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THE AGE AND PROVENANCE OF THE LEYDEN PLATE

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With four plates and five text-figures

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## LIST OF ILLUSTRATIONS

### PLATES

*(at end of text)*

1. Stelæ 10 and 12 at Tikal.
2. Stelæ 5 and 11 at Tikal.
3. Stelæ 1 and 2 at Tikal.
4. Altar VIII at Tikal.

### TEXT-FIGURES

	PAGE
1. Map of the Bahia de Amatique and the adjacent mainland.....	5
2. The Leyden Plate.....	7
3. Map of the Old Empire at the end of the first quarter of Baktun 9 (9.5.0.0).....	10
4. Comparison of elements on the Leyden Plate, Stelæ 1 and 2 at Tikal.....	15
5. Drawing of glyphs on front of Stela 2 at Tikal.....	16

## THE AGE AND PROVENANCE OF THE LEYDEN PLATE

During the excavation of a canal from the Rio San Francisco del Mar to the Rio Graciosa on the northern coast of Guatemala, in 1864,<sup>1</sup> a prehistoric mound was transected which yielded, along with pottery fragments and copper bells, a beautifully carved jadeite pendant, generally known as the Leyden Plate, now at the Rijksmuseum voor Volkenkunde at Leyden, Holland.

The Rio San Francisco del Mar is a small stream rising in the hills southwest of Puerto Barrios and emptying into the Golfo de Honduras about 25 km. east-

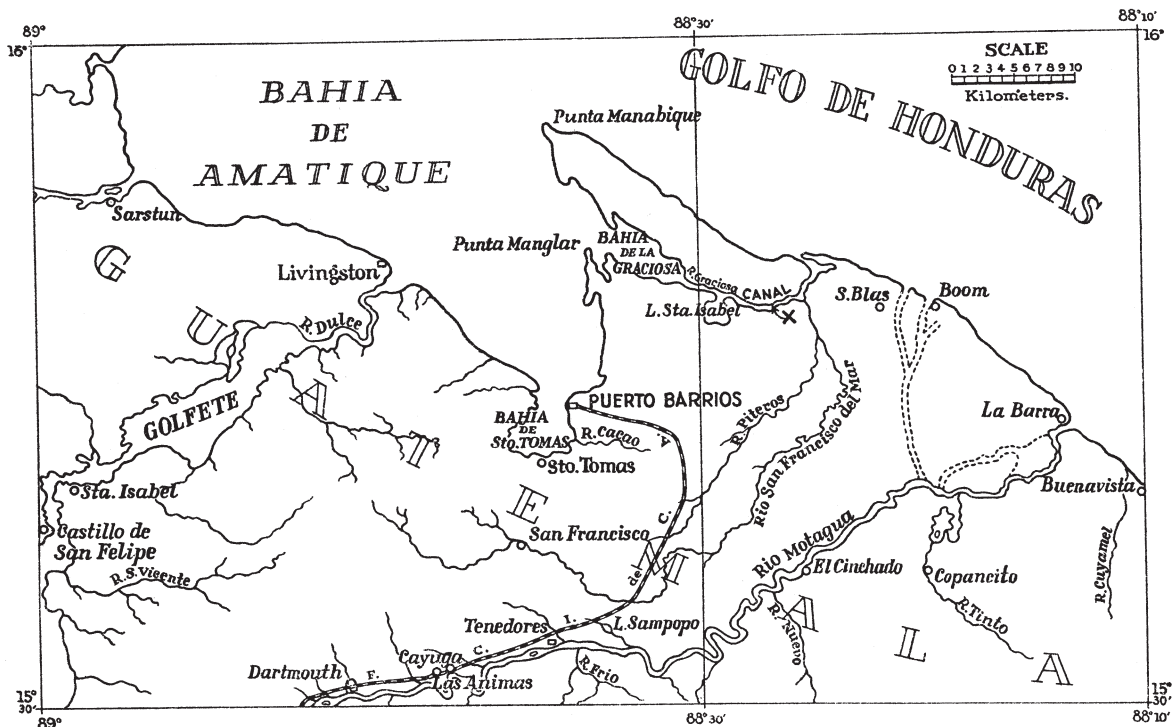


FIG. 1.—Map of the Bahía de Amatique and adjacent mainland showing the location of the canal joining the Rio San Francisco del Mar and the Rio Graciosa. The letter x marks the supposed location of the mound where the Leyden Plate was found.

southeast of Punta Manabique (fig. 1). The Rio Graciosa, not more than 6 or 7 km. in length, flows generally westward for its short and sluggish course into the eastern extremity of the Bahía Graciosa, itself a small, eastern extension of the Bahía de Amatique.

