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THE MEXICAN CALENDAR STONE.

# THE MEXICAN CALENDAR STONE,

By Philipp J. J. Valentini, Ph. D.

*(From the German.)*

# TERRA COTTA FIGURE FROM ISLA MUJERES,

NORTHEAST COAST OF YUCATAN.

# ARCHÆOLOGICAL COMMUNICATION ON YUCATAN,

By Dr. Augustus Le Plongeon.

# NOTES ON YUCATAN,

By Mrs. Alice D. Le Plongeon.

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COMPILED AND ARRANGED

By STEPHEN SALISBURY, Jr.

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WORCESTER:
PRESS OF CHARLES HAMILTON.
1879.

Henry Stevens, Esq.,

*WITH THE RESPECTS OF*

Stephen Salisbury Jr.

Worcester, Massachusetts, U. S. A.

*From Proceedings of the American Antiquarian Society, of April 24 and October 21, 1878.*

PRIVATELY PRINTED.

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## ILLUSTRATIONS.

# THE MEXICAN CALENDAR STONE.

By Philipp J. J. Valentini, Ph. D.

[Proceedings of American Antiquarian Society, April 24, 1878.]

*Note by the Committee of Publication.*

We are indebted to Stephen Salisbury, Jr., Esq., for a translation of Doctor Valentini's lecture on the "Mexican Calendar Stone," "*Vortrag über den Mexicanischen Calendar-Stein, gehalten von Prof. Ph. Valentini, am* 30. *April* 1878, *in New York, U. S. A., vor dem Deutsch ges. wissenschaftlichen Verein*"), and also for copies of a heliotype of the stone itself. The views of the lecturer, as is the case with all discussions in the publications of the society, are left to rest on their own merits. The matter is cognate to the recent investigations in the central portions of our continent, to which attention has been drawn by various communications from Mr. Salisbury, and is clearly and ably set forth by the lecturer. If the system of interpretation applied by Prof. Valentini to the "Calendar Stone" may not be wholly peculiar to himself, but has also been substantially advanced by Senor Alfredo Chavero, a learned Mexican scholar (see "The Nation," New York, August 8th, and September 19th, 1878), the fact that two learned inquirers concur in adopting the same conclusion respecting the nature of the monument, and similar principles for the interpretation of its inscriptions, only gives additional weight to their opinions. The collateral estimate, by Professor Valentini, of the real character and purpose of Bishop Landa's phonetic alphabet, is plausible, and very likely to prove to be correct. It is a view that removes all obscurity from the dubious claim of an absolute key to the literal rendering of Mexican hieroglyphics. The aim of the missionary bishop to construct an alphabet from signs familiar to the natives, which might enable him to prepare religious manuals for their benefit, would be no more than has been attempted by other Catholic teachers—for example, among the Indians of Nova Scotia, as described by Father Vetromile.

Impressed, as we are, by the profound philosophy of Judge Morgan's essays upon Indian institutions, civil and political, and much as we admire the acute and exhaustive studies, among authorities, of Mr. Bandelier upon "the warlike customs and organization of the Mexican tribes," and "the distribution and tenure of lands, and the customs with respect to inheritance among the ancient Mexicans," we cannot ignore the existence of indications of mysterious advances in science, and a mystical archæological lore, possibly extending to remote periods of time, which remain unexplained and unaccounted for by their processes of reasoning. There is something for which the theories of these writers do not afford a means of solution. It is exactly this that has excited and bewildered the imaginations of explorers long before Brasseur de Bourbourg and Dr. Le Plongeon, and will continue to bewilder others till its nature and significance are more clearly understood. The successes of Du Chaillu, of Schliemann, and of Stanley, are remarkable instances of triumphant results in cases where enthusiasm had been supposed to lack the guidance of wisdom. If earnest men are willing to take the risks of personal research in hazardous regions, or exercise their ingenuity and their scholarship in attempting to solve historical or archæological problems, we may accept thankfully the information they give, without first demanding in all cases unquestionable evidence or absolute demonstration.

S. F. Haven, *Chairman.*

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## VORTRAG OF DR. VALENTINI.

Gentlemen. — Will you give your attention to a lecture, which you have kindly invited me to deliver, though I am not a member of your society? The lecture will treat of certain studies to which I have devoted myself for a long time—the so-called Mexican hieroglyphics, and especially a monument which is known as the Mexican Calendar Stone.

My opinion of the circumstances to which this monument of old Mexican art owes its origin, the explanation of the object, I might say of the subject, which the artist has undertaken to represent, — the description and meaning of the hieroglyphic symbols which appear in detail, of their combination in a harmonious whole, and finally also the establishing of a system by which the deciphering of them is made pos-

sible, will demand your time and patience; but by this detailed investigation we shall finally arrive at the desired result. It will be demonstrated that this so-called Calendar Stone did not, as has hitherto been supposed, serve the Mexicans for highly scientific purposes, to wit: Astronomy, but for very profane purposes, for human sacrifices, with whose blood they thought to conciliate the anger of their gods. The rich sculptures with which the disc is ornamented will prove to be no hieroglyphics concerning the days of the passage of the sun through the zenith of the City of Mexico, or through equinoxial or solstitial points; but I shall be able to demonstrate to you that the artist has succeeded in these sculptures in bringing before our eyes a very abstract theme, namely, that of the division of time, and indeed that peculiar division of time which existed among the people of Anahuac before the Spanish conquest. This is a brief outline of what I propose to discuss in this lecture.

In a lecture which touches so closely the culture and civilization of ancient Mexico, a glance at that culture and civilization would be desirable, but for lack of time I must deny myself that pleasure. I shall call to your minds your recollection of the accounts of the Conquest, of all the impressions you have gathered and retained from your acquaintance with Mexican antiquities, paintings and curiosities. But as I have spoken of this monument as one upon which the divisions of time of this nation are said to be engraved, and as this representation and form of hieroglyphic symbols has been suggested, I consider it my duty to make some observations for the better understanding of this particular form of writing.

The Mexican hieroglyphics are not to be read in the same manner as those of Egypt or Assyria, by sound. If you look upon a Mexican picture-sheet, and see a sculpture, a group of connected ornaments made up of human heads, animals, flowers, etc., and see them projected either in a horizontal or vertical line, do not necessarily conclude that each ornament in a group is a letter, the group itself a word, and the union of many or few of such groups a sentence, the meaning of which can be deciphered by the aid of the alphabet-key. The Mexicans possessed a language very highly developed; they had expressions for each idea, abstract and concrete, and could convey them with wonderfully subtle shades, full of feeling and rich in thought; but to separate the human voice into vowel and consonant sounds, and to depict each individual one by an arbitrary mark, symbol or letter, and then to form of these letters the sounded word, and to place each syllable one after the other as we do in writing, was to them an unknown art. This has been lately controverted. It is claimed that a Yucatan alphabet has been found, that a Yucatan picture-book,—the so-called *Codex Tro*— has been thereby interpreted. A gigantic piece of nonsense has thus come to the surface. It is claimed that the Codex is a description of the Yucatecos from the glacial period, of the gradual elevation of the

chain of the Antilles, and like ante-diluvian events. This Yucatan alphabet is nothing more than an attempt by a missionary bishop, Diego de Landa, to teach the natives their own language phonetically, in our manner, but with their own symbols. I will not follow this subject further, but I am willing to give more detailed explanations hereafter if it is desirable.

The Mexicans, as we have said, used no phonetic system, but had an expressive picture-writing. When they desired to communicate with each other, they took the brush and color and depicted the most characteristic scenes of an event on paper. In these representations the fancy of the painter had full play. Each of several artists would depict the same event in a different manner, though there were certain limits to be observed. In expressing the various and daily recurring human dealings they bound themselves to an entirely distinct, conventional method of fixed form. For example, if they would convey the idea of *going*, we find always footsteps leading from one person to another or to a house. If it concerns *speaking*, there flies always from the mouth of the speaker a flake, representing the breath; when *singing*, the flake is larger, longer, and in a certain measure divided. If they spoke of a certain person whose name was "*Blackfoot*" they painted close to his head his name in hieroglyphies,—a foot marked with black dots. If he was called "*Water-nose*" they depicted a face over which a little stream of blue water was flowing. If the conquest of a city appeared in their annals, the typical picture of a conquest was a house under whose crumbling roof a triple flame was applied; but in order to show of what city or town they spoke, its coat-of-arms was painted close to it. These coats-of-arms showed in picture their names, and these names were always derived from some peculiarity growing out of their locality, or other prominent circumstance. Most of the cities were located on rising ground, for protection against inundation and the winds. On that account many of the names of cities end in *tepeque*, which signifies mountain. If there grew upon the mountain many *Zapote* trees, and if it was called for this reason *Zapotepeque*, the coat-of-arms is a mountain on which a *Zapote* tree is painted. If many quails were caught on the mountain there was represented the head of a quail.

These brief indications will be sufficient to explain that the so-called Mexican hieroglyphics were nothing but pictures of natural objects, or if collected in groups, were representations of scenes and events of their social and historical life.

To arrive at an understanding, these Mexican paintings should give us as little trouble as if we had one of our own ordinary picture-sheets before us, or any illustration torn out of a book, from whose particulars we had to guess the text which belonged to it. The difficulty of understanding it is as follows: At first sight, our unaccustomed eye is unfavorably impressed; the reason is that the Mexican painters did not draw like the practiced artist of to-day. They drew, so to speak, like

a highly-gifted but untaught child, without regard to the distribution of light and shadow, in mere outlines, in lines sharply defined; but all the main properties of the objects are vividly portrayed, and often exaggerated to caricature. The eye very soon pardons this deformity. We find this method of representation quite to the purpose, for in the great similarity of objects it never leaves a doubt as to what is intended. The peculiar difficulty in interpreting the pictures is that we may not know at all the objects represented. We may not know them, in the first place, for the reason that such objects, to-day, have entirely gone out of use. To this class belong many pictures of their gods and goddesses, *lares* and *penates*, but especially the entire paraphernalia of their complicated heathen worship. Secondly, the pictures may be unintelligible to us because they represent objects which belong only to those countries, zones, and nationalities where they exist: As for instance, certain tropical animals and plants, their utensils for cooking, for art, and for labor. Who, for instance, would recognize the coat-of-arms which we have mentioned above, of *Zapotepeque*, without having previously seen the particular structure of the tree, of its trunk, of its leaves, its flowers and fruits, or if he had seen it in a modern representation, would have recognized that Mexican style of representation? Thirdly, pictures for certain abstract ideas find a place here. Who would know, without being told, that the representation of the idea of a year was a ribbon or rope wound up in form of a knot? In this case, you see, the picture stands not only for the object itself, but for something else which men have been accustomed to associate with its form. The picture is indeed only a symbol. Let these few examples suffice; I must go on.

In overcoming the difficulties I have mentioned, and which we meet in the explanation of every Mexican picture-sheet, we have valuable assistance provided. In order to convey to the monarch, Charles V., a picture of the history of the lately conquered people, their customs, their resources, and the number of the newly acquired cities, Mendoza, the first Viceroy of Mexico, created a commission of three Indian painters. One was directed to picture the entire political history of the Mexican people, from the time of their immigration from the north to the execution of the last king, Quauhtemotzin, and to present it exactly as it was pictured in their annals. The second was directed to picture all the cities, or their emblems, and with each the emblems of the products which they sent to the metropolis in payment of their semi-annual tribute. The third was directed to represent the Mexican method of education of both sexes year by year up to 15 years of age, to show how the one was taught to be a good mechanic or soldier, and the other to be a skilful housewife. To each of these pictures an explanatory text was attached. We have therefore in this so-called Mendoza Codex, a political, economical, statistical and social history of the nation; but the most important fact is that care was taken to connect a

particular explanation with each individual figure, and of these there are upwards of a thousand. We have, therefore, explanations of nearly a thousand Mexican objects, exactly as the Mexicans presented them, and as all these objects belong to political, statistical and social life, we may be sure that we shall meet them again in each picture-sheet which we may examine. Their recognition will be the easier, as there is no essential change made by the artist in regard to the once-established outline, form or color. We have, besides, another authentic source of interpretation of Mexican hieroglyphic pictures, in the so-called *Codex Vaticanus*, a picture book, which was prepared by some new Mexican magnate of the church, for the Pope, like that of Mendoza for the Emperor. The *Codex Vaticanus* is a description of Mexican cosmogony, mythology, and the calendar. It is painted in brighter colors than the former, and, like that, each figure is accompanied by a special interpretation. In these we possess, from the earliest time of the Spanish conquest, when a generation of Mexican painters was yet alive, an entirely authentic key for the understanding of their conventional mode of expressing both objects and ideas. Besides these official interpretations, we have many other private ones. Later archæologists, of Mexican and Spanish origin, collectors and connoisseurs, have supplied us with many excellent works upon this subject, and have settled decisively the idea and meaning of a great number of the figures.

I have thus pointed out the chief sources for the study and understanding of Mexican hieroglyphics. Much still remains to be said. Taken by itself, no one of these picture problems can be explained successfully without a complete acquaintance with the political history of this people, and with their mythology, and without a profound reading of all the Spanish chroniclers, and especially the reports of the early missionaries, who, in order to accomplish their object, the conversion of the natives, were first obliged to become familiar with their mode of expressing their feelings by symbols or pictures. These missionaries have not, so far as we know, drawn a single picture, but their descriptions of the new and curious objects which came before their astonished eyes, may aid us in understanding the pictures themselves, for they are often so striking that we are sometimes unexpectedly able to find the corresponding picture upon some sculpture or painted sheet.

After this summary description of what Mexican hieroglyphics signify, and the sources where we must look for their interpretation, permit me, as a trial of my system, to interpret with you such a picture problem. As I mentioned before, this will not be undertaken with a painted picture, but with a sculpture, whose richness offers us an abundance of matter for investigation.

I will, in the first place, inform you in what year, by whose order, and upon what particular festival occasion, this stone disc was first made, where it was buried, and when it was afterwards recovered and brought

to light, and what people thought it signified. (The picture which you see here is an exact copy of the best photograph at hand of the Mexican Calendar Stone).

The disc is wrought from an enormous slab of basaltic porphyry. It stands out in relief from the surface of the block, 9 inches. The diameter is 11 feet 8 inches.

It was, according to our reckoning, about the year 1478, or nearly four hundred years ago, and only two years before the death of the then reigning king of Mexico, Axayacatl, that he was reminded by the high priest of the State of a vow that he had once made; who spoke as follows: —(And I will give the long text of the Indian writer, Tezozomoc, in the fewest words.)* "The building of the large sacrificial pyramid which you have undertaken approaches its end. You vowed to decorate it with a beautiful work, in which the Preserver of Mankind, Huitzilopochtli, could take pleasure. Time presses; do not delay the work any longer. 'I think,' said the king, 'to replace the sacrificial stone which my father once devoted to the God of the Sun, with a new one. Let that be laid aside, but carefully preserved. I will give the laborers provisions and clothing that they may select the most proper stone from the quarries, and I will send the sculptor gold, cocoa, and colored cloth, that he may engrave a picture of the sun as it is surrounded by our other great gods.' So the workmen went out and quarried the stone, laying it upon rollers, and 50,000 strong men rolled it along. But as it was upon the bridge of Xoloc, the beams gave way, the bridge broke in pieces, the stone fell into the water, and no one dared to remove it from the bottom of the lake. Then the king was angry and said: 'Let them build a new bridge, with double beams and planks, and bring a new stone from the quarries of Cuyoacan. Let them bring a second stone here out of which a trough may be made to receive the blood which flows as expiation from the sacrificial stone.'" When the stone had been quarried and prepared, and had been rolled over the bridge in good condition, there was a feast of joy. Here follows a description of bloody combats, the praise of the master, whom the king visited in his workshop, and the report that the stone had been completed by order of the king, with a picture of the sun in the middle, surrounded by the other deities. Again a bloody thanksgiving, celebrated for the completion of the trough, is mentioned. Then was the question asked, how should the immense stone be placed on the pyramid? After it was placed in position, we read that it was sunk in the surface of an altar. The altar is of stone, of the height of 8 men, and of the length of 20 cubits. Before it the trough was placed. Then follows the description of a bloody festival which was held for the dedication of this sacrificial slab, and upon it thousands of victims were slain. The king, as chief sacri-

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* Kingsborough's Mexican Antiquities, Vol. IX., Cap. 47-9. H. Ternaux-Compans, Paris, 1853. Vol. I., Cap. 54, page 287-293.

ficer, on the first day killed a hundred victims with his own hand, drank of their blood, and ate of their flesh; and so arduous was his labor, and so much did he eat, that he became sick, and soon after died. He had only time to have his portrait sculptured upon the surface of the rock of Chapultepeque, according to the custom of Mexican kings. So much for Tezozomoc's report. That the sacrificial stone here mentioned is identical with this picture, I will, in addition to the description, bring a still further proof. (See picture of the pyramid in Ramusio's collection).*

No doubt this stone served for all their bloody sacrifices up to the year 1521. In that year the Spaniards captured the city, and Cortez ordered the destruction of the entire pyramid, and that the canals of the city be filled with its fragments. Neither Cortez nor Bernal Diaz, nor any of the chroniclers of the conquerors, make mention of the existence of any such monument as the afore-described stone. They did not undertake its destruction; nay, they even placed it in the market-place, on exhibition, where the pyramid once stood.† This we have from a missionary chronicler named Duran, between the years 1551 and 1569, who says he has always seen it in the same place, and that there had been so much talk about it, among Spaniards and natives, that finally his eminence the Bishop of Montufar took umbrage, and ordered its burial in the place where it stood, in order that the memory of the infamous actions that had been perpetrated upon it might be removed from sight. Until the year 1790, no one of the many writers on Mexican antiquities has made the least mention of it. In that year the repair of the pavement of the market-place was undertaken. In a deep excavation the laborers struck a slab of stone, which gave such a hollow sound from the stroke of the iron, that they thought a treasure-vault might be concealed under it. When they lifted the slab, they found no treasure vault, but were astonished when they beheld on one side the spectacle of this incomparable treasure of ancient Mexican art. The clergy wished it to be again buried, but the art-loving and liberal Viceroy, Revillagigedo, ordered it to be exposed. He caused it to be

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* Ramusio's Viaggi, Giunti, 1556, Tom. III., page 306.

†Senor Alfredo Chavero, of the Liceo Hidalgo, of Mexico, in a pamphlet written on the Calendar Stone, (*Calendario Azteca, Ensayo Archæologico por A. Chavero, Secretario perpetuo de le Sociedad de Geografia y Estadistica de Mexico; Secunda Edicion*, Mexico, 1876), has the merit of having first discovered this interesting fact.

A strong proof was thereby given of the identity of our Calendar Stone with that stone-disc of the sun, which King Axayacatl ordered to be inscribed in the table of the altar placed on the platform of the great pyramid. For, if the existing generation of conquerors, according to Duran, recognized the disc exhibited in 1560, in the plaza of Mexico, as that on which Indians, as well as Spanish captives, were sacrificed, and, further, if the Bishop Montufar ordered this disc to be buried on the same spot (the plaza of the city of Mexico), from which in 1790 it was dug out again, there can be no longer any doubt as to the fact that the discs described by Tezozomoc and by Duran, are one and the same, *i. e.* The Calendar Stone.

Senor Chavero's reference is: *Historia de las Indias de la Nueva Espana, by Padre Duran, Edicion de Jose Ramirez.* Mexico, 1867. Tom. i., pag. 272.

built in on the southerly side of the cathedral, in the ashlar-work, of one of its towers, so that all could see it, and it is to be seen there to-day.

No one had then the least idea that such a stone had ever existed, or for what purposes it might have served. The archæologists said at once that it must have some connection with the worship of the sun. They thought the shield in the centre represented the ancient sun-god, and while they found the always well-known twenty pictures of the days of the Mexican month engraved about it in a circle, they gave to the disc the name by which it is still known, the Mexican Calendar Stone.

A professor of astronomy and mathematics, Don Leon y Gama, who was much devoted to Mexican antiquities, and who had at the same time a small work on Mexican Chronology in preparation, was officially requested to furnish an interpretation of these rare hieroglyphics. He accepted the commission, and produced, after twenty months of study and writing, a work in which he maintained the singular idea that the disc had served the ancient Mexicans as an astronomical instrument. He had deciphered five hieroglyphics upon it, of which one represents the day upon which the sun goes in its course from the north, another the day on which it goes back in its course from the south through the zenith of the Capital of Mexico, the third and fourth hieroglyphics depict the two days of the passage of the sun through the point of equal day and night, the fifth is a hieroglyphic of the day of the Summer solstice. As this theory proceeded on the supposition that the Mexicans must have been acquainted with the globular form of the earth, with our divisions by parallels and meridians, and our entirely modern solar system (an assertion of which we have positive proof to the contrary); and still further, as Gama could not furnish the main proof,—to identify the five hieroglyphics, or to prove that they appear at all in any painting or sculpture—and as no authentic interpretation could be given in corroboration of his assertion, this strange astronomical conception of the monument was assailed on its first publication in a book by his own countrymen. He, himself, was requested by the scientific men of the city to make a public defence of his theory, and as he did not make his appearance, he and his theory were held in contempt. His description of the disc is inaccurate and in many places entirely false, superficial, and full of imperfections. He disposes of two of the zones on the disc by the simple remark that they represent, the one the *photosphere* of the sun, and the other the Milky Way in the tropical heavens! Gama is up to to-day the first and only interpreter of this monument.* In spite of the want of proof in his assertions and of the

* While this translation into English was in preparation, *The Nation*, New York, August 8, 1878, prints an article, in which the claim is made that Senor A. Chavero, in the above-mentioned pamphlet, has given us an interpretation of this Aztecan monument; that therefore, my claim to be the first interpreter of it, after Gama, is a *mistaken assumption*, and finally, that

ridiculous nature of his conception, he as well as the monument will continue to be quoted by those who are interested to establish the superior culture of the ancient Mexicans.

The artist, as I said before, has selected as the subject of this altar-plate, the division of time. How he has handled his subject exhaustively in the symbolic art manner of his nation on this stone disc I will endeavor to explain to you, and I hope by convincing proofs. I wish to make you acquainted with the system of the Mexican division of time as described by the Spanish missionaries and other writers, all of whom are corroborative of each other.

The Mexican year was a solar year of 365 days. The saying was that one of their oldest astronomers, Cipac by name, in order to bring the days of the solar year to a correct number, had added to an old calendar of 360 days, the last five days. Each day had a particular name except these last five, which had no names; they were held as nameless, unfortunate days, and were called *nemotemi*. This year of 365 days was divided into two parts. The larger and first portion, of 260 days, was called *meztli pohualli*, or moon reckoning, *mez*, moon, and *pohualli* reckoning. The smaller and latter portion, of 100 or 105 days, was called *tonal-pohualli*, or sun reckoning. Besides this division they divided the year into 18 months, and gave to each month 20 days, and these 360 days were the foundation of their reckoning. Each month of 20 days had a subdivision of four weeks of five days. A certain number of years, 52, made what the Spanish writers erroneously called

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It is even *particular and striking to what an extent the evidence of the learned Mexican scholar agrees, if not verbatim, at least substantially*, with the contents of my Vortrag.

