which follows, and that the day column at the left of a division refers to all that stand to the right of it, when thus placed, until another day column is reached. In order to make this clear, let me illustrate by an example. On the middle division of Plate V we find a day column with two figures to the right of it. Turning to Plate IV, we find other figures of a similar character, but no day column. By placing the latter (Plate IV) so that its left margin joins to the right margin of the former (Plate V), we have a continuous series of figures of a similar character. The day column, therefore, on the latter plate, relates to all on the right until we reach the next day column, which will be found in this case on the left margin of Plate III, as in the annexed diagram.



In this illustration the letters represent the days and the position of the day columns. That this is the proper position of these plates in reference to each other may be seen by referring to Plates XXX and XXXI, where the head of the bird in the third division of Plate XXXI—there are four divisions in this case—is on the right margin and the tail on the left margin of Plate XXX.<sup>1</sup>

<sup>1</sup>By binding together the plates, exactly the reverse of Brasseur's paging—as is done in many copies—we will probably have them arranged in the order intended.

On Plates XXX\* and XXIX\* the head of the black figure is at the right margin of the upper division of the former, while the body and feet are in the left margin of the upper division of the latter. This explanation will be sufficient to make clear what may hereafter be said in reference to the subject-matter of the division of one plate extending over upon the corresponding division of another.

## PLATE I.

The day characters on this plate, if there were any, are wholly obliterated.

## PLATE II.

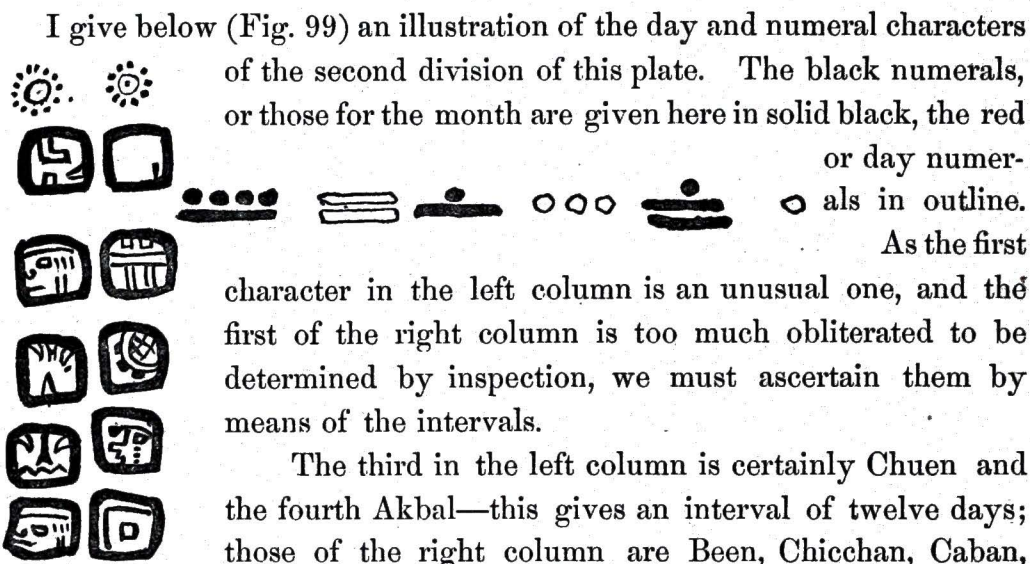


FIG. 99.

This gives for the left column Manik, Cauac, Chuen, Akbal, and Men. The Cauac character, if such it be, is a very unusual one, being identical with that for Men.<sup>1</sup> The first character in the right column is that for Ymix.

<sup>1</sup> This, I think, is an evident mistake, and furnishes one reason for believing this MS. is a copy.



## PLATE III.

## FIRST DIVISION.

Manik.	XI-5.	VI-5.
Cauac.	VI-5.	IX-11.
Chuen.	VIII-5.	IV-3.
Akbal.	X-10.	
Men.		

## SECOND DIVISION.

IV.	IV.	
Akbal.	Ben.	I-10.
Muluc.	Cauac.	X- 9.
Men.	Chicchan.	IV- 7.
Ymix.	Chuen.	
Manik	Caban.	

## THIRD DIVISION.

Day column obliterated.