The canal connecting these two streams was excavated by the Dutch engineer, S. A. van Braam, for a Guatemalan mahogany company, for the purpose of avoiding the rough waters at the bar of the Rio San Francisco del Mar, which broke up

<sup>1</sup> Government of Guatemala, 1932, pp. 373-379.

the timber-rafts as they were floated down to tidewater for shipment to foreign countries. Graciosa Bay is practically land-locked and the rafted timber could there be loaded in calm water. The canal is not more than 1 km. in length. It averages about 12 m. in width and is now some 2 m. in depth.

On February 26, 1937, the writers traversed the canal by launch, both banks being closely scrutinized for remains of a former mound. The banks seemed to be about .5 m. higher than the general ground level behind them, these marginal ridges presumably being the result of earth thrown out in the course of the excavation.<sup>2</sup>

At one point (slightly nearer the eastern than the western end, X, fig. 1) both banks attained a height of perhaps 1 m.; they also sloped away from the canal more gradually than did the marginal construction ridges, at the same time sloping on both sides at each end down to the general level of the construction ridges. This slight rise may represent the base of a mound, the greater part of which had been removed in cutting the canal. However, our small excavations here revealed only the sandy loam of the surrounding country, with no potsherds or other indications of artificial construction. It is therefore probable that the mound was either completely destroyed when the canal was cut through it, or that no more than its lower slopes are left.

Leemans, who first reported on the Leyden Plate, describes it as follows:

An oblong placque rounded at the four corners, a little narrower at the upper end than the opposite extremity. Its two faces diminishing toward the middle, form two planes, each slightly inclined, which meet in the vertical axis of the placque, following an irregular line [see cross section, fig. 2c]. It is probable that this irregularity has been caused by the form and character of the stone in its native state. Two holes have been made at equal distances from the edge toward the two extremities. Its dimensions are as follows: length 21.6 [cm.]; width at the upper end, 7 [cm.], width at the lower end, 8 [cm.]; thickness, .05 [cm.], except toward the middle, in the thinnest part, where this object is reduced to .02 [cm.]. The polish is perfect.<sup>3</sup>

The color of this pendant is a very pale green and it is an unusually fine piece of American jadeite.

The front (fig. 2a), carved in very low relief, shows a human figure in left profile, except the arms and torso which are in full front; while on the ground and behind the principal figure lies a secondary human figure, probably a captive, his head impossibly facing his feet. The back of the pendant (fig. 2b) is incised with a single column of fifteen glyphs, of which the first is roughly twice the size of the next six, which in turn are four times the size of the last eight.

This inscription, so far as it may be deciphered (all but the last five glyphs), records an Initial Series as follows:

- A1-B2 Initial Series introducing glyph with the kin head as its variable central element, indicating the month Yaxkin in the Initial Series terminal date, i.e. A10 below.  
 A3B3 8 baktuns.  
 A4B4 14 katuns.  
 A5B5 3 tuns.

<sup>2</sup>This trip was made possible through the courtesy of Mr. George A. Austen, Superintendent of Port for the United Fruit Company at Puerto Barrios, Guatemala, who very kindly placed his motor boat at the writers' disposition for this reconnaissance. They were accompanied by Col. F. Marion Barker of Detroit.

<sup>3</sup>Leemans, 1877, pp. 299, 300. See also Holden, 1879-1880, pp. 229, 230, and Valentine, 1881, p. 283 for early descriptions.

