

## MAYAPAN AND MAYA INSCRIPTIONS.

BY AUGUSTUS LE PLONGEON, M.D.

## NOTE BY THE COMMITTEE OF PUBLICATION.

The following paper from Dr. Augustus Le Plongeon, communicated to the Society through Mr. Stephen Salisbury, Jr., is published under his supervision. In the existing unsettled state of archæological science in this country, the observations and opinions of explorers are of great value, and should be deliberately considered. The advantage to the archæologist, of possessing the original statements of the views of investigators of different periods, formulated by themselves, may be seen on comparing the theories of Haywood, Rafinesque, Priest, Brasseur de Bourbourg and others with more abstract speculations. See "Archæology of the United States, or Sketches, Historical and Bibliographical, of the progress of information and opinion respecting vestiges of antiquity in the United States," by S. F. Haven, LL.D., Smithsonian Contributions, vol. VIII., 1855. *Passim*.

Dr. and Mrs. Le Plongeon have the rare advantage of an almost continuous residence among Maya ruins for more than seven years, and of constant relations with a class of Indians, most likely to preserve traditions regarding the past history of the mysterious structures which abound in Yucatan.

MÉRIDA, YUCATAN, *January 16th, 1881.*

TO THE MEMBERS OF THE AMERICAN ANTIQUARIAN SOCIETY.

*Gentlemen* :—Since Mrs. Le Plongeon's and my return to Yucatan in June, 1880, to continue our studies of the ruined monuments existing in that country, under the auspices of the American Antiquarian Society, and with the pecuniary assistance of Mr. Pierre Lorillard of New York, Señor Don Vicente Solis de Leon, one of the present owners of the hacienda of *X-canchacan*, within the boundaries of which are situated the ruins of the ancient city of Mayapan, has repeatedly invited us to pay a scientific visit to the remains of the famous abodes of the powerful King *Cocom*, and of his descendants until the year 1446 of the Christian Era, when, according to Landa, the lords and nobles of the country, with the chief of the *Tutuxius* at their head, put to death *Cocom*

and all his sons—except one who was absent—sacked his palace and destroyed his city and stronghold.<sup>1</sup>

Don Vicente Solis de Leon is a civil engineer in the employ of the Mexican Federal Government. His brother Don Perfecto is a lawyer of no mean repute in Mérida, and Don Fernando, who was our *cicerone* in Mayapan, is the manager of the hacienda of *X-canchacan*. These gentlemen can vouch for the correctness of our plans, photographs and moulds.

Messrs. Solis were already in possession of *X-canchacan* when Abbé Brasseur de Bourbourg visited Mayapan. They accompanied him, and listening to his learned descriptions and remarks, gradually became interested in the history of a city, once the residence of powerful lords and learned priests; but to-day alas! an unshapely mass of *débris*, lost in well-nigh impenetrable thickets. So willingly did they lend their assistance to Brasseur, that under his guidance, and following Landa's relation "that on the square of that city were seven or eight stones of nearly 10 feet in length each, with one extremity rounded, well hewn, and with several lines of the *characters* which they use, but which were so defaced by the action of water that they cannot be read. It is believed that they refer to the memory of the foundation and destruction of this capital" . . . .<sup>2</sup>, they soon discovered two of these stones about seventy metres from the foot of the stairway on the east side of the principal mound. I send you, for your better study, a photograph of one of these stones which is now encrusted, by order of Messrs. Solis, in the South wall of the veranda of the principal house of the hacienda of *X-canchacan*. It was inserted in the place where it now is, in order to save it from the fate of its companion, which was destroyed by an ignorant Majordomo, who broke it and used the pieces to form the jamb of the door of a cattle-yard, where I saw them a few days ago. I also sent to Mr. Pierre Lørillard a plaster cast of the remaining stone taken from a paper mould, made by myself and now in my possession.

<sup>1</sup> Landa—*Las cosas de Yucatan*. Chap. VIII. "Que entre los sucesores de la casa Cocomina, uvo uno muy orgulloso y imitador de Cocom, y que este hizo otra liga con los de Tavasco, y que metió mas mexicanos dentro de la cibdad y que comencó a tyranizar, y hazer esclavos a la gente menuda, y que por esto se juntaron los señores a la parte de *Tutuxiu*, el qual era gran republicano como sus passados y que concertaron de matar a Cocom, y que así lo hizieron matando tambien a todos sus hijos, sin dexar mas de uno que estava ausente, y que le sequearon la casa . . . . . que despues de aver estado en aquella cibdad mas de D años la desampararon y despoblaron.

<sup>2</sup> Landa—*Relacion de las cosas de Yucatan*. Chap. IX. "Que se hallan en la plaça de aquella cibdad VII. or VIII. piedras de a diez pies en largo cada una, redondas par la una parte, bien labradas y que tienen algunos renglones de los *caracteres* que ellos usan, y que por estar gastadas de la agua no se pueden leer, mas pensar que es memoria de la fundacion y destruicion de aquella cibdad.



Other stones gathered from among the ruins are also in the wall of the veranda, by the side of the one disinterred by Abbé Brasseur—some are shown by Mr. Stephens in his work on Yucatan<sup>1</sup>; but there are two copies of a certain inscription—represented in the adjoining photograph—which are, in my opinion, of very great historical and scientific value. I will try to explain it to you. To my mind, said inscription confirms the fact that the key to the reading of the ancient monumental inscriptions, discovered by Mrs. Le Plongeon and myself, is, in truth, the right one.

Mr. Lorillard has also in his possession an exact *fac simile* of this interesting inscription—made in plaster from one of my paper moulds.

It was these interesting relics of the last Capital of the Mayas that Messrs. Solis invited us to examine—and to these or their *fac simile*—we humbly beg to call your earnest attention. We may err in our conclusions; but—*Errare humanum est*—pray then, in your judgment of us, be merciful. We are the toilers—you the judges, who, quietly sitting in your curial chairs, have to pronounce sentence upon us. Let the sentence be a just one.

My object is not to rehearse the history of this city—who can now do it? Cogolludo<sup>2</sup>, Lizana<sup>3</sup>, Landa<sup>4</sup>, Torquemada<sup>5</sup> and others, have preserved in their writings the traditions (true or false) yet extant in the memory of the people at the time they wrote. To-day I can only tell you of the ruins of the temples as we see them, destroyed by the hand of time and man. I will speak to you of the characters sculptured by the dwellers of the temples, on the stones of their walls, and of the mode of construction of these temples and other monuments, public and private. These sculptures and this mode of construction will tell us of the scientific and artistic attainments of a people, which has almost disappeared from the theatre of mundane existence. They will also tell us of the intimate relations, not to say parentage, which may have existed between them and other ancient nations which have also ceased to exist, but whose history is becoming better known every day. The characters used by the scribes and learned men of the Mayas to record the events which had taken place in the life of their people, and the history of their nation, will tend to strengthen the presumption of these relations, and bring us to historical ground, already explored by such illustrious men as Young, Champollion, Wilkinson, Layard, Botta, Rawlinson, Smith and others.

During our former stay in Yucatan we did not visit Mayapan, although we could have done so at much less cost, privation and personal

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<sup>1</sup> Stephens. *Travels in Yucatan*. Vol. 1. Page 134.

<sup>2</sup> Cogolludo (*Historia de Yucatan*). <sup>3</sup> Lizana *Historia de N. S. de Izamal*. <sup>4</sup> Landa—*Relacion de las cosas de Yucatan*. <sup>5</sup> Torquemada—*Monarquía Indiana*.

danger<sup>1</sup> than the other ruined cities, among the monuments of which we spent nearly four years. Our attention was engrossed in following the traces of, what we then thought, a more ancient civilization,<sup>2</sup> plainly visible on the better preserved monuments of *Chichen-Itza*, *Aké* and *Uxmal*. We thought Mayapan of a much more recent date than these cities, and were unwilling, as the common saying is, to chase two hares at one time, lest we should catch none. So we postponed our visit to Mayapan; and we have now no reason to regret it, since our former studies caused us to better understand the meaning of the sculptures and characters to-day before us.

Now that Professor Valentini, by his essay on the Landa Alphabet, has called your attention particularly to it, impugning its genuineness, presenting it to the World as a sheer invention of the Bishop; and since, also, Professor Charles Rau, of the Archæological department of the Smithsonian Institute, has published an elaborate essay on a kindred subject:<sup>3</sup> in order to disprove Professor Valentini's assertion, and to show to the world that Landa's characters, or at least some of them, are to be found, in the inscriptions of PALENQUE, and were used by the wise and learned men of the nations of Central America, as well as by those of Yucatan, we imagined that if we could help to set right the debated question, we should render a service to the students of American archæology: and we resolved therefore to accept the invitation of the Messrs. *Solis*, beginning our new studies of the ruins of Yucatan by taking photographs and a mould of one of the stones, which Landa says was inscribed with the very characters now criticised by the two distinguished professors.

My duty, to the scientific world, is to keep entirely neutral towards all contending parties. I possess a great advantage. I study the monuments *in situ*. I hear from the mouth of the natives—in their mother tongue, the MAYA—whatever they have learned from their ancestors of these monuments. My knowledge of them must, of necessity, be

<sup>1</sup>The hacienda of X-canchakan is only thirty miles distant from *Mérida*. Notwithstanding its proximity to the Capital of the State it has been visited by the Indians of *Chan-Santa-Cruz*, who have left, as souvenirs, several traces of their presence and vandalistic propensities. They hacked the door of the chapel, around the lock, with the hope of penetrating into the interior and carrying away the altar ornaments. They felled the lofty cocoanut trees, that Mr. Catherwood represented in his drawing, in the rear of the belfry of the *casa principal*, as published page 142 of Stephens's work on Yucatan: and *Marcelo Canich*, the mayoral of San Joaquin, who well remembered Stephens and his companions, and also the accident of a mischievous pistol shooting off two fingers from the hand of a *vaquero*, because, it is now admitted, said *vaquero* was so inquisitive as to form with it an intimate acquaintance without previous formal introduction. *Marcelo*, I was going to say, keeps an everlasting remembrance of the Indians of *Santa Cruz* in the shape of a bullet wound in his right knee.

<sup>2</sup>We were then misled by the confused relation of Bishop Landa.

<sup>3</sup>See Tomo III., *Anales del Museo Nacional de México*.



greater than that of gentlemen, who write from behind their desks, ignorant of the TRUE FACTS . . . of the very language represented by the characters, the theme of their learned discussions. It is these TRUE FACTS that I will here present to your consideration in the shape of photographs and casts, without more comment than a comparison with *similar facts* contained in the works of the illustrious writers I have mentioned: to these we must now restrict ourselves: for, to tell the truth, it would be impossible for me to agree with either, and a controversy on a subject so little understood, seems to me in the present state of our science, simply time and labor lost. What do the contending parties know about *Maya*, and particularly ancient *Maya* mural inscriptions? Except the Landa alphabet as published by Brasseur, and two or three codices of unknown origin, said to be *Maya*, where have they seen true, genuine *Maya* inscriptions? I hope that with Mr. W. Bollaert<sup>1</sup> and others, who pretend to have discovered a key to writings they have never seen, that they have one of the *Maya* mural inscriptions on the slab of the *Akab-Dib* as figured in the work of Stephens;—because I can now inform them that the engraving is not a faithful representation, but a most imperfect sketch of the slab, and by trying to interpret mere lines (many of them imaginary), they will do what Mr. Bollaert has done, write . . . nonsense.

The only true representation of the *Akab-Dib* slab in the world is the photographic impression made by myself in 1875. Examine the copy which is in the collection of photographs placed by Mr. Stephen Salisbury, Jr., in the rooms of your Society—compare it with the engraving given in the work of Stephens, and you will soon satisfy yourselves of the truth of my assertion.

The Smithsonian Institution possesses a slab, which once formed part of the altar of the cross in the ruins of *Nāchan*,<sup>2</sup> to-day Palenque; and until lately—when I sent to Mr. Pierre Lorillard casts of two inscriptions (taken from the originals in the National Museum of Mexico, by special permission of the Mexican government) brought from these celebrated ruins by Captain Dupaix, at the beginning of the present century—the Smithsonian slab was the only genuine sample of Palenque inscriptions existing in the United States, perhaps in the world. This slab, the theme of Prof. Rau's essay mentioned by me, came near being the cause of a misunderstanding between the learned Professor and myself in May last.

The Professor asserted that the characters of the *MAYAS* and those of the people of *Palenque* were identical. I contended that they were not

<sup>1</sup> W. Bollaert. Examination of Central American Hieroglyphs. Memoirs of the Anthropological Society of London. Vol. III. pp. 288, 314.

