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AN AZTEC "CALENDAR STONE" IN YALE UNIVERSITY MUSEUM

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THIS valuable stone was bought of Orrin Brothers and Nichols, proprietors of a show called the "Aztec Fair, Mexico Past and Present." The purchase was made in 1887 by Professor O. C. Marsh of Yale University at a sheriff's sale in New Haven, Conn., where the "Aztec Fair" was showing at the time; and the stone was given by Professor Marsh to the Peabody Museum of Yale University in 1898. In the printed "Guide to the Aztec Fair," the piece in question is described at No. 101 as "The 'temalacatl' (gladiator's stone). This stone, with a hole through the centre and covered with curious hieroglyphics, is one that victims destined to be sacrificed were fastened to by the arms or limbs, a rope passing through the hole securing them. They were also used for the following purpose: Two of these stones were placed a few feet apart and a warrior fastened to each by the ankle. They were then compelled to fight one another until one or both were killed. There are only three of them known to exist—one at the National Museum in Mexico city, one in the institute at Oaxaca, and the one in our possession, which was lately unearthed in the valley of Mexico. Consequently this relic is without price."

This statement does not specify which stone in the National Museum of Mexico and which in the institute at Oaxaca is to be compared with the Yale specimen. It is comparable with the great Aztec Calendar stone (*Calendario azteca*) of the Mexican National Museum although much smaller than the latter and differing in

detail; also with the stone of Tizoc. Taking advantage of the meeting of the International Congress of Americanists in Mexico city during the past summer, the author had photographs made of the Yale specimen; and through the courtesy of Director Garcia and Dr Paul Henning of the Museo Nacional was able to compare these photographs with certain originals including the two just mentioned. He is also much indebted to Professor Eduard Seler of Berlin, who made a special visit to New Haven in order to pass on the authenticity of the specimen, and to Mrs Zelia Nuttall, of Coyoacán.

The Yale specimen measures $54.6 \times 45.7 \times 25.6$ centimeters, each face being rectangular. The five visible faces bear figures in relief. The bottom is simply dressed to an approximately plain surface. The material is a rather hard, somewhat porous volcanic rock. There is a central vertical perforation lined with a brass¹ tube that reaches from the top to a point about ten centimeters from the bottom. At the top the inside diameter of this brass tube is 5 centimeters, while at the lower end it is only 3.5 centimeters. The wall of the tube has an average thickness of four-tenths of a centimeter. From the lower end of the tube to the bottom of the stone the perforation expands into a cylindrical chamber with a diameter of about twelve centimeters. As no two of the three dimensions of the stone are equal, for the sake of convenience, its six rectangular faces can be referred to as top, bottom, sides, and ends.

The most interesting face is the top with the sun's disk in relief, the latter forming a perfect circle 43.2 centimeters in diameter (plate xxxi). In the center surrounding the metal-lined hole is the sign *olin*, which signifies movement. Outside this sign are two concentric zones each bearing a circle of thirty-three nodes or raised disks. These occupy the same relative position on the face of the sun as do the twenty day-signs of the great stone in the City of Mexico. Then follows the zone of the four cardinal points or beams, the bases of the latter being separated by spaces, each ornamented with four annular disks alternating with three groups of parallel bars, three in each group, resembling triglyphs. These occupy the

¹So determined by Dr C. H. Mathewson of the Hammond Metallurgical Laboratory. The tube is evidently post-Columbian.



UPPER SURFACE OF THE YALE AZTEC "CALENDAR STONE"

With a representation of the historic sun and hieroglyphs of the four prehistoric suns.

same relative position as the forty quincunx patterns to be seen on the Aztec Calendar. The two motives are derived from the same original. Another derivative, that serves as a connecting link between the two foregoing, is to be seen on the four sides of a painted stone chest (fig. 45) in the Museo Nacional and reputed to have been

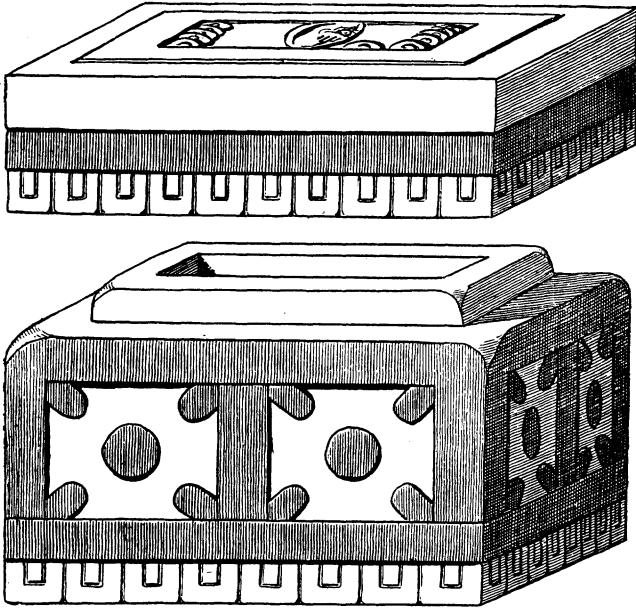


FIG. 45.—Stone chest with lid, supposed to have come from Texcoco. Museo Nacional de Mexico. After Seler, *Gesammelte Abh.*, II, 743, 1904.

found in Texcoco;¹ and still another on the sun's face of the *quauhxicalli* of Tizoc (plate xxxii).