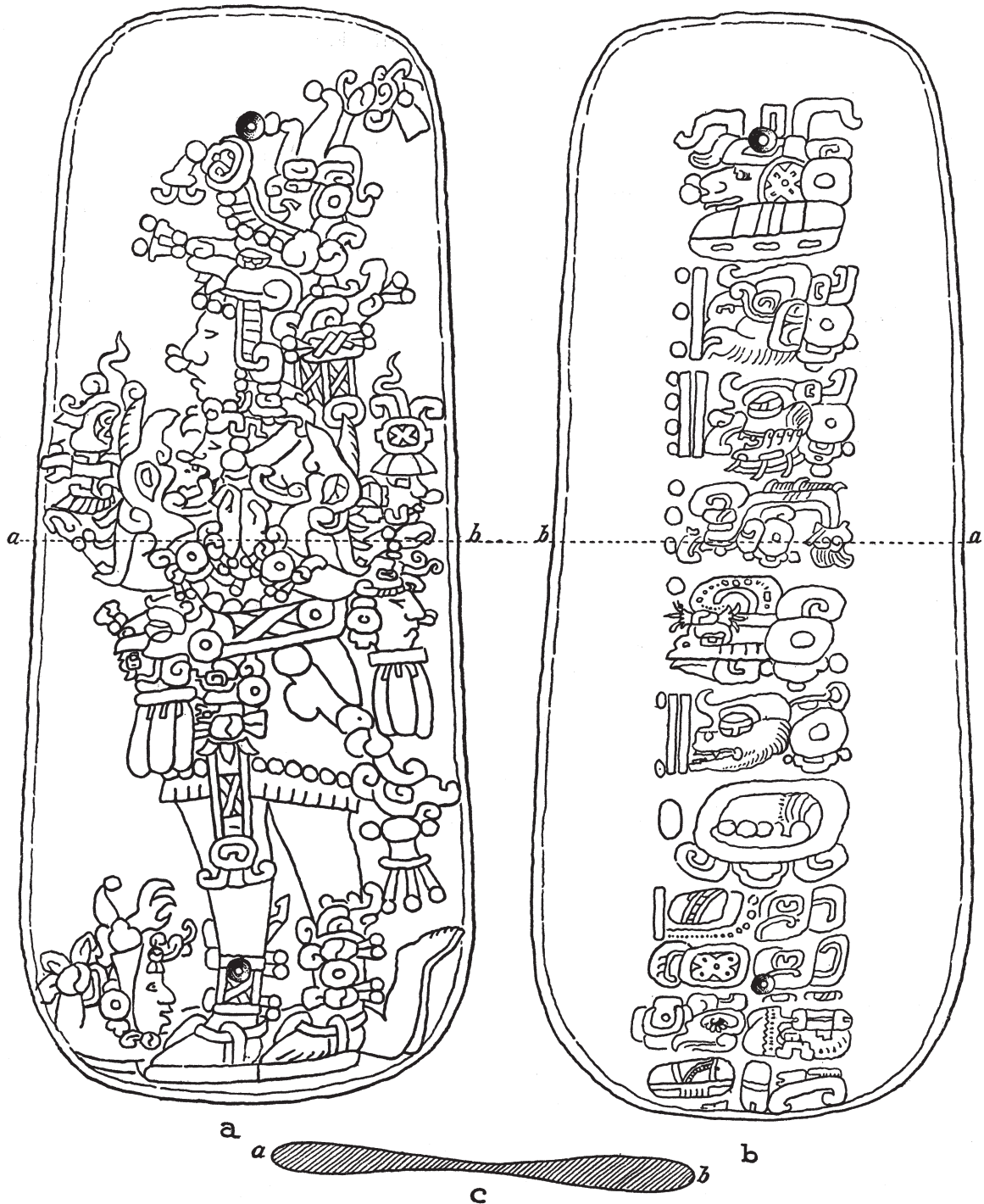


FIG. 2—THE LEYDEN PLATE  
a: Front. b: Back. c: Cross section through line ab.

- A6B6 1 uinil.  
 A7B7 12 kins.  
 A8B8 1 Eb.  
 A9 Glyph G of the Supplementary Series, Form for the Fifth Day.  
 B9 Unknown, perhaps the month coefficient of o.  
 A10 Yaxkin.  
 B10-B12 Unknown.

This records the date 8.14.3.1.12 1 Eb o Yaxkin of Maya chronology, which there are strong grounds for believing may be the earliest contemporaneous date in the Maya inscriptions.

The only other dated object of possibly greater antiquity is the Tuxtla Statuette, found near San Andres Tuxtla in the State of Vera Cruz, Mexico, about thirty-five years ago.<sup>4</sup> This bird-like figurine with a human head, also of jadeite, bears the very early Initial Series 8.6.2.4.17 8 Caban (o Kankin), some 160 years earlier than that of the Leyden Plate.

For many years this figurine was regarded as a contemporaneously dated object,<sup>5</sup> which indeed it may well be, but lately serious doubts have arisen as to the accuracy of this conclusion. In the first place, the date on the Tuxtla Statuette is highly atypical. While it is true that the first five numerals there recorded lead to the day of the terminal date 8 Caban o Kankin, and even though the coefficient of the day of this date, i.e. 8, is correctly recorded on the original, the day sign Caban probably being present though nearly effaced and the month part o Kankin suppressed, nevertheless not a single one of the five corresponding period glyphs is present. This is a very rare feature, duplicated indeed, so far as now known, in only three other texts: Stela 1 at Pestac, Stela 1 at El Baul, and Lintel 49 at Yaxchilan. In the second place, the Tuxtla Statuette was found some 200 km. west of the westernmost site of the Maya Old Empire, well without the "inscription area."<sup>6</sup> Finally, its stylistic attributes are wholly non-Mayan. This, however, has been used as an argument in favor of the contemporaneity of its date, i.e. that at the early period when this figurine was executed Maya stone carving had not yet developed its later unmistakable and diagnostic characteristics; but, at best, the evidence in this respect is negative.