<sup>2</sup> *Nāchan* does not mean as Mr. Bancroft and after him Mr. Short assert, the *city of serpents*, at least in the *Maya* language. The *city of serpents* would then be *cancak*—*can* being serpent, and *cak* a village, a city. *Nāchan* signifies the *small house*, from *Nā*, house, and *chan*, small, little.

at all alike, (Proceedings of American Antiquarian Society, October 21, 1878), that I could in some degree understand the Maya inscriptions, but not a word of those of *Palenque*, *Copan* or *Quirigua*. To convince him, I begged the learned Professor to compare my photographic impression of the *Akab-Dib* with the Palenque slab. His assistant in the archæological department and myself, with the Professor leading, formed, if not a grand, at least a very serious procession to a part of the altar of the cross. If those who in centuries past had engraved their thoughts on that stone, could have at that moment, through a chink from the world above, taken a peep at us, I am sure they would have had a good laugh at our expense. Professor Rau carefully examined my photograph, compared its characters with those of the slab, and candidly acknowledged that he was mistaken, in believing the writings of the Mayas and those of the learned men of Palenque to be identical. True there are signs and characters that seem to be alike in both inscriptions, but this similarity is easily explained. Some of the mural inscriptions of Yucatan go back to so high an antiquity, as I can easily prove, that we will have to count their age by *thousands of years*. Palenque, if the traditions are to be relied upon, would only date, according to Brasseur,<sup>1</sup> one thousand years before Christ, on the authority of Francisco Paula Garcia de Pelæz.<sup>2</sup> But since its foundation, people from its neighborhood abandoned their country and homes, travelled Eastward toward the coast, leaving traces of their passage, invaded the Yucatecan Peninsula, and settling among its inhabitants, at the same time that they accepted new customs, also engrafted some of their own, with their arts and sciences on those of the Mayas. Hence the introduction of Palenque characters in the Maya alphabet, and *vice versa*. Further, as we see ourselves, the character and form of the language is so changed, owing to more frequent communication, that few to-day can read and understand the relations and MSS. of the chroniclers of even the time of the Spanish conquest of America, scarcely more than three centuries. How then can we wonder if the alphabets and languages of nations, whose existence may be reckoned not by centuries but millenaries, have suffered the same changes that we have seen taking place among us! *Tempora mutantur et in illis mores*. And if, as in a former communication, I here repeat that the Landa alphabet is well-nigh useless in deciphering the most ancient monumental inscriptions, I am nevertheless far from agreeing with Prof. Valentini, that the characters preserved by the fanatical Bishop, as by a miracle (he being most enthusiastic in the destruction of all the books and things belonging to the Mayas that fell into his hands), were not used *even* as late as his time. For I ask how can a reasonable and honest man deny that the probabilities are in favor of Landa? Unless we take

<sup>1</sup> *Chimalpopoca* M. S. Brasseur de Bourbourg. *Popol Vuh*, p. lxxxviii.

<sup>2</sup> *Francisco Paula Garcia de Pelæz. Memorias para la historia del antiguo reino de Guatemala.*



him for a fool or an impostor, how are we to dispose of his assertion, when he says, speaking of the stones he saw at Mayapan: *They were inscribed with characters used by them* (y que tienen renglones de los caracteres que ellos usan). He does not say *usaban*, in the past, but *usan* in the present.<sup>1</sup> If the people, in his time, had not used these characters, many of those who were opposed to the Franciscan friars<sup>2</sup> and accused the Bishop of assuming the rights of an inquisitor,—of ordering an auto-da-fé in which he himself boasts of having burned 5,000 idols of distinct forms and sizes, 13 large stones that served for altars, 22 smaller ones, 27 scrolls of hieroglyphs and signs on deer-skin, 197 vases of different shapes and sizes, together with bones of people which he caused to be disinterred,<sup>3</sup> stating that he had burned no one alive,—would certainly have accused him of lying and deception, among the other things brought against him by the Council of Indies.<sup>4</sup> Such an accusation does not, however, appear against him; we must then believe that no one had anything to say against the Bishop on that score, and admit that the characters preserved by him were in truth the same used by the writers of the books he ordered to be destroyed.

Now, for the facts. One of the very stones mentioned by Landa, that discovered by Abbé Brasseur, is now before you (Fig. 1), in the form of a photograph, made as perfect as the defacement of its sculptures, and the bad illumination, owing to the position it now occupies, permit. You can see, however, a perfect cast of it at Mr. Pierre Lorillard's.<sup>5</sup> I consider it of very great importance, not only for the characters engraved upon it, but also because of the historical personage whose portrait it contains . . . and for the opportunity it offers me to show you my mode of studying these ancient monuments (I am not egotistical), and of proving also to the students of American archæology that my words, . . . "*I assert that they are not given by us at random. They are written on the monuments where represented in characters just as intelligible to my wife and myself, as this paper is to you in latin letters. Every person represented on these monuments is known to us by name;*

<sup>1</sup> LANDA. *Las cosas de Yucatan*. Chap. IX.

<sup>2</sup> LANDA—*idem*. Chap. XVII—"y que esto causò que aboresciessen mucho mas a los frayles, haziendoles libellos infamatorios, y cessando de oír sus missas.

<sup>3</sup> COGOLLUDO. *Historia de Yucatan*. Appendix VII—page 604.

<sup>4</sup> LANDA. *Las cosas de Yucatan*. Chap. XIX. . . . "Y que sobre esto se agravió el provincial y determinó ir a España queixandose primero en Mexico—y que así vino a Madrid, donde los del consejo de Indias le afearon mucho que viesse usurpado el oficio de Obispo y inquisidor," &c., &c.

See also COGOLLUDO. *Historia de Yucatan*.

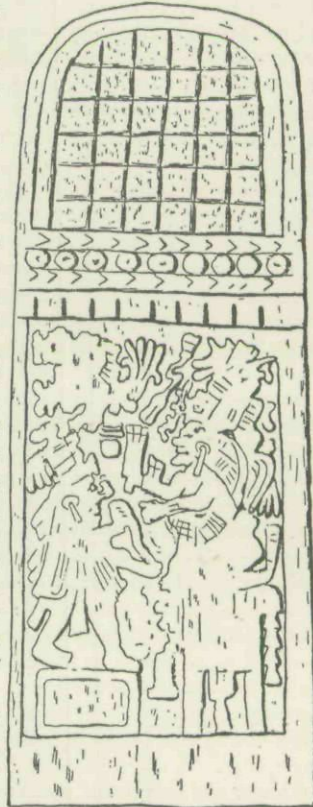
<sup>5</sup> The various casts and moulds sent to Mr. Lorillard have been kindly placed by him on deposit in the hall of this society, and can three be inspected; together with the many photographs and plates previously sent by Dr. Le Plongeon to Mr. Salisbury.—[PUB. COM].

since either over the head or at the feet the name is written,<sup>1</sup> as published in the proceedings of your Society, are not a vain boast when speaking of the names given by us to Chaacmol and his brothers.

That this is one of the stones referred to by Landa, there can be no doubt. Its shape—"rounded at one end—the characters engraved upon it so defaced by the action of water as to be illegible," the position where found, are, to my mind, sufficient data to cause us to identify it. Further, it was disinterred by Brasseur, following Landa's relation, about seventy metres from the foot of the stairway, and in front of it<sup>2</sup> on the east side of the principal mound of Mayapan (called *Kukulcan*<sup>3</sup>) where the square of the city seems to have been, and about midway between the mound and that other edifice represented in the engraving on page 136 of the first volume of Stephens's *Travels in Yucatan*, mentioned also by Landa.<sup>4</sup> "They also made another, perfectly round, with four doors, entirely different from any of the others in Yucatan."

True, the measurement of the stone as made by us, which is 1<sup>m</sup> 62<sup>c</sup> for its height and 0<sup>m</sup> 60<sup>c</sup> for the width, does not quite correspond with its size as given by the Bishop. This, however, is of minor importance; for it is more than probable that all the stones seen by him were not exactly of the same dimensions; and also that the Rev<sup>d</sup> Father did not measure them as carefully as we have done.

Fig. 1.



*Slab at Mayapan, probably referred to by Landa, representing King Cocom.*

<sup>1</sup> Stephen Salisbury, Jr. *Dr. Le Plongeon in Yucatan. Proceedings of American Antiquarian Society. April 26, 1876, and April 25, 1877.*

<sup>2</sup> Marcelo Kanich, mayoral of San Joaquín, who was our guide when we visited the ruins of Mayapan at the beginning of the present month, showed us the place where he saw the stone when being disinterred by the Abbé Brasseur.

<sup>3</sup> Landa. *Las cosas de Yucatan. Chap. VI.*

<sup>4</sup> Landa. *Las cosas de Yucatan, Chap. VI.* "Y que hizieron otro redondo con cuatro puertas, diferente de quantos hay en aquella tierra." This monument, now a shapeless mass of stones, was destroyed by lightning in 1867.



Now, pray take notice that the stone under consideration is divided in two parts. The upper, that which contains thirty squares or compartments (Fig. 1), together with two lines of arrow heads > separated by a line of signs similar to the Egyptian hieroglyph for the Sun (Fig. 2), together with the fringe-like open border is a little more than one third of the whole length. On examining attentively the few lines that remain of the characters once engraved on each of the compartments, we thought for an instant, that at last we had stumbled upon such a monument as we are in hopes of finding some day, an inscription written in two or three languages, one of them known perhaps. You may see, by the very few vestiges which are still perceptible, that the characters traced in the squares were simply straight lines intersecting each other, some running parallel, but certainly different from those of the inscription yet existing over the head of the standing figure, and suggestive of the hieratic characters of the Babylonians and Assyrians. Alas! had our hopes been gratified, of what earthly use would it have been to us in the present instance, these carvings being so obliterated by the hand of time and the action of the water, as Landa remarks. If these precious writings have disappeared, we have, happily, the deeper carvings yet remaining, and those over and between the figures are still sufficiently preserved for us to know, what kind of signs the learned men of Mayapan made use of to give their thoughts material form, and also to tell us who was the personage seated on a high seat or throne, and sporting a colossal head-dress. He is an old acquaintance of ours. We met him for the first time, five years ago at Chichen-Itza,—where we saw him on several occasions — and truly after four years we were glad to see him again, and indeed in his own domains, in Mayapan, receiving the oath of allegiance of a subject chief, (whose name is too defaced for us to make out) and presenting him with the corresponding badge of his authority.



Allow me, to inform you confidentially—but pray do not repeat it, lest it should reach the ears of His Majesty, who might take offence on account of his striking resemblance in general, but that of his nose in particular, with that of Judy's world-renowned husband—Mrs. Le Plongeon, at first sight, dubbed the *great King Cocom, Mr. Punch*.

It is now your undoubted right to ask me: "Who is *King Cocom*? How are we to know that the individual represented on the stone before us is *King Cocom*?" In order to answer these questions, and to make sure that my answers leave no doubt in your minds, I will beg you to accompany me to Chichen. There, after you have made yourselves thoroughly acquainted with the most prominent features of his physiognomy in Mayapan, and with his no less remarkable head-dress, so as to be sure you will never forget them, but remember both again wherever you see them, I repeat, I will introduce him to you as he stands at full length, among other illustrious men of the country, at the entrance of

the castle.<sup>1</sup> Next, we shall meet him in the reception-room of Queen *Kinich Kakmó*, the wife and sister of the great warrior *Chaacmol*, where she is seated on her throne, surrounded by her own and her husband's guardian spirit *Kukulcan*, receiving the visits and homage of the lords and nobles tributary to her. Foremost among these is *Cocom*, offering his presents to the Sovereign, his liege lady.<sup>2</sup> Notice now the shape of the object he holds in his right hand (Fig. 3). It has the appearance of a sack or bag, but in form it recalls vividly to the

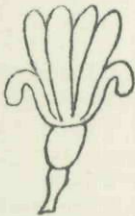


mind the sign of offerings in Egypt.<sup>3</sup> These are FACTS, small and insignificant as they may appear, that are not to be lightly disposed of. It is by bringing together all such FACTS, unimportant if taken separately, that we may arrive at unexpected results. *Small streams make mighty rivers.*

That King *Cocom*, the liege man of Queen *Kinich Kakmó*, yet the powerful ruler of Mayapan, is the personage represented on the *antæ* of the castle, in the bas-relief in the Queen's chamber at Chichen, and on the slab found by Abbé Brasseur at Mayapan, you have only to look at his *unique*, unmistakable nose, his short stature (he was dwarfish), his strangely shaped and towering hat (in which he has stuck a few additional feathers for the occasion of this court reception, as many fantastical men of our times do), to become satisfied of his identity. Should any doubt still linger in your minds, then read his name on the slabs. It is clearly written wherever his portrait appears. It is a peculiar yellow flower, well-known in the eastern and southern portions of the Peninsula. In the Mayapan slab it is partly closed (Fig. 4),



near his head, but adjoining this sign, forming part of the inscription over the head of the standing figure, it is open in full bloom (Fig. 5). These different methods of representing the name of the seated personage have also their meanings; but it is not my object to interpret them in this instance. Now if you look at the bas-reliefs in the Queen's chamber, there we find his name, just as clear; forming part of his speech to the Sovereign. The flower then is entirely open, you can see it just over his right hand holding the sign of offerings which terminate also with the petals of



<sup>1</sup> See among the collection of photographs of Chichen, made by me, which is in the rooms of the American Antiquarian Society, the full-size standing picture of *Cocom*. It is carved on the *antæ* sustaining the north-east end of the portico of the castle.