The outer zone with its four secondary or diagonal beams, eight groups of arches or scallops, four in a group, eight tower-like structures and sixteen annular disks, although much simplified, is also similar to the outer zone of the Aztec Calendar; the two encompassing serpents, however, and the sign *matlactli omei acatl*, "thirteen reed," the birth year of the historic sun, are lacking.

The arches of the outer zone represent feathers and the disks, eyes. These elements and the cardinal points and diagonal beams

¹ Eduard Seler. *Gesammelte Abhandlungen* II, 743, 1904.

generally enter into Mexican representations of the sun's disk. Beyond the latter in the four angular fields are the symbols for the four prehistoric suns which in the Aztec Calendar are to be found in the four spokes of the sign olin.

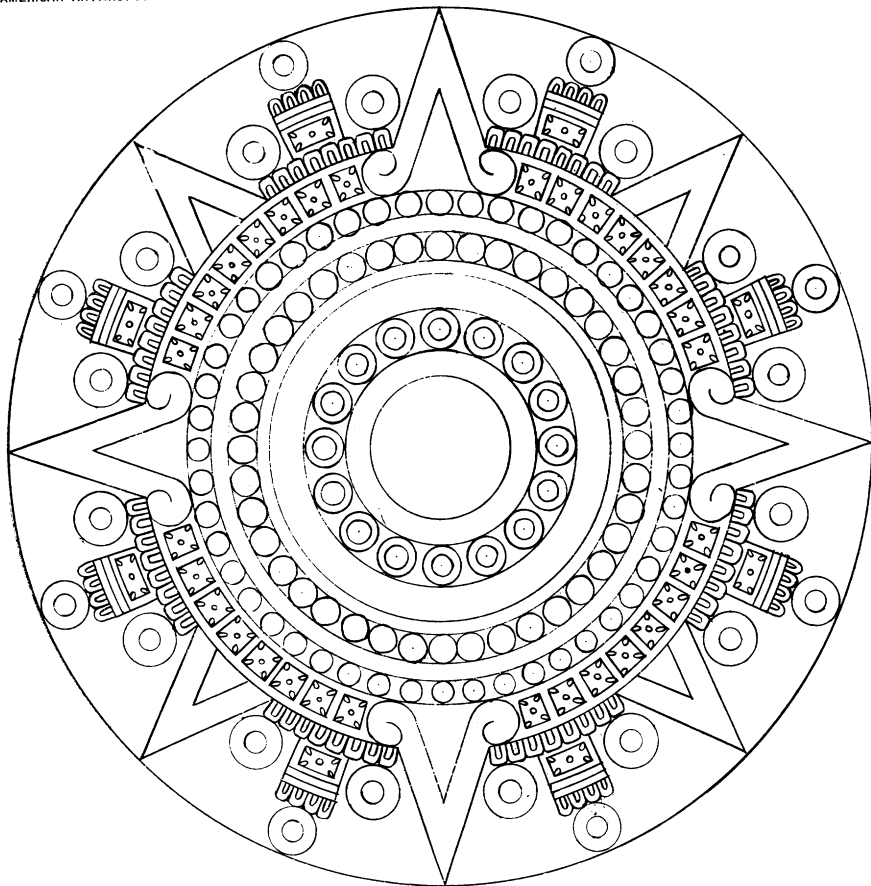
The orientation of the Aztec Calendar of the Museo Nacional is not difficult because of the face or mask at the center and the two encircling blue feather snakes (plate xxxiii). As these are both lacking in the sun stone of Yale University Museum, I have oriented the latter by the sign olin, and the signs of the four prehistoric suns. The sign olin is bilaterally symmetrical when divided either vertically or horizontally. In placing its handles on the sides where they belong there would still be two possible orientations. One of these, however, would cause the hieroglyphs of the four prehistoric suns to be inverted. I have chosen the other. Beginning therefore at the upper left hand corner and proceeding in a direction opposite to the movement of the hands of a watch we have the following:

1. *Nawi ocelotl*, "four Jaguar."
2. *Nawi eecatl*, "four Wind."
3. *Nawi quiauhtl*, "four Rain," i. e. Rain of Fire.
4. *Nawi atl*, "four Water."

These are the symbols of the following four prehistoric suns:

1. *Ocelotonatiuh*, "the Jaguar sun."
2. *Eecatonatiuh*, "the Wind sun."
3. *Quiauhtonatiuh*, "the Rain sun."
4. *Atonatiuh*, "the Water sun."