My answer to these remarks has appeared in *The Nation*, of Sept. 19, 1878. The writer of the article, brought by this answer to an absolute silence regarding that latter imprudent and even odious insinuation, insists, however, on his statement that Senor Chavero has given an interpretation, and has his reply printed at the foot of my answer.

This reiterated claim, I am forced to declare, again, is unjustified. I maintain what is expressed in the Vortrag. Senor Chavero, in continuation of his very interesting pages on the history of the Calendar cut in the stone, attempts, in a few additional pages, to explain only a certain set of the hieroglyphics which claimed his main attention; as also A. von Humboldt did when he explained those engraved in the zone of the 20 days. Neither of these scholars, however, has gone over the whole ground of the monument, and endeavored, as I did, to prove that the whole sum of the multifarious symbols will turn out to be, so to speak, a text, the purport of which is a full representation of all those symbols which the ancient Mexicans used for their peculiar *division of time*, and which was chosen by the sculptor as an appropriate subject for the celebration of the lapse of the cycle in the year 1479 A. D.

Now, if A. von Humboldt has given only a fragmentary interpretation of the stone, and never thought to call himself its interpreter, nor has been called so by others, and neither Albert Gallatin nor Brantz Mayer, two scholars who have written largely on the same subject, have pretended or were pretended to be interpreters of the monument, I do not see why Mr. Chavero, under equal conditions as the aforesaid authors, should be called so,—unless the writer of the article, in order to suit his purposes, intended to force upon the term "interpretation" a meaning different from that which science has always given it. To all these gentlemen due merit is given in a larger treatise which I intend to publish. The restrictions of a public lecture forbade more elaborate literary references.

a Mexican century,—*un siglo*. Each year of this period or cycle of 52 years had its particular name. When this cycle ended, the years of the succeeding cycle bore the same names. Finally, the Mexicans reckoned according to the periods of creation, of which they had four. The world was, according to their tradition, destroyed by the sun, and four times was again reconstructed by it. The first destruction was by war, the second by hurricane, the third by rain, and the fourth by a general flood. The traditions of the duration of these periods of creation vary. The name of the year of creation is always the same; they called it a sacrificial knife,—*I Tecpatl*. This year, *I Tecpatl*, forms the basis of all their chronological calculations. The Mexican system of the division of time is exhausted by this statement. Allow me now to make mention of the day which the Mexican astronomers are said to have interpolated after a lapse of four years, in order to make the length of the solar year more correct. This assertion, first made by modern writers, is not upheld by a single authentic source. No Indian, no Spanish writer, no picture, no sculpture, gives any justification of such an interpretation. This assertion is not even fortunate enough to belong to the class of well-grounded suppositions; it belongs to the class of learned fictions.

The symbolic figures for the representation of each of these divisions of time we shall find expressed on this disc, and indeed engraved upon the zones, which are always laid concentrically around each other. Let us look first at the centre shield, which is formed by these zones.

A face looks out of it, ornamented with all imaginable decorations. It has a neck-chain, ear-rings from the middle of which feathers depend; from the under-lip hangs down a *tentetl*, lip-stone, set with jewels; the forehead is surrounded by a fillet on which are two large jewels, and in the middle is a hieroglyphic symbol. If I do not mistake, the hair is represented braided in skeins. If we analyze the small symbol on the forehead, we shall find the name of the sun-god, *Atonatiuh*, expressed on it. Here, the tub with water in it, and drops springing out, is the Mexican symbol for water, *atl*, in the *Nahuatl* language of the natives. Above this water rises a disc whose margin is set with four small circles. This is the emblem of the disc of the sun when seen in connection with other objects. The sun was commonly called *tonatiuh*. If the sun-god was intended in his quality of destroyer of the world, and particularly as destroyer by the last great flood, this was expressed by the prefix *Atl*, and both words were blended together and called *Atonatiuh*. In view of this explanation of the name, it is easy to understand why the artist engraved the face with the lineaments of extreme old age. The eye-sockets are deep-sunken, deep wrinkles appear upon the forehead and the cheeks. The chin and jaws are lean and emaciated. The artist did not wish to represent the god as a brilliant constellation, but as the creator, the giver, the divider of time; as

the very oldest being that ever existed. We shall find him now surrounded by all the symbols of time.

It is easy to recognize the above mentioned symbols of the day as expressed in 16 hours. It is evident that the four larger pointers indicate sun-rising, meridian, sun-set and midnight. The subdivisions of 8 hours are marked by the smaller pointers, while the 16 hours are indicated by the small towers at corresponding distances. Their location at exactly equal distances, favors the assumption that they were also employed for dividers, as they occur on every picture or sculpture extant of the sun's disc. But I am unable to tell you why our artist and all his predecessors, instead of further subdividing by pointed indices, have chosen the figure of this small tower.

Let us turn now to the symbols of the 20 days of the Mexican month. You will not find them in the broad zone which surrounds the centre shield, but in the next and smaller one, which is composed of 20 small houses. You will find the picture for the first day, called *Cipac*, at the left of the apex of the pointer of the diadem, as we shall always find the series of days running towards the left. The bristling head of some nameless monster signifies the priest-mask of the astronomer who, as the story goes, interpolated the five days to the 360 of the old sun reckoning. They thus gave to the oldest of their calendar heroes the first place in the circle of days. The second day, called *Ehecatl*, wind, is represented by the head of a crocodile with open jaws, and a fillet upon its head. The third day is called *Calli*, house, a Mexican house with flat roof. The floor, rear-wall, roof, ceiling, pillars and cross-beams are clearly defined. The fourth day is *Quetzpalin*, or lizard. The fifth, *Cohuatl*, or serpent. The sixth, *Miquitzli*, or skull. The seventh, *Matzatl*, a stag. The eighth, *Tochtli*, a rabbit. The ninth is *Atl*, water. The tenth is *Itzcuintli*, a hound. A. von Humboldt expresses surprise that this head is the only one in the entire zone which had its face turned to the right. He had seen it thus in Gama's drawing, but the original shows it in the same position as the rest. The eleventh day is *Ozomatl*, a monkey. The twelfth is *Malinalli*, a creeping plant, a skull surrounded by this parasite,—the decoration of a hero fallen in battle. The thirteenth day is *Acatl*, a cane. This is a tropical bamboo, growing only in moist places, and therefore is represented standing in a tub; the bud, breaking from its envelope of leaves, and the stalk are easily recognized. The fourteenth day is *Ocelotl*, the tiger. The fifteenth, *Cozcaquauhtli*, a king vulture. The sixteenth, *Quauhtli*, the eagle. The seventeenth, *Ollin*, a minature of the great centre shield, the destruction of the world. The eighteenth is *Tecpatl*, the sacrificial knife. The nineteenth is *Quiahuitl*, the head of the statue of the god of rain. And the twentieth day is *Xochitl*, a flower, with the water tub, the growing bud, the fruit, a kernel of corn and stamens.

With these 20 representations of the days in an encircling ring, the unity of the idea of a full month is expressed. That these are indeed

the symbols of the 20 days is more than confirmed by the many pictures which we possess in the Mexican Codices. It is interesting to observe that none of the painters or sculptors permit themselves to deviate essentially from the once established type of expression, either in outline or in color.

In the interpretation of the following zone, that of the squares with five points enclosed, and also with the other one around this, consisting of small *Glyphs*, there is more of difficulty. No picture or text can be found in accessible sources. In consequence of this lack of external evidence we must try to develop internal explanation of their meaning. Therefore let us first examine the construction and arrangement of their several parts. The zone of the squares is as you see interrupted by the main pointers, and thereby divided into four equal parts. Each of the parts consists of ten little houses. Each of these encloses five points. The prevailing idea that upon this disc the ancient Mexican calendar is represented leads us to suppose that there was in the sequence of the squares, as well as in the numbers enclosed therein, a concealed calculation which referred to the calendar. Let us see, now, what product we find by adding the given numbers. In each part are ten little houses, each with five numbers, therefore we obtain 50 for each part, and 200 for four of them. I frankly confess that I had no idea that the counting of the 200 numbers could be increased to 260, but Gama has shown me the way. He says in his description, always so hastily written, regarding this important zone, the following: "In it you find the ancient Mexican reckoning,—*Metzlipohualli;* only 200 days are visible. You must look for the missing 60 under the pointers." That sounds very artful. We cannot remove the pointers and look under them. If we could do that we certainly should not find the 60 days under them. Further explanation Gama does not give. But we will take this bare assertion as a hint whose meaning it is worth while to investigate more closely. Is Gama indeed right? and has the artist, forced as he was to show the pointers on the disc, demanded of the observer to look for the missing days in the places which he had to cover with the pointers? Now if these pointers take just as much room as is necessary for placing under them the 60 numbers, or what is the same, 12 small houses, then the reckoning must be right. Let us take a compass, therefore, and measure how much space each leg of a pointer covers. We find it takes just the room of one and a half houses. One pointer thus gives room for three houses, or 15 numbers. Now as we have only four main pointers, we obtain room for 60 numbers. These 60, added to the 200 which we have already, gives a hypothetical total of 260 numbers. Now the Moon-reckoning, *Metzlipohualli*, has just as many days as we have found numbers here. It is, therefore, very probable that each number is meant to represent a day.

But this is thus far only a supposition. It might be easily said that the reckoning was right merely by accident. Has not the artist himself

given some certain indication that directs the observer to find the missing 60 numbers under the pointers? Look at the cross-lines which have been drawn over the pointers; they are in exact continuation of the rings with which the zone is surrounded. The ring-lines reach exactly to the end of the foot of each pointer. We must not suppose them to serve an ornamental purpose. Such a purpose could only have been reached if the artist had drawn all the lines parallel with the contours of the pointers. But by drawing the lines across the pointers, he has certainly indicated his meaning that the zone of the squares is continuous under the feet of the pointers, and that the corresponding numbers are also concealed there.

Still we are not certain whether these so found 260 numbers are really symbols of the 260 days of the moon's reckoning. We shall be perfectly sure if we discover besides these 260, the other 105 which complete the year of 365 days.

And in what more fitting place than directly in the following zone, that of the *Glyphs*, may we expect to find the 105 missing days? The arrangement is, as you see, entirely as in the preceding zone. This zone is also divided into parts by the intervening pointers. But we perceive not only four but eight parts. The four little pointers have stepped between the main ones. The zone also has a new symbol, a *Glyph*, which, as it appears to me, is an imitation of a kernel of maize. Evidently the days of the sun-reckoning should be different from those of the moon-reckoning. Consequently the different form of representation is no stumbling-block. The principal thing is that the reckoning permits 105 such *Glyphs* to be found in the zone. Beginning to count, we find 10 *Glyphs* in each of the upper six divisions, and 5 in each of the two lower ones. This gives us 70 visible *Glyphs*. There are still 35 *Glyphs* wanting for the completed number of the sun-reckoning. But we observe that the artist again demanded of us to imagine that the missing number is concealed under the pointers. He has drawn the lines of continuation of this zone also across the pointers, and not only over the four large ones, but also across the four smaller ones. Nay, he has even (and I am afraid induced by very stupid advice), begun to carve a *Glyph* on the surface of the evening (west) pointer, within the cross-lines. We are therefore certain of his intention for the continuation. Let us, as before, measure, to find how many *Glyphs* will go under the space of each foot of a pointer. We find the measure gives one and a half *Glyphs*. We have 16 such spaces, and therefore room for 24 such *Glyphs*. These, added to the 70 which we have, give 94. If we would be consistent we must imagine 10 *Glyphs* more concealed by the feathers of the helmets, and we thus reach the sum of 104 *Glyphs* within the zone, divided into eight parts. Now we are in distress. We need not only 104 but 105 *Glyphs*, and without the discovery of this last one our entire speculation would be good for nothing. Wherever

we look upon the monument this one single *Glyph* is nowhere to be found.

Now, gentlemen, the artist must have been just as much at a loss to represent this last *Glyph*, as we are to find it. The number 105, an odd one, does not, as we see, easily allow itself to be divided among the eight divisions which are equal to each other. This was as clear to the artist as to us. But let us think how, if he had an intention to represent 105 days of the sun in this zone, he could have done it?

In order to help himself, he could have drawn the lower part of the circle, unnoticed by the eye of the spectator, a trifle larger, and thus have made room for the 105th *Glyph*, or he could have carved each of the *Glyphs* in the lower part of the circle a trifle smaller. But the circles, as well as the *Glyphs*, are uniform. He might have been able to put the missing *Glyph* between the openings of the lower large pointer, but he did not; he would thereby have defaced the symmetry of the whole monument. How did he help himself? In the theoretical exposition of the ancient Mexican division of time, I have made mention of the last five days of the year, the *Nemotemi*. In a carved representation of such a division of time as we have on this monument, these five highly interesting days ought not to be wanting. But if they are contained here, then our idea of the purpose which the artist had in his mind will not only be better corroborated, but we shall at the same time be obliged to admit that the artist was perfectly aware of the customary computation of 365 days in a year. Your eyes have, no doubt, before this, found the place where the artist brings to view the five *Nemotemi* days. Here! they are inserted over the large midnight pointer, between the two large lower tablets of the central shield. Now imagine this section, which is indeed nothing else than a portion of the double circle of the year, brought down, and the impression is created as if its central *Glyph* occupied just the space where it is missing for the computation of the 105 days of the sun, and in which place the artist did not trust himself to depict it, for reasons which I have already mentioned. In the strongest meaning of the words the artist has not finished his task. He demands that we accept the missing *Glyph* as standing with the *Nemotemi*. I think we can accept this proposition. He, as a true artist, has spoken more clearly by a hint than we could ever have supposed at the beginning. He was hard pressed, but he has extricated himself skilfully. "How?" he thought, laughing, "I will leave you to guess!"

Now, for the first time, we have a right to suppose the 260 numbers in the former zone to represent in reality the 260 days of the moon-reckoning. The numbers of each separate zone form the arithmetical complement of the other. Each, separately, gives us an insight in its own peculiar separation of the Mexican year, to wit, in the so-called moon-reckoning of the 260 days, and in the sun-reckoning of the 105 days.

We have found, up to now, the symbols of the 16 hours of the day,

those for the 20 days of the month, the month itself in the unity of the day-circle. We have found besides, the sun of 365 days as they were divided into 260 and 105 days, and finally the five *Nemontemis*. We might ask besides for a representation of the division of the week. Now here it is. The 5 points in each square shall represent the above-mentioned Mexican week of five days.

There remain still to be found representations of the 52-year cycle, and for the four eras of creation.

We shall find the symbol of the cycles of the 52 years engraved in this last and broader zone which surrounds the entire disc. What is the proof of the symbol? We have an external proof of it by pictures in the so-called Mexican Codices. I have selected some for your inspection. Here they are. (See the drawings for the collection of Kingsborough, Codex Vaticanus, pl. 91; Codex Boturini, pl. 10; Codex Tellerianus. pls. 6 and 8.) Compare these pictural paintings with those sculptured on the zone. You will find that they agree completely. In both a shaft is sunken into a round hole out of which some involuted object comes forward. We observe on each of the pictural representations, that each is divided in halves, the one painted gray, the other, red. We find the same bipartition on this sculpture. What this symbol signifies becomes clear to us by the observation that on the painted tables, representing the years, we always find the same symbol after the lapse of 52 years. We find it always connected with the symbol of the 52d year. In one place, in Kingsb. Col., Vol. V., Cod. Tel., page 150, pl. 8, it is accompanied by an explanatory text which says,—"This is the mark for the binding together of the 52 years." In this way its significance as the symbol of the 52-year cycle is established, and an external proof is furnished. The internal proof proceeds clearly from an analysis of the symbol in its different parts.

The shaft represents the stick for rubbing,—*tetlaxoni*, which, put in a round disc of dry wood, produces, by friction, the sacred spark, by twirling it round and round. The volutes are the smoke arising therefrom, made red by the reflection from the kindled flame.

For a better and more vivid understanding of the symbol, I will give you in brief words a description of the re-kindling of the sacred fire, as the chroniclers have transmitted it to us.

The ancient Mexicans had a superstition that the sun-god would destroy the world in the last night of the 52d year, and that he would never come back. To prevail on him to remain, they offered to him of their own free-will the greatest sacrifices; not a human life only, but also on all their hearths and in all their dwellings and temples, they extinguished their fires. They left it to the goodness of the god to give them back this element so necessary to mankind. They broke all their household furniture; they hung black masks before their faces; they prayed and fasted; and on the evening of the last night they formed a great procession to a neighboring mountain. Arriving, there is found a

man lying on a circular stone, who gave himself voluntarily as a sacrifice to the god. Exactly at the midnight hour a priest thrust a knife into his breast, tore out the heart, and raised it towards the starry heavens with uplifted hands, while another priest laid a small, round block of dry, soft wood upon the open wound, and a third priest, springing on the stone and kneeling over the body, placed a hard stick perpendicularly on the block, which he then with his hands caused to revolve. This violent friction produced a spark which was caught up and was immediately carried to a neighboring funeral pile, whose rising flame proclaimed to the people the promise of the god to delay for a season the destruction of the world, and to grant to mankind a new lease of 52 years of existence. Wherever among the nations in Asia Minor and other parts of the continent of Asia, the worship of the sun prevails, we read always of the same ceremonies at the periodical reproduction of the sacred fire, but perhaps not with the same bloody rites as in Mexico. Three pictures showing the kindling of fire can be seen [1]) on a wooden board in the Codex Selden, pl. 10; [2]) the same procedure over the body of a serpent in Codex Laud, pl. 8, both in the Kingsborough collection, and [3]) the same scene upon a human body in the Codex Veletri, Fol. 34.

In this way the existence of the symbol indicating the larger division of time, the cycle of 52 years, is found to be represented on the monument.

You will observe, within the upper part of the same zone, two other groups of sculptures, which give the idea of knots or loops. Such is indeed the case. What do they mean? After a close examination of the painted annals, it appears that this knotted loop is a second symbol, indicating the lapse of a cycle of 52 years. This symbol too, like the former, which represents the rekindling of the sacred fire, returns like it each time at the end of 52 years; and not closely connected, and underneath it as the former, but crowded in so imperceptibly that I only acquired the knowledge of its existence, when in the collection of Squier I saw a picture of Mexican annals where the artist had not crowded it in but had painted it separately underneath. Near it was written in the *Nahuatl* text the word *Molpiynxihuitl*,—translated it means the binding together of the years. We say, a century has elapsed,—the Mexicans said, we bind the years together.

The copies in both cases are, [1]), in Kingsborough Col., Cod. Boturini, pl. 10; [2]), Codex Squier. I will mention at the same time that the Yucatecos, also the artists of the Palenque sculptures, have used the same knot as a symbol for a period which had elapsed. The discovery of these symbols and the establishing of their chronological signification, will be of value in the future, to throw more light on the history of Central American nations, as soon as we shall have secured more material for study.

We now come to the last of the divisions of time,—to the era.

You will find their symbols represented on the four large tablets which are grouped around the head of the sun-god in a highly original manner. These eras, as I have said, were great cosmogonic epochs, about the duration of which the painters do not seem to have entirely agreed. The number of years indicated by them is various. It is sufficient for the moment for us to know that the first era (the table for which is above the sun-god on the right hand) represents the destruction of the world by war. Tradition tells us that tigers went forth and broke the bones of men. The head of this tiger wears an ear-ring with a curled feather, and a tassel depends from the ring. The four numbers shown in this tablet do not signify dates of days or years. Four was the sacred number which appears everywhere, expressed in circles or lines where sun-feasts or objects particularly connected with them were concerned. You see this number, four, repeated in the three other tablets, and also in a larger form in the interstices at the sides of the tablets, and once more in the same manner at the right and left and close to the border of the medallion which incloses the head. But the symbol affixed to the upper tablet at the left, 1 *Tecpatl* (one sacrificial knife), is a genuine symbol of the day, probably signifying the very day in which the festival was celebrated in memory of the first destruction of the world. The second tablet has the symbol for *Ehecatl*, or wind, in memory of the epoch when the world was destroyed by a hurricane. This epoch is separated from the first by the point of the diadem of the sun-god, and crowded in between these is visible an interesting smaller sculpture,—a wall with towers of varying size, rent, and the crumbling and falling roof lifted by the wind. Observe the small symbol for the breath, or wind, a tassel hanging from the side of the larger tower. The destroyed building therefore signifies the royal city. If, as I suppose, the destroyed building means *calli*, or house, and the round button on the roof means *one*, we should have before us the announcement that on the day 1 *calli* a great festival was celebrated to commemorate the second destruction of the world. If we turn the disc half round towards the upper side, we recognise in the third tablet the head of the god of rain,—*Tlaloc*. The world, it was said, had been destroyed for the third time by rain. Rain drops flow down over the nose and the neck of the god. The festival of this destruction seems to have been held on the day 1 *Quiahuitl* (1 Rain), for we see the symbol for this day placed at the foot of the tablet. In the last tablet you find the representation of the fourth destruction of the world, by a great flood. Nothing has more strongly led to the supposition that there might exist a connection between this American nation and those of the Orient than the communication which the natives at the time of the conquest had made to the missionaries, that such an event had occurred. A great flood, as they report, had inundated the world thousands of years ago. Two persons, man and

woman, the one *Coxcox*, the other *Xochiquetzal* by name, had saved themselves in a boat, and landed on the top of a mountain. After a time a vulture came with a bone in its beak. "The destruction is still going on," said *Coxcox*. But after a while a humming bird came with a flower in its beak. This was a sign that things on the earth were again produced. The pair alighted from their boat, and from them are descended the whole human family. This account is regarded in more modern times as a fabrication of the priests, and the pictures of it, which are in existence, are considered simply as inventions. (I will show you now such a picture. It is from the work of Gemelli, *il giro del mondo*, Vol. VI., and is taken from the so-called picture of the migration of the Aztecs. Out of a sheet of water there projects, as you see, the peak of a mountain; on it stands a tree, and on the tree a bird spreads its wings. At the foot of the mountain peak there comes out of the water the heads of a man and a woman. The one wears on his head the symbol of his name, the head of *Coxcox*, a pheasant. The other head bears that of a hand with a bouquet [*xochitl*, a flower, and *quetzal*, shining in green gold]. In the foreground is a boat out of which a naked man stretches out his hands imploringly to heaven). Now, still under the impression of this picture, turn your eyes to the sculpture in the tablet. There you will find represented the flood, and with great emphasis, by the accumulation of all those symbols with which the ancient Mexicans conveyed the idea of water,—[1]), a tub of standing water; [2]), drops springing out, not two as heretofore in the symbol for *Atl*, water, but four drops; [3]), the picture for moisture, a snail; [4]), above, a crocodile, the king of the rivers. In the midst of these symbols which in their combination evidently express abundance of water, you will notice the profile of a man with a fillet, and a smaller one of a woman. There can be no doubt that these profiles indicate the Mexican Noah—*Coxcox*, and his wife—*Xochiquetzal*, and at the same time the story of them, and the pictures representing the story have not been invented by the catholic clergy, but really existed among the nations long before the conquest. At the foot of the tablet stands the date of the festival day 7 *Ozomatl*, or 7 Apes.