<sup>2</sup> Also in the same collection among the bas-reliefs in the Queen's Chamber, King *Cocom* is represented holding offerings in his right hand and a rattlesnake in his left. He is the foremost in front of the throne, and is adorned with an enormous collar or necklace of round beads.

<sup>3</sup> Encyclopædia Britannica. *Signs of offerings*. P. LXXI. Egyptian hieroglyphs. Also Sir Gardner Wilkinson. *The Ancient Egyptians*. Vol. I. page 81. Vol. II. p. 515. The same sign for offerings is also on other monuments, under figures worshipping the mastodon's head.



the flower (Fig. 6); you will also notice that the petals are turned towards the Queen, to whom he addresses himself. On the *antæ*, the name is less visible owing to the greater deterioration of the stone: but there is his nose and his stupendous hat, these cannot be mistaken for those of anybody else, for he only, among the crowd there represented, indulged in ornaments of that peculiar shape.



Now let us see if we can satisfy ourselves still further, about the identity of the personage seated on the high chair on the Mayapan slab. Señor Don Pio Perez, whose name is familiar to you as a student of the ancient history of his country, who has written on the *Maya Chronology*, and whose works are quoted by Stephens, Brasseur, Valentini, Short and others, in his dictionary of the Maya language at the word *Cocom* says: *Cocom is a sarmentous plant, with yellow flowers, from the leaves of which, during the feast of St. John, people make treaced cigars. Cocom was the name of an ancient Maya dynasty, and is still preserved as an indian family name among the natives of Yucatan.*<sup>1</sup>

But to make certainty doubly sure, let us consult tradition. This time we shall find that in this particular instance, it agrees with the history as preserved in the sculptures. Landa tells us: *that after the departure of Kukulcan, the lords agreed in order to make their republic stable, to give the principal command of it to the house of the Cocomes, either because it was the most ancient, or perhaps the richest, or may be that the man then at its head, was the one of most worth among them.*<sup>2</sup>

Whom do we see foremost, in advance of all the lords, in the court reception in the Queen's chamber, holding a rattlesnake in his left hand, emblem of his adhesion to Kukulcan's sect or party,<sup>3</sup> but the very man whose features are portrayed on the slab at Mayapan? Who can doubt now that he is *Cocom*? There is his totem (a flower called *Cocom* even to-day) near all of his portraits. That he was the Ruler of Mayapan, his being seated on a high seat or throne as we see him on Brasseur's slab, while the other man is standing before him, and not

<sup>1</sup> Pio Perez.—*Diccionario de la Lengua Maya*, at the word *Cocom* . . . Una planta Sarmientosa que da flores amarillas y con cuyas hojas se hacen el dia de San Juan cigarros enmelados. Dinastia antigua de los mayas . . . conservandose hasta hoy el nombre como apellido indio." This flower is almost unknown in the neighborhood of Mérida, but is abundant in the eastern and southern parts of the state. I was anxious to procure a flower in order to describe it and take a picture of it. I applied to Señor Dr. Juan Donde, Professor of Botany in the National Institute, one of the learned men of Yucatan; he also tried his best to obtain one, but in vain. Soon we hope to secure a specimen.

<sup>2</sup> Landa. *Las cosas de Yucatan*. Chap. VII. Que partido *Cuculcan* acordaron los Señores para que la Republica durasse que tuviesse el principal mando la casa de los Cocomes, por ser mas antigua, o mas rica, o por ser el que la regia entonces hombre de mas valor.

<sup>3</sup> *Kukumcan* o *Cuculcan*, the winged serpent is always represented as a rattlesnake, *ahauacan*, with feathers, only in the mural painting it has no rattle, but a dart.

alone standing, but on a low stool (a proof of his inferiority) in order to reach, somewhat, to the exalted position of his lord, who is pictured condescending to stoop toward his subordinate, clearly indicates that *Cocom* is the King. If you are not satisfied that this is the truth, then count the number of feathers on his hat and you will find that he has seven, just as the Queen *Kinich Kakmó* in the plate published in the Proceedings of the American Antiquarian Society, October 21, 1878, where she is represented, when yet a child, consulting a *H-men* (wise man) to know her destiny. She has, also, seven feathers in her cap, whilst the personage standing on the stool before *Cocom* has only three. If that is not yet sufficient to convince you, then hear what Landa says of the duties of the lords towards *Cocom*.<sup>1</sup> *That all the lords were under obligation to visit, respect and divert Cocom, accompanying him, entertaining him sumptuously, and helping him in all important affairs . . . speaking of their mode of burial, he says:—When those of the ancient family COCOM died, they cut off their heads, cooked them in order to clean the meat from the bones; after which they sawed the hind-part of the skull, preserving the front with the jaws and teeth. They then replaced the wanting flesh in these half skulls with a certain putty, giving them with perfection the same appearance they had when alive. They placed them among their cinerary statues, which they had with their idols in the oratories of their houses, and looked upon them with great reverence and love.*<sup>2</sup>

To conclude my explanation of the slab of Mayapan, it only remains to call attention to the objects held by the figures. The standing personage evidently presents a petition, or a written oath of allegiance, to his Lord, in the shape of a scroll. Landa says: *Their books were written upon a large leaf, folded and enclosed between two boards.*<sup>3</sup> Such MS. you will admit, must have formed a scroll when opened, and held for the lord to read.

As to the badge of authority, pray look at the badges held by the lords and nobles, as offerings at the feet of the Queen, in the court reception so often mentioned in these pages; and also to those in the hands of the chieftains and men of rank represented in my collection

<sup>1</sup> Landa. *Las cosas de Yucatan*. Chap. VII. Que todos los Señores tenían cuenta con visitar, respetar, alegrar a Cocom, acompañandole y festejandole y acudiendo a el con los negocios arduos . . . .

<sup>2</sup> Landa. *Las cosas de Yucatan*. Chap. XXXIII. . . . A los antiguos Señores de *Cocom* avia cortado las cabeças, quando murieron, y cozidas las limpiaron de la carne y despues aserraron la mitad de la coronilla para tras dexando lo de adelante con las quixadas y dientes, a estas medias calaveras suplieron lo que de carne les faltava de cierto betun, y les dieron la perfeccion muy al propio de cuyos eran, y las tenían con las estatuas de las cenizas, lo cual todo tenían en los oratorios de sus casas con sus idolos en muy gran reverencia y acatamiento . . . . .

<sup>3</sup> Landa. *Las cosas de Yucatan*. Chap. VII. Que escribían sus libros en una hoja larga doblada con pliegues, que se venia a cerrar toda entre dos tablas.

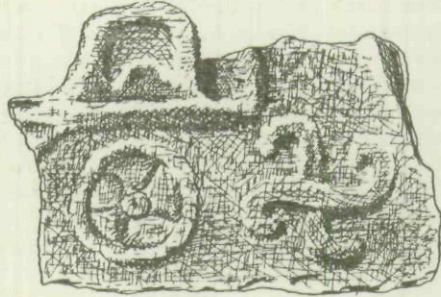


of mural paintings from Chichen, and you will soon become convinced that the object held by *Cocom* in his right hand and presented by him to the personage standing in his presence, is, as I have said, a mark of authority and distinction.

I will now call your attention to the smaller slab, but not the least important (Fig 7.) Also to the few characters it contains. Happily they are not defaced. We can easily read them and know their meaning. It is simply the name of a divinity held in as great esteem by the ancient Mayas, as by the inhabitants of Hindostan, who gave it several names,<sup>1</sup>

or by the Aryans,<sup>2</sup> and their descendants the Assyrians and the Persians,<sup>3</sup> or by the Iranians, brothers of the Aryans,<sup>4</sup> and by the Turanians, whose priests were the *magi*, the name of which may have been Mayas, since their head-man, the archimagus, was called *Rabmag*,<sup>5</sup> the *old man*, in the vernacular of Yucatan, and since also Maya in Sanscrit means magician, prestidigitator. The deciphering of the name of this Divinity KAK, the fire, is most interesting: for while it proves to the world that the key to these Mural inscriptions, discovered by Mrs. Le Plongeon and myself, is not only a FACT, but is the true one, it may cause us to hope that the day is dawning when the mysteries of these inscriptions will no longer be mysteries, when the history of the mighty nations that have left the traces of their passage on earth, rearing the stupendous monuments scattered, not only in the Peninsula of Yucatan, but throughout the whole of Central America, shall become known; when we shall learn

Fig. 7.



Slab at Mayapan, inscribed with the name of the God KAK (Fire).

<sup>1</sup> Manava-dharma-Sastra. Translation of A. Loiseleur Deslongchamps, Lib. III., Sloka 100. *Notwithstanding the master of the house lives only from gleaned grain, he must make oblations to the five Fires, to wit: the Garhaptya, the Dakchîna, the Ahavaniya, the Avasathya, and the Sabhya.* But the FIRE is by the Bramins often identified with the great and unique soul — *Mahan Atmâ.*

<sup>2</sup> *Agni* was called by the Aryan his protector, his relative (Rig-veda, Sect. I., lect. 5, p. 14. v. 4), his friend (Rig-veda, Sect. II., lect. 8, p. 13, verse 4,)—his protecting spirit.

<sup>3</sup> Herodotus. Lib. I., (chap.) 131, lib. III., (Thalia) 16.

<sup>4</sup> L. F. Alfred Maury. *Revue germanique*, 1861. *Les mythes du feu*, &c., &c., and *Croyances et Legendes*, page 45.

<sup>5</sup> RAB=LAB (Maya), old and MAG=MAC (maya), person, hence *Rabmag*=*Lab-mac*, the old person, the *old man*—used even to-day to designate the paterfamilias, in England and the United States (my governor).

what were their relations and parentage with the inhabitants of all the other inhabitable portions of our planet.

We have met with this same inscription often, in Chichen, Uxmal, and now in Mayapan.<sup>1</sup> In every instance it is carved on the trunk of the Mastodon's head, the symbol of Deity among the primitive civilized inhabitants of the country, who have left vestiges of their religious worship,<sup>2</sup> figured and carved on stones.

The comparative study of the Maya language, as published lately by me in Mérida, in the *Revista de Mérida*, in the form of a letter to the late Right Rev. Bishop Courtenay of Kingston (Jamaica), in Spanish, in order that the Maya scholars might criticise it and pass judgment,<sup>3</sup> was a revelation to Mrs. Le Plongeon and myself, which put us on the road to the finding of the key to the ancient inscriptions of the Mayas. On seeing that the Maya is akin to the most ancient languages known,<sup>4</sup> and

<sup>1</sup>I have already told you that among the stones gathered at random among the ruins of Mayapan, and inserted, for safe-keeping, in the south wall of the veranda of the hacienda of X-canchakan, by Messrs. Solis, there are two with this inscription.

<sup>2</sup>In Chichen, on the façade of the monument called by Stephens *Iglesia*, and represented in the engraving opposite page 296, in his II<sup>d</sup> vol. *Travels in Yucatan*, and forming the *main* ornamentation of the façade, is represented the adoration of the Mastodon's head. The four figures—two at each side of the head—are sitting, and hold their hands in worshipping, or rather, respectful positions, just as we see the Hindoos while praying, and the Egyptians when in presence of a superior, as shown in the illustrations pp. 272 and 301 of Wilkinson, *Ancient Egyptians*, Vol. I. Both sides of the head we read the word DAPAS=TABAS=TABA=AP, Egyptian for *Head*. (See note Vol. I., p. 61, same work just mentioned). Under the worshipping figures are the signs of offerings, leaving no doubt as to the meaning of the representation there intended. This vividly recalls to the mind not Egypt, where the elephant was not among the sacred animals, but Hindostan, where we see worshipped even to-day the elephant-headed divinity, Ganesa, the Hindoo *Thot*.



see worshipped even to-day the elephant-headed divinity, Ganesa, the Hindoo *Thot*.

<sup>3</sup>Maya is the vernacular language of the inhabitants of Yucatan. In fact the Indian population speaks no other. For this reason, it is taught in the Colégio Católico to young men who wish to dedicate themselves for the priesthood, by Rev. Don Secadino Baeza, curate of San Cristoval, who is master of it. My friend, Rev. Don Crecencio Carillo y Ancona, a Canon of the Cathedral of Mérida, acting Secretary of the Diocese, whose name as an historian, an archaeologist, and a writer on the Maya tongue, is well known among those who have studied the works of Bresseur, has been pleased to write an article on my essay, in which he gives his opinion. The review was also published in the *Revista*. As Sanscrit, Greek, Latin, and other dead languages are to-day taught in our universities, it would be very advantageous indeed, if some of our wealthy men should leave a sum of money to one of our Universities for the foundation of a Maya professorship. This beautiful tongue, not yet a dead one, would prove very important to philologists, historians and etymologists.