Ocelotonatiuh came to an end through darkness and the fall of the heavens, at which time the people were devoured by jaguars. According to the belief of the Mexicans it was a great jaguar that by devouring the sun caused its eclipse. Eecatonatiuh was destroyed by a great hurricane, the people of the time being turned into monkeys. The destruction of the third prehistoric sun, Quiauhtonatiuh, was caused by a rain of fire, the evidences of which were to be seen in volcanic phenomena so common in Mexico. Atonatiuh perished by means of a flood and the people were turned into fishes. Only after the successive annihilation of these four prehistoric suns did the present sun, fifth in the series, appear. This took place in



REPRESENTATION OF THE SUN ON TOP OF THE SACRIFICIAL STONE OF TIZOC, MUSEO NACIONAL DE MEXICO

After A. Peñafiel, *Monumentos del Arte Mexicano Antiguo*, vol. II of plates, p. 300, 1890.



AZTEC CALENDAR, MUSEO NACIONAL DE MEXICO

After A. Peñafiel, *Monumentos del Arte Mexicano Antiguo*, vol. II of plates, p. 312. 1890

the year *matlactli omei acatl* represented by the number thirteen and the sign reed. The date symbol occurs between the tails of the two serpents on the Aztec Calendar. The following year, *ce tecpatl*, "one flint," is reckoned by all peoples speaking the Aztec tongue as the first year of the present or historic era. They believe the historic sun is destined to be destroyed by an earthquake (*tlalolin*). It is therefore called *Olintonatiuh*, "the Earthquake sun" and its day-sign is *nauī olin*, "four movement." The latter recurs every 260 days and with it the impending danger of destruction by a great earthquake, which the people seek to ward off by holding a four days' solemn fast.

My orientation of the Yale stone of the sun gives the same sequence for the four prehistoric suns as that in the Museo Nacional specimen except that in the latter, one must begin at the upper right-hand instead of the upper left-hand.

The only other Mexican stone monument bearing these four symbols is a cubical stone that was found in the City of Mexico (Centro Mercantil) and which is now in the Museo Nacional. Here according to Seler the same sequence is given. The symbols, however, are placed one on each of the four sides (plate XXXIV) instead of on the top. All the heads face the corner that divides the date *nauī ocelotl* representing Ocelotonatiuh, the first prehistoric sun, from that of *nauī atl*, symbol of Atonatiuh, the fourth sun.

The top of this cube where one would expect to find Olintonatiuh, the fifth or historic sun, is not sculptured at all. At its center is a somewhat squarish pit covering forty-seven by thirty-four centimeters and about thirteen centimeters deep. The size of this pit suggests that the block might be an unfinished stone chest, without a lid, or else a *quauhxicalli*. Certain elements that compose the disk of the historic sun are not lacking, however, for they form a sculptured band that is carried around the four sides just above the four prehistoric sun symbols. The upper part of this band corresponds to the zone on the Aztec Calendar that is filled with a quincunx pattern; its counterpart in the Yale specimen being the zone of triglyphs alternating with annular disks. The lower part of the band is the simple feather ornament corresponding to the

outer zone of the sun's face both in the Aztec Calendar and the Yale stone where the same motive is employed.

A version of the story of the four prehistoric ages is given in Codex Vaticanus A, otherwise known as Codex Vaticanus No. 3738, or Codex Rios. The sequence, which differs slightly from that in the stone monument, is as follows:

1. Atonatiuh, "Water sun."
2. Eecatonatiuh, "Wind sun."
3. Quiauhtonatiuh, "Fire sun."

The first of these prehistoric ages (Atonatiuh) is represented on the back of page 4. At the top *Chalchiuillicue* descends from heaven in a flood of water that spreads over the face of the earth. On the lateral margins of this mass of water are waves each terminating in a drop of water. A man and woman escaped to re-people the earth. This is the catastrophe that turned men into great fishes (*tlacamihin*), two of which are swimming in the water. The duration of the period, 4008 years, is indicated by the number signs at the left. Above these is the word *apachihwilliztli*, meaning "inundation"; and on the right the day-sign, "ten water," giving the date of the catastrophe. At the bottom is the figure of a giant, "*tzocuillicxeque*."

Eecatonatiuh.—On page 6 the wind-god is descending in the form of a serpent and with his coming, men are changed into monkeys. A single human pair escaped within a rock (*dentro d'una piétra*). Near the bottom of the group are two hieroglyphs of the wind-god (*Eecatl*). The *ecatococ* at the lower left-hand corner signifies: "one is driven or destroyed by the wind" (*eca* = wind, *toco* = one is destroyed). The branching, scroll-like figures represent the cyclone or whirlwind. The duration of the period, said to be 4010 years, is expressed in the upper right-hand corner. On the left is the sign "one dog," the day of the cyclone.