My task to furnish a proof that the disc contains a complete sculptured representation of the division of time which prevailed in ancient Mexico, is mostly completed. We have found the 16 hours of the day, the 20 days of the month, the 5 days of the week, the 365 days of the year, the 5 *Nemotemi*, the two subdivisions of the year of 260 days in the moon-reckoning and the 105 days in the sun-reckoning, the symbols for the cycle of 52 years in two different forms, and lastly the four eras.

You will also ask me the signification of another zone—of that which lies between the zone of the sun-reckoning and that of the cycles. We will call it the zone of the rain-god,—*Tlaloc*. By the discovery of entirely analogous pictures in the painted annals "of rain streaming from out of the clouds," the explanation of the twelve sculptures resembling each

other, is justified. Under each of these clouds discharging rain you will observe four drops falling on a bed of earth, represented by three furrows in which there lies a seed-corn. This was the mode of representing cultivated land. In consideration that on the great sacrificial pyramid there stood, as I showed you on the Ramusio drawing, not only the temple of the sun, but also that of the rain-god,—*Tlaloc*, the artist, on the occasion of the consecration of the pyramid, of the dedication of the sacrificial slab, brought also his homage to the rain-god, by a representation of the rain, the fertilizer of all things.

But I have not yet completed my explanation of the disc of the sun. The zone of the cycles owes us still more important disclosures. As yet we know only what each of these cycle-tablets means; not what all together signify. As the zone, *Metzlipohualli*, would have remained unexplained if we had looked only at each small house by itself and not at the meaning of them regarded as a whole, so it is here. We shall have to *count* the tablets in order to solve the problem which it is evident the artist has laid before us in connecting them with each other. It is evident that they must be connected with each other, as a whole series of tablets, and consequently as a series of cycles or festivals. You see each of these tablets brought close to the border of the next one, in the same manner in which the painters used to represent the series of successive years (as you will see here on this painting, copied from the annals) in which the frame of each year appears closely connected with the preceding one. On one disc the series and connection of the sculptured tablets of the cycles begins at the bottom, from the two heads decorated with helmets. Whom these heads represent I am unable to tell. The artist may have had in his mind to represent the discoverer and improver of the calendar of the sun. From them the zone goes round to the right and left and each half ends in a pointer above. These two pointers converge towards a conspicuous tablet between them, which crowns the whole disc.

By counting the tablets, we find 12 on each side, and 24 in all. Now if each of these tablets and the corresponding cycle includes 52 years, then 24 such tablets would express a total of 1248 years. What we have to do with these 1248 years has clearly been indicated by the artist. We must bring them into connection with the large tablet at the head of the disc, for nothing can be understood by the two pointers alone. These pointers have a certain function to perform. They are, as it were, the leaders of their respective cycle columns. They move them towards this crown-tablet and thereby indicate that these two columns should be brought into a certain connection with it. The true meaning of this connection will not be understood before we know what the symbol engraved on the crown-tablet may signify. Nothing is easier to decypher. It is that of *Acatl*, a cane, which we have become acquainted with as the symbol for a certain day. We see added to this symbol the number 13; consequently we read 13 *Acatl*. Now, as 13 *Acatl*

is a well-known name for a distinct Mexican year, to wit, for the last year of a cycle of 52 years, let us translate this year of 13 *Acatl* into our own chronological language. To do this I simply refer, for I must be brief, to the authentic reduction tables which I can show and explain if it is desired. This year, 13 *Acatl*, changed into our corresponding year will give us A. D. 1479.

A year engraved in such a place as this evokes from the beginning the supposition that it was intended to designate a time in which this work of art was made and consecrated to its public uses. We disperse all doubts if we call to mind the donor of this altar-disc, the king *Axayacatl*, of whom the chronicler, *Tezozomoc*, tells us that, sickening in consequence of his feast of consecration, he lived but a year longer. The reign of this king was from 1466 to 1480. *You see, therefore, how reliable is the report of the historian*, [Tezozomoc, and that the symbol, 13 *Acatl*, can not fairly be understood to signify the day 13 *Acatl* of the Mexican calendar, but must be interpreted by the year of this very same name, which year is found equivalent to ours, A. D. 1479.] Now, the connection into which the artist wished to bring these two semicircles of cycles to the year A. D. 1479, was no other, as it seems, than to inform the observer that when, in this year, 13 *Acatl*, he carved the altar-disc, he had found mentioned in the annals 24 festivals of the re-kindling of the sacred fire. This, therefore, in our idiom, would signify that the Mexicans, in the year A. D. 1479, had a recorded national existence of 1248 years. For this reason, the beginning of their national era would be the year A. D. 231.

It is not difficult for us to guess what particular historical event was meant to coincide with this date, if one is only familiar with all the traditions, the accounts of the missionaries, the collected labors of the chroniclers, and the explanations which have been made even so recently as the last century, relating to the history of the people of *Anahuac*. I cannot go further into details, however interesting they appear to me. Only so much I may say: It is evident from the scrutiny of all the mentioned authorities, that the annals indicate the middle of our third century as the time when the people arrived, who, coming from the three eastern harbors of Central America,—Tampico, Xicalanco and Bacalar—penetrated into the interior of the country, killed the giants who inhabited Cholula, and became, in Yucatan, Honduras, Chiapas and Mexico, the founders and builders of those numerous towns and temples whose ruins we to-day behold with wonder. The disc, therefore, with its chronological zone, should be considered one of the most reliable authorities on the earlier periods of ancient Mexican history. On the one hand it gives a historical date; on the other hand it confirms one which long ago was only a speculation, and for that reason always regarded with doubt.

[Another question is still to be solved, namely, what use can be made of the symbols for the *ligatures?* Each ligature was found to represent

one cycle, and since we have two bundles of these ligatures, each of four symbols, on the disc, the product of multiplying 8 by 52 would give a sum of 416 years. Thus much, however, is clear, that these 416 years were not intended by the artist to be *added* to the 1248 years. Had he so intended, we do not perceive why he should not have increased the number of the 24 tablets to 32 tablets at once. He would have found the room for them, if he had only sought it. In this perplexity, the well known dates of written Mexican history will come to our aid, and lead us on a track, which very probably, will afford a reasonable solution of the problem. All chroniclers agree in speaking of the year's date of a memorable event that occurred in the middle of the 11th century: that of the dispersion and ruin of a mighty and highly cultured race, which for long centuries had swayed the destinies of Anahuac, civilized the ancient indigenous race, laid the foundation of social, political and religious order, and built sumptuous palaces and temples. Yet this nation, at the epoch indicated, afflicted by drought, famine, pestilence, and also by domestic revolution, had given way to the irruption of other races, coming from the North of Mexico. Several Northern tribes, we are told, had come, one after the other, settled on the ruins of the former, and gradually adopted from the few and highly civilized remnants that civilization which anciently had formed its glory. The writers commonly give that ancient race the name of the *Tultecas*, to the invading barbarians, that of *Chichimecas*, of which latter, the Aztecs, were those who came last, and who on the lonely island of the Tezcuco-lagoon, had succeeded in building up the splendid town of Mexico-Tenochtitlan, and very soon arose to such a power, that the surrounding tribes, willingly or not, acknowledged their supremacy.

Now, this total destruction of the so-called Tultecan Empire and the first invasion by Chichimecan tribes from the North, is generally set down in the chronicles under the year date of 1063 A. D. It is a round chronological number and will be found to bear the name of 13 Acatl. If we now incline to make use of this year's date of the overthrow of the ancient Tultecan dynasty set down at 1063 A. D., and would subtract the sum of these eight cyclical ligatures (which is 416) from the date of the inauguration of the disc, 1479, we should come to the year's date of 1063 A. D. It was the date of the important national event, which could not have escaped the knowledge of the annal-painters, since we learned that they knew enough of their ancient history to carry it back as far as 231 A. D. These 416 years, therefore, would represent the full epoch occupied by Chichimecan history, from 1063 to the year 1479 of our Disk.

Let us now follow this same train of thought and suppose that the artist, who was a Chichimecan by nation, but an Aztec by tribe, when he was writing history with his chisel on the disc, had felt desirous of incorporating on it also a date of special interest to his tribe, the Aztecs,

namely, that of the foundation of the Aztecan dynasty, how could he do this better than in the way as it seems he actually did it? We allude to the peculiar circumstance of two tablets of rekindling the sacred fire severed from the remaining series of tablets. These two tablets, translated so to speak into the language of numbers, represent *two* cycles, which give us the number of 104 years. It happened that exactly in the year 1479 two cycles had elapsed since the ascension of the first Aztecan king, Acampichtli, to the throne of Mexico. This memorable event in Aztecan history we find set down in the printed annals as the year 13 Acatl, or 1375 A. D.]

Much more might be said about the contents of this chronological zone, which will not escape the attentive observer, but I must refrain from giving more information just now. I must refrain also from speaking of the conclusions which might now be drawn from the establishing of so early historical data, in explanation of still earlier periods, dates, it is true, which have been indicated solely in the painted annals. I could make you acquainted with what might be understood by the date, *X Calli*, or 137 A. D., particularly in what year the earlier annals make mention of a great eclipse of the sun. Also, with regard to the date 1 *Tecpatl*, about which the astronomers are said to have had a congress for the correction of the calendar, and which corresponds to the year 29 before the birth of Christ. But I have already occupied your time and attention beyond the intended limits, and I close my lecture with my warmest thanks for the honor of so large an audience.

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*Note by the Translator.*

The references which now appear as foot-notes in the *Vortrag*, and several paragraphs of the text, were supplied after publication, by Dr. Valentini, at special request, and in the interest of completeness.

A short biographical sketch of the author may not be without interest to his readers. Philipp J. J. Valentini was born at Berlin, Prussia, in 1828. His father was a teacher of foreign languages, and he was early trained to philological pursuits. He was educated in the Lyceum of Rosleben and the Gymnasium of Torgau, and studied jurisprudence at the University of Berlin, where he was appointed *auscultator* of the *Kammer gericht*. Interrupted in this career by political disturbances, he was forced to enter the army. In 1854 he went to Central America with schemes of colonization. He found that the people of Costa Rica could

give no account of the entry and settlement of their ancestors in that country; and in pursuit of information, in 1858 he returned to Berlin to discover historical material that might throw light on this obscure point of early Spanish colonization. The first vague results were presented in a dissertation on this question, for which he received the degree of Ph. D. from the University of Jena.

In 1861 Dr. Valentini revisited Costa Rica, with the intention of viewing localities of conquest and discovery, and making researches among the archives of the five Central American Republics. There he established, in union with Dr. Streber, the first statistical office on a modern plan, and was sent by the government to assist at the foundation of the Atlantic province of Limon (Caribbean Gulf). He visited, in schooner and canoe, the west coast discovered by Columbus, Roatan Island, and as far as Boca del Toro. He found that Columbus's reports of his fourth voyage from Jamaica were as complete as could be made by that persecuted navigator. Dr. Valentini was encouraged by the government to publish his investigations; but the German and the Spanish texts still remain in manuscript in consequence of a subsequent revolution in that country.

In the course of his studies he arrived at the conviction that the conquest could not be understood without research into the former history of the Indians, and that chronology is the backbone of the historical account. Indian history is supposed to be written on stone, the copies of which are often of doubtful correctness. Therefore, Dr. Valentini visited Guatemala to inspect the hieroglyphics of Palenque. He was not able to penetrate farther than to the Quiché ruins on account of sedition of the border Indians. To arrive at positive proof that a certain symbol found in the engravings of the named races represented that which the ancient races used for their century was his fixed purpose. Residing in Guatemala and San Salvador for some time, he completed his MSS. of the "Discovery and Conquest of the ancient Province of Castilla de Oro," and a "Geography of San Salvador" for the use of schools.

In 1871, Dr. Valentini came to New York, and was able to pursue his studies of Indian hieroglyphics in the Mexican department of the Astor Library. He received from the Smithsonian Institution an original copy of a curious Central American slab, presented to that collection twenty-five years ago, from Tabasco, without explanation. He recognized this as the tablet which J. L. Stephens missed when he explored the

oratory. (Travels in Central America, Chiapas and Yucatan, Vol. II., page 346). On this, the supposed symbol for the century is clearly expressed by a *knot*. The same knot, or loop resembling a bow knot, appears also in the Mexican painted hieroglyphics, and particularly on the Calendar Stone interpreted in the Vortrag herewith presented. One vertebra of the backbone of Indian history is now recognized. The skeleton can be reconstructed of the disjecta membra, from which important conclusions may be drawn. Dr. Valentini has prepared an essay and interpretation on some of the Palenque slabs, which contain, however, no history of that people, but were merely local temple records. He has been, and is now, occupied in teaching languages as a profession.

Stephen Salisbury, Jr.

# TERRA COTTA FIGURE FROM ISLA MUJERES,

## NORTH-EAST COAST OF YUCATAN.

By Stephen Salisbury, Jr.

The aboriginal relics considered in this article are portions of a female figure in terra cotta, found by Dr. Augustus Le Plongeon, late in the year 1876, on the Island of Mujeres. It formed the front of a brasero or supposed incense burner, and though the exact dimensions of the entire figure can not be given, some idea of its relative size may be formed by observing the way in which a smaller figure was attached to a brasero or earthen vase, which is also shown in heliotype for comparison. The portions of the figure which remain are hollow, and are made of a reddish clay. The face is very expressive, with open mouth, showing the upper row of teeth filed * as are said to be those of Chaacmol, discovered by the same explorer at Chichen-Itza, Yucatan, already described in a previous paper.† The nostrils are perforated and also the pupils of the eyes. There are small holes near the base of the ears from which an ornament may have originally depended. The expression of the face is cruel and savage, and when seen in profile extremely searching. The head is surmounted by a helmet or head-dress 8 inches high, the base of which consists of a square

*The practice of filing the teeth is spoken of by Landa, *Relation des choses de Yucatan, de Diego de Landa.* Paris, 1864, page 183. Also, by Herrera [English Text], Vol. IV., page 174.

†Proceedings, April 25, 1877, page 70.

band, presenting a front of 7 inches and 4½ inches wide, with an indented border above and below, narrowing at the middle of the face so as to expose much of the forehead. The band is ornamented by lines and incrustations. Above the band is a tubular projection 4½ inches high, the top of which is of greater diameter than the base, and is marked with regular incisions. The feet and part of the leg remain. Above the ankle are seen traces of the clothing. The feet are shod with sandals, like those of the statue of Chaacmol, which are confined by a band of some material at the heel, and tied together in front in a manner very similar to that which is practised at the present time among the Indians of that country. The toes are clearly defined, and the nails are carefully formed.

The surface of the clay shows the wear of time and the effect of contact with moist earth, but portions still present the original smooth finish seen on terra cotta objects that have been better preserved. On offering these relics for inspection to a skilful potter, much admiration was expressed for the ability in moulding shown by the Indian workmen of the past. In fact, the degree of skill manifested in the execution would indicate a trained eye and hand, and a knowledge of effect not often observed in the stone and clay works of early Indian artists. The illustration marked 1 on the opposite page is from a photograph of the shrine, near which the relics marked 2 and 3 were excavated. It is presumably the same building described and pictured in Stephens's "Travels in Yucatan," Vol. II., page 416, as the two plates agree entirely with each other, except that in the later picture, the building has suffered somewhat from the disintegrating influences of thirty-five years. There is also

1.—Shrine at South end of Isla Mujeres.

4.—Incense Burner, from Guinea Grass, British Honduras.


2.—Portions of Terra Cotta Figure, forming front of Incense Burner, found near the Shrine at the South end of Isla Mujeres, North-East Coast of Yucatan.


3.—Another view of the same Figure, forming front of Incense Burner, found near the Shrine at South end of Isla Mujeres, North-East Coast of Yucatan.

*Heliotype Printing Co.* *220 Devonshire St., Boston.*

a discrepancy in the localities, Stephens saying that the ruins were at the North end of the island, while Dr. Le Plongeon places them at the South point, both in his written description and upon the plans of the island which are introduced later. However, Dr. Le Plongeon has given the most conclusive proof of his assertion in the plans which he has offered. That the building is the same viewed by Stephens is shown by the fact that his name, with the date 1842, is mentioned in a letter to the writer accompanying the photograph, as one of those traced "on the lintel of the largest doorway on the South side of the building."

The illustration marked 4 is another supposed incense burner, now in the possession of the writer. It was the property of Mr. John E. Mutrie, of the house of Guild & Co., of Belize, British Honduras, and was found at Guinea Grass, New River, Northern District, British Honduras, and is 9½ inches high and 7 inches in diameter. This specimen of a brasero or incense burner, is here shown to indicate the character of the object of which the face and feet, previously described, formed a part.

The interest in these relics is much increased by the fact that the Island of Mujeres, where they were found, received its name from the worship of female idols, which was there observed by the Spaniards on the first exploration of the coast of the continent of which we have a detailed account. This island was the earliest discovery in the expedition of Cordova, and is thus described by Torquemada in his *Monarchia Indiana*:—

"In the year 1516, Francisco, Fernandez de Cordova, Christoval Morante, and Lope Ochoa de Caucedo, armed three ships to go to seek for Indians in the neighboring islands, and to traffic, as had

been their custom up to that time, and their expedition was uneventful until they discovered the land of Yucatan—a coast until then unknown and undiscovered by us Spaniards; where upon a headland there were some very large and good salt mines. It was called Las Mujeres, because there were there towers of stone, with steps, and chapels, covered with wood and straw, in which many idols that appeared to be females were arranged in a very artificial order. The Spaniards marveled to see edifices of stone, that up to that time they had not seen in those islands, and that the people there clothed themselves so richly and beautifully, because they had on tunics and mantles of white cotton and in colors, ornamented with feathers, carcillos, and with gold and silver jewelry; and the breasts and heads of the women were covered. There came soon canoes full of people. We called to them by signs that they should come on, and there entered thirty Indians into our ships, and they wondered to see our people. We rewarded them, and they went away promising to come back another day, which they did, bringing a message from the chief himself, who said these words: *Conez cotoche*, [which means 'Go there into my houses'], and they called this place Point Cotoche. Those in the ships went on the land and had a skirmish with the natives of the country, as related by Antonio Herrera in the *Decades;* and they wounded fifteen Spaniards; engaging them one after another, until they came foot to foot; and they seized our two Indians who became afterward Christians and were called, the one Julian and the other Melchor. There were of those Indians many wounded and seventeen killed." *

Herrera states in his account of this action:

"Where this defeat was sustained there were three houses† made of stone and lime, which were oratories, with many idols of clay, having countenances of demons, of women, and of other horrid

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* *Monarchia Indiana. Por F. Juan de Torquemada.* Madrid, 1725. Lib. IV., cap. 3.

†The remarkable agreement in the number of buildings mentioned by Herrera with the number found by Dr. Le Plongeon, in a more or less ruined condition, as shown in his plan which accompanies a communication hereafter introduced, dated June 15, 1878, is to be noted. The plan is entitled "Plan of the Southernmost Point of Island Mujeres, showing the relative position of the ruins."

figures. * * * * * And, while they fought, the priest Alonzo Gonçalez took from the oratories certain boxes in which were idols of clay and of wood, with ornaments, adornments, and diadems of gold. They took in this encounter two laborers who were Christians,—called Julian and Melchor. The Spaniards returned to embark, content with having discovered a people of reason, and other matters different from those of Darien and the islands; especially houses of stone and lime—a thing that they had not seen in the Indies up to that time." *

Bancroft, in his Native Races of the Pacific States, vol. IV., page 277, says: "The scarcity of idols among the Maya antiquities must be regarded as extraordinary. The double-headed animal and the statue of the old woman at Uxmal; the rude figure carved on a long flat stone, and the small statue in two pieces at Nohpat; the idol at Zayi, reported as in use for a fountain; the rude, unsculptured monoliths of Sijoh; the scattered and vaguely-mentioned idols on the plains of Mayapan, and the figures in terra cotta collected by Norman at Campeachy, complete the list, and many of these may have been originally merely decorations of buildings. The people of Yucatan were idolaters there is no possible doubt, and in connection with the magnificent shrines and temples erected by them, stone representations of their deities, carved with all their aboriginal art, and rivalling or excelling the grand obelisks of Copan, might naturally be sought for. But in view of the facts it must be concluded that the Maya idols were small, and that such as escaped the fatal iconoclasm of the Spanish ecclesiastics were buried by the natives, as the only means of preventing their desecration."

The writer has three specimens of Campeachy idols, which

*_Historia de las Indias. Por Antonio de Herrera._ Madrid, 1601. Tom. I. Decade II., Lib. IV., cap. 17.

he procured at that city in 1862. They are of a reddish clay of a darker hue than that from Mujeres Island, and measure respectively 5, 6 and 7 inches in height. They have high head-dresses, and two of them have wraps about the throat, and are otherwise grotesquely clothed. Two of them are arranged with a whistle, and the other answers the purpose of a rattle, which suggests the idea that they may have been used as toys, to say nothing of any other purpose. This peculiarity is not uncommon in similar relics found in the central portions of the continent. These so-called Campeachy idols were found in the Indian graves which abound in that locality. Similar terra cotta figures are pictured in Bancroft's Native Races of the Pacific States, vol. IV., page 264. The figures bear marks of being moulded by hand, and not cast, and this same observation applies to the Mujeres figure. On inspection the Campeachy idols show traces of white, vermilion and green pigment, which is not uncommon in the picture paintings of the Mayas.

The incense burner shown in Plate 4 exists now only in the figure which is still perfect, and in pieces of the vase which is broken. The heliotype was taken from a photograph secured while it was still perfect and entire. The pieces of the vase show marks of fire and are much blackened, but whether from ancient use or from modern experiment can not be determined. However, it is fair to presume that the coloring is ancient, as clay utensils of aboriginal date often retain the traces of exposure to smoke and flame.