## PLATE IV.

The first division of this plate is rather an unusual one in regard to the days and numbers. The days are as follows:

## FIRST DIVISION.

Ahau.	
Oc.	X-9.
Eb.	(?)-7.
Ik.	
Kan.	
Ix.	
Cib.	
Cimi.	
Lamat.	

We observe that only three of the regular numbers remain; but in addition to these there are small red characters representing the following numbers (?) I,XII, I,XII, I,XII, I,XII, I,XII.

## SECOND DIVISION.

The second division commences on Plate V, and includes all of the second division of that plate. The characters are as represented in the annexed cut (Fig. 100):



FIG. 100.

The days are Kan, Cib, Lamat, Ahau, Eb; the dates, 4th day, 13th and 11th months; 1st day, 13th month; 9th day, 11th month; and 8th day, 13th month.

## THIRD DIVISION.

XII.

Cauac. VI-6.

Chuen. VI-6.

Akbal. VI-7.

Men. VI-7.

Manik. XIII-7.

XIII-7.

## PLATE V.

## FIRST DIVISION.

The first division of this plate contains two compartments. The first has the numeral IV over the day column. The days are Caban, Muluc, Ymix, Been Chicchan. The numbers in the space are I-10, X-10.

The second compartment is found partly on Plate V and partly on Plate IV, and is similar to the first division of Plate IV. The days are Cauac, Muluc, Chuen, Ymix, Akbal, Been, Men, Chicchan, Manik. The only regular number unobliterated is the black numeral 13 in the space. The following are the small red numerals: XIII, XI, XIII, XI, XIII (?), XIII, XI, XIII. White cross-bones on a black ground are in this space.

## SECOND DIVISION.

The second division of this plate runs over on Plate IV, and has been illustrated and described as belonging to that plate.



## THIRD DIVISION.

The day characters in the third division are wholly obliterated.

## PLATE VI.

## FIRST DIVISION.

IV(?)	
Ahau.	(?)-10.
Eb.	XI-10.
Kan.	IV-12.
Cib.	(?)-10.
Lamat.	IX-10.

## SECOND DIVISION.

XII.	
Caban.	XIII-13.
Ik.	XIII-13.
Manik.	XII-13.
Eb.	XIII-13.
Caban.	XIII-13.

## THIRD DIVISION.

IV.	IV.	
Ahau.	Oc.	X-6.
Cimi.	Cib.	I-4.
Eb.	Ik.	
Ezanab.	Lamat.	
Kan.	Ix.	


## PLATE VII.


## FIRST DIVISION.

The characters and numerals being partially obliterated in the first division of this plate, it is omitted.

## SECOND DIVISION.

XII.	{ XIII }	-13.
I.	I	
Chuen.	{ XII }	-13.
Cib.	I	
Ymix.	{ XII }	-13.
Cimi.	I	
Chuen.	{ XII }	-13.
	I	

This section (second) of Plate VII contains some peculiarities in the day symbols and numeral characters. For example, the day (red) numerals are given thus, , the first signifying two numbers, XIII and I; the second XII and I.

The symbol for Cimi is also peculiar and is in this form . The numbers over the column are XII and I.

## THIRD DIVISION.

Day characters on Plate VIII.

## PLATE VIII.

## FIRST DIVISION.

(?)	(?)		
Kan.	Ix.	XIII- 1.	VI-4.
Oc.	Ahau.	XII-11.	
Cib.	Cimi.	I- 4.	
Ik.	Eb.	X- 4.	
Lamat.	Ezanab.	II- 2.	



## SECOND DIVISION.

VII.	VII.	
Ahau.	Cimi.	XIII- 1.
Eb.	Ezanab.	I- 1.
Kan.	Oc.	XII- 5.
Cib.	Ik.	IV- 3.
Lamat.	Ix.	VII-13.
		VII- 3.

## LEFT SECTION OF THIRD DIVISION.

XII.	XII.		
Cimi.	Ahau.	II- 2.	X-10.
Ezanab.	Eb.	VII- 5.	XII-12(?).
Oc.	Kan.	XIII- 3.	
Ik.	Cib.	X-11.	
Ix.	Lamat.	XII- 2(?).	

## RIGHT SECTION OF THIRD DIVISION.

I.	
Ahau.	X-10.
Eb.	IX-10.
Kan.	V-10.
Cib.	II-10.
Lamat.	①-10.
Ahau.	

Part of this section runs over on Plate VII.