Quiauhtonatiuh.—On the back of page 6 is portrayed the rain of Fire. *Xiuitecotli*, the god of fire, is descending in the form of a serpent. At each side the mass of flames is differentiated into triple tongues of fire. The avian forms are humming-birds, representing the souls of warriors. This period lasted 4801 years, terminating on the day nine movement. One man and one woman were saved by hiding in a cavern.



a



b



c



d

CUBICAL STONE WITH SYMBOLS OF THE FOUR PREHISTORIC SUNS

a. *Nauiocelottl*, "four Jaguar"; symbol of *Ocelotonatiuh*, "the Jaguar sun." b. *Nauicecaltl*, "four Wind"; symbol of *Eccatonatiuh*, "the Wind sun." c. *Nauiquiauitl*, "four Rain"; symbol of *Quiauh-tonatiuh*, "the Fire sun." d. *Nauiatl*, "four Water"; symbol of *Atonatiuh*, "the Water sun." Museo Nacional de Mexico After Seler, *Gesammelte Abh.*, II, 835, 1904.

A fourth age is depicted on page 7, but it does not seem to be Ocelotonatiuh, that was destroyed by darkness and the fall of the heavens, which according to Seler is represented by the giant on the back of page 4 beneath the picture of Atonatiuh. The principal figure is *Xochiquetzal* descending from heaven with flowers (*Sochiquetzal idest essaltatione delle rose*). After this period had lasted 5042 years, a great famine is said to have intervened when nearly all the people perished. The cause of this calamity was vice. Seler suggests that this represents the historic age or that of Olintonatiuh.

One other record of the four prehistoric eras was recently published by Dr Walter Lehmann,¹ an anonymous Mexican text, dated 1558, giving the interpretation of pre-Spanish picture writings.

The sculptured pattern on the four sides (plates xxxv and xxxvi) of the Yale stone of the sun is unevenly divided into two zones representing the heavens. The narrow upper zone is decorated with three horizontal rows of raised disks and is separated from the zone below by two horizontal bars. Two distinct motives are recognizable in the lower zone. One motive consists of the symbol that Seler calls *Sternauge* or *Strahlauge*—a central eye (*ixtli*), the outspread wings of the butterfly, three beams each ending in an eye and alternating with radiating flint knives (*tecpall*). According to Preuss this represents *Itzpapalotl*, a type of *Tzitzimimè*, the demon of darkness, descending from heaven. This star-eye or *Itzpapalotl* is repeated six times, once at each end and twice on each side. It alternates with a large symbol of flint knife (*tecpatl*). The latter therefore occurs twice at each end and once on each side. It is provided with jaws showing teeth, and an eye.

The other motive consists of what might be considered a feather ornament, like that in the outer zone of the sun's disk only simpler, and the four corner pilasters that terminate below in what seems to be a simplified feather or eye ornament, most clearly seen in plate xxxv, *a*. These pilasters may be comparable with the tower-like structures in the outer zone of the sun's disk and the pedunculate eyes on the cylindrical bowl (*quauhxicalli*) of the Museo Nacional.

These same motives seen on the four sides are also found on

¹Die Historia de los Reynos de Colhuacan y de Mexico, *Zeitschr. für Ethmol.*, xxxviii, 752, 1906.

the convex sides of the Aztec Calendar (plate xxxvii, *a*), only on a smaller scale in the latter; since the cylinder of which the sun's disk forms the head is only 18.5 centimeters high. There is for instance only one row of raised nodes, then the two bands, below which hang



FIG. 46.—Details of painted border decoration, east wall of side court, Palace I, Mitla. After Seler, *Ges. Abh.*, III, 403, 1908.

the star-eye symbols, each one alternating with two flint knives, the latter facing each other in every case. At the bases of these is a plain continuous band in low relief corresponding to the scalloped band on the sides of the Yale stone, which is presumably a repetition of the outer, or feather zone in representations of the sun's disk. With the exception of the zone of raised nodes, we find the same design (figs. 46 and 47) employed as a border decoration on painted walls