After the receipt of these terra cottas, Dr. Le Plongeon, at the request of the writer, prepared an account of his discovery of the relics pictured in Plates 2 and 3, and extracts from his communication are here given, as the most full and


PLAN OF
SOUTHERN MOST POINT
OF ISLAND MUJERES,
SHOWING THE
RELATIVE POSITION OF THE RUINS.

Surveyed Dec 3rd 1876
BY
AUGUSTUS LE PLONGEON,
M. D.

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complete description of the Island Mujeres, its people and its ruins, of which we have any knowledge. The incense burner in Plate 4 represents a similar object in perfect preservation, though of less artistic merit than that which Dr. Le Plongeon describes in the following letter:—

COLONY OF BRITISH HONDURAS,
BELIZE, 15 *June*, 1878.

STEPHEN SALISBURY, Jr., Esq., Worcester, Mass.:

*Dear Sir.*—You ask me to furnish you with a description of the locality where I discovered the beautiful specimen of Maya ceramic art—the head of a priestess, now in your possession—disinterred by me at the shrine on the southernmost end of Island Mujeres

Notwithstanding all such descriptions belong by right to the work I intend to publish on the ruins of Mayapan, and a premature relation might, perhaps, with many individuals, detract from the interest of the book, the concern manifested by you in our labors and discoveries amongst the ruined cities of the Mayas, causes me to put aside any egotistical feelings and prompts me to cheerfully comply with your request.

May the reading of the following lines prove to yourself, to the members of the American Antiquarian Society, and to the lovers of science, as interesting as the visit to the island has to Mrs. Le Plongeon and myself.

ISLA MUJERES is a small islet on the eastern shores of the Yucatan Peninsula, situated about six miles from the coast, in latitude North 21° 18′ and longitude West 86° 42′, Greenwich meridian. It is a mere rock of coralline calcareous stone, six miles long and one-half mile broad in its widest parts, whilst in many places it is scarcely two hundred steps across. The northernmost point, called *El frayle*, at high tide is cut off from the main portion of the island. The north end is barely higher than the level of the sea, but the soil rises gradually from north to south and west to east until it reaches an elevation of forty to fifty feet at the south extremity. There, are conspicuous the ruins of the shrine and those of three other small buildings,

hanging on the very brink of the precipice, serving as landmarks to mariners.

Island Mujeres was one of the first lands discovered by the Spanish adventurers who came to the conquest of Mayapan, attracted thither by their lust for gold.

Bishop Landa is the chronicler who has given the most minute and correct accounts of Mayapan—of its inhabitants, their customs, laws and modes of life. He tells us in his work, "*Las cosas de Yucatan*," that when the Spaniards landed there, they found a shrine, on the altars of which were the images of many women; that in the impulse of their religious fanaticism they destroyed these images and replaced them by one of the Virgin Mary. Mass was then celebrated in presence of a large multitude of Indians. That on account of so many statues of females having been found there, they gave the place the name of *Isla de las Mujeres*—Women's Island.

The same chronicler also informs us that there existed a shrine dedicated to female idols. Hither pilgrims came from far and near in order to sacrifice and deposit votive offerings. To-day even, the soil in front of the shrine is strewn with their *débris*, more or less broken. They consisted of terra cotta figures made to the semblance of the human body or parts of the same.

After the conquest of Yucatan, not only the shrine, but the whole island seems to have been abandoned. It remained uninhabited for many years.

The village of Dolores is built on the beach of the pretty little bay, where the fleet of fishing smacks from Havana, as the pirates of old, find a sure shelter from the violence of the stormy northers that dash the waves against the iron-bound shores of the eastern side of the islet, producing a terrific and deafening noise.

The houses are snugly ensconced in a thick grove of cocoa trees, whose evergreen foliage shields them from the scorching rays of the tropical sun. Three streets run north and south, parallel with the beach of the bay, and are crossed at right angles by others leading from the bay to the ocean. The principal street, the middle one, half a mile in length, covered with deep sand, as are all the others, leads in a straight line to the necropolis.

The dwellings, with but very few exceptions, are mere thatched huts. The walls are formed of palisades of trunks of palmetto

trees called *chät*, that grow in great abundance on the island and on the main land opposite. They are stuccoed inside and out with cob, and then whitewashed. Amongst the five hundred houses of which the village is composed, a dozen may have their walls of stone and mortar, but all are covered with the leaves of the palmetto tree. Each hut is separated from the next by a court-yard. In some, the owners, with great patience and labor, try to cultivate in the sandy soil, a few rose-bushes and other flowering shrubs of sickly appearance, of which they are very proud.

The village boasts of a Square. The south side is occupied by a neat little church, the result of the handiwork of some devout individuals who, being caught at sea in a norther, and in imminent peril of their lives, vowed to build, with their own hands, a new church, in lieu of the old one, which had been destroyed by a storm, if they reached the shore alive. On the east side are seen, at the foot of a hillock, the foundation walls of the ancient church. The west side is adorned with a long, narrow shed, surrounded by a rustic balustrade. In the rear of it is a large room —this is the barracks; two cells—these are the jail. The whole form the City Hall, for the reunions of "*El consejo municipal*" —the common council—when that honorable body meets, and during every day in the week it is converted into a school-room. Private dwellings fill the north side of the Square or Plaza.

The interior of the houses is the same for the rich as for the poor. It consists of a large single room, which serves during the day as parlor and reception room. It is converted at night into a common sleeping apartment by hanging hammocks from the rafters which support the *guano* roof. Oftentimes an old sail hung across the room divides it into two apartments, and serves in lieu of a curtain. In several houses, whose owners have been so fortunate as to pick up stray pine boards from wrecked vessels that have been wafted in the neighborhood of the island, or from the coast of the main land opposite, the old sail has been replaced by a wooden partition.

The articles of furniture are few and old-fashioned—some wooden chairs and tables, trunks, supported on trestles to isolate them from the damp floors of *betun* (Maya for concrete), in order to preserve their contents from humidity and mould, and the shrine

of the *Penate*, containing the wooden statuette of the patron saint of the family, before which is constantly burning a small lamp. A coarse hammock or two, together with fishing nets, oars, poles, masts, sails, and divers other tackle, complete the list, not forgetting a few cheap colored lithographs of the Virgin Mary and some saint or other.

The inhabitants are, as a general thing, a fine set of people. The men, mostly of Indian race, speaking among themselves the Maya language, are sinewy and athletic. They forcibly recalled to our minds the figures of warriors so beautifully portrayed on the walls of the inner room in the Chaacmol monument at Chichen-Itza. It is surprising to see them handle their canoes —so similar in shape to those used by the ancient Mayas, as seen sculptured on the stones of the queen's room in Chichen. Hardy, fearless and skilful in their own craft, they are said to be worthless as sailors in larger vessels. The women, of medium height, are handsome, graceful, not over shy, and rather slovenly.

It is a fact, patent at first sight, that the Indian blood is fast disappearing from amongst the islanders. The blue eyes, fair, rosy skins, and light blonde hair of the rising generation bespeak their direct descent from European blood.

Salt is found in large quantities in the centre of the island. It is deposited on the shores of an extensive pool of salt water, connected by an underground passage which communicates at certain epochs of the year with the sea on the east side of the islet.

A large portion of the interior of the island is occupied by a most picturesque lake, which opens on the south side of the bay by a narrow channel, through which the waters of the ocean enter, and is very nearly three miles in length. The lake is consequently subject to tides.

On the third of December I hired Don Ambrosio Aquilar and his boat in order to visit the ruins at the south end of the island. After breakfast, we left Dolores, in company with a gentleman from Campeachy, who had arrived a few days before. The people saw us leave the shore with suspicious eyes. We were all strangers, going to visit a place that no one cares for, and where the pirates used to have a lookout. There could be no possible doubt that we were going in search of the treasure said to be

buried there; and an hour after our arrival at the ruins there was no lack of visitors and people, who came suddenly upon us and observed our movements.

A little more than an hour's pleasant sailing along the eastern shore of the island brought us opposite the ruins, which appeared towering above our heads on the very brink of a precipitous promontory. The whole building seemed as if it was about to tumble into the sea and crush us under its *débris*. We could find no place to land. The sea was breaking heavily on the coralline rocks; so we were obliged to retrace our way until we could find a proper place. We soon met with a small nook where the water was calm, and the boat could be safely anchored on the edge of the coral reef, but the rock was high and perpendicular. There was a small patch of white sand beach where we could easily land. We made up our minds to try to ascend this natural stone wall. Holding to the rough and projecting points of the rock, and also to the roots and the hanging withes, we soon found ourselves on firm ground, within half a mile of the building. We came to a slight declivity that seemed artificially made, and then to a perfectly level plain, sandy and barren. At our right, on the very edge of the rock, were the ruined walls of a small square building. It stood on an oblong platform about two metres high, easily ascended by means of a stairway composed of five steps, on the east side. The whole was entirely covered by the *Cactus opuntia* plant, whose prickly leaves forbade intrusion. Opposite, on the east side of the promontory, on the brink also of the precipice, are the remnants of another structure, now completely destroyed. Only the foundation stones of the walls are left. I am informed that in 1847 the walls stood entire, but were demolished by the people who immigrated at that time, in order to procure materials for building their houses. To-day they are obliged to go to *Nisucté*, probably the ancient *Ekab* of the chroniclers, a large ruined city on the main land opposite Mujeres, in order to procure hewn stones. They go there with fear and trembling, lest they should meet with Indians from *Tulum*, and be made prisoners.

About one hundred metres from these ruins, going south, is the shrine, standing on the narrowest part of the promontory. On each side the rock has given way to the incessant disintegrating

power of the waves, and tumbled into the sea, carrying in its fall the eastern end of the platform, and the wall of the edifice.

It is a rough, oblong structure, originally measuring 5m. 95c. by 5m. 25c., and 3 metres in height. It faces nearly south, and stands on a platform 2 metres high, by 9m. 25c. from north to south, and 8m. 55c. from east to west.

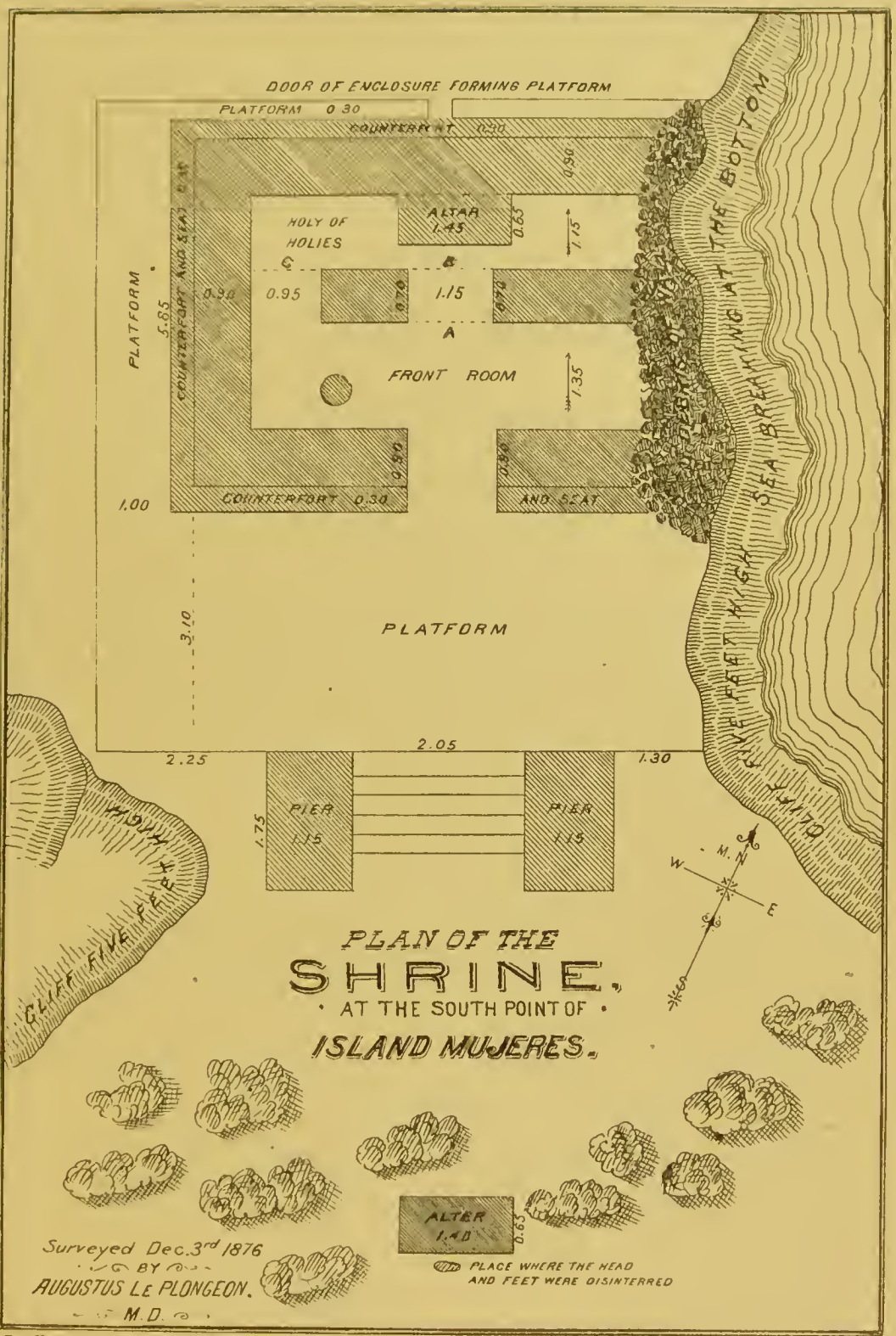
Its architecture is similar to that of the larger monuments of the interior of the peninsula, with but a slight variation in the entablature and in the cornice. The construction is rude, as that of the buildings I have had an opportunity of visiting on the coast at Meko, Nisucté, Kankun, and the Island of Cozumel. Formerly the walls were stuccoed, and may have been ornamented. The stucco has now disappeared, except in a few small patches here and there, and the walls inside and out are left denuded.

As in all the edifices devoted in Mayapan to religious worship, the interior is divided into two rooms, the innermost and smallest being the holy of holies, where the shrine proper, or altar of the god or goddess, stood. This fact, recorded by Landa, Cogolludo, and other chroniclers, is in the present case most forcibly illustrated.

The exterior walls measure exactly 0m. 90c. in thickness, the inner, or that which divides the sanctuary from the front room, 0m. 70c. The ceiling is formed by a triangular arch. The sanctuary is 4m. 95c. long and 1m. 15c. wide; the front room of the same length is a little wider, being 1m. 35c.

Let me remark here, that if, in the measurement of the monuments of Yucatan, I have adopted the metric standard of linear measure, it has not been from choice, but from necessity, and the strange discovery that the metre agrees with the standard of dimension adopted by these most ancient artists and architects. I have tried successively the English yard, the Spanish vara, the French toise; none gave me the exact dimensions of the width of doors or thickness of walls, &c. All left me fractions in plus or minus. The metre only, strange as it may appear, answering in every case to the exact dimensions. I will not pass any private opinion on this FACT, but will leave the inference to others.

The building is entered by a single doorway, 1m. 15c. wide and 1m. 50c. high, facing southerly. Two doors lead from the

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front room into the sanctuary. The one opposite to the exterior doorway is of exactly the same dimensions; whilst that on the left is somewhat narrower, being 0m. 95c. wide.

The lintels of these doorways consist of round sapote beams, about 15 centimetres in diameter.

Those of the two inner doorways are literally covered by the names of those who have visited the place at different epochs.

In the inner room, just opposite the entrance doorway and the corresponding inner one, stands the altar. It is of masonry, 1m. 45c. long by 0m. 65c. wide and 0m. 50c. high.

It was on this altar that the Spanish adventurers found the images of the female idols which were destroyed by their fanatical and ignorant chaplain, who replaced the Maya idols by the image of the Virgin Mary, and celebrated mass.

Entering the building, on the left-hand side, may be seen an excavation about eighteen inches in diameter, made in the floor by a certain Dr. Fabregas, who came in years past in search of the treasure. From my heart I thanked him for having opened this hole, and saved me the trouble. Notwithstanding it is not more than two feet deep, it afforded me a good opportunity for studying the construction of the platform. I found it to be an oblong inclosure surrounded by massive walls of strong masonry 0m. 75 centimetres wide and 2 m. 50 centimetres high, filled up with loose stones carefully piled one upon another. An entrance was left on the north side to penetrate the inclosure and arrange the stones. I discovered it closed by a huge stone four feet high and eighteen inches wide. I held my own counsel, for many eyes were following me wherever I went, but I made up my mind to bring the proper tools and remove it at my next visit. The floor of the rooms is made of concrete. Even to-day, concrete floors are those most generally in use in Yucatan.

The edifice, surrounded, at its base, by a counter-fort 0m. 30 centimetres wide and 0m. 60 high, that served the double purpose of strengthening the walls of the building, and offering a comfortable seat to the ministrants or to the pilgrims, does not occupy the centre of the platform; but is so placed as to leave a space of 3 metres, 10 centimetres in front between the counter-fort

and the edge of the platform and only 0m. 30 centimetres in the rear.

A stairway 2m. .05c. wide composed of 5 steps, each 1 metre deep, and encased between massive piers 1.15 wide and 1.75 long by two metres high, serving in lieu of balustrade, leads to the top of the platform. Four metres from the foot of that stairway and fronting the entrance of the shrine was another altar of the same size and construction as that within the holy of holies. It is at the foot of this altar, on its south side, that I disinterred the precious specimen of ceramic art, that I take to be the head of a priestess, from the head-dress. It might have been also one of the images of the goddess, wrought to the semblance of one of her devotees.

The soil between the shrine and the other ruined buildings was once upon a time leveled by hand, and covered with a layer of betun (concrete) 0m. 20 centimetres thick, beautifully polished and painted white. So was the area in front of the edifice to the very edge of the cliff. To-day the wind has blown coarse sand over it to a depth varying from one to four and five feet.

The survey of the monument and its surroundings, operations incomprehensible to the motley crowd of curious individuals who had followed in our wake, having occupied several hours, it being about 3 o'clock P. M., we concluded it was time to retrace our way to Dolores, if we wished to reach the village before night, notwithstanding our intense desire to rake the sand in search of any precious object that might have escaped destruction at the hands of the iconoclasts, whose handiwork was everywhere visible, in the scattered *débris* of votive offerings, that strew the sand in front of the shrine and around the exterior altar to the very brink of the precipice. We refrained; there were too many witnesses eagerly watching every one of our steps and motions. So taking a parting glance at the shrine and promising to repeat our visit as soon as possible, we regained the spot where our boat lay riding at anchor, trying on the road to picture to our minds the scenes witnessed by these old, weather-beaten, silent walls.

I wanted to engage Don Ambrosio for the next day, as I desired to take photographic views of the ruins, and continue explorations. I had seen enough of them to tempt my appetite and make me long for something more. What should I find by

removing the large stone that closed the entrance to the chamber I suspected to exist under the shrine? I knew that the ancient Mayas were wont to bury their *Kins* or priests in such apartments built expressly under the temples, and with them the badges of their profession.

But Don Ambrosio was not to be obtained. He had to finish some business and start immediately for Cozumel. He offered however to accompany me again to the ruins, on his return to the island, which he said would be in a few days, if I wanted him. Day after day passed, and I was unable to obtain the means of again visiting the shrine. Several times I was tempted to start on foot, but it was a serious undertaking. It would take me at least half a day to reach the place. Then I should certainly be exhausted, unfit for work. It was useless to go unless I made up my mind to pass the night there, exposed without shelter to wind and rain if it happened to be bad weather.

At last, on the 28th of December, Señor Don Salustino Castro, a farmer from Cozumel, who had come for a few weeks to Isla Mujeres, and whose acquaintance I had made, offered to make a pleasure trip to the ruins with his wife and children. I accepted with pleasure his invitation to join him, and happy to have the opportunity, told him of my intention to remove the large stone on the North side of the platform.

When we reached our destination and while each one was enjoying, to the best of his fancy, the *dolce far niente*, the necessary consequence of a good repast, lying or reclining on the sandy soil as it best suited the fancy of the individual, I began to examine the ground in front of the shrine. At the foot of the altar, on the South side, I saw a place that had all the appearance of having once been disturbed.

I called for a shovel, one of the servants was soon by my side with the instrument called for, and in order to show his willingness to please me, unasked he thrust with all his might the tool into the soft sand, and with a smile of pride at his exploit, brought forth a foot within a sandal, that bore unmistakable marks of having just been amputated from its corresponding leg. He was about to repeat the operation when I swiftly interposed. Falling on my knees, in presence of all the picnicking party, with my own hands, I carefully removed the damp sand from

around an incense burner, of which the whole body of a female in a squatting posture had occupied the front part. It had lain there for ages, but, alas! it was now before us in pieces. The blow from the shovel had been sufficient to destroy the soft, fragile work of art. Happily the face had escaped injury. It was a great fortune in a terrible misadventure.

These terra cotta objects when first discovered are very tender, the dampness having permeated the whole clay during the centuries that they have been buried. They are therefore exceedingly pliable. Before attempting to remove them it is necessary to leave them exposed for an hour or so to the action of the air and to the rays of the sun, when they recover part of their pristine hardness, and can be handled without so much danger of damage. For hours all hands were busy searching in the sand endeavoring to discover some other entire object, but without success.

The servants of Don Salustino with the aid of a crowbar removed the large stone on the North side of the platform, and a small doorway lay open before us, and we could then plainly see that the whole platform was made of dry stones carefully superposed. We removed some, but soon abandoned the job, fearing lest the whole structure, which is in a very ruinous condition, should tumble upon us, and catch some one as a rat in a trap. We remained satisfied that, if any thing is buried among the stones, it can only be obtained by running the risk of seeing the entire edifice crumble over those engaged in the work. *Le jeu n'en vaut pas la Chandelle, et le coût en quitte le gout.*

That day I made excavations in several places in the level space North of the shrine, and discovered that, as I said before, the whole soil between this structure and the other ruined buildings had been and is yet covered with concrete, highly polished and painted white. It was now about 2 o'clock P. M. Satisfied with our day's work, we began our journey home, happy with the consciousness to have in part saved from destruction a rare specimen of the Maya ceramic art. Don Fermin Mondaca, who has lived for more than twenty years on the island, and the oldest inhabitants, have assured me that this was the finest object that to their knowledge had been found in that place.

Four days later, that is to say, on the 2d of January, 1877, Don Pedro Toredano, having been able at last to put some men and

one of his boats at my disposal, for the last time we returned to the ruins with our photographic instruments, and took views of the shrine, from the altar near which I had disinterred the beautiful female head. Desiring to varnish the negatives, in order to be able to carry them safely home, I put some live coals in the bottom of the incense burner discovered on the 28th, and entered the shrine to be protected from the wind, when lo! a slight vapor arose from among the coals, and a sweet, delicious perfume filled again the antique shrine, as in the days of its splendor, when the devotees and pilgrims from afar used to make their offerings and burn the mixture, carefully prepared, of styrax, copal and other aromatic rosins, on the altar of the goddess.