<sup>4</sup>See my essay on the language of the Mayas, published in the *Revista de Mérida* and in the *Republican of Mexico*, in September last.



furnishes the etymology of many names of nations, divinities and places, the origin of which is, to say the least, doubtful; that many of the names of tribes and cities of Afghanistan to this day, are Maya words, and that in that country there are tribes which call themselves MAYAS, and live on the right bank of the river *Kabul* (the name of one of the mounds at Izamal, where anciently, according to Lizana and Cogolludo, was the image of a *miraculous hand* KAB-UL),<sup>1</sup> we naturally inferred that the alphabet of the *Mayas* might also contain letters and characters belonging to the alphabets used by these ancient nations. The study of the Maya inscriptions photographed by us during our visit to Chichen and Uxmal, during our former stay in Yucatan, soon gave us the proofs, that we had surmised rightly. We found that many of the ancient Chaldaic and Egyptian hieroglyphs—even the letters of the hieratic alphabet belong to the Maya inscriptions—had the same meaning and value in Mayapan as in Egypt and Chaldea; while there are other characters, of the precise significance of which, we are yet in doubt, that seem to belong exclusively to the Maya. Happily the inscription before you does not pertain to that class. We can easily understand its meaning. All we need, for the purpose, is simply an Unabridged Illustrated Webster's English Dictionary, opened at pages 1767 and 1768.

Among the *Remarkable Alphabets* contained on the latter page is one inscribed *Coptic* or *Egyptian*. On the former we read the title ANCIENT ALPHABETS, and we find columns headed *Conjectural Chaldaic Hieroglyphic Originals*, *Egyptian letters*, *Original Egyptian Hieroglyphics*.

It is to these columns that I will ask you to look for the value of the characters of the inscription before you. Please to remember that I make no appeal to your *imagination*, that I do not offer any theory, but simply present FACTS for your consideration and study.

Fig. 8.



We shall begin with the sign (Fig. 8), which stands on the slab, directly over Fig. 9. It is plainly visible among the Egyptian letters and hieroglyphs, where it is given as equivalent to our CH or HL. We see a



variety of the same sign in the column of the Chaldaic hieroglyphs. An altar with FIRE burning upon it, (Fig. 10). This sign is

Fig. 10.

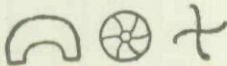


also Egyptian. It corresponds either to AA or to R=RA the SUN (Fig. 11), of which it is the hiero-



glyph. As to Fig. 12, it is *chi* of the Egyptian alphabet on the next page, our CH.—

Fig. 13.



Then the Maya inscription (Fig. 13), reads



*chach* or KAK—in Maya FIRE<sup>2</sup> whether we read the characters from left to right, as in the cun-



<sup>1</sup>Lizana. "Historia de N. S. de Izamal." Cogolludo. "Historia de Yucatan."

<sup>2</sup>The Egyptians used indifferently *Ch* or *K*; both letters being for

from right to left, as in those of the Egyptians.<sup>1</sup> Either way, in the present instance, the result is the same — *Chaach-Kaak-Fire*.

You will perhaps object that the character of the Maya inscription that I translate AA is not simply Fig. 14. but Fig. 15.

Fig. 14.



Very true. The last sign is a compound Fig. 15.

of the former with the emblem of divinity.



Both, in the Egyptian writings, are equivalent, being the hieroglyphs of RA, the

Sun, the great divinity universally worshipped, not only in Egypt, but in Assyria, Chaldea, Hindostan, Mayapan, and throughout ancient America. Hence this emblem (Fig. 16) of divinity added to the

character, (Fig. 17), denotes that the meaning of the inscription is not *fire* simply, but the GOD FIRE.



That the emblem (Fig. 18) is that of divinity in Assyria, as in Mayapan, is evident. Mr. Phil. Smith, in his "Ancient History of the East,"<sup>2</sup> tells us that



the signs (Figs. 19 and 20), found on an obelisk in the British Museum, are the emblems of one of the principal gods of the Assyrians.



Fig. 20.

But these very emblems are frequently seen on the temples, on the palaces of the priests and kings of the Mayas, always either on the trunks, or forming the centre of the diadems adorning the foreheads of the Mastodon heads; (the grand symbols of the *Supreme Ruling Soul of the Universe*, among the primitive inhabitants of the Peninsula, as I have already informed you). They are very plain, forming the centre of the diadem of the Mastodon head, on the left hand side of the top of the arch dividing the south wing of the central or main body of the *House of the Governor*, at Uxmal, as you may see in the photograph.

Now, we are told by all the chroniclers who have written on Yucatan, that FIRE was worshipped by the ancient Mayas, and even by the mixed races that inhabited the peninsula at the time of the Spanish conquest.<sup>3</sup>

them equivalent. They spell the name of their country as often *Chem* as *Khem*.

KAK is the Maya for *Fire*—could it not be possible that the *Kaians* who invaded Bactria and Media and were of Turanian stock, took the name from their primitive god KAK the FIRE, the AGNI of the Aryans?

The name Agni itself, according to Alfred Maury, *Croyances et Légends*, note, page 39, comes from AG—to move in an undulating manner. According to Gremm's laws  $g=k$  and  $Ak$  in Maya signifies tongue, or withe, a twisted, undulating twig; giving the  $\lambda$  a guttural or aspirated sound, we again have KAK-*fire*, which in Sanscrit is *Ku*. But *Ku* in Maya means God.

<sup>1</sup> Herodotus, lib. II., chap. 36.

<sup>2</sup> Phil. Smith. Ancient History of the East, page 412.

<sup>3</sup> This would prove that the civilization of the Mayas did not come from Egypt, as some are inclined to think. True, the Mayas had many customs similar to those of the Egyptians, but they had as many in common also with the Assyrians, the Chaldeans, the Hindoos, and other Asiatic nations.



Cogolludo, speaking of the *Zuhuy-Kak* (Virgins of the fire) the priestesses in Uxmal, says: that one of their duties was to take care of and keep alive the perpetual fire in the temples; that if through neglect of the one in charge, the fire became extinguished, she was put to death for her negligence.<sup>1</sup> Landa gives us details of the feast of the fire, which took place to celebrate the new year, commencing with the sign *cauac*.<sup>2</sup> His description recalls vividly to the mind the ceremonies performed by the Royal Scythians in honor of the god *Mars*, so graphically related by Herodotus<sup>3</sup> and causes us involuntarily to wonder whence arises so striking a similarity of customs between nations living so far apart, and what may have been, in remote times, their mode of communication. (The Scythians, like our North American Indians, to-day, scalped their fallen foes, and carried the scalps as trophies). He also informs us, that during the festivities of the New Year, the *Chacs*<sup>4</sup> were elected, and that they began their duties by lighting the *new fire*, into which all who had prepared themselves by fasts and abstinences of various kinds, threw small balls of incense prepared by the priests for the occasion. The *old fire* had been extinguished in the month of *Mac* during the feast called *Tupp-Kak* (the extinguishment of the fire) celebrated in honor of the *Chacs* the Gods of the rain, protectors of the fields, in order to obtain from them an abundant supply of water for their crops.

Landa does not tell us how the *new fire* was procured. Cogolludo, always so particular in mentioning all things pertaining to the customs of the aborigines, is also silent on this subject. But knowing that the

<sup>1</sup> Cogolludo. *Historia de Yucatan*, Vol. I., lib. II., page 284.

<sup>2</sup> Landa. *Las cosas de Yucatan*. Chap. XXXVIII., page 230 . . . .  
 Demas desto, para la celebracion desta fiesta hazian en el patio una grande boveda de madera, y henchianla de leña por lo alto y por los lados, descandole en ellos puertas para poder entrar y salir. Tomavan despues los mas hombres de hecho sendos manojos de unas varillas, muy secas y largas atadas, y puesto en lo alto de la leña un cantor, cantava y hazia son con un atambor de los suyos, vallavan los de abaxo todos con mucho concierto y devocion, entrando y saliendo por las puertas de aquella boveda de madera, y assi vallavan hasta la tarde, que descando alli cada uno su manojo, se ivan a sus casas a descansar y comer.

En anocheciendo volvian y con ellos mucha gente, porque entre ellos esta cerimonia era muy estimada y tomando cada uno su hacho lo encendian, y con ellos cada uno por su parte pegaron fuego a la leña, la cual ardia mucho, y se quemava presto. Despues de hecho todo braza, la allanavan y tendian muy tendida y juntos los que avian bailado, avia algunos que se ponian a passar descalços y desnudos come ellos andavan por encima de aquella braza de una parte a otra, y passavan algunos sin lesion, otros abraçados y otros medio quemados . . . . . y pensavan era este su servicio muy agradable a sus dioses . . . . .

<sup>3</sup> Herodotus, lib. IV., page 62.

<sup>4</sup> *Chacs* were the gods, protectors of the fields and of the rain. They also gave this name to the assistants of the priests, and they were elected every year in the month of *POP*.

natives of Yucatan, as the Aryans of old, still obtain fire by the swift friction of two pieces of wood together, one hard, the other soft—of the *pramantha* against the *arane*, as the Vedic poet would say, we are led to infer that in this manner the *Chacs* caused the flame of the *new fire* to spring into existence.

That we should find the *God Fire* represented among the Mayas by the same hieroglyph that the Egyptians used for *Sun*, and the emblems of one of the principal gods of the Assyrians, need surprise no one. True, the fire was not worshipped as a god by the Egyptians, who considered it as a *living beast that devours everything within its reach, and when replete and satisfied, dies with all it has swallowed.*<sup>1</sup> But not so with the Assyrians; for they, as the Aryans, very often identified *Agni* with the great luminary, source of all light and heat—life-giver of the world—with *INDRA*, from whom, at times, he seems to seize the first rank, becoming therefore the supreme deity. “*O! Agni,*” says the poet *Vasichtha*, “*no sooner art thou born than thou art the master of the worlds—thou walkest among them as the shepherd who visits his herds.*”<sup>2</sup> *O! Master divine of all nations, with our prayers we invoke thee, God resplendant and strong.*<sup>3</sup> *Immortal Agni, thou art he whom the mortals invoke first in their prayers.*<sup>4</sup> Says *Ramadeva*. Nay, more, *AGNI* is at times, for the *Aryans*, the god of the pure light—the true soul of the world.<sup>5</sup> And we see that among the Brahmins, the *Duidjas* are enjoined to offer every day, the food destined for the gods, after having prepared in the domestic fire, the oblation of the *Homa* with all the wonted ceremonies. The *Aryans* also transformed *AGNI* into thunder and lightning and placed these as weapons in the hands of *Indra* to combat *Ahi* the Great Cloud Serpent<sup>6</sup> his personal and most powerful enemy. “*Fond*

<sup>1</sup> Herodotus, lib. III., page 16.

<sup>2</sup> Rig Veda. Sect. V., lect. 2, h. 12, v. 3, Vol. III., page 45. Langlois's translation.

<sup>3</sup> Rig Veda. Sect. V., lect. 2, h. 14, v. 7, Vol. III., page 47. Langlois's translation.


<sup>4</sup> Rig Veda. Sect. III., lect. 5, h. 7, v. 5, Vol. II., page 126. Langlois's translation.

<sup>5</sup> Rig Veda. Sect. IV., lect. 1, h. 18, v. 1, Vol. II., page 281. Langlois's translation.

<sup>6</sup> *Ahi. The Cloud Serpent. The Winged Serpent. Ah—I*, the falcon (*maya*). The *Kukulcan* of the Mayas; the *quetzacohual* of the Mexicans; the *gukumatz* of the Quiches are names of the culture heroes of those different nations. I beg to differ from the opinion of those, who, resting merely on the authority, very feeble indeed, of tradition, consider them as personages who came and brought civilization among those people. I can assert, in the case of the Mayas at least, that they considered *Kukulcan* as a demiurge, and enemy of the sun. So it is represented in the mural painting at Chichen, and in the bas-reliefs on stone and wood at that place. It was the personification of the clouds, at least for the *people*, who were then as now, ready to believe whatever their *H-menes* and priests pleased to teach them as *TRUTH*. The *Aryans* thought that the clouds were enemies of the sun, because they obscured and interrupted its rays. So the Mayas—they also were good



of praise, firmer and more vigorous every time, he destroys the dwellings founded by the Asuras;<sup>1</sup> he prevents the celestial splendors from being veiled, and for the happiness of him who offers the sacrifice, he causes the rain to descend.<sup>2</sup> Again . . . Vretra<sup>3</sup> causes drought upon the Earth, and with his powerful lightning, Indra, strikes him and causes torrents of rain to flow."<sup>4</sup> So exclaims the Vedic poet. So also the psalmist: "He made darkness his secret place; his pavilion round about him were dark waters and thick clouds of the skies. At the brightness that was before him, his thick clouds passed, hail-stones and coals of fire. The Lord also thundered in the heavens, and the highest gave his voice . . . Yea, he sent out his arrows and scattered them; and he shot out lightnings, and dis-comfited them. Then the channels of waters were seen<sup>5</sup> . . ."