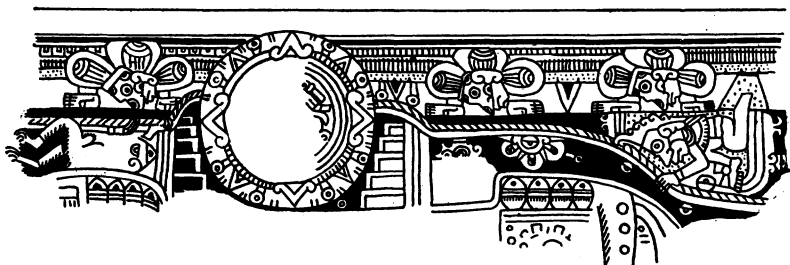
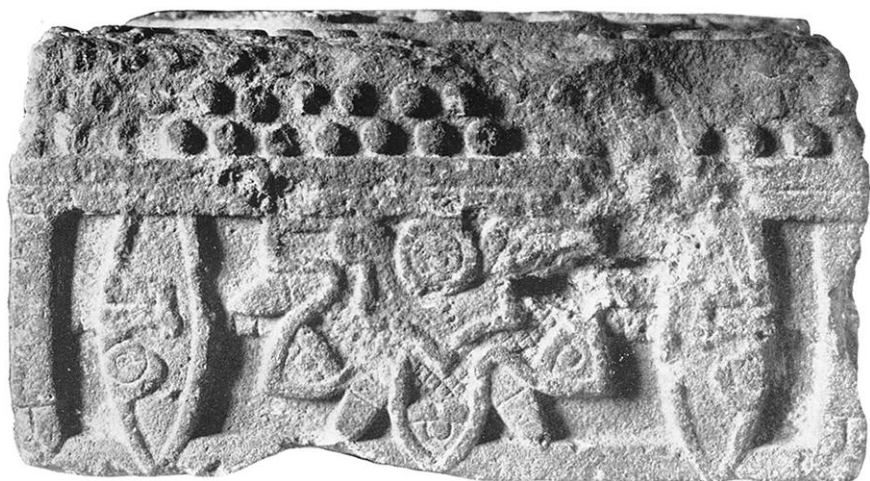


FIG. 47.—Detail of painted border decoration, north wall of side court, Palace IV, Mitla. After Seler, *Ges. Abh.*, III, 403, 1908.

at Mitla.¹ Here the feather motive is emphasized and combined not only with pedunculate eyes but also with beams similar to the diagonal ones in representations of the sun; the itzpapalotl symbol is inverted, and instead of an eye there is the head of a deity, representing the planet Venus.

¹Op. cit., III, 403, figs. 18-20 (also fig. 15c)



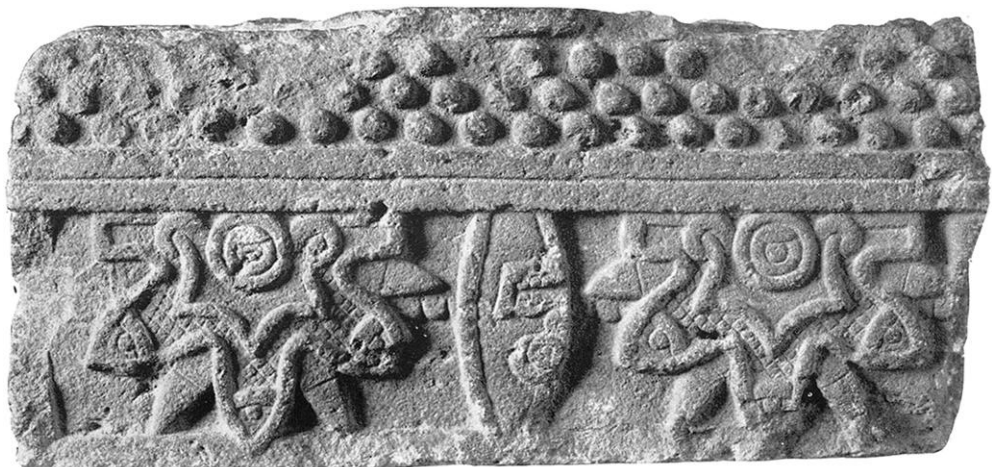
a



b

YALE AZTEC CALENDAR STONE

a, upper end; *b*, lower end.



a



b

YALE AZTEC CALENDAR STONE

a, left side; *b*, right side.

The sculptured designs on the ends and sides therefore should be looked upon as a unit just as if the stone were a cylinder (figure 48). Bearing this in mind, also that the top face is oriented in such a manner as to make *nauí ocelotl* appear at the upper left hand, or perhaps more properly speaking in the northwest corner,



FIG. 48.—Ensemble of the top and four sides of the Yale Aztec "calendar stone" in their exact relation.

we find that the six large flint knives are turned so as to face toward the *itzpapalotl* symbol in the center of the lower end and away from that in the center of the upper end.

While the Yale stone of the sun has many points in common

with the Aztec Calendar of the Museo Nacional as regards not only the sun's disk but also the lateral decorations, it is also comparable with the so-called sacrificial stones or bowls (*quauhxicalli*) of which the stone of Tizoc (Museo Nacional) is the most notable example. This cylindrical stone, two and one-half meters in diameter by four-fifths of a meter high, was unearthed in 1791, at a point opposite the Empedradillo and near the cathedral of the City of Mexico. On its top is a sculptured image of the sun (see plate xxxii) at the center of which is an oval pit fifteen centimeters deep by forty-six centimeters in diameter, instead of a hole completely penetrating the rock. A groove (not indicated in plate xxxii) leads from this pit out to the margin and part way down the side but does not completely drain the pit. The decoration on the convex sides is composed of three zones, the upper and lower combined not being quite so broad as the one in the center. The latter consists of fifteen groups of figures, each group representing a victor and the vanquished. In each case the victor is clothed in the garb of *Tezcatlipoca*, recognized by the smoking mirror on the temple and by a cloud of smoke replacing the left foot. These warriors also wear the scalloped breastplate of the fire-god and the *yacaxiuilli*, the nose ornament of *Tonatiuh ilhuicac yauh*, the warrior who falls in battle. The bowed figure before each *Tezcatlipoca* warrior represents a subdued city or country—fifteen in all, each indicated by the nature of the garb worn and the accompanying hieroglyph.