I remain, very sincerely, yours,

AUGTUS LE PLONGEON, M.D.

In connection with the above communication, extracts from letters of Dr. Le Plongeon, of date July 18 and August 9, 1878, are introduced as bearing upon the character of the terra cotta objects now under consideration and as valuable reflections upon Maya art. He writes :—

"In answer to your inquiries about terra cottas in Yucatan, I will say that I have studied with great care the specimens that have come into my hands. But they have been comparatively few, the locality where found was unknown, and I have not acquired sufficient knowledge to decide upon the subject authoritatively. The best specimens I have seen came from Isla Mujeres (the head now in your possession), and the "Goddess of the Bees" from Cozumel, now in the Museum at Mérida. They are not the productions of the inhabitants of the islands, since there is no clay (*can cab*—red earth) to be found there. These pieces were imported from the main land, and must have been manufactured in the eastern part of the Peninsula, where this kind of earth exists in abundance in certain districts. The broken jar, pieces of which I found scattered at various depths among the loose stones that formed the monument raised over the statue of Chacmol, was of a very coarse manufacture and the loss of its lid,

which was entire, and placed over the remains of the brains of Chaacmol in the large stone urn, near his head, is to be lamented. A friend, while examining it, let it fall by accident and it was smashed into fragments.

Before I should dare to pronounce upon the advancement of ceramic art in Mayapan and hence determine the probable age of each specimen, I must disinter the pieces myself, and by the age of the monument where it was found, determine that of the terra cotta. One thing however is clear to my mind, that the ceramic art kept pace with that of sculpture, and that at a certain period Mayapan boasted of very skilful artists who could transform the clay into beautiful objects of art, like the head in your possession. But there were, at the same time, inferior artists whose works were not as costly, more within the means of the people in general, and consequently more abundant; and these were the tyros in the art that filled the market with their productions, as the Italian plaster-of-Paris statuette venders do in our days. There were potters who manufactured common pottery, like our common earthen ware. Who will dare compare the artists who can transform *kaoline* and *petunse* into the beautiful vases of Sévres, and the workman who makes our common plates, cups and saucers! Yet all these things are made at the same epoch and may be produced from the same material. * * * * * *

At the village of St. Michael, in the island of Cozumel, is the spot where Cortez is said to have left a cross for the adoration of the Indians, and near by a church was built, whose walls still remain. Here in digging to search for treasure, said to be buried near it, was found by chance the terra cotta incense burner, the so-called Goddess of the Bees, now in Mérida.* * * * *

Do not mistake in regard to the head from the Isla Mujeres. It was not an idol but the portrait of some high priestess placed in front of an incense burner, like the figures from Guinea Grass in the collection now sent you, or the above named incense burner in the Museo Yucateco, of which you have a photograph. I can not say how high it was when entire, for it was broken under the sand; but judging from the bottom of the burner that I used to carry live coals into the shrine to varnish my negatives, I should suppose that it was about 18 inches high, like that at Mérida, or it may have been a little higher. It was well preserved by the

accumulation of loose sand around it, and so are many pieces of the votive offerings that strew the sand in front of the sanctuary, and since destroyed in part by the hand of man."

We may now safely turn for information to that unfailing and authentic source of light on the customs and usages of the Mayas, Bishop Landa.* He says: "The very travellers carried incense with them in a small dish. At night wherever they arrived they placed together three small stones, depositing upon them grains of incense. Before these they set three other flat stones and placed incense upon them, praying to the God, et cet. **** They had some idols of stone, but few in number, others of wood of small size, although not so numerous as those in terra cotta. † **** The priest then burnt incense mingled with forty-nine kernels of ground corn. The nobles placed their incense in the brasero of the idol, and offered incense in their turn."

Lord Kingsborough's collection has numerous plates representing probable incense burners, but none of them have figures attached that will compare in artistic finish with the face from Mujeres Island. The text of Captain Dupaix (2d Expedition, 1806), says in regard to one of these braseros, "you may perceive in the rear of the figure a cylindrical tube suitable to contain in its cavity pieces of pitch or some other combustible material, and which might have served as the receptacle of a torch at their religious festivals."§

Among the interesting collections from Guatemala in the

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* *Relation des choses de Yucatan, de Diego de Landa.* Paris, 1864, page 157. † Ib., page 213.

§ Kingsborough's Mexican Antiquities, London. 1830, vol. V., page 254. Ib., vol. IV., Figures 78, 103 and 107. [Illustrations.]

Peabody Museum of Archæology at Cambridge, are several small terra cotta figures, having vases above the head-dress that are blackened on the inside by the use of fire.

The incense usually burned by the Mayas was copal. This resinous gum is insoluble in most liquids, and resists the action of time like amber, while on being burned it gives forth a fragrance resembling frankincense. Therefore it is not incomprehensible that the incense vase from Mujeres Island should have retained enough of the fragrant gum to astonish a person experimentally heating it, as is mentioned by Dr. Le Plongeon at the conclusion of his communication.

We have Hubert Howe Bancroft as authority that the Maya idols thus far discovered are few in number, none of them equal as monoliths to those of Copan in Guatemala, in point of size. But in point of artistic finish we should give the first place to those of the Maya country, as is generally conceded to its architecture and sculpture. The *Revista de Mérida*, of July 4, 1878, describes a small statue lately discovered, and answering to Landa's account of Maya idols of stone. The writer calls it *un pequeño Chaacmol*, representing an Indian character of importance, judging from its costume. "It is seated upon a seat placed on a pedestal or throne, which in the rear loses itself in the bust of the statue. The hands are extended over the knees, and the erect head has a gloomy, serious and majestic countenance, as of a monarch giving audience to his subjects. It has a spacious forehead, above which the hair is cut horizontally. The nose is decidedly aqueline, the lips are moderately large, and the upper lip is covered by a moustache cut like the hair, which leads the antiquarian to suppose that this type belonged to a superior race from that which the con-

querors encountered. It is shod with the traditional sandals or alpargatas. Upon the breast is an escutcheon with rays, which perhaps represents the sun, and the shoulders are covered by a mantle, which is recognized as composed of feathers. The seat, throne, and statue itself are of a single piece of stone, and together measure about two feet in height. It was found in a vault in the neighborhood of Izamal, which permits us to suppose that it was an idol, or that it represented a king or a character of the ancient Maya aristocracy. It was painted flesh-color, and notwithstanding it has been repeatedly washed, it still retains traces of coloring closely adhering to it. The stone is now porous, and the archæologist supposes he finds marks of three or four centuries which have rolled over the statue."

The desire is expressed by the writer of the article just quoted that this figure may be presented to the Museo Yucateco, and preserved there, without the unfortunate fate which awaited the greater Chaacmol (the statue which was carried to the city of Mexico by order of Government in 1877 and is now placed in the National Museum). There seems to be good reason to suppose that the above described figure was an idol. Its size and coloring agree with some of those hitherto accepted as such, while the fact of its being hidden away is in accord with the explanation of the rarity of such objects, as they were often secreted by the Indians from the knowledge of the Ecclesiastics, who had caused their destruction in numerous authenticated *autos-da-fé*.

Foremost among the Maya idols which have escaped destruction, may be ranked the gigantic stucco head at Izamal, a place famous among the Indians at the time of the Conquest as one of their most sacred resorts. Though of rude

workmanship and of inferior art, it deserves to be alluded to in connection with the terra cotta figures of Yucatan, as stucco is also exceedingly rare in external ornamentation, stone being generally employed for the purpose in Maya buildings. It is correctly pictured in Stephens's Travels in Yucatan, vol. ii., page 434. The relief is a colossal human head upon the face of an artificial perpendicular wall, and has a stern, harsh expression like that of some of the bas-reliefs in stone at the ruins of Uxmal. The head is 7 feet 6 inches in height, and 7 feet in width, and the ground-work is of projecting stones, which are covered with stucco. A stone 1 foot 6 inches long protrudes from the chin, serving, perhaps, for a copal altar. The face was evidently designed to be seen from a distance, as its extraordinary proportions indicate. Upon the left appears the *totem* or emblazonment of the divinity portrayed in relief.

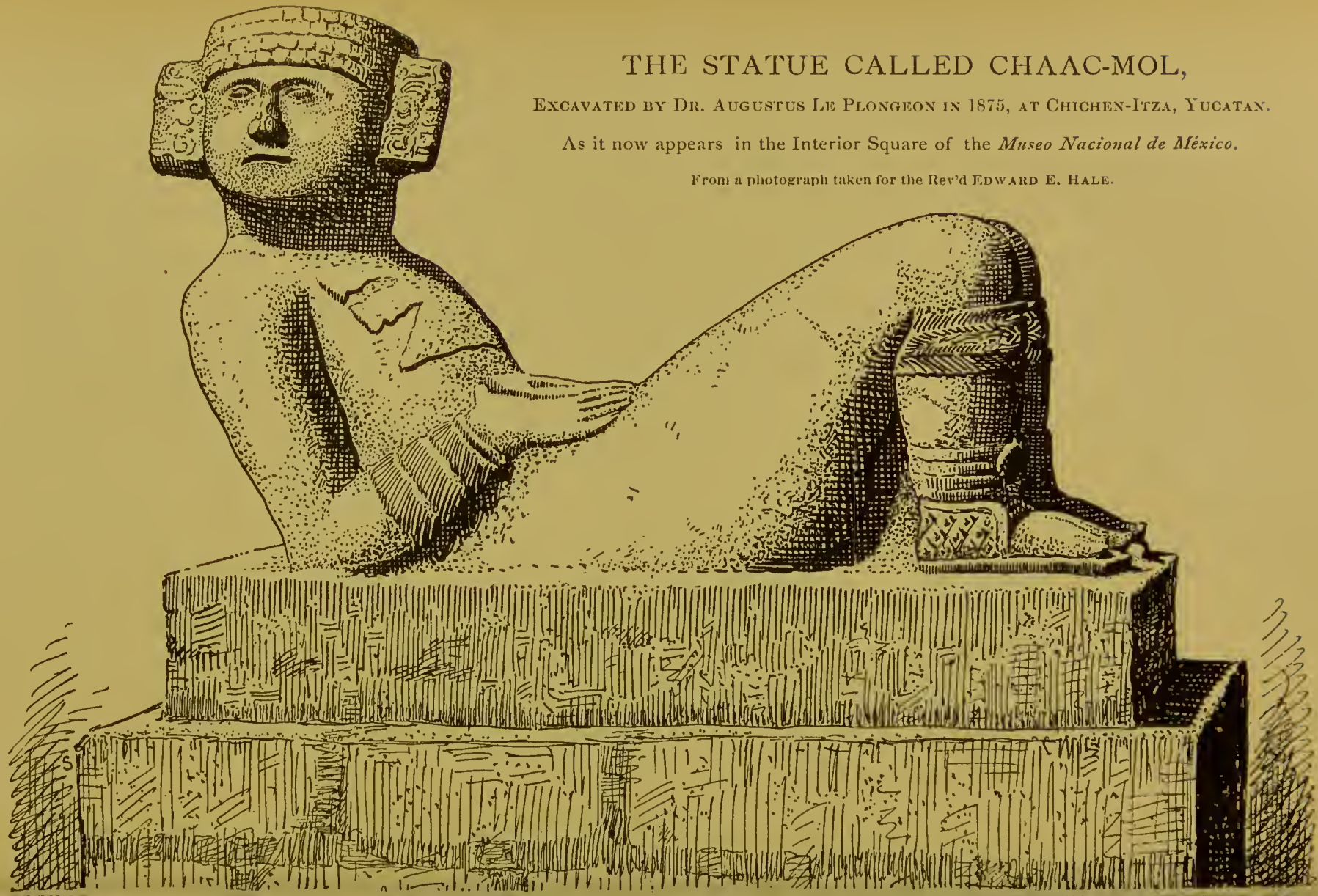
But enough has been written to draw attention to the terra cotta figure, and to show the probable use that the vase to which it was attached subserved. It is most interesting from its merit as a work of art, and it is curious as being found near a shrine on the island famous for female idols at the time of its discovery. Dr. Le Plongeon's supposition that the face may have been moulded to resemble some particular female character or priestess, is not at all improbable. It is to be hoped that future excavations in a country so abounding in antiquarian material, will furnish us with other and more perfect specimens of Maya art.

## *NOTE.*

A work of much interest to the student of American Archæology is now being issued in the form of a general history of Yucatan, in three volumes, of which the first and second have already been published. It bears the title *Historia de Yucatan desde la època mas remota hasta nuestros dias, Por Eligio Ancona. Mérida*, 1878. *Imprenta de M. Heredia Argüelles.* The first volume treats of the ancient history of the province, the second of the period of the Spanish rule, and the third will contain the modern history of that country. This work will more than supply the place of *Historia de Yucatan, Por Fr. Diego Lopez de Cogolludo, Madrid*, 1688, and its reprint *Los tres siglos de la dominacion Española en Yucatan, Por idem, idem, Mérida*, 1845. As both of these editions are extremely rare and contain nothing of modern history, the new work is much needed.

For the proper understanding of investigations and discoveries in the Maya country, access to a historical map is necessary. This want has now been fully supplied by the publication of *Mapa de la Peninsula de Yucatan, edicion de* 1878, by Señores Joaquin Hübbe and Andres Aznar Perez, assisted as to important data by the suggestions of our late associate, the lamented archæologist and philologist, Dr. Carl Hermann Berendt. It is a valuable addition to the topographical history of this portion of the United States of Mexico, and gives a most correct plan of the States of Yucatan and Campeachy, together with the greater part of Tabasco and Belize and portions of Guatemala and Chiapas. This map designates places occupied by the beautiful Maya ruins, and has been prepared with great care for official and educational uses in Yucatan. It is a work of interest to students of the history and archæology of the central portions of America. The map is 28x36, and may be obtained from Dr. George E. Shiels, No. 896 Broadway, New York.

# ARCHÆOLOGICAL COMMUNICATION ON YUCATAN.



# THE STATUE CALLED CHAAC-MOL,

EXCAVATED BY DR. AUGUSTUS LE PLONGEON IN 1875, AT CHICHEN-ITZA, YUCATAN.

As it now appears in the Interior Square of the *Museo Nacional de México.*

From a photograph taken for the Rev'd EDWARD E. HALE.

# ARCHÆOLOGICAL COMMUNICATION ON YUCATAN.

BY DR. AUGUSTUS LE PLONGEON.

[Proceedings of American Antiquarian Society, October 21, 1878.]

The following letter is intended by the writer as a first contribution to the Proceedings of this Society since his appointment to membership, and as a recognition of his satisfaction at the interest manifested by the Society in his explorations and discoveries. It is accompanied by copies from a photograph of the Statue of Chaacmol, of tracings of a Mural Painting, and of a Carved Lintel from Chichen-Itza, all of which are herewith reprodnced:—

COLONY OF BRITISH HONDURAS,
BELIZE, *July* 15, 1878.

STEPHEN SALISBURY, Jr., Esq., Worcester, Mass.:

*Dear Sir.*—You will see in my communication on the Isla Mujeres, that I have found the three houses made of stones and lime that were the oratories mentioned by Herrera, and on my plan you have the exact position they occupy respecting each other.* Of the towns spoken of by Torquemada, and chapels with steps, their roofs being covered with straw, I have also spoken to you.† They are on the main land opposite. The largest city is *Kankun*, but in *Nisuckté* and *Meco* are temples and altars and columns, while nothing of that sort exists on Isla Mujeres, and those of Cozumel are on quite a diminutive scale. The largest to be found at the time of the conquest was about half a mile from the village of St. Miguel, on the north side.

Father Gonzales tells me he saw the statue of Chaacmol as it now appears in the city of Mexico. It is not within the museum, but rests upon a pedestal in the open court-yard of that establishment. This is an unfortunate position, for by this time all the paint put on the stone by the artist who sculptured it must have disappeared, washed away by the rain.

* *Historia de las Indias. Por Antonio de Herrera.* Madrid, 1601. Tom. 1. Decade II., Lib. IV., cap. 17.

† *Monarchia Indiana. Por F. Juan de Torquemada.* Madrid, 1725. Lib. IV., cap. 3.

The upper lip of the statue is very thin, and in portraits painted on the walls and carved on the stones in the lodge of the queen at the north end of the gymnasium at Chichen-Itza, he is represented, as in his statue, with the upper teeth discovered, which are filed like a saw, as are those of the head in your possession from Isla Mujeres. I have seen only these two heads with the teeth filed in that way. Besides what Bishop Landa says of the practice in Yucatan, it is known that tribes of Indians in the interior of Brazil practice this custom to-day, as do also nations of the west coast of Equatorial Africa. Were we to judge of the Itzaes as Judge Morgan and others wish us to do, by analogy, we must be convinced that Landa, in that, as in many other things, told us the truth. I have studied his work very carefully, as published by Brasseur de Bourbourg, and as far as I am able to judge from what I positively know of the customs, habits, domestic and public life, and religious ceremonies, of the ancient dwellers in Chichen-Itza, as portrayed in brilliant colors and accurate drawings on the walls of what I call the Chaacmol monument, I may say, without fear of being contradicted by men of intelligence, that many of these pictured customs are accurately described by Landa, although impaired and changed in some degree by the manners and customs of the different races that invaded the country after these monuments were erected.

I am more particularly willing to credit the relations of intelligent eye-witnesses, who have lived in a country, and tell me of the ways and mode of life of its inhabitants, when I find there pictures and sculptures agreeing with such narratives, than I am to give faith to the speculations of the wisest men who have not had the same opportunities of observation. So I prefer to believe what Diego de Landa says of what he saw with his own eyes than what others imagine must have been, judging by comparison and analogy with the manners and customs of other tribes and nations.

I have passed four years of my life among the monuments of Yucatan, searching every corner of them, scrutinizing every stone, asking every portrait or sculpture to tell me something of the lives on earth of the personages they represent. How far they have responded to my enquiries, the discovery of the statue of

Specimen of the figures composing the mural paintings of the funeral chamber in Chaac-mol Monument, Chichen-Itza. Traced by Dr. Le Plongeon and his wife, from the originals, in the month of November, 1875.

The Heliotype Printing Co. 220 Devonshire St. Boston

Chaacmol, the knowledge of the place where his brother *Huuncay's* statue lies concealed, and of the location of the vaults containing the libraries of the *H-Menes*, (records of the wise men) will show. What else I know of their secrets, if I am able to resume my work among the ruins of Chichen-Itza, the scientific world will see. At present I can offer two more statues, that of the dying tiger with a human head, showing on its body the wounds, the cause of its death, typical of what happened to the great warrior, Chaacmol (spotted tiger), and another of white calcareous stone, like Chaacmol's, lying exactly in the same position on its pedestal, somewhat smaller than the first, and unfortunately without a head, which I have searched for without success. Besides, I have many basreliefs ready for transportation, together with ancient gigantic heads, sculptured in the round. These heads, and the statue of the dying tiger are represented in your collection of photographs.

That I should be able to speak of the customs and manners of the Itzaes at the time that the beautiful *Kinich-Kakmó* and Chaacmol reigned at Chichen Itza, should surprise no one, since they are vividly painted on the walls of the funeral chamber of the Chaacmol monument, and on those of the apartments in the second story of the palace and museum.* Part of these mural paintings have been restored by Mrs. Le Plongeon and by me, and we have therefore studied them line by line. It requires no great effort of the imagination to understand, when one sees it pictorially represented, that it was customary for the *H-Menes* to cover themselves with a mantle of blue and yellow plumes when consulting the lines produced by fire on the shell of an armadillo or a turtle, in order to read the destiny of a person (just as the Chinese used to do), on seeing the scene so plainly represented as in the drawing that I send you, which is but a fraction of those on the walls of the room so often mentioned. These two figures, part of a more complicated design, represent the queen *Kinich-Kakmó* (recognized by her seven blue feathers), when a child, consulting an *H-Men*, in order to know her destiny. Her fate is

* Some of these names are translations of Maya words used to designate particular buildings by the Indians themselves, and others of the names have been given by later travellers, and by the writer of this letter, as descriptive of the uses for which it is supposed the buildings were intended. [S. S., Jr.]

written in the form and colors of the scroll starting from the neck of the *H-Men*.

I will now indulge in a little translation (when in fact imagination does the greatest part of the work), in the reading of the scroll starting from the priest's throat of the figure in the mural painting I send you. First, the meaning of the colors. These we know to a certainty. Blue meant holiness, sanctity, chastity, — hence happiness, from the blue vault of heaven; the human victims who offered themselves, or were offered as a propitiatory sacrifice to the divinity, were painted blue and considered holy. Then violet. It also meant happiness, but without the idea of sanctity; rather happiness produced by an innocent and pure life. Then green—wisdom, knowledge—hence power, war. The feathers that the chiefs carried on their heads in war, or in the peaceful occupation of scientific researches, were painted green, as also among the high chiefs in Mexico. This ornament of the chiefs is mentioned in the essay of Mr. Ad. F. Bandelier, in the tenth Report of the Peabody Museum. Then yellow—all evil passions.

We have also the form of the scroll to consider. Now it starts from the throat of the *H-Men*, a blue, well rounded smooth curve which indicates a happy infancy free from troubles, &c., &c. (She is a princess). Then adolescense—free from care, filled with innocence and happiness (violet). Then she enters into womanhood. She is in love with a wise and fierce warrior entitled to carry three feathers on his head (Chaacmol has three feathers), and during her matrimonial life, she will enjoy a short period of bliss and happiness. But after her youth she will experience the effects of the evil passions of some one who will persecute her and cause her to suffer. Hence the yellow crooked streak, the end of which turns from her, whilst the three feathers of her husband overshadow and protect her. This may be a beginning to solve the riddle of the mural paintings when my tracings are placed in the hands of those expert in rebus solving. These two figures are merely part of a group, nearest the ground, on the right hand side as you enter the funeral chamber.

If the Peabody Museum or the Smithsonian Institution desire to purchase my collection of tracings of mural paintings, I will sell it in order to procure funds to continue my researches. The whole collection will comprise as many as twenty-five plates, nearly all between 30 and 36 inches in length. Either a copy of the

tracings can be thus purchased or the original tracings with the copyright. They represent war scenes with javelins flying in all directions, warriors fighting, shouting, assuming all sorts of athletic positions, scenes from domestic life, marriage ceremonies, temples with complete domes, proving that the Itza architects were acquainted with the circular arch, but made use of the triangular probably because it was the custom and style of architecture of the time and country.