The above objections appear so weighty as seriously to challenge the contemporaneous character of the early Baktun 8 date on the Tuxtla Statuette. But in the case of the Leyden Plate, both style and provenance tend to support the contemporaneous character of the Baktun 8 date recorded upon it.

Old Empire epigraphy may be divided into three general stylistic periods:

- I. Simple glyphs in low flat relief, not too regular in outline, recalling a cursive script, with relatively simple interior decoration; in use as late as early Baktun 9.
- II. Rigidly rectangular glyphs with elaborate interior decoration, in high relief, numerical bars and dots frequently also having interior ornamentation; in use with decreasing frequency to about the close of Baktun 9.

<sup>4</sup> Holmes, 1907, p. 691.

<sup>5</sup> *Ibid.*, pp. 696-700; Morley, 1920, pp. 402-411; *idem*, 1925, pp. 655-659.

<sup>6</sup> The westernmost Maya inscription now known is at El Tortuguero in the State of Tabasco, Mexico, some 200 km. east of San Andres Tuxtla.

III. Rigidly rectangular glyphs with increasing simplification of interior decoration, numerical bars having rounded ends and no interior ornamentation and numerical dots also without the latter; in use as late as the third katun of Baktun 10 (end of Old Empire).

The glyphs on the back of the Leyden Plate (fig. 2*b*) belong stylistically to the first period, the glyph-blocks being somewhat rounded and of irregular outline, suggestive of an earlier cursive prototype, while the interior decoration is relatively simple.

This earliest Maya epigraphic style is represented at ten sites only: Uaxactun, Tikal, Uolantun, Xultun, Naachtun Copan, Yaxchilan, Piedras Negras, Altar de Sacrificios and, less surely, at Balakbal (fig. 3). And since it had been superseded by the second style by early Baktun 9, the 8.14.3.1.12 date of the Leyden Plate accords stylistically with its glyphs. The figure on the front (fig. 2*a*) also bears

TABLE 1—CLASSIFICATION OF THE MAYA STELÆ BASED UPON THE POSTURE OF THE PRINCIPAL FIGURE

FIRST STYLISTIC GROUP: HEAD, LEGS AND FEET IN PROFILE, FEET TANDEM, TORSO AND ARMS IN FULL FRONT				SECOND STYLISTIC GROUP: HEAD, LEGS AND FEET IN PROFILE, TOES OF NEAR, OR BACK, FOOT OVERLAPPING HEEL OF FAR, OR FRONT, FOOT, TORSO AND ARMS IN FULL FRONT			
Site	Stela	Date	Reference	Site	Stela	Date	Reference
Uaxactun	9	8.14.10.13.15	Morley, 1937-38, V, pl. 54 <i>a</i>	Uaxactun	4(?)	8.18. 0. 0. 0(?)	Morley, 1937-38, V, pl. 56 <i>d</i>
"	18	8.16. 0. 0. 0	<i>Id.</i> , pl. 54 <i>c</i>	"	3(?)	9. 3.13. 0. 0	<i>Id.</i> , pl. 60 <i>e</i>
"	19	8.16. 0. 0. 0	<i>Id.</i> , pl. 55 <i>d</i>	Uolantun	1(?)	8.18.13. 5.11	<i>Id.</i> , pl. 66 <i>b</i>
"	10	Late Baktun 8 or early Baktun 9	<i>Id.</i> , pl. 58 <i>b</i> and <i>a</i> (?)	Tikal	1	Very early in Baktun 9	Maler, 1911, pl. 13, fig. 2
				"	2	Very early in Baktun 9	<i>Id.</i> , pl. 14, fig. 2
				Xultun	18	First quarter Baktun 9	Morley, 1937-38, V, pl. 78 <i>c</i>
				"	20	First quarter Baktun 9	<i>Id.</i> , pl. 74 <i>e</i>
				Naachtun	3(?)	9.5.0.0.0(?)	<i>Id.</i> , pl. 148 <i>b</i>

unmistakable evidence of antiquity in that the feet shown in left profile are in true tandem, the near foot (left) being directly behind the far foot (right). The arms and torso are depicted in full front, and the head again in left profile. This awkward and physically almost impossible position is typical of the earliest Maya stone sculpture.