Previous writers have pointed out that the group on the front of the stone directly opposite the groove that leads from the center of the sun's disk is distinguished from the others in that the *Tezcatlipoca* warrior has a richer feather head-dress, the hieroglyph behind him being that of Tizoc, seventh of the Mexican kings, who according to the *Codex Mendoza*, ruled from 1482 to 1486.

The narrow upper zone is decorated with a variation of the *itzpapatl* ornament, representing the heavens (see plate xxxvii, *b*). Its counterpart is seen on the sides and ends of the Yale specimen and on the convex sides of the Aztec Calendar (text-figure 48 and plate xxxvii, *a*). The decoration of the lower zone is intended to represent the earth, or that which is beneath the heavens.

There is another monument (plate xxxviii) in the Museo Nac-



a



b

DETAILS OF CALENDAR AND SACRIFICIAL STONES

a, Detail of lateral relief ornament on the Aztec Calendar ; *b*, Detail of lateral relief ornament on the sacrificial stone of Tizoc. From photographs made by the Museo Nacional de Mexico expressly for this article.



a



b

LARGE STONE SACRIFICIAL BOWL: MUSEO NACIONAL DE MEXICO

a, side; b, bottom. After Seler, *Ges. Abh.*, II, 811, 1904.

ional that in some respects resembles still more closely our stone of the sun. It is a cylindrical sacrificial bowl (quauhxicalli), with a diameter of 1.05 meters and a height of 0.47 meters. This is a real bowl or vessel having a depth of twenty-nine centimeters with nothing left of the top save a narrow border, which as might be expected is ornamented with the outer zone of the sun's disk. The ornament on the convex sides is almost identical with that on the rectangular sides and ends of our stone of the sun—three horizontal rows of raised disks at the top, and two horizontal bands near the middle, below which are elaborate itzpapalotl symbols alternating with pairs of pedunculate eyes. On the lower external flat surface of this bowl is a figure of *Tzontemoc*, the earth toad, in an appropriate setting of larvæ, insects, scorpions and other creeping things, to which are added several death masks. On each cheek of *Tzontemoc* is the *tlaxapochtli*, the caoutchouc ring, which is the insignia of the earth goddess (*Teteoinnan*),¹ or the *Tlaçolteotl* of the picture writings. The fleshless teeth hold a flint knife, symbolizing the light that the earth not only absorbs but also reflects.

There is another sacrificial bowl almost identical in shape and decoration with the foregoing, except that the bowl is reduced to a mere pit leaving more space for the sun's disk. A typical bowl-shaped quauhxicalli (plate xxxix) of relatively small size and fine workmanship belongs to the Royal Museum für Völkerkunde, Berlin, and has been fully described by Professor Seler.² The whole interior represents the sun's disk at the center of which is the sign *nauí olin*, four movement, symbol of the present, or historic sun. Here again the lower external flat surface is reserved for an

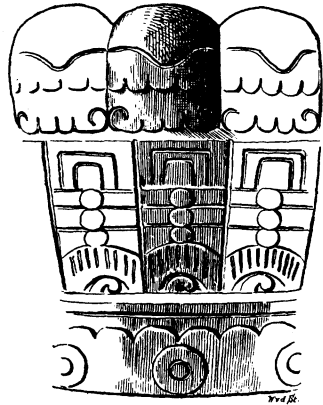


FIG. 49.—Detail of relief decoration on the outer wall of a sacrificial bowl. Königl. Mus. für Völkerkunde, Berlin. After Seler, *Ges. Abh.*, II, 707, 1904.

¹ Seler, *Ges. Abhandlungen*, II, 469, 812, 1904.

² *Op cit.*, II, 701, 1904.

elaborate representation of the Earth toad, Tzontemoc, accompanied by numerous death symbols. The outer sloping walls of the bowl¹ are decorated with a chaplet of eagle feathers and hearts (plate xxxix, *b*; also text-fig. 49).

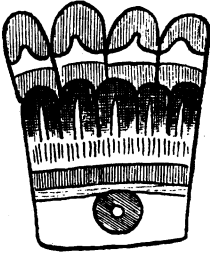


FIG. 50. — Sacrificial bowl. Codex Borbonicus 8. After Seler, *Ges. Abh.*, II, 705, 1904.