The figures in this division, which are all blue, are each seated on a large compound character, under one of the pairs of numerals above given, and pertaining to it as shown by the lines dividing these minor spaces. In the character on which each figure is seated there are, first, an Ahau of the usual size and form, to which is joined a black numeral; then several small Chuen symbols. The numeral over the Ahau belonging to the day numbered I, as given above, is 9; that belonging to the day numbered II is 10; that belonging to the day numbered V is 11.

The lists of day characters on this plate as given by M. de Charency, differ from the foregoing only in having Ix for the first day of the left column of the upper division, and Kan for the first day of the right column of the same division. These two days are obliterated in the Manuscript and hence have to be restored, which can only be done by counting the intervals.

The interval between the days in these two columns, as may be seen by counting, is six days. This gives Kan as the first of the left-hand column and Ix as the first of the right-hand; hence I conclude that this author is wrong in his restoration, or has made a mistake in transcribing. Following out his plan, we would have an interval of sixteen days between Ix and Oc in the first column and of six between each of the others, and a like discrepancy in the other column. But I think it is evident, from what he says on page 30 of the same work, that he has unintentionally reversed these two days, as it is not sixteen days from Kan to Oc, as he says, but six. If we substitute Ix for Kan and Kan for Ix, we find all his numbers correct, except that it is only ten days from Lamat to Ezanab, instead of sixteen, as he states.

# PLATE IX.

## FIRST DIVISION.

X (?).	
Men.	VII-(?) The death symbol is found in this space occupying the place of one number of this pair.
Manik.	Ⓢ-(?)
Cauac.	II-1.
Chuen.	VI-4.
Akbal.	XIII-7.

## SECOND DIVISION.

IV.	IV.		
Cimi.	Ahau.	V-1.	VIII-4.
Ezanab.	Eb.	XIII-3.	X-3.
Ik.	Kan.	VII-2.	I-9.
Oc.	Cib.	II-2.	
Ix.	Lamat.	IV-3.	

<sup>1</sup>Déchiffrement des Écritures Calculiformes ou Mayas, p. 26.



## THIRD DIVISION.

X.	X.		
Ezanab.	Lamat.	XII-2.	VII-3.
Kan.	Ix.	X-3.	I-5.
Oc.	Ahau.	IX-2.	VII-(?)
Cib.	Cimi.	II-3.	
Ik.	Eb.	III-2.	

## PLATE X.

## FIRST DIVISION.

There are no day characters in this division.

## SECOND DIVISION.

V.	V.	
Oc.	Ahau.	VII-2.
Cib.	Cimi.	V-9.
Ik.	Eb.	IX-2.
Lamat.	Ezanab.	IV-8.
Ix.	Kan.	V-4.

## THIRD DIVISION.

VII.	VII.	
Cib.	Cimi.	IX- 2.
Ik.	Eb.	VII-12.
Lamat.	Ezanab.	X- 1.
Ix.	Kan.	XIII- 3.
Ahau.	Oc.	VIII-

## PLATE XI.

## FIRST DIVISION.

IV.	
Ezanab.	
Oc.	I-10.
Ik.	- 8.
Ix.	
Cimi.	

## SECOND DIVISION.

①	①		
Oc.	Ahau.	II-1.	XIII-2.
Cib.	Cimi.	①-9.	X-5.
Ik.	Eb.	IV-4.	
Lamat.	Ezanab.	IV-2.	
Ix.	Kan.	VI-2.	

## THIRD DIVISION.

IV.	IV.		
Oc.	Ahau.	V-1.	IV-2.
Cib.	Cimi.	IV-9.	
Ik.	Eb.	VII-2.	
Lamat.	Ezanab.	IX-4.	
Ix.	Kan.	XIII-6.	

## PLATE XII.

## FIRST DIVISION.

X.		
Men.	①- 5.	II- 6.
Ahau.	XIII-11.	IX-13.
Chicchan.	IX- 9.	IX- 8.
Oc.	XIII- 4.	
Men.	IX- 9.	

## SECOND DIVISION.

XII.	XII.		
Ix.	Ahau.	XIII- 1.	IX-2.
Cimi.	Eb.	XII- 2.	XII-3.
Ik.	Kan.	X-11.	
Ezanab.	Cib.	III- 3.	
Oc.	Lamat.	VII- 3.	



## THIRD DIVISION.

I.		
Cimi.	VII- 4.	XIII- 3.
Ezanab.	①-17.	X-10
Oc.	IV- 7.	
Ik.	X- 2.	
Ix.	X- 3.	


The lists of days on this plate, as given by Charency, agree with those here given, only in the middle division. Those of the first and third divisions, as given by him, are as follows:


## FIRST DIVISION.

Men.  
Ahau.  
Oc.  
Men.  
Men.