The Mayas seem likewise to have entertained the same conception as the Aryans concerning the identity of the three divinities, *Fire, Sun and Thunder*. Probably they came to that belief by observing that the lightning burned their houses, as the sun scorched their crops. The antagonism of *Kukulcan*, the winged serpent, to the sun, and the reading of the inscription would tend to confirm that community of ideas. In fact we have seen  that these characters are equivalent to our *ch*, *aa*, *ch*; or CHAACH. *Chaac*, in the Maya language, means *Thunder, tempest of rain*.<sup>6</sup> But Landa has informed us that *Chaac* was also the name of the *Gods of Rain*, that is to say, of the *masters of the rain*, to whom in the month of *Mac* the old men addressed their prayers in order to obtain from them an abundant supply of water, to irrigate their fields, and secure plenteous crops.<sup>7</sup> There we evidently have the belief that the thunder conquers the clouds, and throws them on the

observers of all natural phenomena, but believed them the acts of genii friendly or inimical to mankind, according as they were benefited or injured by them. They had noticed that the vapors, suspended in the atmosphere, were condensed when an electrical discharge took place. They then imagined that the supreme God (call it *INDRA* with the Aryans, or *KU* with the Mayas), had killed his enemies with his thunderbolt. In the mural painting and bas-reliefs at Chichen-Itza, the *winged serpent*, the protecting spirit of *Chaacmol*, is always pictured antagonistical to the *sun*, the guardian genius of *AAC*, who at last kills *Chaacmol* by treason, with three thrusts of his lance in the back. The name *Kukulcan* is written on the tablets which occupy the place of the ears in the statue of *Chaacmol*, discovered by me, now in the National Museum at Mexico.

<sup>1</sup> Asouras. Powerful demons, always at war with the Gods.

<sup>2</sup> Rig-Veda. Sect. 1., lect. 14, h. 9, v. 6, vol. I., page 108.

<sup>3</sup> Vretra. A demon killed by Indra. It is the emblem of darkness dissipated by the rays of the sun. He is also the *winged serpent*, AHI.

<sup>4</sup> Rig-Veda. Sect. 1, lect. 4, h. 15, v. 10-12, vol. I., page 118.

<sup>5</sup> Psalm XVIII., verse 11 to 15. Holy Bible in use in the churches of England.

<sup>6</sup> Pio Perez. *Diccionario de lengua Maya*.

<sup>7</sup> Landa. *Las cosas de Yucatan*. Chap. XV., page 252.

earth in the shape of water. Hence also the enmity of the serpent and the sun, so vividly represented in their mural paintings and bas-reliefs.

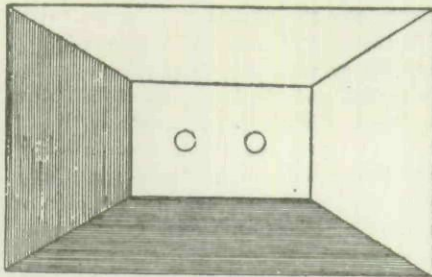
*"I wish to sing the antique exploits by which the thundering Indra has distinguished himself. He has wounded Ahi; he has scattered the waters on the earth; he has let loose the torrents of the celestial mountains."*<sup>1</sup>

I will now call your attention to two stelæ I found on a small mound situated about one hundred metres from the south-east corner of the principal pyramid, named anciently *Kukulcan*, in the city of Mayapan. These stelæ are the first of the kind I have seen during my long and careful explorations of the ruined cities of Yucatan. I consider them of great importance, since they demonstrate the high scientific knowledge attained by the learned men among the Mayas. They might, it seems, have been able to hold their own, as far as mathematical and astronomical sciences are concerned, with the *Magi* and the astronomers of Egypt, as I hope to show you.

While measuring the platform on the top of the mound, that once was dedicated to *Kukulcan*, on searching the thicket, my eyes fell upon what I took to be the columns of the *Katuns*, illuminated by the rays of the sun sinking towards the West. On inquiring I was told: "Oh! it is nothing; merely two small round stones." I have long since learned by experience, as Stephens did, the meaning of these words. Often you are informed by the natives, of a place where according to them are very important monuments, which on examination turn out to be the insignificant remains of old walls, while, as in the present instance, things they consider not worth looking at, happen to be most interesting for science and history. I therefore insisted on examining the stones which had attracted my attention. Our Indian guide remarked that in that place there were many *garapatas*, that it was rather far, and tried to persuade us not to go, simply because as *he* had not considered the monument of sufficient interest for the foreigners to see, he had not opened a path to it, and he did not seem to relish the idea of doing it at this hot hour of the afternoon. Reluctantly therefore he took the van, when I told him that there we must go. A grin of gladness overspread Marcelo's face and betrayed his inward feelings, when he saw that the cattle had taken upon themselves to perform the duty he had neglected. Following the detours of the trail, clipping here and there a few boughs, we at last reached the foot of a small mound eight metres high, eleven metres, fifty centimetres wide at the base on the north side, but so much destroyed and overgrown that with difficulty we were able to measure it. Its ascent was anything but easy, but thanks to the branches and roots of the shrubs with which its sides were covered, we were able to reach the platform. There, the sun seemed to dart his hottest rays, as if to

<sup>1</sup> So begins a hymn in honor of *Indra* to celebrate his victory over the serpent *Ahi*. Rig-Veda. Sect. 1, lect. 2, h. 13, vol. I., pp. 56-57. Langlois's translation.



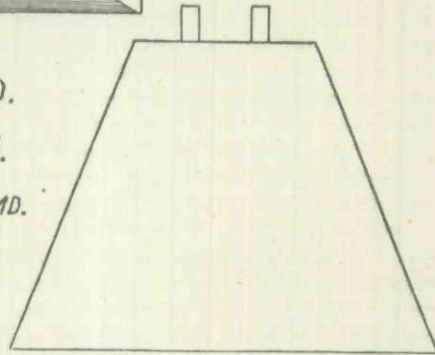


PLAN OF  
GNOMON MOUND.  
AT  
MAYAPAN.  
SURVEYED BY  
A. LEPLONGEON, MD.  
JAN. 1881.

SCALE.



EACH SMALL SQUARE 20<sup>c</sup>.



prevent intrusion on a spot, where, of old, his worshippers had calculated his course through the heavens. The platform, four metres, seventy centimetres on the North and South sides, by three metres on the East and West sides, sustained two perpendicular stelæ of forty-five centimetres in diameter, and one metre high from the floor, which, once was perfectly leveled and paved with beautifully-hewn slabs of stone. To-day it is covered with a layer of ten centimetres of loam, product of the dust of the centuries, and of the decomposition of the plants that have grown there, and the rank grass which now covers it, since the city was abandoned in 1446 of our era.<sup>1</sup> The distance between the centre of the stelæ is 1<sup>m</sup> 70<sup>c</sup>, their orienta-

<sup>1</sup>I had occasion there again to verify an observation made by me in Chichen-Itza and afterwards in Cozumel, an observation that has enabled me to compute approximately, the time when the monuments were abandoned by those who dwelt in them. The accumulation of loam I had reckoned to take place at the rate of one inch per century, more or less. Well, since 1446 of the Christian Era, when, according to Landa, the city of Mayapan was destroyed and abandoned, 0<sup>m</sup> 10 centimetres of loam has accumulated on the top of the gnomon mound in Mayapan, that is to say, 3 $\frac{1}{2}$  inches of dust and decomposed vegetable matter has covered the platform of this astronomical edifice in 434 years. Hence by reckoning the accumulation to take place on the ruined monuments at the mean average of one inch in every hundred years, we are very near the truth.

tion East and West is as perfect as it could be made to-day with our improved instruments. Of course I made use of the metre. In a former communication, dated Belize, June 15th, 1878, in my description of Island *Mugeres*, I told you<sup>1</sup> "I have not adopted the metric standard of linear measure *from choice*, but *from necessity*, and the strange discovery that the metre is the *only measure of dimension* which agrees with that adopted by these most ancient artists and architects; another and very striking point of contact with the Chaldean priests, the *Magi*."<sup>2</sup> This FACT, that of the adoption of the metric measure by the builders of the ancient monuments of Mayapan, is plainly corroborated by the careful protraction of the columns of the gnomon here annexed.

To this protraction I must now refer, in order to explain graphically the extent of the mathematical and astronomical knowledge attained by nations, that writers on the ancient civilization of America have been pleased to call semi-barbarous. Perhaps you will object that such science, such knowledge, was *then* the sacred privilege of the few. True; but cast your eyes on the populations which live on the earth to-day; nay! in the very countries that we consider at the van of modern civilization, and tell me is its science and knowledge the privilege of the masses, or of the few? What is the number of the truly scientific men in England, in France, in Germany, in Spain, in Italy, compared with the whole populations of these countries? How many truly scientific men are there in the UNITED STATES, *around you*, in a country which receives the best in art, science and literature, that the Old World can produce? How many among us do not even know how to read and write their own names, and yet we call nations *barbarous*, among whom with difficulty we shall find a man who does not know, not only how to read and write, but the first principles of arithmetic, as for example, the Chinese, Japanese, and others? FACTS are what are needed in the study of the history of humanity, ancient and modern; not theories!!!

Let us examine the accompanying diagram. It is carefully drawn by me, according to very accurate measurements. The FACTS it reveals are certainly most interesting. We cannot suppose that the gnomon was built at random, that the diameter of the stelæ, and the distance they are placed from one another, are wholly fortuitous. We must

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<sup>1</sup> Stephen Salisbury, Jr. *Mexican Calendar Stone, Maya Archaeology.* Page 42.

<sup>2</sup> *Le caractère grandiose des constructions Babyloniennes et Ninive, le développement scientifique de la CHALDEE, les rapports incontestables de la civilisation Assyrienne avec celle de l'Egypte (et de l'Amérique Central avec les deux. A. L. P.) auraient leur cause dans cette première assise de peuple matérialistes, constructeurs, auxquels LE MOND ENTIER DOIT avec le SYSTÈME MÉTRIQUE, les plus anciennes connaissances que tiennent à l'Astronomie, aux mathématiques, et à l'industrie.* Ernest Renan. *Hist. gen. des langues sémitiques.* Pag. 60-61.

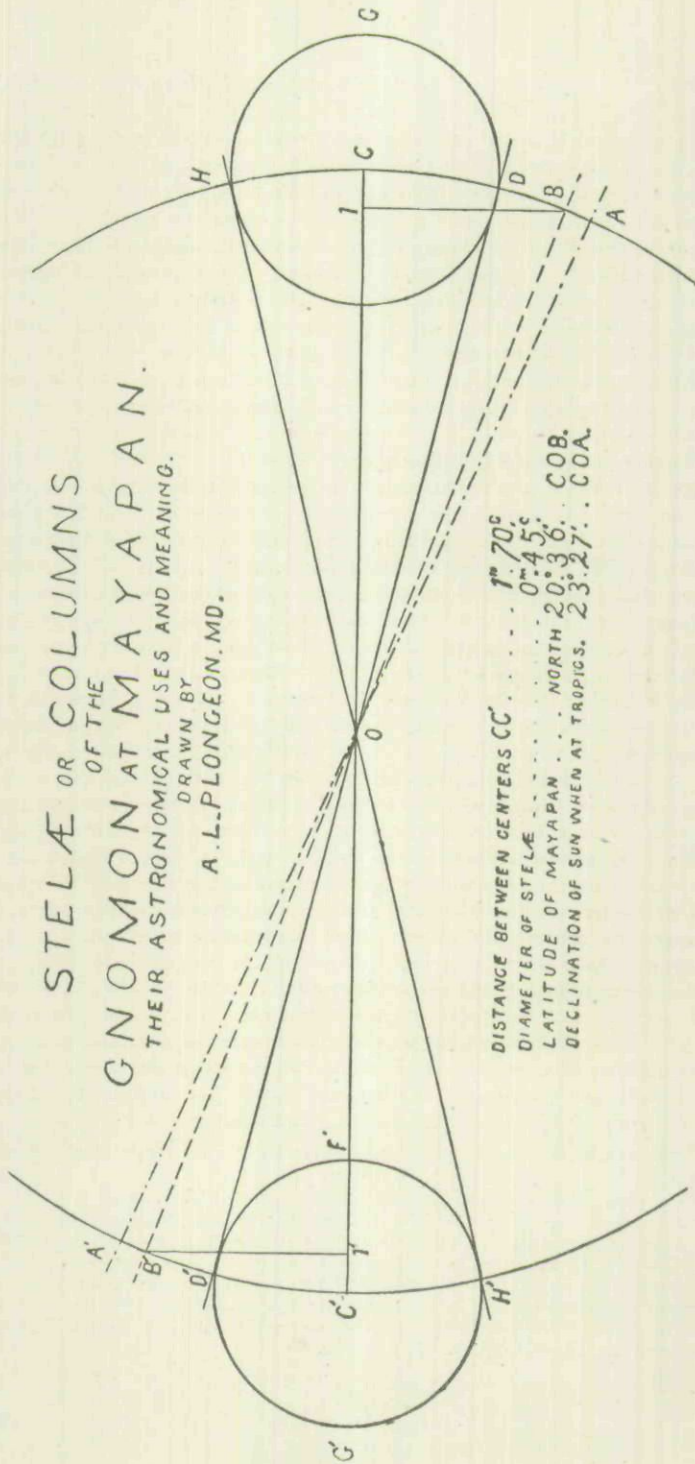


STELÆ OR COLUMNS  
OF THE  
GNOMON AT MAYAPAN.