Sacrificial bowls similar to those in Berlin and in Vienna are figured in ancient Mexican codices. Two such are reproduced from Codex Borbonicus (figs. 50 and 51). Both have the chaplet of eagle feathers, above which is a chaplet of hearts; one is overflowing with blood, indicating thereby the use to which it was put.

In the description of the eighteen annual festivals of the Mexicans, Father Sahagun mentions for the first time the bloody sacrifice ritual and the name of the bowl destined to receive the heart of the victim, *i. e.*, the vessel from which the gods ate. The heart of the victim was called *quauhnochtli*, cactus fruit, on which the eagle feeds.

The priest dedicating it lifted it toward the sun. After having thus been offered it was placed in the *quauhxicalli*. The body however was cast down from the steps of the pyramid.

Human sacrifice is said to have taken place on the great *quauhxicalli* of Tizoc, the victim being designated as "Messenger to the Sun." Father Duran² describes this sacrifice as follows:

"There was in this land an order of knights whose profession was war, willing to die in defense of their country and very courage-

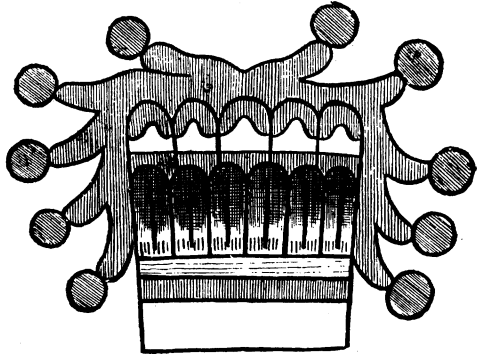
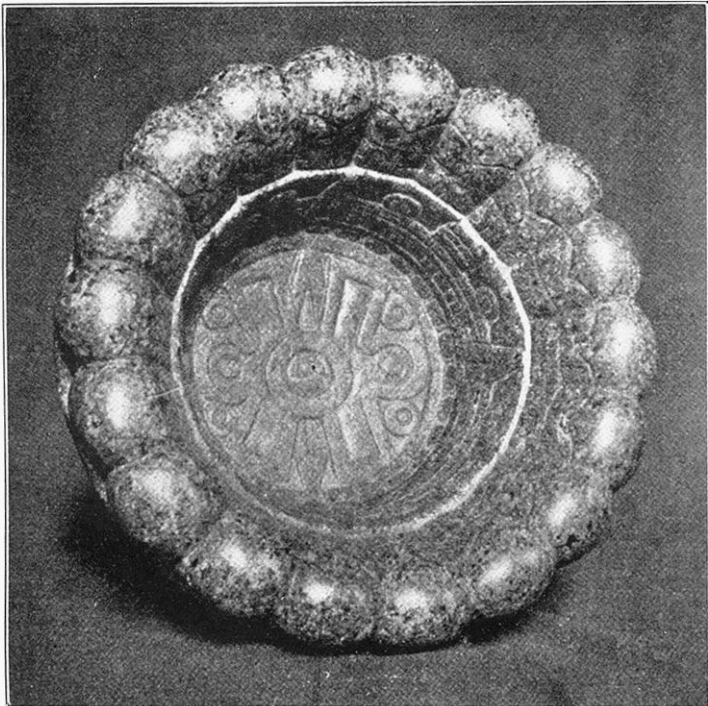


FIG. 51.—Sacrificial bowl overflowing with blood. Codex Borbonicus 18. After Seler, *Ges. Abh.*, II, 705, 1904.

¹ A *quauhxicalli* similar to the one in Berlin is to be seen in the Philip A. Becker collection, k. k. Naturhist. Hofmuseum, Vienna.

² *Historia de las Indias de Nueva España* etc., II, 155, 188c.



a



b

STONE SACRIFICIAL BOWL (QUAUHXICALLI), KÖNIGL. MUSEUM FÜR VÖLKERKUNDE, BERLIN

a, inside; b, outside. After Selser, *Ges. Abh.*, II, 797, 798, 1904.

ous, who looked upon the sun as their god, as the Spaniards look upon Santiago, the glorious. All who belonged to this order were illustrious people, and valorous sons of the better class, people of the lower class not being admitted no matter how valiant; and so the festival of these noblemen made in honor of their god, the sun, which feast they called *nauholin*, which means *four movement*, under which name they solemnized it. . . . This festival they celebrate twice a year; the first time on the seventeenth of March; and again, the second of December—in short the two times in the year which coincide with four movement.