I began my work in Yucatan, I will not say without preconceived ideas, but with the fixed intention of finding either the proof or the denial of an opinion formed during my ramblings among the ruins of Tiahuanuco, that the cradle of the world's civilization is this continent on which we live. Ready to retract such opinion if I should find plausible evidence that I was wrong, I cared too little for the theories that others have advanced, to allow my mind to be influenced by them. I judge for myself; if my conclusions are the same as theirs, it is a proof to me that I am not far from the truth. But I prefer to listen to the mute yet eloquent voices of the painters, sculptors and architects, who have written the history of their nation on the stones of the monuments reared to perpetuate and make known to succeeding generations the events recorded by them.

Let us take an example—the very ancient origin of these monuments. In some buildings in the larger towns are seen rows of columns of hewn stones, all equal in size, and containing the same number (eight) of stones. No traces of roofs ever having been supported by these stones are to be found in their vicinity. Stephens, having seen many of them at Aké and Chichen, could not imagine why they had been erected. Their very construction, the upper or capping stone being supported on four smaller ones, isolated from those underneath, precludes the very thought of their having served to sustain a roof of any kind. Yet they had an object, and what was it? Let us see if the chroniclers knew anything about their use? Yes, all did. Landa, Lizana, Cogolludo, and others, tell us they were called *Katuns* (epochs), and served as calendars to record the age of the nation or town.

Cogolludo tells us that every twenty years, amid the rejoicings of the people, a new stone was added to those already piled up in certain edifices, and that each stone marked an epoch of twenty years in the life of the nation. That after seven had thus been

placed one above the other, then began the *Ahau-Katun;* and every five years a small stone was placed on each corner of the uppermost, beginning at the eastern *(likintan)*, then the western *(chikintan)*, then the northern *(xamantan)*, lastly, the southern *(noholtan)*. At that time a great festivity took place, and the capping stone was laid upon the top of the smalles ones. Landa, in his "*Cosas de Yucatan*," tells us the same thing. Now examine the plates of the town of Aké in your collection; there you will find the photographs of the monument supporting the columns of the *Katuns*, and the columns themselves. See how they correspond to the above-mentioned description. May we not consider the question of the extreme antiquity of some of the monuments of Yucatan as settled, since the thirty-six columns represent (to the mind) an undeniable lapse of 5760 years from the time the first stone was placed on the platform until the place was abandoned, and we know that this very town of Aké was still inhabited at the time of the Spanish conquest?*

In Chichen, I counted as many as 120 of these columns, and there were many more. True, many lay prostrate on the ground, and we cannot be certain that they were completed, but this is a matter easy to ascertain by counting every stone of the *Katuns*, which are easily distinguished from any others.

The evidences that intercourse existed in very remote times between this continent and those of Asia and Africa, are as follows: On the same walls, already many times mentioned (Chichen-Itza), we see very tall figures of people with small heads, thick lips, curly short hair or wool on their heads (negroes). We always see them as standard or parasol bearers, but never engaged in actual warfare. Sculptured on the pillars, and particularly on the columns of the castle, and also on the walls of the queen's chamber and on those of her lodge in the gymnasium or Tennis court, are the marked features of long-bearded men. (See your collection of ancient types). These seem to have Semitic or Assyrian features, and on the slabs found by Layard in Nineveh are seen sculptured male and female characters with true American types, crowns of feathers on their heads, the females wearing the very identical dress *(anacu)* of the Peruvian Indian women.

* May not the greater part of these columns have served as symbolical history set up as memorials of past antiquity? [S. S., Jr.]

Here figures with turbans on their heads are not wanting, and in a few days I hope to be able to send you a terra cotta found in this colony, representing a character wearing one of these Asiatic head-dresses.

After reading what Landa tells us of the customs of the inhabitants of Yucatan and comparing them with the habits of the Carians, as described by Herodotus, it suggests itself to me that these Carians, who were the first known rovers of the seas long before the Phœnicians, came from Mayapan or Central America; I say Mayapan because of the large number of Maya words found in the ancient Greek, and the many Assyrian and even Hebrew or Semitic words, to speak more accurately, found in the Maya, which would seem to indicate intercommunication. That fact can not be purely accidental. I must say, however, that I have never seen in Mayapan any vestiges whatever of Phœnician writings, architecture, or civilization.

The civilization of Mayapan stands entirely apart and distinct from any other. It must on no account be confounded with the Aztec or Mexican, as is often done. The Itzaes (wise and industrious men as their name implies) and the Mexicans are two distinct races. Neither their language, nor religion, nor their customs, had many points of similitude, and it is well known that the Mexican element was introduced on the Peninsula as soldiery by the laws of Mani only a few years before the Spanish conquest, and is consequently an importation of recent date.

As to the existence of giants and pigmies in remote antiquity at Mayapan, there can be no doubt. We see their figures represented on the mural paintings and on the sculptured walls; and, more to the point, their bones are from time to time disinterred. The edifices of Aké give the impression that they were the work of a very tall and uncouth people, and the buildings on the eastern coast and on the islands of Mujeres and Cozumel give evidences of habitation by a diminutive race not more than two feet in stature. Tradition among the Indians refers frequently to the *Alnxob* (pigmies), and they ascribe all the monuments to them.†

† Statements, which seem improbable, are so habitually made in both ancient and modern accounts of observations in Mexico and Central America, that they may best be left to the future for comment or explanation.

[Pub. Com.]

The writing of the Mayas is different from that of Copan, Palenque, or Mexico. True, sentences or ideas are written at Palenque and Copan in squares like those in the Maya country, but on comparing carefully their different writings I could perceive only a very slight resemblance. The writing of sentences or ideas in squares does not, by any means, imply that the characters were the same. The Germans, the English, the Latin races, and the Greeks, all wrote their ideas in straight lines from left to right, but their languages and alphabets are very different, while containing some characters that are similar. So with the Maya and other writings of Central America.

The Maya MSS. and hieroglyphics, since we must give that name to their characters, must be studied by themselves, without reference to those of Copan and Palenque, or the pictorial records of Mexico. Landa has preserved the Maya alphabet, and Brasseur de Bourbourg has the credit of having discovered and published it. He has explained it at some length in the introduction of his translation of the Codex Troano. I think he has done more towards the advancement of our knowledge in the Maya literature than all the jealous impugners who have refused to accept his translation. It seems to me that, since they rejected his work and scorned him, some one of them should have come forward to offer a better rendering of the Codex. No one has done so because no one is capable of doing it. "*La critique est facile, mais l'art est difficile,*" and until I can do better I will accept as good Brasseur de Bourbourg's work and translation, for he had more opportunities for studying the Maya characters and language than the French archæologists who have not accepted his interpretation.

I believe, in ancient times as to-day, the tide of emigration of the human race following the course of the sun, has been from East to West. This is natural; the conical motion of the earth causes the ocean to submerge the eastern sides of continents whilst it elevates the western coasts, and men as other animals retreat before the invading waters. But I also believe that, at an epoch difficult to determine, there was a partial emigration from West to East; from this continent to the Western coast of Africa and the Mediterranean, and from the Western coast of Asia to America; as we see in our day the Chinese abandoning


AAC
FROM A SCULPTURED
SAPOTE BEAM FORMING
THE LINTEL OF THE
FUNERAL CHAMBER AT
CHICHEN-ITZA
DRAWN FROM THE ORIGINAL BY
AUGTUS LE PLONGEON M.D

their native flowery empire to flock to California; and that the emigration then as now has not been sufficient to impart the customs of the mother country to the people among whom they landed; and that, as the Carians of old in the Mediterranean and on the coast of Asia Minor, have ended by disappearing—by being swallowed up by the more populous surrounding nations,—so the emigrants from the Western coast of Asia have been swallowed up by the American nations, leaving however, in some places in America, as proofs of their existence, their almond eyes and some other of their physical characteristics, together with a few of their religious superstitions and practices.

Concerning the historical value of the statue of Chaacmol, I would say that, at the time of the Spanish conquest, the tradition of three brothers having governed the country at the same time, at a remote period, was prevalent among the inhabitants of Mayapan. Some of the chroniclers have mentioned it in their writings. The legend of these three rulers is to be found among all the Indian nations of Central America, with slight variations of course from the idiosyncrasies of each tribe and the manner of its communication to them by their ancestors. But the main fact of the existence of the three brothers stands the same throughout their narratives. The mural paintings on the walls of the funeral chambers at Chichen-Itza represent the very life of these three brothers, whose portraits are seen in vivid colors, and are easily recognized also in the *bas-reliefs* that adorn the Queen's room in the Chaacmol monument (you have the photographs in your collection) and the lodge or box at the Northern end of the gymnasium. In the funeral chamber, the terrible altercation between Aac and Chaacmol, which had its termination in the murder of the latter by his brother, is represented by large figures, three-fourths life size. There Aac is painted holding three spears in his hands, typical of the three wounds he inflicted on the back of his brother. These wounds are indicated on the statue of the dying tiger (symbol of Chaacmol) by two holes near the lumbar region and one under the left scapula, proving that the blow was aimed at the heart from behind. The two wounds are also marked by two holes near each other in the lumbar region, on the *bas-relief* of the tiger eating a human heart that adorned the Chaacmol mausoleum (see photograph in your collection). This is

no play of the imagination, but simply a close scrutiny of the stones and a plain reading of the history recorded thereon.

Aac after the commission of his cowardly act, prompted, we infer from the mural painting, by love for his sister in-law Kinich-Kakmó, who had preferred her husband Chaacmol to him, fled for safety to Uxmal and built there the edifice called the "House of the Governor." There he is represented over the door, in the centre of the edifice, sitting on an ornamented seat, his feet resting on three flayed bodies, the one in the middle that of a woman—typical picture of his triumph over Huuncay, Kinich-Kakmó and Chaacmol. The building, "House of the Turtles," at Uxmal, standing on the corner of the second platform of the "House of the Governor," was the private residence of Aac, inscribed with his totem—the turtle, as that rising on the South end of the East wall of the gymnasium at Chichen-Itza is adorned with the totem of his brother Chaacmol, a row, or as Stephens has it, a procession of tigers.

Let these few words suffice to show my view of the historical value of the statue discovered by me, the name of which I did not give at random, and prove to the American Antiquarian Society that, in my investigations, I have not relied on the imagination, but have contented myself with reading what is written in very plain characters. I shall be most happy to do the honors of the forests and deserted palaces of the Itzae rulers, when I am able to resume my work among their ruins, to any member of the Society who will favor me with a visit. Meanwhile, let those who desire to become acquainted with the history of the personages whose life, memory and deeds, my explorations in Yucatan have helped to revive after their long oblivion, study the photographs.

I hope our friends of the Antiquarian Society have been interested in the few terra cottas I have sent you from Honduras. On closely examining representations of *bas-reliefs* from Copan and Palenque, my attention has been drawn to the fact that the figures are represented sitting cross-legged, and this is surprising, for the Indians of to day never sit in this manner, but always squatting on their heels like the Chinese. But the Hindostanese are represented sitting cross-legged like the little figure of a woman among the objects obtained from General Bogran in the Honduras collection.

If I could obtain a sale of my collection of mural tracings, that, historically speaking, are of more importance than the statue of Chaacmol, because they declare the history of the characters they represent, I might take a new start to search for the books of the Mayas Could not the American government ask the Mexican for a plaster-of-Paris fac-simile of the Chaacmol statue for the Peabody Museum, or the National Museum at Washington, and then collect together the other stones, or copies of them, relating to the history of this statue? It is sad to see the leaves of that history scattered here and there. What does the statue individually placed in a Museum mean? Nothing, of course, except as a specimen of sculpture. But when accompanied by other stones relating to it, then it forms the body for an episode in the life of the Maya nation.

Yet the small collection, as you will perceive, is interesting in more than one point of view—

1st. *The singular instrument of music*, showing that at the time they were used the people had some idea of the scale, and could contrive even rude instruments by which they were able to produce the true notes *do*, *mi*, *sol*, *la*, *si*, and perhaps more if we understood their instruments better. By chance, blowing it in a certain manner I produced a semi-tone also, *sol sharp*, if I remember rightly.

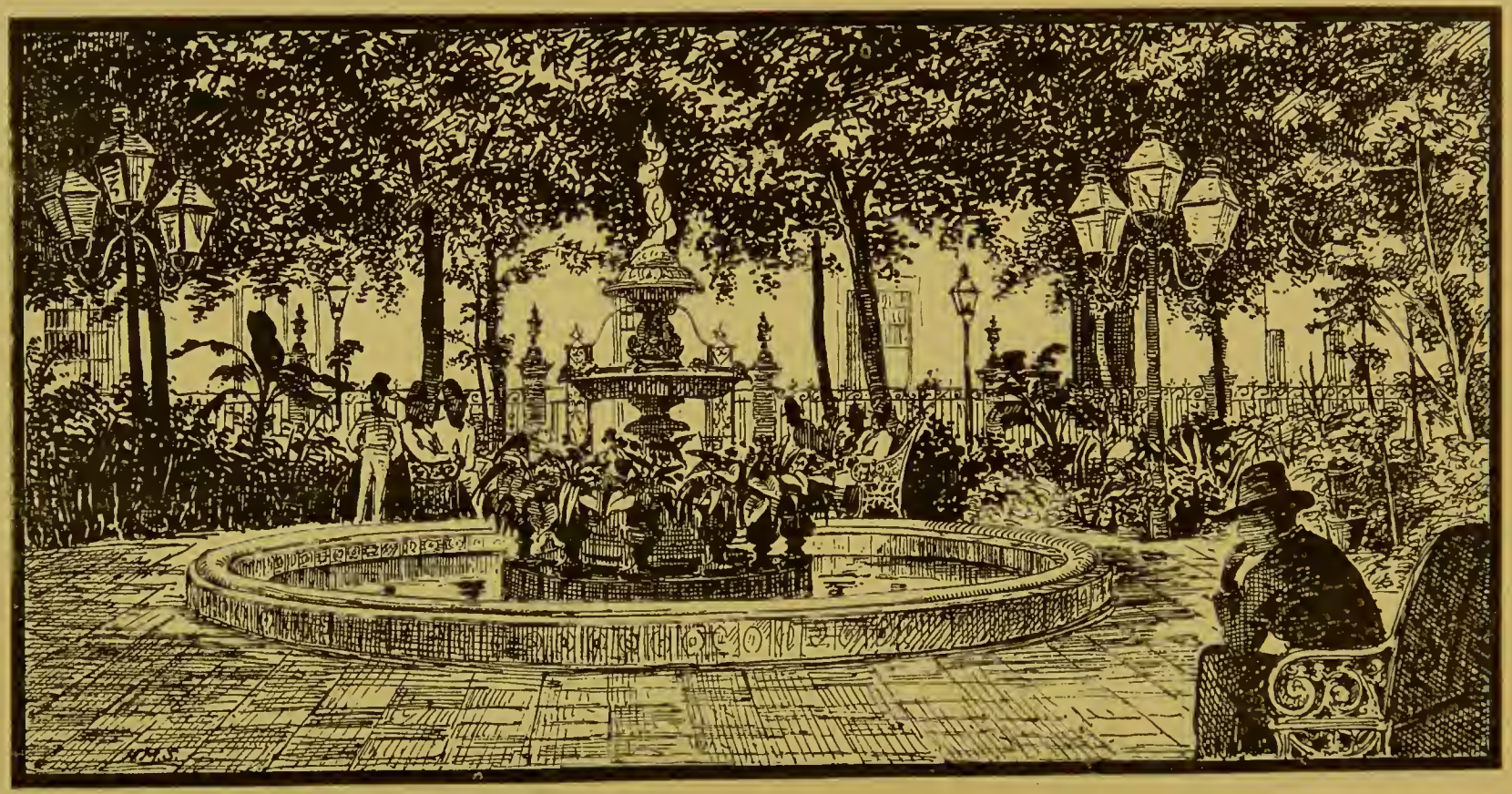
2d. *The little statue without a head, sitting cross-legged.* During my investigations in Yucatan, I have found only two small statues without heads sitting in that manner, the one at Chichen-Itza, in the observatory (you can see it in one of the plates of that monument at the top of the stairs, where I caused it to be placed in a niche, which it seems to have occupied in ancient time), and the other in the court-yard at the foot of the great stairway of the sanctuary or *Casa del Adevino* at Uxmal.

3d. That, like the Peruvians, the Indians of Honduras made their utensils of clay, in the forms of fruit and animals, while the Mayas made them generally to represent portions of the human body, or of its ludicrous likeness, the monkey.

Accept my thanks for papers and reports, and believe me, Sir,

Yours very sincerely,

AUG$^{TUS}$ LE PLONGEON, M.D.



PARQUE HIDALGO (FORMERLY CALLED *PLAZA DE JESUS*), AT MÉRIDA, YUCATAN.

# NOTES ON YUCATAN.

By Mrs. Alice D. Le Plongeon.

These notes were the substance of a lecture delivered by Mrs. Le Plongeon, at Belize, British Honduras, early in 1878, for the benefit of "The Catholic School," which is free to the poor children of that place. The lecture gives the impressions of a traveller respecting a portion of this continent, destined to receive most careful attention from historians and antiquaries. At the close of the lecture, Hon. Frederick P. Barlee, Lieutenant-Governor, proposed a vote of thanks, in which he handsomely complimented Mrs. Le Plongeon on her first effort in the lecture field, which motion was supported by the Honorable W. Parker, the Supreme Judge of the colony, in fitting terms. The illustrations in the form of photographs were furnished to accompany the lecture.*

We are about to speak on a very dry matter; of old sun-scorched stones, piled one upon the other at so remote a period that we have to go back ages upon ages in order to arrive at the time when civilized men existed on this Continent, and reared monuments that not only emulate those of modern times, but even approach, in beauty of form and elaborateness of design those of Greece and Hindostan, and which to-day our artists and architects copy.

We shall endeavor to associate the modern customs with the ancient, so as to make it agreeable as well as instructive. We dwell on the borders of a country where anciently a very high civilization existed. We speak of these lands thus far archæologically unexplored; and it may be that when properly ex-

*The illustrations used in this article were made by the Heliotype Printing Company from copies by Mr. H. M. Stephenson, of Boston, Architect.

amined we shall find that people who were far advanced in intellectual and scientific culture, lived thousands of years ago in places not yet penetrated among the forests in the unknown parts of the Colony of Belize.

We shall ask you to accompany us in our travels among the ancient cities of Yucatan; and when we speak of the people who inhabit the country to-day, we shall tell you the truth about their customs, their civilization, their physical and mental attainments. We hope that if there are any Yucatecos present, when we criticise what we believe should be criticised, they will not regard it as speaking ill of their country or of their people; nor when we tell of their merits and virtues, look upon it as adulation. As travellers, we must speak of things as they are.

On the 29th of July, 1873, we left New York for Yucatan, on board the steamship "Cuba," of Alexandre & Sons, of Broadway, New York, owners of the line of steamers that run between New York and New Orleans, touching at Havana and the principal ports of the Mexican Gulf, carrying the Mexican mail to and from the United States. We were not sorry, on the 6th of August, two days after leaving the Island of Cuba, to cast anchor three miles from the shore in the roadstead of Progreso. Seen at that distance, Yucatan appears a low, level plain, scarcely rising above the sea—not a hill, not even a hillock, to relieve the monotony of the landscape, or to intercept the line of the horizon. The first sound from the land that reached our ear was the sharp, shrill call of the bugle—*ill omen* for the peace of the country.

The custom-house boat soon drew up alongside of the "Cuba," and the health officers, with Mr. Martin Hatch, the American Consul, came on board. Mr. Hatch told us that the yellow fever was making havoc among the strangers in the Capital. He had just lost his father by it. The health officers also assured us that it was unusually severe that season among the people not acclimated. The Consul even advised us not to land, lest we should fall victims to the fever. We also learned from him that the country was in a state of revolution, and had been for some time past; that encounters were frequent between the troops of the revolutionary chief and the State and Federal troops. Notwithstanding this rather discouraging news, having started to see Yucatan, we left the steamer about 8 o'clock, A. M., on board a lighter. As the

weather was very calm, it took us three hours, under a scorching sun, to reach the land. At 11 o'clock we were on the wharf. We

DOCK AND WHARF AT PROGRESO, PORT OF YUCATAN.

started immediately in search of some breakfast; for on board they had neglected to give us any, in their hurry to discharge the living freight. Wading ankle-deep in the sand we reached a place called the Hotel Mendezona: a thatched hut of two rooms. Here breakfast was served in the fashion of the country, at a round table, where some of our fellow-passengers were already seated.

Progreso was founded only a few years ago through political influence (and political influence is everything in Mexico), to the detriment of the real estate and house owners of the old Port of Sisal, that was from that time abandoned. Progreso, as a port of entry, has few advantages over Sisal, being an open roadstead that affords no shelter for shipping, and is even dangerous in the season of the northers. At the time of our arrival there were but few good buildings in the place. The wharf where we landed is a skeleton wooden wharf, built on piles. It is about one hundred and fifty to one hundred and seventy feet long, and

about 40 feet wide, and is said to have cost 20,000 dollars. It would, however, be difficult to know, by its appearance, how the amount could have been expended in that work. Its construction was superintended by an American engineer, Mr. Alexander Stephens, who, about eighteen months ago, was murdered by the hostile Indians of Chan-Santa-Cruz, on his farm of *Xuxub*, situated on the extremity of the north-east coast of the Peninsula of Yucatan, at a short distance from the Island *Holbox*.

To the right of the wharf, about one hundred yards from the shore, stands the finest edifice in the town—the custom-house.

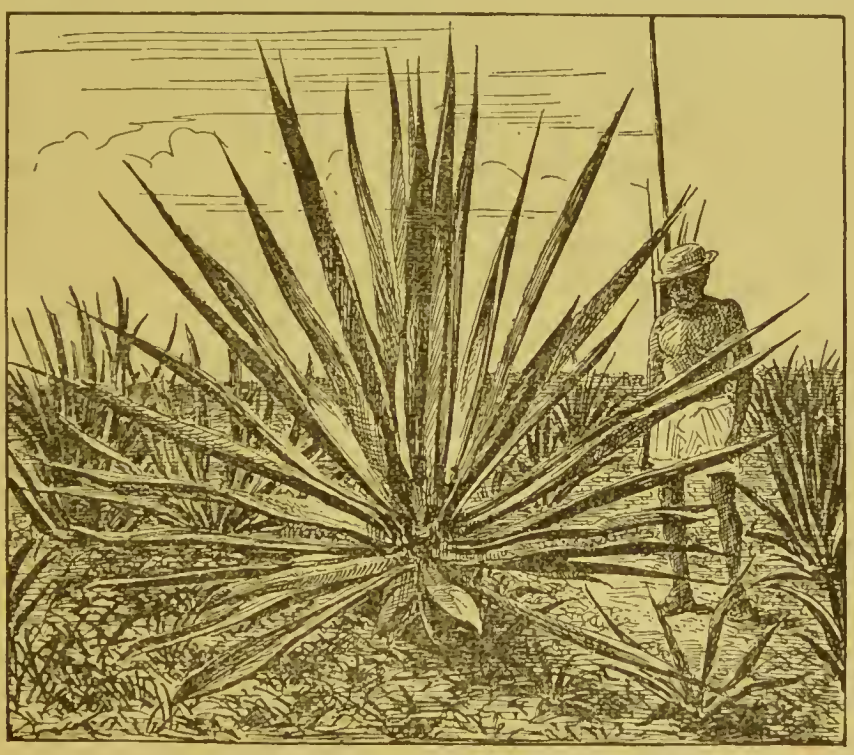
CUSTOM-HOUSE AT PROGRESO, PORT OF YUCATAN.