THEIR ASTRONOMICAL USES AND MEANING.

DRAWN BY

A. L. PLONGEON, MD.



DISTANCE BETWEEN CENTERS  $CC'$  . . . . .  $1^m 70^s$   
 DIAMETER OF STELÆ . . . . .  $0^m 45^s$   
 LATITUDE OF MAYAPAN . . . . . NORTH  $20^{\circ} 36'$  COB.  
 DECLINATION OF SUN WHEN AT TROPICS.  $23^{\circ} 27'$  COA.

rather suppose that the construction of the astronomical instrument was subject to positive data, studiously calculated by the accomplished Maya astronomers. Judging of past humanity by the present, we must of necessity agree that the diameter and distance of the centres were the result of accurate calculation and knowledge. Would any scientific optician pretend to make, at hazard, any mathematical instrument, and assert that such instrument was a proper one to use for accurate observations? Such assertion would of course be looked upon as simply preposterous. And are we to suppose, that what the scientific men in our days would not do, the scientific men of past ages have done? Science remains the same, and the capacity of human intellect, when cultivated to its utmost extent, is very nearly the same in all countries, at all times.

We must admit that the precise dimensions given to the stelæ, and to their distance from each other, have had a cause as well as an object. What that cause and that object may have been, is for us to discover if we can; for the solution of this problem will tell us of the mathematical and astronomical knowledge attained by the *H-menés*.

Taking for granted that they knew the distance of the solstitial points from the equator; that is to say, the greatest declination of the sun, North and South,<sup>1</sup> I have traced the diagram, making use of a scale of two millimetres for every five metres, in the following manner: at the points *c* and *c'* extremities of the line *cc'* drawn through the centres of the stelæ and equal to the distance  $1^m 70^c$  of their centres, with a radius equal to half their diameter  $0^c, 22^c, 5$ . I described the two circumferences *GDFH* and *G'D'F'H'*. These represent the columns of the gnomon, and their respective places on the platform of the mound. I then traced the tangents *D'D* and *HH'* which bisect each other and the line *cc'* in *o*. With *o* as a centre, and a radius *oc* equal to half the line *cc'*, I described the circumference *HCDAH'C'D'A'* passing through the centres of the stelæ. Then from the points *c* and *c'* I measured the axes *CA* and *C'A'*, =  $23^{\circ} 27'$  the declination of the Sun when on the tropical line, at the time of the solstices. You will please notice here that the chord *AD* which joins the arc *AD* is 1-12 (one twelfth) of the line *cc'*, the distance of the centres of the stelæ, proving that the Maya astronomers divided their astronomical year into twelve months of thirty days each, to which they added the *five days* when they *said the sun was resting*. To these, which they considered luckless, they gave no names. Here again we find another point of contact with

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<sup>1</sup> I have taken it for granted that they knew when the sun had reached the tropics, and therefore its greatest declination  $23^{\circ} 27'$ , because the days that this declination does not vary they called *uayab ó' mayab haab*, which means, according to Pío Perez, *the bed, or place where the sun rests*. These days are now from the 19th to the 24th of June, and from the 19th to the 24th of December.



the Egyptians,<sup>1</sup> and perhaps more particularly, the *Chaldeans*.<sup>2</sup> This corroborates what Landa tells us on the subject. "They have their perfect year of 365 days and six hours, as ours, they divide it into months in two different manners, one is by dividing it in months of 30 days, and they call them  $\Upsilon$ , which means moon; and they count them from the time that the new moon appeared, until the time she disappeared."<sup>3</sup> The Hindoos, we learn from the *Manava-Dharma-Sastra* in the most remote times, also divided their years into twelve lunar months, and the month into two periods of 15 days each. The first, the lighted period (*Soukla-pakcha*) finished with the day of the full moon. The second, the dark period (*Krichna-pakcha*) with the day of the new moon.<sup>4</sup> We have thus come to the knowledge of why the Maya astronomers placed the centres of the columns of their gnomon at the precise distance of 1<sup>m</sup> 70°. Let us now try to find out what may have been their motive for giving to the diameters of said columns 0° 45°.

By observing the meridian altitude of the sun, I found that the latitude of Mayapan is 20° 36' north. I then traced on my diagram, taking the centre o as angular point, the angle COB equals 20° 36', prolonging

<sup>1</sup> The Egyptians also divided the year into twelve months of 30 days each, to which five days, called *epact*, were added at the end of the last month, *Mesore*. These, as among the Mayas, were considered unlucky. This was the solar or sacred year, which was somewhat different from the Gothic or sidereal year. This solar year seems to have been adopted, and the *Epact* added at a period so ancient that it is referred to the fabulous time of their history. But in the beginning they computed time, and divided the year by lunations, as did the Mayas, so that besides their solar year, they had a civil year divided in 18 months of twenty days, or lunar months, to which they added likewise the five unlucky days. (See Herodotus, lib. II., ch. 4.) And Sir G. Wilkinson. *Ancient Egyptians*. Vol. II., pp. 370-375.

<sup>2</sup> Phil. Smith, in his *Ancient History of the East*, page 400, says: "There can be no doubt that the Babylonian astronomy was more truly scientific than the Egyptian, and that it reached the highest perfection attainable without the aid of optical instruments. The Chaldeans knew the synodic period of the moon, the equinoctial and solstitial points, the true length of the year as dependent on the annual course of the sun (within a narrow limit of error) and even the precession of the equinoxes. Herodotus, lib. II., ch. 109, tells us that the Greeks learned from the Babylonians the division of the day into 12 hours, as well as the sun dial and the gnomon."

<sup>3</sup> Landa. *Las cosas de Yucatan*. Chap. XXXIV., page 202. "Tienen su año perfecto como el nuestro de ccc. y LXV. dias y VI. horas. Dividenlo en dos maneras de meses, los unos de a XXX. dias que se llaman  $\nu\upsilon$  que quiere decir Luna, la qual contavan desde que salia nueva hasta que no parecia."

<sup>4</sup> *Manava-Dharma-Sastra*. Lib. I. *Stokas* 66-67. . . "One month of the mortals is one day and one night of the *Pitrés*; it is divided into two periods of fifteen days. The dark period is for the *Manes*; the day set apart for labor, and the lighted period; the night reserved for sleeping. . . One year of the mortals is one day and one night of the Gods, and this is the manner of its division. The day corresponds to the northern course of the sun, the night to its southern."

the leg OB until it meets the circumference HCDAH/C'D'A', and noticed that the chord CD, semi-diameter of the circumferences FDGH and F'D'G'H' of the stelæ is equal to (*two-thirds*)  $\frac{2}{3}$  of the latitude of the place. Then the whole diameter is the 1-13 (one-thirteenth) part of the circumference passing through their centres c and c', which stands in this case for their week of thirteen days.<sup>1</sup> This, it seems to me, would tend to prove that they had some means for calculating accurately the latitude of places, but it certainly gives us the reason why they made the columns of the gnomon  $0^{\circ} 45'$  in diameter.

But this is not all. Landa, Cogolludo, and after them, Pio Perez, tell us that they divided the year into eighteen months of twenty days each,<sup>2</sup> which they called *Unal-Hun-Ekeh*, to which they added the five days and six hours. Well, this strange division of the year is also indicated by the dimensions given by the Maya astronomers to their gnomon.

In fact, the sine BI of the arc BC equals  $20^{\circ} 36'$ , the latitude of Mayapan, and is the 1-18 (one-eighteenth) part of the circumference HCDAH/C'D'A' passing through the centres c and c'. As to the 20 days into which these months were divided, you will find that the versed-sine CI is 1-5 (one-fifth) of the sine BI, representing the duration of one month. Double this sine would be ten days; on each stelæ, therefore, are the twenty days of the month. Landa tells us<sup>3</sup> that their mode of counting was by fives up to twenty, and by twenties up to one hundred. Of course, by noticing the length of the shadow projected by the stelæ on the smooth floor of the platform, they could know the hour of the day. At night, as the Indians do even now, they could tell the time quite accurately by observing the course of the stars.<sup>4</sup> By placing a style, or any narrow object, on the top of the columns, so as to rest on the

<sup>1</sup>Pio Perez. *Cronologia Antigua de Yucatan*, says: La triadecaterida ó periodo de trece dias, resultado de sus primeras combinaciones fué su numero sagrado en lo sucesivo y procuraron usarlo y conservarlo ingeniosa y constantemente sometiendole todas las divisiones que imaginaron para concordar y arreglar sus calendarios al curso solar . . . . .

<sup>2</sup>Landa. *Las cosas de Yucatan*. Chap. XXXIV., page 204. Otra manera de meses tenian, de a XX dias, a los quales llaman, *Unal-Hun-Ekeh*: destos tenia el año entero XVIII y mas los cinco dias y seis horas.

<sup>3</sup>Landa. *Las cosas de Yucatan*. Que su cuenta es de v en v hasta xx; y de xx en xx hasta c, Chap. XXIV., page 134 . . . Again . . . . . Ya e dicho que el modo de contar de los Indios es de cinco en cinco, y de cuatro cincos hazen veinte; assi en estos sus caracteres que son veinte sacan los primeros de los quatro cincos de los XX y estos sirven, cada uno dellos un año de lo que nos sirven a nosotros, nuestras letras dominicales, para comenzar todos los primeros dias de los meses de a XX dias. Chap. XXXIV., p. 206.

<sup>4</sup>Landa. *Las cosas de Yucatan*. Regian de noche, para conocer la hora que era por el luzero (*Venus*) y los cabrillas (pleiades) y los artillejos (gemini). Chap. XXXIV., page 202.



centres c-c', and noticing when its shadow fell perpendicularly on the platform and covered exactly the line they had traced for that purpose between the stelæ, they knew when the sun passed on their zenith, which phenomenon occurs twice every year, in March and July.

Here I will rest in my description of the gnomon of Mayapan, leaving it to the learned personages who have written on Maya chronology to theorize and tell us why the ancient astronomers of the Peninsula, or rather, of the city of Mayapan, adopted these two modes of computing time, that the chroniclers have recorded in their works, and which seem corroborated by the study of the gnomon. Whatever be the theories presented to the world by others, my duty toward you, and towards the students of American Archæology, is to present the FACTS as they are, without passing an opinion, for the present, on what I see; because I do not believe that we possess, as yet, sufficient positive and incontrovertible data for any one to form a true and correct opinion on the subject, free from hypothesis. I may remark, however, that this gnomon appears to have been built, subject to approved trigonometrical rules, which can leave no doubt as to the mathematical attainments of the builders. They seem to have taken as the basis for their calculations the latitude of the place, and the declination of the sun when at its resting place, as they called the solstitial points: FACTS that would do away with the mythical reasons attributed by Brasseur and others, for their computation of time, and bring us at once to the right ground in the presence of truth. I take it for granted that the learned men of old were no more foolish than the learned men of our days.

That this manner of computing time was used by the primitive civilized inhabitants of the great metropolis, Chichen-Itza; or by those who dwelt in it, when at the height of its splendor, when scientists and scholars flocked from all parts of the world to its temples and seminaries to consult the *H-Menes*, is more than, at present, we can positively know. It is quite probable, however, that their astronomical conceptions may have suffered the same changes as their religious ideas. These we can follow tolerably well, written as they are on the walls of the palaces and temples. We know that in the most remote times, they represented the God-head under the symbol of the *Mastodon head*; and notwithstanding the great respect for the memory of their ancestors, so strongly inculcated on their minds that even to-day, they would not fail to prepare the *Hanal-pixan* (the food of the soul), and offer it in particular places in the forests on *All Saints day*.<sup>1</sup> In after ages this

<sup>1</sup> We find that great respect for the memory of the ancestors was taught by the precepts of the *Manava-Dharma-Sastra* to the inhabitants of the peninsula of the South of Asia. We read in Book III., Sloka 203. . . . The ceremony in honor of the Manes is superior, among the Brahmins, to the ceremony in honor of the gods, and the offering to the gods, that precedes the offering to the manes, has been declared to augment its merit.

Respect for the memory of their ancestors is also one of the first duties

emblem became replaced by that of the *Winged Serpent* KUKULCAN or AHI, even in the city of the holy and wise men (*Itzaes*). while in Uxmal and other places where, in time, the Nahuatl civilization and religion prevailed, the phallic emblems were coupled with those of the sun, the fire, and the Mastodon head. The monuments also show the changes that had taken place in architectural taste, a consequence of the alteration in the customs, in the ideas, and in the mode of life of the people, caused, perhaps, by immigration and invasion, probably by commercial intercourse and frequent communication, by sea and by land, with the neighboring nations.<sup>1</sup> The ornamentation of the edifices also tells us of the progress of the artists in the arts of drawing and sculpture. But there we must rest until we discover genuine *Maya* books, and until some one is found able to translate them into any of our modern languages; for whatever we may pretend to know to-day, about the life and history of the primitive civilized inhabitants of the Peninsula, will only amount to mere surmises, notwithstanding the Pio Perez MS. published by John L. Stephens, and commented on by Professor Philipp J. J. Valentini.