“This order of knights had its temple and private house curiously wrought with many halls and rooms where they assembled and worshiped the image of the sun and since all were married and had their private houses and estates, they had in those rooms and houses of that temple their prelates and elders whom they obeyed and by whose orders they were ruled. Here also were a great number of boys, the sons of gentlemen, who were in training for that order of chivalry. And so they taught them there and instructed them in every kind of combat with every kind of arms which they were wont to use, which order I imagine to be like the orders of the knights (commendadores) of Spain, as for instance those of San Juan or those of Calatrava or of Santiago, bearing different emblems in order to distinguish themselves one from another; so according to the rank which they had in this order of chivalry, they may be called the knights of the sun, whose device they carried when they went to war. This temple of the sun was in the same place where now they are building the cathedral of Mexico city which they called fittingly (por excelencia) *Cuacuauhtinchan*, which means the house of the eagles, which name of eagle or tiger they used metaphorically to honor the men of valorous deeds; and so by calling that temple the house of the eagles it was the equivalent of saying the house of the valiant men, comparing metaphorically their valor to that of the eagle, or that of the tiger, because the eagle is among all birds most valiant and the tiger among all animals, the most brave and ferocious. Upon the top of this temple there was a medium sized chamber next to a courtyard (*patio*) which was of seven or eight *braças* (braza = 6 ft.). At one side of this courtyard was the cham-

ber I spoke of, in which over an altar was hung on the wall an image of the sun painted with a brush on the tapestry, which figure was in the likeness of a butterfly with its wings; and around it a circle of gold with many rays and splendors which came out from it; all the rest of the room being very much adorned and elegant. For ascending to this room there were forty steps more or less.

“In this temple were performed all the ceremonies as in the others, for example to sprinkle incense upon this image four times during the day and night, and to make and perform all the rites of offerings and sacrifices which were performed for the other gods; for which they had their priests and dignities with all the preëminences and privileges that the rest had, who solemnized this festival in the following manner: In the first place during this day all the people of the city had to fast so strictly and rigorously that it was not even permitted to the children or sick to break their fast until the sun in its course marked high noon, at which moment the priests and ministers of that temple took shells and trumpets and made a signal for the people to gather at the temple. Hearing this the people came together with much more zeal and promptness than now they come to mass on Sunday. The people having assembled, at the sound of the instruments they brought forth from among those taken in war accompanied and surrounded by illustrious men, an Indian. His legs were painted with white stripes (*enbixadas de vnas rayas blancas*) and half of his face with red; a white feather was fastened in his hair; he carried in his hand a very fine staff with knots and ties of leather and some feathers inserted in it. In the other hand he held a shield with five small bundles of cotton on it; on his back he carried a small pack in which were eagle feathers, pieces of ochre, or gypsum, candlewood smoke *y papeles rayados con vle*. Of all these gewgaws they made a small bundle which that Indian carried on his back and they put him at the foot of the temple steps, and there in a loud voice so that all the people, who were present, heard it, they said to him: Sir, we entreat you that you go to our god, the sun, and that you salute him from us and tell him that his sons and knights and chief men, who remain here pray him to remember them and that from above he favor them; and that he receive this small present which we send him and that you give

him this staff with which he may walk and this shield for his defence, with all the rest you carry in this pack. The Indian, having heard the message, answered that it pleased him, and they untied him and straightway he began to ascend through the temple, going up little by little, pausing a long time after each step. When he had reached the top he approached the stone which they call *cuauhxically* and mounted upon it, which as we have said bore an image of the sun. Standing there, he turned toward the image of the sun which was hung in the room above that altar and, from time to time turning toward the true sun, in a loud voice he delivered his message. Having finished this message there came up by the four stairways which as I said this rock had, four priests of the sacrifice; and they took away from him the staff, the shield and the load which he carried and they held him hand and foot; the chief priest approached with knife in hand and cut the victim's throat, commanding him to go into the other life with his message to the true sun; and they caught the blood in that basin which, by means of a groove or canal, emptied itself before the chamber of the sun, and the sun which was delineated on the rock was drenched with that blood. All the blood having left the body, he opened the breast and took out the heart; and raising his hand presented the heart to the sun, holding it aloft till it became cold, and thus ended the life of the unfortunate messenger of the sun."¹

The term *quauhxicali* is thus applied not only to the bowl that received the heart of the victim but also to the stone on which the sacrifice was made. Both are decorated with sun symbols and eagle feathers. Seler believes the word *quauhxicali* to be derived from *xicali* (bowl) and *quauh* (wood) *i. e.*, a bowl made of wood. Later the meaning might easily have been changed into eagle bowl, for *quauh*, or, with the article, *quauhtli*, likewise means eagle. The constant association of attributes of the eagle with this class of monuments is sufficient ground for interpreting the word as eagle bowl.

The only symbols on the Yale stone of the sun that are not common also to the *quauhxicali* are the signs of the four prehistoric ages; four Jaguar, four Wind, four Rain, and four Water. In this

¹ Translated by Prof. F. B. Luquiens.

respect it resembles the Aztec Calendar, but since the twenty day-signs are lacking it is not a calendar stone in the strict sense. Morphologically it is a link between the calendar stone on the one hand and the quauhxicalli on the other. As such it might well have been associated with human sacrifices to the sun.

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