It is a two-storied stone building, with arcades on the ground floor, where are situated the storerooms, and the office of the Captain of the Port. The upper story is divided into a large room occupied by the desks of the clerks and different officers of the house, and the dwelling apartments of the administrator. This building is pretty and spacious. It is also said to have cost a large amount of money. On one side of this edifice, about one hundred yards back, are several large storerooms, and the Post-office.

Beyond this there was then little to be seen. Since that time

many improvements have been made, and Progreso is now resorted to, in the summer months, by the ladies of Mérida, as a watering place. The best bathing booth that existed at the time of our arrival, and until lately, belonged to Señor Alonzo Aspe, then the administrator of the custom-house. This gentleman, for whom we had a letter of introduction, received us with great hospitality. Hospitality is one of the leading traits of Yucatecan character. It is a particular blessing in a country where hotels are almost unknown.

The Yankees are proverbially inquisitive; we had just come from among them, and finding ourselves in the custom-house, we began, in the course of conversation, to ask questions about the country and its commerce. The principal article of export is the *henequen* or filament of the Sisal hemp (the *Agave Sisalensis*, an evergreen succulent plant, indigenous to Yucatan,



A PLANT OF *HENEQUEN (Agave Sisalensis)*.

which bears a considerable resemblance to the plants of the genus aloe, with which it is sometimes confounded). This plant requires little care, grows well in stony places, and scarcely

needs water. Yucatan is very stony, and as there are no rivers in the country, the agriculturist depends altogether on the rain for irrigating his fields.

The leaf of the agave, which varies in length from two to five feet when mature, is the part of the plant that furnishes the filament. There are three ways of scraping the leaf to obtain it. The one most in use is a machine moved by steam or horse power. It incurs so much waste of the filament, that last year, we are informed, the planters of Mérida proposed to offer a reward of 20,000 dollars to any person who would improve the machine.

The other two methods have been used by the natives from time immemorial. The first is with a *Tonkos*. A tonkos is a flat board of very hard wood, about a foot long, and four inches wide. The upper end, which is the thickest, is carved out to form a handle; the lower end, thin and sharp, is scooped in the middle in shape of a crescent. This is the scraper. They place a leaf of the plant upon a round, straight stick, about an inch or an inch and a half in diameter. This is held in an oblique position. After splitting the leaf lengthwise with the *tonkos*, into three or four parts, each piece is squeezed between the *tonkos* and the scraper, the man putting all the weight of his body to increase the pressure. The filament obtained in this manner is the most appreciated.

*A Tonkos.*

The second method is with the *Pacté*. It consists in laying the leaf upon a flat board about three feet long and eight inches wide, one end being placed on the ground and the other against the waist of the worker, who scrapes it with a piece of hard wood, made in the shape of a two-handled knife. By working hard, the best hand can only obtain twenty-five pounds of filament per day. He commences work at midnight, and ceases about 9 o'clock in the morning, when the sun is getting high, for the plant contains an acrid principle that, with the heat of the day, acts as an epispastic. Hammocks, bags and cordage, all made of *henequen*, constitute, besides the filament, the chief articles of exportation; the making of them is therefore an important branch of industry in the country.

To return to our narrative. We passed the day in the habita-

tion of the family of Señor Aspe, in the custom-house. It was mail day—we obtained seats in the coach for Mérida. At four o'clock it was at the door. Between the custom-house and the road there was a quantity of deep sand, and Señor Aspe was too polite to allow a lady to walk through it.

Our conveyance was an old-fashioned, rickety carriage, that might well have belonged to our great-great grandfathers. Attached to it were three tiny mules; they looked quite incapable of getting their load out of the sand, much less of taking it to Mérida, twenty four miles distant. Evidently they had resolved not to try it; for they kicked, jumped, turned and twisted in every direction but the right one. By dint of pushing the wheels from behind, dragging the beasts in front, and whipping them from above, we finally got into the road. Once fairly started they went with surprising rapidity; not even slackening their speed, when they passed over a rustic bridge, made of loose boards placed on beams, constructed over the slough, at the entrance to the swamps behind the town. Nor did they once stop until we reached the relay. These mules, so puny in appearance, were far too strong and active for our comfort. When on board the "Cuba" we had looked to Yucatan for rest; but now we were, for the time being, worse off than ever. The road is cut through fields of *henequen;* and it is not in many places that precaution has been taken to make it smooth. Since then a railway has been laid, and is operated by horse-power. When we left Progreso it was about half completed. One year ago mules were yet used in place of the locomotive. Here and there, on either side of the road, tall chimneys denote the establishments of planters. We thought at the time that no road could be worse than this, from the port to the capital of Yucatan; but when we visited the eastern part of the state we had reason to change our opinion. To remain seated was quite out of the question; we could only hold on to the leather straps, and patiently receive a shaking, which forcibly reminded us of a doctor's prescription, "when taken to be well shaken."

We survived the twenty-four up-and-down miles, and entered the capital, well-nigh exhausted, between seven and eight o'clock in the evening. Even at that early hour all was silent, as if the city had been deserted. Moonlight lends enchantment to every-

thing, and smooths out rough places. When we passed the principal square all looked polished and beautiful. The shrubs and other plants, that adorn the central garden, seemed to be covered

Casa del Gobierno (Government House), at Mérida, Yucatan, with a portion of the Plaza de la Independencia, and in the background on the right the Iglesia de Jesus.

with frost. The cathedral on our left rose grand and gloomy. Opposite to it the arcade of the City Hall, and the ancient mansion of the Fathers of the Company of Jesus, looked imposing and brilliant. We told the coachman to drive to a hotel. There was only one—of course that was the best—the Hotel Meridiano. Thither we went. After taking supper in the public apartment—for the landlord, Francisco Lopez, a Spaniard, said there was no private dining room—we were conducted to a room. It contained two folding beds, closed all round with curtains, a large pine table and one or two chairs of the same material. Besides these articles there were mosquitoes enough to torment all the inhabitants of the city. From these the bed-curtains seemed to promise us a shelter. We prepared to avail ourselves of it; but alas! for our

expectations. Instead of a mattress to rest upon, we had only a piece of canvas stretched on the frame.

The business of the next day was house-hunting,—not an easy task, for very little building is done in Mérida.

Having made arrangements to visit the eastern part of Yucatan, we set out for Izamal. An epidemic of small-pox had broken out in Mérida. Our friend, Dr. Don Liborio Irigoyen, then Governor of the State, asked us, as a favor, to dispense vaccine matter among the inhabitants of the places through which we were to pass. On the 3d of November he gave to Dr. Le Plongeon an official commission to that effect. He said that he could not send a physician for that purpose, as the treasury was exhausted. We complied with his request at our own expense. Our travelling carriage was a *bolan-coché*. It is a two-wheeled vehicle resembling a van. A mattress is spread in the bottom, for the passengers to sit or lie upon, as may best please them. It will accommodate six persons seated, or two lying at full length, which is the most common way of travelling in the *bolan*. Suspended upon leather straps, it is the only conveyance suitable for the roads of Yucatan. Some are four-wheeled, but these are seldom used on account of the bad roads. They are drawn by three mules, which go at a dashing rate, at least for the first few miles. The road between Mérida and Izamal is one of the best in the State. About four miles from the capital, on the right-hand side going towards *T'ixkokob*, are to be seen a number of mounds in a ruinous condition. This is the site of the ancient village of *T'echoh*, and the ruins show that once upon a time there existed a large village. We have not examined these edifices, our attention not having been called to them until a very short time previous to our leaving Yucatan. The people of the country take but little interest in the remains of the monuments of the ancient inhabitants.

The first village that we reached was *T'ixpeual*. It is composed of a few straggling houses, with thatched roofs, and some Indian huts, nestling among orchards. We passed through a long, irregular street, the principal and only one, leading to a large square overrun with grass, where stands an old convent in a most ruinous condition, and a roofless church. The altar only is under a shed of palm leaves. Nominally, the Roman Catholic religion is that

of the country; but since the laws of reform were first promulgated under President Don Benito Juarez, when the property of the clergy was confiscated, many of the churches have fallen into ruin. Frequently the churches are sustained by the exertions of the priests alone, who are now, with but few exceptions, very poor. The people of the small towns take little pride in the appearance and preservation of their temples.

At *Tixpeual*, the carriages coming from or going to Mérida, generally stop to water their horses at a well by the roadside. The next town of importance is *Tixkokob*. At this place the Spaniards fought a hard battle with the Indians, under the command of the Cocomes, princes of Sotuta. The historian says there were only two hundred Spaniards to forty thousand (?) Indians. This battle took place on Thursday, June 11th, 1541. A few months later the city of Mérida was founded. *Tixkokob* is now the aristocratic village of Yucatan, so we were told. It is small, not over picturesque, but a well kept and clean town. The church is large. The convent, now half ruined, attached to it, is occupied by our good friend, Dn. Pablo Ancona, the curate, to whose hospitality and kindness we owe much. To him also is due the re-edification, at his own expense, of the part now habitable. The village is surrounded by plantations of *henequen*. The principal industry of the place, among the poor, is hammock making. This is done for the most part by women and young girls, which latter I must say are very pretty. Besides the curate, we have there many good friends whom we remember with pleasure.

About fifteen miles from *Tixkokob* we passed the village of *Cacalchen*, once of some importance, if we might judge by the number of stone houses seen around the spacious square. It is now nearly deserted and lonely.

This manner of travelling in our own carriage, passing through many unknown and strange looking places, stopping when and wherever one feels inclined, is certainly more pleasant and full of interest than being carried at the rate of forty miles an hour in a railway car. The Indians alone, in their picturesque, unique costume, were sufficient to rivet our attention. Then, too, the hedges were brilliant with convolvulus of various colors; rose-pink, sky-blue, rich purple, and pure white, mingling and entwining each other. Upon the ground, every here and there, were large groups

or patches of yellow butterflies that, upon our approach, rose and fluttered around us. To give an idea of their number, we may say that we rode through clouds of them for miles. They were of the most brilliant hues. Indeed no country can surpass Yucatan in the beauty and variety of color of its flowers, insects and birds.

We next traversed *Mucuiche*, a hamlet of a few scattered huts hidden among orchards, and then came to the village of *Citilcum*.

INDIAN HUT IN YUCATAN, WITH INDIAN LABORERS AT WORK.

As we rode through it a storm was just breaking overhead; yet notwithstanding a loud peal of thunder, we distinctly heard A, B, C, echoed by many youthful mouths. Looking toward the place from whence the sound came, we saw the village school where the hopes of the villagers of both sexes were learning the names of the letters, which they shouted out at the top of their voices, making rather a discordant than a harmonious noise. They stopped short of one accord at the rattle of wheels upon the stony road, stretching their necks and eyes to the utmost to get a peep at the travellers, and then, at the command of the *Magister*, in unison screamed again A, B, C.

At a very short distance from this place, on the left of the road, are to be seen the remnants of the magnificent ancient causeway, carefully built of hewn stone, cemented with mortar, which, at the time of the Spanish conquest, existed between Izamal and *T.-Hó* (Mérida). A great part of this work has been thoroughly destroyed to obtain stones to macadamize the public road.

We were six miles from Izamal, yet could plainly see, towering above all, the church that crowns the great mound of which we will speak anon. The rain continued to fall heavily until we were near the city, when the sun again shone forth in all its splendor; so the *bolan coché* entered Izamal sparkling with rain-drops. We drove to a house that had been taken for us, and found to our dismay that the floor of each room was abundantly adorned with little pools of water—unfortunate result of a shower of rain and a leaky roof. We had letters of recommendation to Señor Don Joaquin Reyes, one of the principal merchants there. These we sent by our servant. In less than half an hour the carriage of Don Joaquin was at the door with a request from him for us to go immediately to his house. He did not allow us to return to our mansion of small lakes, but furnished one belonging to himself, and put it at our disposal, which proved to be much more comfortable than the one rented for us. The friendship then shown by Señor Reyes and his amiable family has never changed.

Izamal is not what it was some years ago, having been partly destroyed by the Indians at the time of their insurrection in 1847. Anciently it was celebrated for its temples where the people went in pilgrimage from all parts, even from the countries now called Chiapas, Guatemala, and Tabasco, in olden times *Xibalba*. Four of the principal mounds yet remain. They surround the largest square. The smaller ones were destroyed for the purpose of building the city. That situated on the north side is an oblique pyramid, with a gradual ascent of broad steps on the south side, and a very steep, almost perpendicular one, on the north. Upon this mound, that is one hundred and fifty feet high from the base to the summit, a temple was raised in honor of *Kinich-Kakmó*. Kinich-Kakmó signifies fiery Ara, with eyes like the sun. The Ara, or Macaw, is of the parrot family, with a long

tail, very brilliant plumage, and a powerful beak. This bird inhabits the Antilles and the warmer parts of America.

PUBLIC SQUARE, AT IZAMAL, YUCATAN,

WITH ARTIFICIAL MOUND IN THE BACKGROUND.

In our later studies among the ruins of Chichen, we have learned that the totem of the wife of the chieftain Chaacmol, queen of Chichen, was an *Ara* (*Moó* in the Maya tongue). The queen is represented on some of the monuments as an *Ara* eating human hearts. In the interior of the building that Kinich-Kakmó caused to be raised to the memory of Chaacmol, we find the history of her life portrayed in mural paintings. She was graceful, beautiful, affectionate and brave; and such was her goodness and virtue, that after her death the people deified her, as some of the nations of antiquity in the Old World deified their illustrious personages. Her shrine was then built upon the mound on the north side of the square. It was said that always at mid-day Kinich-Kakmó descended from heaven in the form of an Ara, and burned the sacrifice offered on her altar. By a strange coincidence we read in the Bible of similar phenomena, taking place among the Jews, the fire from heaven coming to burn the offerings on the altar.

The seeond mound, on the south side of the square, is very extensive. It was ealled by the Indians Ppapp-Hol-Chac, which means "Heads and thunder." Father Lizana, an historian of the time of the conquest, said that the word Ppapp-Hol Chac meant the mansion of the priests of the gods. This mound was occupied by the palaces of the priests, whieh were destroyed by Bishop Diego de Landa, who built in their plaee the ehureh and eonvent of the Franeiscan monks, in order, says Cogolludo in Book V. of his "*Historia de Yucatan*," to drive away the devil with the sight of the holy habit of the friars, from a plaee whieh had been defiled by the presenee of the priests of idols. To-day the convent is in a ruinous eondition, but serves as a barracks, and oecasionally as a penitentiary. Landa also destroyed the temples of the other mounds. On the east side of the square was a temple dedicated to *Itzamatul*, whieh means "he who reeeives and possesses the graee or dew from heaven." Tradition says that *Zamna* was the first King that ruled over Yueatan, and that he divided the lands, and gave names to the towns. During life he was eon sulted by the people, who wished to know what was taking place in remote parts. He also used to propheey the things of the future. Aeeording to tradition, they carried the dead to him that he might bring them baek to life. He healed the siek by the imposition of the hand. After his death they deified him and raised an altar in his honor. He was held in great veneration even at the time of the Spanish eonquest. The people brought to his shrine their sick friends. These were earried to another temple, also dedicated to him, that oeeupied the west side of the square, and was ealled *Kabul*, that is to say, "the working-hand." People went there in great numbers from all parts of the eountry, earrying presents and alms.

Cogolludo, in the seeond chapter of the VIth Book, tells us that Father Landa endeavored by all possible means to attraet the Indians to the holy Catholie faith, and wean them from their idol-atrous rites. Seeing that they were aecustomed to worship images, having destroyed theirs with his own hands, he resolved to replace them by one of the Virgin Mary. He made a voyage to Guatemala to obtain one from the ehisel of a renowned sculptor, who resided there. As he was going, the Franeiscan monks

asked him to bring another for their convent in Mérida. The two images were obtained, put into one box, and, that they might not be injured, it was carried on the shoulders of Indians. On the way back it rained continually, but not on the box, nor upon those who carried it, nor even for some distance around them. Arrived at the city of Mérida, the monks chose for their convent the image that had the prettiest face and most saintly expression. Although the other had been brought for the Indians, and was to be carried to Izamal, the people of Valladolid wanted it for the convent of that city, because, said they, it is not just that it should remain in an Indian village. The Indians opposed this as they could; but what the Spaniards wished began to be put in execution. All in vain, however; no human strength could move it from Izamal. So, to the delight of the Indians and admiration of the monks, the image was placed in the convent of that city. Cogolludo goes on to tell of the wonderful and numerous miracles performed by Our Lady of Izamal, in healing the sick and raising the dead. Even to-day they are said to be performed, and her shrine is a place of pilgrimage for the people of Yucatan, notwithstanding that the original image was destroyed some years ago in the burning of the church, and replaced by another, as stated on a marble slab at the principal entrance of the church. Landa destroyed the idols that healed the sick and raised the dead, putting that of the Virgin Mary in their place, and the same miracles have continued. The image, however, that had remained at Mérida effected nothing.

The Indian, the mixed or Mestizo race, and even some of the uneducated white, are firm believers in witchcraft, and practice many superstitious rites. In name they are Catholic, but in name only, and because they have been driven to it. Cogolludo says in the 17th chapter of his IVth Book, that those Indians who failed to attend mass were flogged; and we know from good authority that only thirty years ago those Indians who entered the church late were whipped at the door.

Throughout Yucatan, when the Indians or Mestizos suffer from a disease they do not understand, they are often said to be, and really imagine themselves bewitched, and that this or that medicine man *(H-Men)* can cure them by destroying the sorcery. The medicine man is generally an Indian who pretends to a great

knowledge of medicinal herbs; and who, in fact, has an insight into the use of some few, having received the instruction from his parents, who have, in their turn, received it from theirs. It is easy to comprehend how different may be the knowledge of the medicine man of to-day from that possessed by his forefathers, when we consider that it has been passed to him only by word of mouth. The ancient *H-Men* (wise man) was, possibly, a sage of great learning, but the *H-Men* of to day is a trickster and impostor. Nevertheless, many Indians have a profound faith in his power and wisdom, so he is called to the aid of the bewitched. The rogue, uttering cabalistic words, goes under the bed or hammock to dig up the figure of the person that has done the mischief. This, at least, is what he pretends. Of course, he has some little figure hidden about him; he feigns scraping the floor, generally mere earth among the poor Indians, and soon presents an image said to be a likeness of the person who has bewitched the patient. For this he receives a fee, and takes his departure amid the thanks of his wondering dupes. The patient remains, of course, neither better nor worse for the ceremony, unless his faith be great and the disease half fanciful.

I copied an old manuscript, written in the Spanish language, and in very bad grammar, that I found in Isla Mujeres, where it is venerated and firmly relied upon as the most complete work on medicine. It is called the "Book of the Few." Why, I have not been able to discover. I was told by several persons that this same manuscript serves in lieu of a physician in some parts of Yucatan. When in Valladolid, Yucatan, we heard it spoken of in very flattering terms. The following is a quotation:—

Cure for the Bewitched.—"First take a root of vervain, cook it in wine, and give it to the patient to drink. It will be vomited. To know if the person is bewitched, pass a branch of skunk plant over him. If the leaves become purple the person is bewitched. To be freed from the enchantment wear a cross, made from the root of the skunk plant, around the neck."

This is a sample of the many absurdities found in that old manuscript.

We were in Izamal in the month of December. On the 8th the festival of Our Lady of Izamal is celebrated. A large fair is

held, to which the merchants, not only of Yucatan, but also from the neighboring States, flock, as in olden times, if not to pay their respects at the shrine of the Virgin, to worship at the altar of Mercury. The people go thither to kneel before the image already mentioned, and to pass three days as merrily as possible. In the morning there are processions to the shrine of Our Lady. Mass is celebrated at eleven o'clock. From church the congregation goes straightway to the bull-fight.

A bull-fight in Yucatan is not like a bull-fight in Spain. The ring is built by the principal families of the village, each lending servants to erect a part of it. It is a double palisade, sustaining sheds, covered with leaves of the palmetto, that are divided into boxes. Every one provides a chair for himself. The best and worst, large and small, all attend.

There are but few men, if any, who give themselves at all to the study of tauromachy. Many enter the ring perfectly ignorant of all rules by which they might escape the fury of the animal. It was customary among the ancient people of Yucatan to sacrifice their lives as an offering to the deity for any benefit received. This is yet openly practised among the Indians, but in such manner as not to pass for human sacrifice. If an Indian desires any particular thing he begs it from his patron saint, and, to show his gratitude, promises in return to fight the bull, or to keep himself intoxicated for a certain number of days, or to perform some other rash deed. Well, he knows nothing about bull-fighting. To enter the ring and confront the animal is about as sure a death for him as being shot at by arrows, as was customary for the victims that offered themselves in the olden times. With an Indian about to enter the arena I once remonstrated, but the only answer given to all argument and persuasion was "*In promesa, Colel*" (my promise, Lady). Nothing could shake his resolution; he complied with his promise, and was carried away mortally wounded. The ring is occupied by six or more Indians on foot. Some young men of the city who wish to display their horsemanship enter mounted. Of those on foot some are provided with a pole about three feet long, having a sharp iron head like that of an arrow, called *rejon*. Others have merely a sack made of henequen. This serves them as a shield against the bull. Certainly they, at times, show much courage and have very narrow escapes.

When the people tire of seeing the bull played with, they call for the *rejoneros*. Those who have already performed now stand aside, and the *rejoneros*, that is, the men provided with spears, come forward. Their business is to strike the bull in the nape of the neck and kill him. If the blow is well given the animal at once falls dead, but this is seldom the case. The beast is chased by two or three men at once, blow after blow is dealt; the blood gushing afresh each time. The first blow makes it furious; it is then dangerous for the pursuers, but the loss of blood soon weakens it, and it becomes almost harmless. The horsemen are then called upon to lasso, drag it off, and bring in another. Rockets are fired, the people applaud, the band plays, and a clown does his best to amuse the audience during the interval. If a bull is disinclined to fight, they girt his body with ropes in every possible way, and fasten fire-crackers to his tail and about the head and back. Thus aggravated the poor beast jumps and the fire-crackers explode. This renders him furious for a minute or so. If again he refuses to fight he is taken away as a coward not worth killing. Such is the bull-fight in some of the villages of Yucatan.