I will now call your attention to the great mound at Mayapan which Landa says was built by Kukulcan, and named after him. Stephens *pretends* to have represented it in the engraving, page 132 of the first volume of his work on Yucatan. The *peculiar regularity of its shape*, as he says; but, more properly, the perfect mathematical symmetry of all its parts, carefully computed by its builders, will show you that the Maya architects were as well acquainted with the rules of trigonometry as their friends, the astronomers. While the construction of this pyramid, like that of all the other monuments of the latter period, will vividly recall to your mind that of the Assyrian buildings, its form will

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inculcated on the inhabitants of China, and considered so important that in that country temples were dedicated to their worship. In the book *Chang-Soung*; Ode, *Lici-Tsou*, speaking of the behavior of the wise man, it is said: *He goes with holy thoughts and silence to the temple of the ancestors, and during the continuance of the sacrifice, no discussion as to the priority, or duty, must take place.* And we read in book I, *Chang-lun*, Chap. 3, Sloka 12 of the *Lun-yu*, that Confucius enjoins on his disciples this maxim: *It is necessary to sacrifice to the ancestors as if they were present.* . . . .

<sup>1</sup>In the urn that contained the brains of Chaacmol we found two TOPAZES, now in the possession of Mrs. Le Plongeon, and in that where his heart and vicera were, was his talisman; a piece of polished JADE, cut in a peculiar shape. A similar stone, cut in the same shape, exists in the National Museum of Antiquities in Mexico. Well then, these stones, the sacred stones of the Americans, are only met with, according to Alcedo, in the silver mines of the mountains of New Granada, between the Isthmus of Darien and the Equator, where they were worked by native artists, while Topaz occurs in the Mercado mountains in Durango, and at La Paz, near Guanajuato in Mexico, says Dana in his work on Mineralogy. These precious stones existing in the urns placed near the statue of Chaacmol, leave no doubt about the communication of his countrymen with the inhabitants of these distant places.



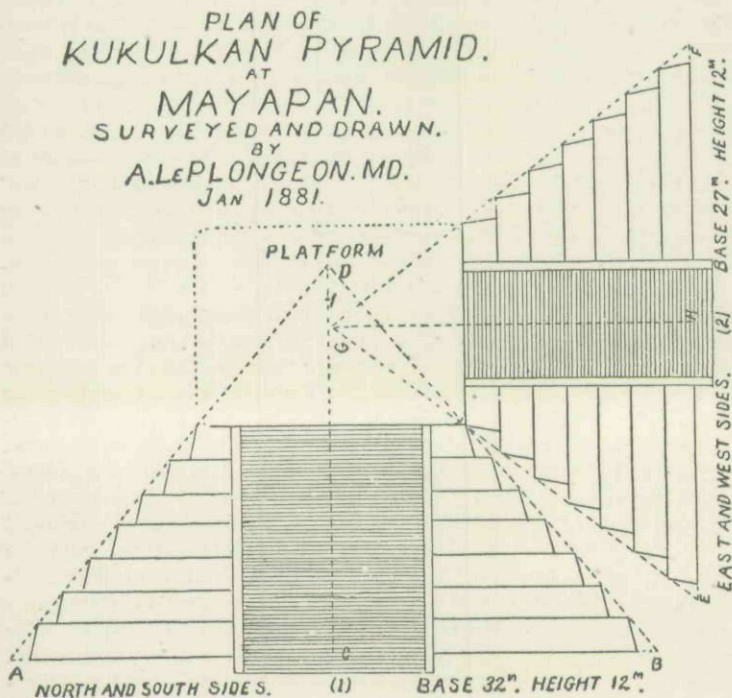
cause you to remember that of the oldest structures of the plains of Chaldea; the *Ziggurat* or graduated towers so characteristic of Babylonia, mounds without edifices (of which the oldest type known in history is the *Tower of Babel*); and from the tops of which the priests of the Mayas, as the *Magi*, elevated above the mists of the plain below, could trace through the cloudless sky, the movements of the stars and other celestial bodies, instead of cutting out, there, the hearts of human victims in the sight of the assembled people, as Stephens suggests.<sup>1</sup> There are no visible vestiges of sacrificial stones having ever existed either on the platform or at the foot of the stairs, where, if the place had served for sacrifices, they would have been erected, and where they are found to-day in other localities.

The mound is now in a very dilapidated condition and thickly covered with a rank vegetation. It is an oblong truncated pyramid, measuring, on the North and South sides, at the base 32 metres, and 14 metres at the top; on the East and West sides, the base measures 27 metres, and the top 10<sup>m</sup> 60<sup>c</sup>; making consequently the size of the platform at the summit 14 metres by 10<sup>m</sup> 60<sup>c</sup>. On the four faces are stairways containing 60 steps, each 25 centimetres high, that were encased in balustrades 45 centimetres in width, and constructed in gradients. The stairways on the North and South faces measure 10<sup>m</sup> 50<sup>c</sup>, those of the East and West sides 6<sup>m</sup> 50<sup>c</sup>, the height of the whole building being exactly 12 metres. The ascent to the platform on the summit is most difficult, owing to the fact that very few stones of those which formed the stairs are now in place.

By consulting the annexed plan of the mound, drawn by me from as accurate measurements as the ruinous condition of the edifice permits, you will observe that it appears as if composed of seven<sup>2</sup> superposed

<sup>1</sup> Mr. Stephens seemed to ignore that this mode of human sacrifices was not in vogue among the ancient *Mayas*, who sacrificed their victims either by shooting them with arrows, or by drowning in the great sacred well at Chichen. The sacrifices made by tearing out the hearts of the victims when alive, was an importation from Mexico, brought to Mayapan by Mexicans when they came as mercenary soldiers at the bidding of one of the Cocomes. Landa. Chap. VIII., page 49.

<sup>2</sup> This NUMBER 7 (SEVEN) of the stages of this and many other mounds (not to say the majority) in the Yucatecan peninsula, seems to have been among the ancient *Mayas* a *mystic number* as it was with the inhabitants of Asia Minor, Egypt, Hindostan, and other countries. The edifice known as the Tower of Babel, *the temple of the seven lights*, the *Birs-i-nimrud*, was made of seven stages or platforms; connected in some way in the opinion of many with the several planets, the 7 *marouts* or geni of the winds, the 7 *amschaspands* of the angelic hierarchy of Mazdiesm, the 7 horses that drew the chariot of the Sun, the 7 *apris* or shape of the flame (or 7 rays of agni,) the 7 *manous* or criators etc. . . . The 7 lamps of the ark, and of Zacharia's vision, the 7 branches of the golden candlestick, the 7 days of the feast of the dedication of the temple of Solomon, the 7 heads of the Hydra killed by Hercules . . . and to finish with quotations of number 7, and return to the *Mayas*, the 7 feathers, placed in the caps or headdresses of their kings as a mark of their rank.



platforms all of the same height, 1<sup>m</sup> 70<sup>c</sup>, the one above being smaller than that immediately below by 0<sup>m</sup> 90<sup>c</sup> exactly, from the upper line or edge of the platform or *anden*, to the foot of that next above, with an inward slope of 18°. You will also see, by the diagram of the superior platform, that all the corners are rounded, so also are those of the other platforms. (Let me remark here that this same peculiarity exists in all the monuments of the peninsula, even in those built in the most remote ages.) This mound, as all those that I designate as belonging to the latter period, in order to distinguish them from the most ancient, (which are built of solid stone masonry from their foundations to their summits, as those of *Khorsabad*,) is made of loose unhewn stones and rubbish, piled up so as to form the interior mass, which was then encased by a facing of carefully hewn stones, in this case without ornamentation; at least none is visible on the monument to-day. In many instances, this exterior facing is ornamented with sculptured designs, beautifully colored.

Does not this simple relation of FACTS bring before your eyes the description, *verbatim*, so far as the objects described are concerned, of



the monuments of Chaldea and Assyria in the works of Rawlinson,<sup>1</sup> and more strongly perhaps of Nebuchadnezzar's account of his rebuilding of the *Temple of the seven lights of the Earth*, found among its ruins and translated by Mr. Appert, the author of a cuneiform grammar. I will only quote the part of the inscription that relates to the manner of construction of the temple . . . "Since that time the earthquake and the lightning have dispersed its sun-dried clay. *The bricks of the casing* have been split, and the *earth of the interior* has been scattered in heaps." In the plains of Babylonia there were no stones; the builders of the *Temple of the seven lights* had, of course, to make use of the materials at hand. They formed the *core* of the structure with sun-dried clay, and the *facings* with hard-burned bricks. In Yucatan, where there is no clay, but stones, the rearers of the mound at Mayapan, and of those at other places in the Peninsula, formed the *core* of their construction with loose stones, using for the *facing* blocks of the same material, carefully hewn. The mode of building, however, was identical among the Mayas, as among the Chaldeans.

Again, the main distinctive feature of the Babylonian architecture, was a profuse employment of colored interior and exterior decorations. So also with the Maya. Examine my collection of photographs of the monuments of Chichen and Uxmal, and you will soon be convinced that the fronts of the monuments were literally covered with the most complex and elaborate ornamentation, and read Stephens's description of the interior of the funeral chamber in Chaacmol's monument, which he mistook for the shrine where the players at the games of ball came to make offerings to the Gods of the games, and look at the meagre sketch he gives of the beautiful mural paintings that covered the walls from the floor to the peak of the arch of the ceiling,<sup>2</sup> and it will not be long before you recognize that the builders of the temples and palaces, and the artists who decorated them, at Chichen-Itza and Babylon, seem to have been actuated by a surprising identity of ideas. Even the choice of the same colors would tend to

<sup>1</sup>Rawlinson. *Five Monarchies*, vol. I.

<sup>2</sup>John L. Stephens. *Travels in Yucatan*. Vol. II., page 310, and the engraving opposite.

My collection of mural paintings, traced from the originals, on tracing paper, contains all of the beautiful gems of aboriginal art that can be seen at present in the Peninsula, as far as I know. The walls of the second story of the *Palace* and *Museum* at Chichen were decorated in like manner. Alas! the stucco has fallen from the stones, and in falling carried with it the representation, in bright colors, of the life, customs, religious ceremonies and civil festivals, of a people, one of the most ancient, perhaps, on Earth, whose history may be irretrievably lost to the world, unless future investigations, carefully and scientifically conducted, bring to light some unknown monuments, never visited by white men, and which have not suffered at the hands of invading, inimical and vandalic tribes. I have heard of the existence of such places, *Tekal* for example.

suggest that the Maya and Chaldean painters had learned their art at the same schools.

The further study of the diagram of the mound at Mayapan will tell us of the mathematical attainments of those who drew the plan of the edifice and directed its erection. Fig. 1 represents the North and South sides, contained, as you see, within the isosceles triangle ABD. Fig. 2, the East and West faces which are inscribed within the isosceles triangle EFG. These triangles are not equal. The base of the triangle ABD =  $33^m 80^c$ ; that of the triangle EFG =  $28^m 80^c$ ; their heights being also different. Yet you will notice how accurately the lines of the edges of the platforms intersect the legs AB, DB, EG, FG, in the same proportional ratio  $1^m 80^c$  in both triangles, the sides of the pyramid preserving also the same inward slope, an angle of  $18^\circ$ . Well, such mathematical accuracy is not the result of mere guess-work, at least I don't think it is; it is rather the result of a perfect knowledge on the part of the architect, of the rules for the resolution of triangles. For in order to know what height they should give to their triangles, the bases being different, they must have had recourse to the same calculations as we would, to ascertain that they must make the height CD of the triangle ADB equal to the height HG = CI of the triangle EFG +  $1^m 70^c$ , exactly the height of one platform, to give the same height to the whole building, and cause the lines of the edges of each angle to intersect the corresponding line on the other side, at the same point on the legs of their respective triangles. Hence, as I have said, they must have been well acquainted with the science of trigonometry.

The study of the diagram also teaches that if the Mayas had adopted the same style of building as the Babylonians, graduated truncated pyramids, it was from *choice*, as they preferred the triangular to the circular arch, knowing how to construct domes, and not from *ignorance*. That like the Egyptians,<sup>1</sup> they could have made complete pyramids is perfectly plain. By filling up the platforms and following the direction of the legs of the triangles ABD and EFG, and, as they have done in some instances, continuing the construction to the apex, they would have produced them, had they liked. This predilection for the *graduated truncated pyramid*, would be another circumstantial evidence tending to prove that the civilization of the Mayas did not come from Egypt; but mayhap the contrary way.

We are told that the marked distinction between the Babylonian temple towers and the Egyptian pyramids is, that the former, if their stages were filled up would form *oblique pyramids*, with their *angles* to the cardinal points, while the Egyptian have *always* their axes perpendicular to the horizon, with their *faces* to the cardinal points.