## THIRD DIVISION.

Cimi.  
Ezanab.  
Eb.  
Ik.  
Cib.

Some of the characters on this plate are of a form found here only. The character for Oc in both divisions is unusual, an eye being inserted which throws back the broken line as shown in the annexed figure. 

The character for Chicchan in the first division is somewhat different from the usual form, as will be seen by the figure here given. 

So far as the list in the first division is concerned, there can be no doubt that the first and last characters represent *Men*. This would of itself require an interval of five days between each two, if uniform throughout.


Counting from *Men* to *Ahau*, we have an interval of five days; five more gives us *Chicchan*, five more *Oc*, and five more *Men*, as it should be.

Now turning to the third division of this plate, we find that the interval between *Cimi* and *Ezanab* is twelve days; twelve more will give *Oc*. twelve more *Ik*, and twelve more *Ix*, which makes the days and the order

precisely like that of the right-hand column of the middle division of Plate VIII as given by both Charency and myself, and regarding which there can be no doubt.

The reader will see that Charency's arrangement of this third division (Plate XII) gives twelve days for the first interval, fourteen for the second, ten for the third, and fourteen for the last.

The character for *Ix* in this division is an unusual one, being as here

represented. 

### PLATE XIII.

#### FIRST DIVISION.

III.	III.		
Kan.	Lamat.	II-2.	XIII-2.
Oc.	Ix.	III-9.	XI-2.
Cib.	Cimi.	V-2.	
Ahau.	Eb.	X(?) -4.	
Ik.	Ezanab.	VII-5.	

#### SECOND DIVISION.

XIII.	XIII.		
Cib.	Oc.	V-1.	X-3.
Kan.	Ik.	XIII-9.	VII-2.
Lamat.	Ix.	III-1.	
Ahau.	Cimi.	II-5.	
Eb(?).	Ezanab.	IV-4.	

#### THIRD DIVISION.

X.	X.		
Oc.	Ahau.	III- 3.	XIII-3.
Cib.	Cimi	X-10.	
Ik.	Eb.	VII- 4.	
Lamat	Ezanab.	X- 2.	
Ix.	Kan.	XI- 4.	



The character for Cimi is similar to that in the middle division of Plate VII.

Plates XIV and XV are so badly damaged that the numerals and day characters cannot be satisfactorily made out.

### PLATES XVI AND XVII.

All the divisions of Plate XVII extend over and occupy the whole of Plate XVI.

#### FIRST DIVISION.

IV.		
Ahau.	VIII-4.	XI-11.
Eb.	I-6.	VI- 8.
Kan.	X-9.	IV-11.
Cib.	XIII-3.	
Lamat.		

#### SECOND DIVISION.

I.		
Caban.	IX- 8.	II-12.
Muluc.	III- 7.	- 4.
Ymix.	XIII-10.	
Been.	V-(?).	
Chicchan.	X-6.	

#### THIRD DIVISION.

XII.		
Chicchan.	III- 4.	VIII-10.
Caban.	VIII- 5.	XII- 5.
Muluc.	II- 8.	
Ymix.	X-(?).	
Been(?).	X-13.	

## PLATE XVIII.

The column of day characters belonging to the first division of this plate is found in the first division of Plate XIX.

## SECOND DIVISION.

IV.	IV.		
Cimi.	Ahau.	III-2.	IV-4.
Ezanab.	Eb.	VIII-5.	
Oc.	Kan.	I-5.	
Ik.	Cib.	XII-5.	
Ix.	Lamat.	IX-5.	

## THIRD DIVISION.

X.			
Ezanab.	IV-5.	X-6.	XI-6.
Oc.	①-4.	IV-3.	V-4.
Ik.	VIII-4.	X-3.	VIII-3.
Ix.	II-4.	V-3.	XII-4.
Cimi.	①-III.		

## PLATE XIX.

The subject-matter of the first division of this plate occupies all the first division of Plate XVIII.