Nearly all the religious festivals outside of the larger towns are attended with bull-fights, gambling and fireworks, and, as of old, inebriation. Apart from the festivals of the church, the Indians have many ceremonies of their own that their forefathers practised. They regard them with far more veneration than those forced upon them by the priests. One of these rites is the *Etzmeek Naylan*, or the act of placing the child, when four months old, astride the hip of a woman chosen for the occasion. She represents for them the godmother, from *Naylan* (godmother.) These godmothers faithfully keep their promise to bring up the child, if the parents are removed from it. The child, and its mother, both have a great respect for her, the little one being taught to kiss her hand when she approaches it. The ceremony is as follows: After the child is placed astride of the hip, the woman walks round the outside of the house five times with the baby. Five eggs are buried in hot ashes, that they may there break, and the child thus have its five senses awakened. If the eggs do not break readily, it is a sure sign that the children will not be very intelligent. If they wish it to write well, they place a pen in its

hand during the ceremony; to read well, a book; to work in the fields, a *machete* (a long knife generally used by the natives).

This rite causes us to remember a very touching Hindoo anecdote that we have read in the life of the Prince Sidharna, son of Maya Devi, the beautiful illusion. He retired from the court when yet young, and became Budha, the founder of Budhism, which sect is to Brahmanism, as Christianity to Judaism. A young woman having lost her only child thought herself most unjustly treated. She went to Budha to ask him to bring it back to life. Budha promised so to do if she would bring him five grains of mustard seed from the hands of some one who had lost no relative, no friend. The woman went rejoicing from door to door with the child *astride upon her hip*. She failed to find any one who had lost neither friend nor relative. Then she comprehended that she was not exempt from the general law of death, and went back repentant to Budha, who pardoned her. Ever after, she remained with him and became a sainted person.

This shews that the custom common in Yucatan, of carrying children astride the hip, existed likewise in Hindostan at the time that Budha lived; that is to say, more than five thousand years ago.

As we have said that the Indians of Yucatan believe in witchcraft, we will tell you how Dr. Le Plongeon acquired the reputation of a wizard. It was said that several persons had wished to enter the great artificial mound raised to Kinich-Kakmó, the late Abbé Brasseur de Bourbourg among others, but as yet none had succeeded. Everybody considered the feat, if not impossible, at least very dangerous, as there might be snakes lurking there, and other venomous reptiles, with which the country abounds. Dr. Le Plongeon decided to enter if possible, as his examination of the mound had persuaded him that it must contain interior chambers. He was fortunate enough to find a small opening on the eastern side. After penetrating ten yards, he found a dry stone wall blocking the way. To the right he perceived, by the light of his candle, a small aperture. He made his way through this. Crawling on about fifteen yards among immense blocks of hewn stone that form the foundation of the mound, he found that there was no entrance in that direction. Returning, he felt a strong current of air that seemed to come through the stone wall. He

came to the conclusion that there was the road he sought. He had an order from the Governor of the State, to ask the *Jefe Politico*, or magistrate, for help. This he did, requesting him to lend four prisoners from the penitentiary, as no free working men could be induced to venture, much less to work, under the mound. The men were given, and an opening was made in the wall. This took nearly a whole day, as there was little space for working. The next day the magistrate offered all kinds of excuses not to lend the men again. The Doctor, however, went to the mound in company with Dr. Don Braulio Mendez and Don Joaquin Reyes. The gentlemen entered as far as the wall, but left Dr. Le Plongeon to continue his explorations through the opening made by the prisoners. The passage was exceedingly small, being half filled up with loose earth. He took a string between his teeth, to signal if anything should befall him, and penetrated, by the light of a candle, about twenty-five yards in a westerly direction, crawling on the ground, with his back scraping the roof. Reaching the end of the passage, he found a place where he could sit upright. At the left-hand side was an opening almost blocked up with earth that had sifted between the stones. It left an aperture of about a foot and a half. Here the shoulders would not pass; but looking through, he saw a kind of chamber, and, on the south side, the doorway of a subterranean passage, leading south towards the mound upon which the church stands. A strong current of air blew through the passage. There is no doubt that from time immemorial communication has existed between the two mounds. There ended the exploration in that direction for the time being.

Among the Indians and Mestizos a strange tradition is current and firmly believed. It is, that under the mound is a large pool of crystalline water; and, standing in the middle, a beautiful image of a woman, so resplendent and shining that it illuminates the whole place. But as in our modern times no one has entered into the interior, we must accept the existence of an image there as a possibility, for the Indians were in the habit of burying under these pyramids the effigies of their honored rulers, as the Egyptians the mummies of theirs. The visit of the doctor to the mound gave rise to the following ludicrous incident:—A mischievous cat, poking his nose where he had no business, threw

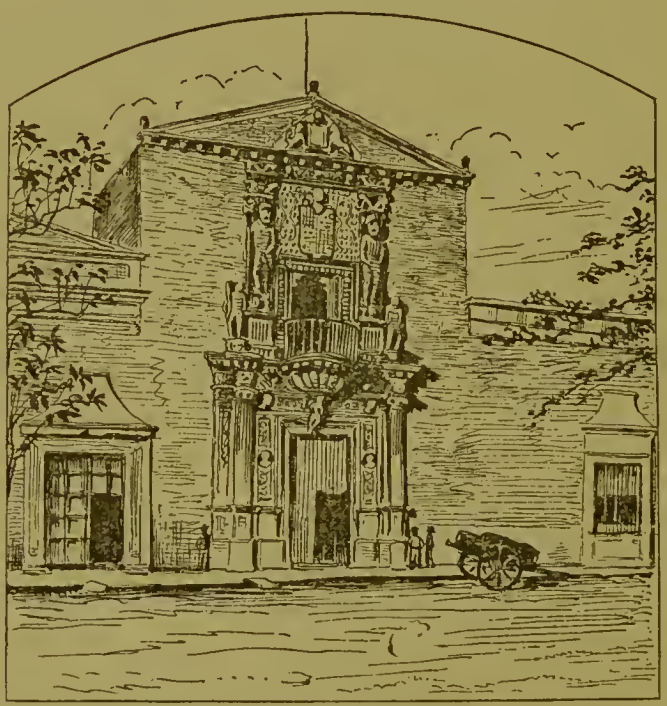
down a bottle containing a solution of nitrate of silver. To repair the damage the doctor set to work to make some more, and for that purpose dissolved some Spanish coin in nitric acid. Having precipitated the pure silver in the form of chloride, in order to separate it from the alloy of copper, he converted the chloride into black oxide, which very much resembles loam. In order to get rid of the little zinc it might yet contain, he sent it, well washed and dried, to the silversmith to have it melted, little dreaming of the inference that would be drawn. Our servant was a Mexican soldier of the Pioneer regiment, accustomed to a strict discipline, and to comply therefore with the orders he received, he took the oxide of silver to the best silversmith and requested him to melt it. The smith having examined the stuff, became enraged at the idea that any one should take him for a fool, and wish to play him a practical joke, and asked the soldier what he meant by requesting him to waste his time trying to melt earth under the pretence that it was silver. The soldier merely replied that such were his orders, that he knew nothing else, and begged him to do it. After much *pourparler*, the smith at last took a small quantity of the *stuff* that he believed to be earth, placed it upon a piece of charcoal and with his blowpipe directed a flame upon it. When lo! to his astonishment, a globule of bright silver appeared in lieu of the supposed earth. Then a lucid idea crossed his brain. "Oh!" said he, "I now know why that foreigner, your master, went under the mound. He knew that the earth there was pure silver, and went for that." The worthy man refused to melt the rest lest it might be bewitched. This took place on a Saturday morning. On Monday we learned that very early on the previous day, Sunday, the smith, with some of his companions, had proceeded to the mound, entered it, not without fear and trembling, and filled some large bags with loam. This was carried to the forge, and he passed the day trying to obtain silver by blowing upon it, but alas! without success.

When this story was told to us, the Doctor thought it would be well to push the joke a little farther. So he took a small quantity of solution of nitrate of silver and poured into it a solution of common salt. You are aware that the result of this mixture is a white precipitate of chloride of silver, which when dry, resembles lime. Having obtained this, the Doctor sent it to the silversmith to have it melted. After much hesitation he sub-

mitted it to the magic action of the blowpipe flame. The globule of silver again made its appearance. "Ah!" said he, angrily, "now I understand the whole thing, and why we worked all yesterday, and burned so much coal for nothing. Your master knew that we were going to the mound, and by his power of witchcraft, changed the loam into *saccab*" (white earth).

From that time Dr. Le Plongeon passed for a great wizard and enchanter among the lower classes of Izamal.

Mérida, the capital of Yucatan, was founded on the site of the ancient city of *T-Ho*, in the year 1542, by Don Francisco de Montejo, Lieutenant-Governor and Captain-General, son of Don Francisco de Montejo, the Adelantado, Governor and Chief Justice for the Provinces of Yucatan and Cozumel.

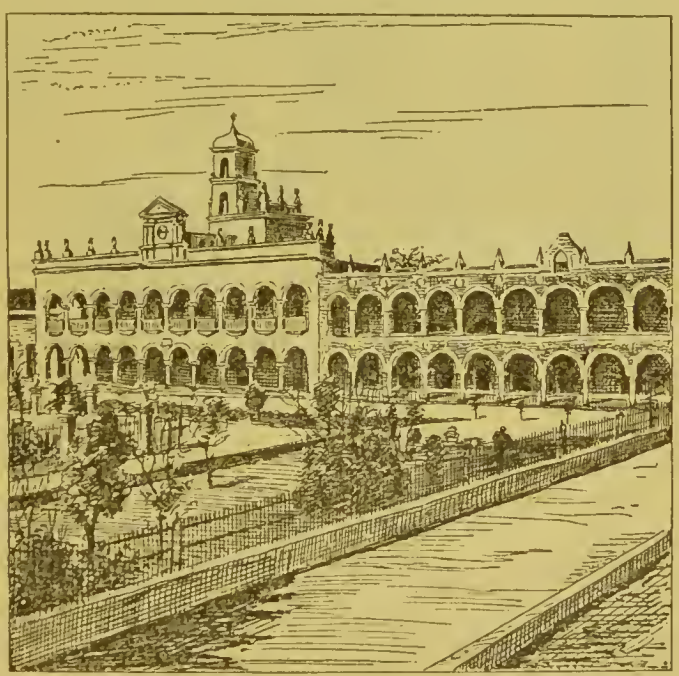


Casa del Adelantado Montejo, on the Plaza de la Independencia, at Mérida, Yucatan.

The Spaniards built their first houses in the style of the natives. Afterwards they destroyed the artificial mounds that surrounded the place where the principal square now is, to use the stones for building the city, commencing at that point. The first house built under the direction of Montejo yet stands on the south

side of the square. It is a curious combination of Spanish and Indian work. Prominent among the ornaments on the façade are Spaniards standing upon prostrate Indians (sad emblem of the social position of the poor Indian of to-day).

The City Hall occupies the central part of the west side of the square, between the dwelling of Don Bernado Peon and the ancient mansion of the Jesuit Fathers. It is a long two-storied building, with an arcade running the whole length on the ground and upper floor, where are the Council Chambers and office of the City Treasurer. Below are the barracks of the National Guard, police station, city jail, and office of the magistrate. A turret rises from the centre of the building, and in front is the city clock, which announces to the inhabitants that their life on earth is shortened by an hour. Under it, on a marble plate, is the date of the erection of the building in letters said to be of pure gold.



Casa Municipal (City Hall) with a portion of the Plaza de la Independencia, at Mérida, Yucatan.

The Bishop's palace and the cathedral adjoin each other, and occupy the eastern side of the square. The cathedral is a massive-looking monument, of imposing proportions. On the north are

the government offices and some private property. The middle of the square is laid out as a flower garden. This is the promenade of the ladies, particularly on Sunday and Thursday evenings, when the orchestra performs there.

LA CATEDRAL, AT MÉRIDA, YUCATAN,
ON THE PLAZA DE LA INDEPENDENCIA.

The prettiest spot in Mérida is the *Plaza de Jesus*, or Jesus square.* It is a small enclosure, with an Italian marble fountain in the centre, patches of ground laid out as flower beds, and an abundance of elegant iron seats. The walks are paved with marble, and over all trees wave their green foliage. Formerly the orchestra played there, but it was abandoned for the larger square, not being spacious enough for all the people to enter the garden. This is enclosed by an iron railing, and only opened to the public at certain hours. A few days after our arrival we went

*See full-page illustration of Parque Hidalgo (formerly called *Plaza de Jesus*), facing page 69.

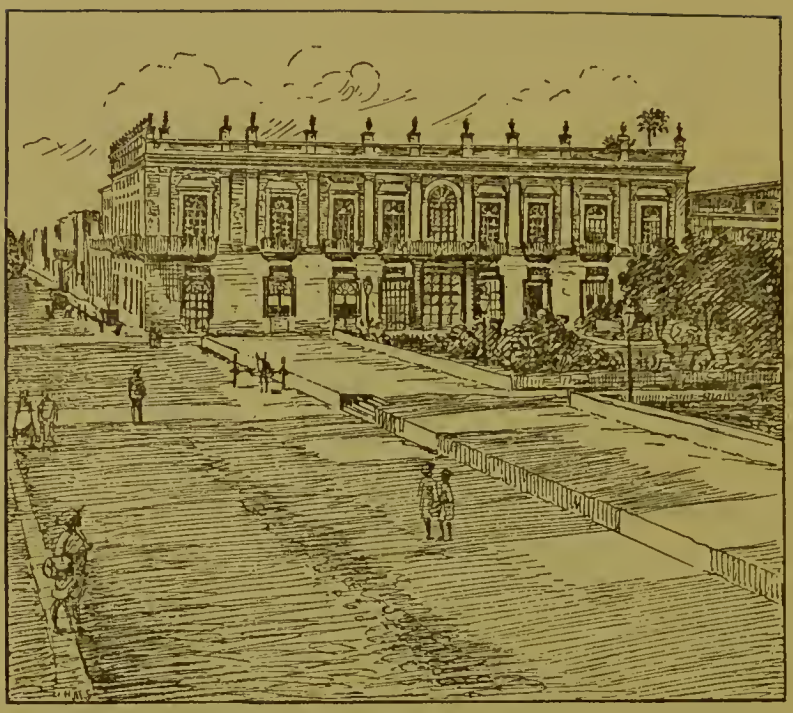
to that place to listen to the music, and we almost imagined ourselves upon enchanted ground. The band was excellent; Maestro Cuevas was director, and the opera of Semiramis was well executed. The atmosphere was soft and balmy; and how graceful were the ladies! Dressed, nearly all of them, in white, they glided, rather than walked, to the compass of the harmonious sounds. We have never seen any people move as gracefully as do the Yucatecan ladies; this walk is not studied, but natural to them. Their harmonious, amiable character shows itself in their way of walking. This scene was yet more enhanced by the pale moon that shed her silvery light over all. That evening will always be remembered by me, for before morning I was prostrated with yellow fever. I passed through that illness in the Hotel Meridiano, attended by Dr. Le Plongeon, who patiently fulfilled the duties of nurse and physician with the most assiduous care, not sleeping, during seven days, more than an hour in every twenty-four, as we had been assured that no stranger attacked with the fever that year had escaped death.

The streets of the city of Mérida are laid out at right angles. They are wide, and paved in the dry season with dust—when it rains, carpeted with mud, and adorned with innumerable pools of water, that almost interrupt pedestrian travel. Besides the *Plaza Mayor*, there are about fourteen or fifteen smaller squares, and on each a church.

The market-place is in the centre of the city. It is poorly provided. Everything, except the meat, is sold on the ground, generally spread out on clean, white cloths, or large plantain leaves placed on the flagstones. The venders squat in rows beside their wares, which are sold in very small proportions. To a stranger it is a novel and pretty sight, on account of the picturesque costumes of the Indians.

The houses are generally one story high, though there are some handsome two-story dwellings. The apartments are spacious and lofty, but seldom elegant. Some of the buildings have interior court-yards adorned with flowers.

The only theatre looks rather unattractive outwardly. It has been proposed to pull down the Castle of San Benito, and build a new theatre in its place. It would be regretted, for the fortress of San Benito, and ex-convent of the Franciscan friars, is a his-



House of Señor Dario Galera, on the Plaza de la Independencia, at Mérida, Yucatan.

torical monument that ought to be preserved. It stands on the eastern side of the city, and occupies the elevated site of a magnificent temple of the ancient inhabitants. Bishop Landa in his work, "*Las Cosas de Yucatan*," has given a description, and preserved the plan of it. To-day the convent is in ruins. The church attached to it serves as barracks for the federal troops stationed in Mérida. Some part of the building has been re-erected to serve as a penitentiary. Many of the cells have been purposely pulled down by the federal soldiers, to use the material for building an almshouse and free school for the poor, but a change of government prevented the completion of the project. Some of the interior decorations yet remain upon the old walls of the convent, though the roof has fallen. We have seen the remnants of the ancient monument spoken of by Landa, which, according to Father Cogolludo, supported the cells of the second story of the convent. As a fortress, the building would yet do good service.

Court-Yard of the House of Doña Bruna Galera de Casares, at Mérida, Yucatan, with Servants variously employed.

The society of Mérida is pleasing. Even the poorest classes are well-mannered and refined. They will give all they have to receive a visitor kindly. There is little vice in the city; violent crimes, such as theft and murder, are almost unheard of in the country. The gentlemen are very polite, and, as a rule, well informed, well educated, and very intelligent.

The ladies are very much retired. Some only leave their houses to attend church. In appearance some are beautiful, but all are graceful and none ugly. They are fond of music, and have a natural talent for it. Some are very skilful at making sugar flowers, fruits and vegetables. We have seen these fabricated with such perfection, that, being close to them, and even having them in the hand, it was difficult to persuade ourselves that they were not the real thing. The taste alone can undeceive; it is as

pleasing as the appearance. In dress the ladies follow the European fashions.

The Mestizas and Indians always retain their most picturesque ancient national costume. The Indian woman's dress is of white linen. The under part is a full skirt called *pic*, made long enough to escape the ground; the upper, called *uipil*, falls over it to the knees. This consists of a single piece that requires no fastening; it is cut square at the neck. Nothing can be prettier than a young Mestiza in holiday attire—her *pic* and *uipil* both edged with colored embroidery and deep lace, made by the natives; her feet encased in dainty satin slippers—around her neck a gold rosary, from which depend coins of the same metal, and ribbons of various hues. Her bearing is that of a princess; a modest

MESTIZA SERVANTS IN YUCATAN,
ENGAGED IN MAKING TORTILLAS, OR INDIAN CORN CAKES.

one withal, though conscious of her bewitching appearance, which is yet more enhanced if she carries a basket of flowers, gracefully

poised upon the tips of her fingers and raised to the level of her head to shade her face from the sun. The Mestizas of Mérida are renowned for their beauty, and with good reason. Their ordinary head-dress is a white lace veil, and when they dance they wear a hat trimmed with ribbons and flowers. Their hair is either worn in two plaits, or fastened in a peculiar knot, called *a Tuch*, that falls upon the back of the neck. The costume of the men recalls most forcibly to the mind the dress worn by the workmen of Assyria and Egypt, as shown on the mural paintings of the tombs of Egypt, and the *bas-reliefs* on the slabs of Nineveh.

Mérida has a musical academy, where music is well studied and carefully performed. There is also an amateur theatrical society among the youth of the city, which certainly performs far better than the travelling companies that visit Yucatan.

There are two large colleges. One, "*El Colegio Catolico*," in the *Plaza de Jesus*, is the private property of Father Dominguez. It is exceedingly well kept. They have classes for primary education and the higher branches of learning. Theology, and all other studies necessary to those who wish to enter the priesthood, are taught. It has a good library, and a department of chemistry and natural philosophy, well supplied with good instruments; also an astronomical and meteorological observatory, where the director, Father Dominguez, takes observations every day, that are published in the "*Revista de Mérida.*" The other, at a short distance from the *Plaza de Jesus*, is the "*Instituto Literario*," an establishment belonging to the Government. In it all branches of education are taught, including medicine and jurisprudence. Two large apartments of this building were ceded in the year 1871 to serve as a museum for antiquities, under the direction of Señor Don Crecencio Carillo Ancona, a Presbyter, who has taken a true interest in the archæology of that country and has dedicated many hours of his life to its ancient history. This museum contains pieces of antique sculpture, plaster casts, pottery, some Maya manuscripts, objects of natural history, and samples of various woods of the country. There are also several public schools. These, under the supervision of the Common Council, are very well conducted. The children are what the Americans would call "smart." They progress with astonishing rapidity in all the studies they are put to. A few

years ago, there being no proper school for girls, two ladies, Doña Rita Cetina Gutierez and Doña Cristina Farfan, undertook to establish one for those of poor families, calling it the "*Siempre Viva*" (Evergreen). It is, to-day, by the efforts of those ladies, in a most flourishing condition.

Formerly there was an hospital near the centre of the city; the old convent of the Mejorada serves now for that purpose. This hospital, until the middle of 1876, was under the care and superintendence of the Sisters of Charity; but at the time of the promulgation of the laws of reform, these ladies abandoned it, no longer being permitted to dwell in the community. It contains an asylum for the insane. At the time of our departure from Mérida the hospital was under the direction of our friend, Dr. Sauri, a very able physician, who served in the United States as surgeon during the war, in the army of the Potomac, and went afterwards to France and Germany to complete his medical studies. He is a true lover of his profession.

Mérida boasts of several private open carriages, and some very fine horses imported from Europe and the United States. The vehicle generally in use is called a *caleza*. It is similar to the old-fashioned chaise. Two people may sit in it comfortably, and three upon an emergency. It is drawn by one horse, which the driver rides. This conveyance is supported on broad leather straps, and the motion is very easy.

Several newspapers are published; some three times a week, others twice only. "*El Periodico Oficial*," or "*La Razon del Pueblo*," is the organ of the Government; "*La Revista de Mérida*," that of the commercial community; "*El Pensamiento*," of the Masonic society; and "*El Mensajero*," of the clergy. Other small sheets are issued occasionally by the Spiritualists and other "*ists*," as this or that opinion is most prevalent. One of them, called "*La Ley de Amor*" (The Law of Love), is a Spiritualist paper, against which "*El Artesano*," an ultra-montane sheet, is issued.