<sup>1</sup>The Egyptian pyramids are graduated, only the degrees are smaller, more numerous, and continued to near the apex. Yet the *Sakkara* pyramid is a remarkable evidence that the Egyptians did not always fill the platforms in order to complete the edifice.



I have shown, in my essay on the Maya language, that it contains many words, and ethnologies of names, belonging to well-nigh all the ancient known languages. I have told you that in the Maya alphabet we find letters and characters pertaining to the *most ancient* Egyptian and Chaldaic alphabets, even their mode of writing in squares, is similar to the hieratic writings of the Chaldeans or Babylonians, as I assert also. We see that their architecture partakes of that of the Egyptians and Babylonians, besides having a style which belongs to none of those ancient nations.

That they had perpendicular pyramids, with their faces to the cardinal points, as the Egyptians, the mound of Mayapan proves. But the great mound situated on the North side of the principal square of Izamal, on the top of which stood formerly a temple dedicated to *Kinich Kakmó*,<sup>1</sup> the Queen of Chichen, wife of Chaacmol, who, after her death obtained the honors of apotheosis, is an *oblique* pyramid, the very counterpart of the temple of the Moon at Mugheir, described by the explorer, Mr. Taylor.<sup>2</sup> Besides these two modes of constructing pyramids, they had *one exclusively their own*, as we see in the great mound at Uxmal, on the top of which is the building called by me *Sanctuary*, but designated in Stephens's work as the DIVINER'S HOUSE (*La casa del adivino*). Its construction is as follows: from the ground up to a certain height it has the shape of an *elliptical cone*. Then its form changes into an oblique oblong pyramid, terminated by a narrow platform on which stand two long narrow apartments. Its widest sides face the East and West; there, are situated the stairs by which to ascend on the West side to the suite of rooms on the top, to a narrow platform on the East side of which is built the Sanctuary proper. The sides of the pyramid are smooth stone walls without degrees of any sort, but with apartments reserved in the body of the pyramid, on each side of the stairs of the West face, at a height of about five to six metres from the floor of the court.

I will terminate this paper by stating to you a strange piece of information I received while in Progreso, in September last. I was waiting for the ill-fated steamer *City of Vera Cruz*, en route for the City of Mexico, at the request of Hon. Phil. R. Morgan, our most gentlemanly American Minister, resident in that city. He had written to me that he desired that I should begin nothing serious among the ruins of Yucatan, without going to the capital and obtaining the permission of the Federal Government of the Mexican Republic.

<sup>1</sup>Lizana. *Historia de Nuestra Senora de Izamal*. Lib. I. . . .  
 "Assimismo haria otro celyo, ó cerro de la parte del Norte que hoy es el mas alto, que se llamara *Kinich Kakmó* y era la causa, que sobre el hacia un templo, y en el un idolo que se llamava assi *sol con rostro que sus rayos eran fuego*, y baxava a quemar el sacrificio a mediodia, como baxava la *vacamaya* con sus plumas de varios colores" . . . .

<sup>2</sup>Taylor. His account of the ruins in the *Journal of the Asiatic Society*. Vol. XV., page 264.

In the course of conversation with Señor Luis Morales, one of the principal merchants of Progreso, this gentleman told me of an ancient cemetery situated in the outskirts of the town, in which skeletons of great size, with the skull enclosed in an earthen pot, had been dug out on several occasions. He offered to introduce me to Mr. Fermin Domingo, one of the oldest settlers, who had found them while looking for stone to build his houses. The last named gentleman was kind enough to propose to accompany me to the place, and explain how things were thirty years ago. I invited Mr. Louis H. Aymé, the American Consul in Yucatan, to accompany us.

The cemetery is situated on the bank of the slough in the rear of the town, on the edge of the swamps. I saw in many places, pieces of broken pottery, and of human bones, which were easily pulverized on being lightly pressed between the fingers. Mr. Domingo pointed out to me the site where, not many years ago, existed a mound, about twenty feet high. Not a vestige of it remains to-day, the stones of which it was made have been used to build the houses of the town, and the fences. In the course of his graphic description, he pointed out eight square holes in the ground, forming two symmetrical parallel lines of four in a row. "There," he said, "I found the most singular things you can imagine, and up to the present moment I can't make out what they served for." "There," pointing to a certain spot, "is where once stood the mound; on this side, the Western, were the stairs. Now in each of these eight holes, I found a large stone urn (*pila*) measuring about three feet each way. They were all alike; and every one was covered with another exactly like it, sealed to the one below with mortar. They were all empty, and a small hole was bored in the bottom of the lower ones."

Mr. Rubio, the owner of a part of this ancient cemetery yet undisturbed, not only confirmed Mr. Domingo's relation but added so many more details that he fairly awakened my curiosity. I petitioned the Common Council for permission to make a few excavations, to procure, if possible, one of the gigantic skeletons spoken of by my informants. The petition was granted, provided I would agree to place all my finds in the hands of the Common Council, subject to the orders of the Governor of the State. This proviso acted as a perfect refrigerative, that cooled my warmest hopes of being soon able to send for your examination and study, the remains of some of the traditional giants, who, once are said to have inhabited the Peninsula, and whose bones have often been unearthed.<sup>1</sup>

Now, here again, in the stone urns found by Mr. Fermin Domingo, in the ancient cemetery of Progreso, we have a reminiscence of some of the tombs that encircled the old cities of the lower plain of Chaldea, so fully described by Rawlinson;<sup>2</sup> and we can easily recognize the

<sup>1</sup> Cogolludo. *Historia de Yucatan*. Vol. I., lib. IV., Chap. V.

<sup>2</sup> Rawlinson. *Five Monarchies*. Vol. I., page 113.



kind used by the Chaldeans for the burial of a single corpse, namely an earthenware coffin formed by two bell-shaped jars, placed mouth to mouth, and sealed at the joint with bitumen, an opening being left at the end for the escape of the gases resulting from decomposition.

This is a resumé of my observations and last investigations among the ruins of Mayapan. I consider it a pleasure, as well as a duty, to submit to your criticism, begging you to bear in mind, that I do not present any theory, but relate bare FACTS.

A few words more and I have finished. I know that after the patience of an audience has been taxed to its utmost by listening to the reading of a paper like this, one of the bored listeners thinks it his prescriptive duty to rise and propose a vote of thanks to the writer. In the present instance I beg to decline such a vote. Not in humility, but in justice, because it belongs by right to His Excellency Fred. P. Barlee, Esq., Lieut.-Governor of British Honduras; and to Mr. Pierre Lorillard, of New York.

I will explain. Since by the acts of arbitrariness of the petty officers of the Mexican Government, and contrary to the law of the land, I have been despoiled of the statue of Chaaemol, and the Federal Government of Mexico disclaiming all responsibility in the matter (see Mr. Foster's letter below) has refused to indemnify me up to the present day, for my labor and my money spent in the patient study of the ruined monuments of Yucatan during four years, with the knowledge and consent of the Governor of the State; for the study that has enabled me to know the place where the statue was buried, in the midst of dense forests at eight metres under ground, and to obtain the knowledge of many interesting FACTS concerning the life, science, religion and history of the builders of the monuments. Since also, I saw the manifest indifference of the American Government<sup>1</sup> and of the Ameri-

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<sup>1</sup> This is the first opportunity that has offered itself, in so many years, for thanking Hon. George F. Hoar, and Mr. Stephen Salisbury, Jr., for the interest they have manifested in my work, and their efforts in my behalf in trying to induce the American Government to protect me as an American citizen abroad, and a scientist whose explorations were interrupted, and the results of whose explorations were taken from him by the officers of the Mexican Government. I beg both these gentlemen to accept my most heartfelt thanks.

When I speak of the indifference of the American Government it is not without cause. In fact, when I knew of the seizure of the statue of Chaaemol by General Protasio Guerra, I was in the Island of Cozumel. Immediately I wrote a memorial to our minister in Mexico, then Hon. John W. Foster. It is dated May, 1877. This gentleman never took the trouble even to acknowledge the receipt of the document, which Hon. Mr. Hoar had printed when he presented my claim to the American Congress in 1878. Congress has never taken any action in the matter, up to the present day. Mr. Salisbury used his influence with the Secretary of State Hon. W. M. Evarts, to try to obtain redress for me, and received from the Secretary a letter stating: "*I have taken pleasure in writing to Mr. Foster, the Minister of the United States in Mexico, to commend Dr. Le Plongeon to him, and request him to aid Dr.*

can scientific societies, not only in not affording all due and rightful protection to an American scientist; but in being unwilling even to assist him to obtain the necessary means for continuing his investigations, by purchasing his collection of photographic views of the ancient monuments, and his tracings of mural paintings; since I felt that I was abandoned by ALL, notwithstanding ALL wanted to procure from me GRATIS what had cost me so much time, labor and money to acquire, I made up my mind to keep my knowledge, so dearly purchased, to destroy some day or other my collections, and to let those who wish to know about the ancient cities of Yucatan, do what I have done.

These are some of the reasons why, until now, I have been so reticent, notwithstanding the entreaties of many students of American Archæology in Europe and the United States. But these are not all. The main cause of my unwillingness to say more on the subject is, that my former writings, when published, have been so curtailed and clipped, to make them conform with certain opinions and ideas of others, that my own have altogether disappeared, or have been so

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*Le Plongeon's application to the Mexican Government by any proper means within his power.*" . . . . As soon as I was made acquainted with this fact, in September, 1879, I wrote again to Mr. Foster, who answered me January 2, 1880, as follows:

"In reply to your inquiries, I have to state that soon after you sent me your memorial and letter in May, 1877, I discussed the matter with the Minister of Foreign Affairs and he *denied all responsibility* on the part of the Mexican Government to you, on account of the appropriation by it of the image. He maintained that under the Mexican law all antiquarian relics belong to the Government, that no person without the authority of the Federal Government can in any way interfere with them, and that their exportation from the country is expressly forbidden. Until the Mexican Government can be induced to change its position as to its responsibility, it is useless to make any proposition to it in regard to a compromise of the claim by the acceptance of lands, as indicated in your letter.

Under the regulations of the Department of State, this legation has no authority to officially present a claim to the Mexican Government, until it has first been regularly examined by said department and specific instructions given by it. Mr. Evarts's letter, which you quote, *did not contemplate* any other than my friendly and *unofficial assistance*, such as I have already given. Before I can take any official action, the *claim would have to be submitted* by you to the department, and its instructions communicated to me. In view of the existence of the Mexican law, and the *decided negative* of the Mexican Foreign Office, I very much doubt whether you can induce this government to recognize the justice of your claim.

Very truly,

Signed, JOHN W. FOSTER."

I may add that if it be true that there is a law of the year 1827, forbidding the exportation of antiquarian relics from Mexico, there is none authorizing the Mexican Government to appropriate said relics, when in the possession of private individuals; so true is this, that Mexican antiquities are daily sold in the City of Mexico, publicly, and sometimes bought for the National Museum.



disfigured as to cause me to be taken for what I am not—an enthusiastic theorist following in the wake of Brasseur de Bourbourg. The true FACTS presented by me were considered as mere vagaries, scarcely worth the notice of cool-headed men,<sup>1</sup> who notwithstanding know absolutely nothing about the subject upon which they pretend to pass an opinion.

In conclusion, were it not for the entreaties of many of my acquaintances in England, men of science and knowledge, and particularly for the earnest counsels of my good friend Fred. P. Barlee, Esq., not to deprive the scientific world at large (that in fact, knows as yet but little of Mrs. Le Plongeon's and my own works and discoveries and that little not quite favorably) of our knowledge of the ancient ruined monuments of Yucatan, and ourselves of the just reward due to us; were it not also, for the generosity of Mr. Pierre Lorillard, who, not pretending to be a scientific man, has nevertheless advanced the necessary funds to enable me to pursue my studies during the present dry season, and find if possible, the meaning of the characters of the Maya alphabet, which yet remain a problem to solve, this paper would never have been written.

To these two gentlemen, consequently, if to anybody, the vote of thanks belongs. With your leave then, as a member, I propose that a vote of thanks be given by the American Antiquarian Society to Messrs. Fred. P. Barlee and Pierre Lorillard, for the moral and material support given by them to the writer, and for their efforts to promote the study and advancement of archæological science in America.

AUG<sup>TUS</sup> LE PLONGEON.

<sup>1</sup> John T. Short. *The North Americans of Antiquity*, page 396 . . . .  
 "Still, [says Mr. Short] we cannot refrain from expressing the regret that Dr. Le Plongeon's enthusiasm is so apparent in his reports, a *judicial frame of mind, as well as the calmness which accompanies it, are requisite both for scientific work and the inspiration of confidence in the reader* . . ." Thanks for the advice! But I will ask Mr. Short what in fact does he know about Yucatan, and the history of its primitive inhabitants? Is there anywhere a man, who, to-day, knows about these things so as to pretend to pass an opinion on them? What does Mr. Short know of the monuments of Yucatan? Has he ever read a true description? Where? It has never been published to my knowledge. Who is to know best about them, Mr. Short, who has never seen them, or Dr. Le Plongeon, who has made a special study of them, *in situ*, during seven years?

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