## FIRST DIVISION.

IV.	
Ahau.	II-13.
Eb.	II-11.
Kan.	XIII-11.
Cib.	X-10.
Lamat.	IV- 7.




## SECOND DIVISION.

The red numerals in this division are doubled, as in the manner heretofore shown.

IX and IV.	
Cib.	XI and VI-10.
Lamat.	VII and II-11.
Ahau.	IX and I- 7.
Eb.	IX and IV- 2.
Kan.	

## THIRD DIVISION.

III.	III.	
Muluc.	Cauac.	X- 7.
Men.	Chicchan.	III- 6.
Ymix.	Chuen.	VI- 3.
Manik.	Caban.	III-10.
Been.	Akbal.	

The character in this division interpreted as Chicchan is an unusual one, being in this form: .

The numerals on Plates XXIV and XXV and those in the upper division of Plate XXVI being partially obliterated, we have omitted them.

## PLATE XXVI.

## LOWER DIVISION.

XIII.	
Ahau.	XIII-13.
Eb.	XIII-13.
Kan.	XIII-13.
Cib.	XIII-13.
Lamat.	



## PLATE XXVII.

## UPPER DIVISION.

XI.	
Ahau.	X-13.
Eb.	XI-13.
Kan.	XI-13.
Cib.	XI-13.
Lamat.	

## LOWER DIVISION.

IX.	
Chuen.	XIII (or XIV)-2.
Caban.	XI- 2.
Akbal.	VI- 2.
Muluc.	IX- 3.
Men.	VI-10.
Ymix.	IV- 4.
Manik.	IX- 3.
Been.	
Chicchan.	
Cauac.	

We find in the day column of this division a rather unusual character for Chicchan, which is here shown . As the day column entirely fills the space the numeral character which should be placed at the top is put at the side of the first day character. The first red numeral is as follows: . The right-hand dot in the original is imperfect, small, and crowded, and, as I believe, is there by mistake.



## PLATE XXVIII.

The characters of the first division are somewhat obliterated, as are also the numerals.

## SECOND DIVISION.

①	
Men.	XI- 9.
Manik.	I- 9.
Cauac.	I- 9.
Chuen.	I-17.
Akbal.	V- 7.

## THIRD DIVISION.

XI.	
Ahau.	VII- 2.
Eb.	①-7.
Kan.	XI-10.
Cib.	XI-13.
Lamat.	

## FOURTH DIVISION.

Men.	I- 8.
Manik.	III-14.
Been.	XIII-13.
Eb.	I-13.
Chuen.	V- 3.

## PLATE XXIX.

No day characters in the first, second, or third divisions.

## FOURTH DIVISION.

XII	
Cimi.	VI-
Ezanab.	VI-13.
Oc.	III-10.
Ik.	XII- 9.
Ix.	

## PLATE XXX.

The left-hand compartments of the first, second, and third divisions of this plate are continuations of the first, second, and third divisions of Plate XXXI. The right-hand compartments of these three divisions form the commencement of, and contain the day characters for the first, second, and third divisions of Plate XXIX.

## SECOND DIVISION.

(III?).

Ik.

Ix.

Cimi.

Ezanab.

Oc.

## FIRST COLUMN, THIRD DIVISION.

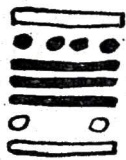
Lamat.

Kan.

Ahau.

Cib.

Eb.



The numerals are placed in this form over the column. They are probably to be taken in pairs, the black characters representing two separate numbers, one stripe with the dots to be taken with the red numeral above, thus, V-9; the two remaining stripes with the red numerals below thus, VII-10.

## RIGHT COMPARTMENT, THIRD DIVISION.

XIII.

Muluc.

Ix.

Cauac.

Kan.

Muluc.

XIII-13.

XIII-13.

XIII-13.

XIII-13.

XIII-13.

There are no day characters in the fourth division.



## PLATE XXXI.

Day characters obliterated in the first division.

## SECOND DIVISION.

Kan.	VII-11.
Cib.	V-11.
Lamat.	III-11.
Ahau.	?-11.
Eb.	IX-11.

## THIRD DIVISION.

Chuen.	Oc.	Muluc.
Cimi.	Cimi.	Chicchan.
Akbal.	Ik.	Ymix.
Cauac.	Ezanab.	Caban.
Men.	Ix.	Been.

These columns all have the same numerals over them as the first column in the third division of Plate XXX, and they are arranged in the same way. There are no numerals in the spaces.

## FOURTH DIVISION.

XIII.	XIII.	
Ymix.	Manik.	IX- 9.
Been.	Cauac	XII- 3.
Chicchan.	Chuen.	IX-10.
Caban.	Akbal.	XI- 2.
Muluc.	Men.	XIII- 2.

This division extends over to Plate XXX.

## PLATE XXXII.

## FIRST DIVISION.

?

Cib.	XIII- 9.
Lamat.	- 8.
Ahau.	IX- 8.
Eb.	II-17.
Kan.	II- 9.

## SECOND DIVISION.

(VIII?).

Ik.	I- 6.
Ix.	IX- 8.
Cimi.	II- ?.
Ezanab.	VIII-18.
Muluc.	

## THIRD DIVISION.

(?)

Ix.

XII.

Ix.

VI.

In space, 5.

Ix.

XIII.

Cimi? or death symbol.

## FOURTH DIVISION.

(?)

Lamat.	III-13.
Ahau.	III-13.
Eb.	III-13.
Kan.	III-13.
Cib.	



## PLATE XXXIII.

## FIRST DIVISION.

(?)	
Kan.	VII- 5.
Muluc.	II- 8.
Ix.	X- ?.
Cauac.	XIII-15.
Kan.	VIII- 8.

## SECOND DIVISION.

Chuen.	Ymix.	II-11.
Caban.	Manik.	X?- 3.
Akbal.	Been.	VIII- 6.
Muluc.	Cauac.	IV, or IX- 6.
Men.	Chicchan.	?- 4.

## THIRD DIVISION.

## Column left compartment.

V?  
Cauac.  
XII?  
Cauac.  
VI?  
Cimi?  
XIII.  
Cimi?

## Column right compartment.

V.  
Kan.  
XII.  
Kan.  
VI.  
Cimi?  
XIII.  
Cimi?

## FOURTH DIVISION.

Caban.	III-13.
Muluc.	III-13.
Imix.	III-13.
Been.	III-13.
Chicchan.	

## PLATE XXXIV.

The first and fourth divisions belong to Plate XXXV.

## SECOND DIVISION.

IV.		
Cimi.	XII-8.	VI-8.
Ezanab.	XIII-7?	? ?
Oc.	?-7.	IX?-7?
Ik.	IV-8.	
Ix.		

## THIRD DIVISION.

IV?	
Ahau.	XI- ?
Eb.	II-17.
Kan.	IV-15.
Cib.	
Lamat.	

## PLATE XXXV.

On this plate the day column in the second division is illegible.

## FIRST DIVISION.

	(?)-10.	
Lamat.	VII-10.	VIII-10.
Been.	V?-10.	XII?-10.
Ezanab.	I-10.	
Akbal.	XI-10.	

## THIRD DIVISION.

(?)	
Ymix.	X-10.
Been.	IX-11.
Caban.	IX-13.
Chicchan.	VIII-12.
Muluc.	I-12.

## FOURTH DIVISION.

IV.	
Ahau.	IX-11.
Chicchan.	I-17.
Oc.	III or IV-17.
Men.	
Ahau.	

## PLATE I\*.

No day characters are discernible in the first division of this plate.

## THIRD DIVISION.

I?	
Caban.	I- 6.
Ik.	I- 5.
Manik.	?-13.
Eb.	
Caban?	

## PLATE II\*.

## FIRST DIVISION.

Manik.	XI- 4.
Eb.	IX-15?
Caban.	
Ik.	
Manik.	

## SECOND DIVISION.

Left column.		Right column.	
IX.		VIII?	
Caban.	IX-12.	Ik.	II-13.
Ik.	IX-13.	Eb.	IV-13.
Manik.	IX-18?	Manik.	IV-11.
Eb.		Caban.	
Caban.		Ik.	

This division is continued on PLATE I\*.

Left column, third division, illegible.



## THIRD DIVISION.

Right column.

IV.

Ahau.

Eb.

XI-13.

Kan.

IV-19 or 9 and 10.

Cib.

Lamat.