The only site at which the above arrangement of the feet has been found on the large stone monuments is Uaxactun in northern central Peten, Guatemala (fig. 3), where it occurs certainly on but four monuments, three of which, Stelæ 9, 18, and 19, are the earliest surely dated large stone sculptures in the Maya area; while the fourth, Stela 10, cannot, on stylistic grounds, be later than very early Baktun 9. See Table 1.

As time went on, however, the position of the feet became more natural; the near, or back foot, advancing until its toes actually overlapped the heel of the far, or front foot; the body, however, remained unchanged, with arms and torso in full front. Examples of this second position of the feet are found on two monuments at Uaxactun: Stelæ 4 and 3, both doubtfully dated as 8.18.0.0.0 (?) and

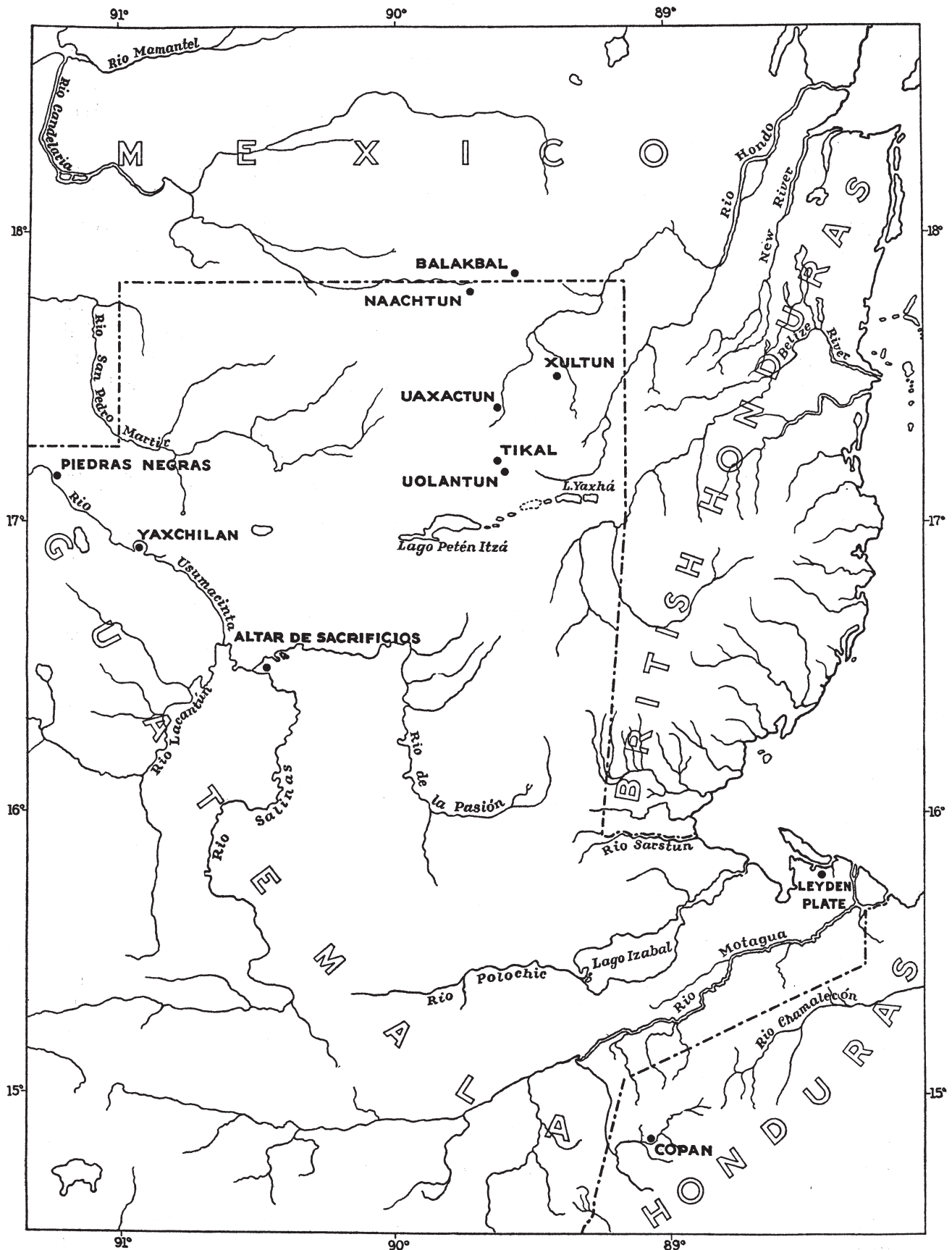


FIG. 3—Map of the Old Empire at the end of the first quarter of Baktun 9 (9.5.0.0.0) showing the location of sites known to have been occupied before that date.



9.3.0.0 (?) respectively. The same arrangement of the feet occurs at four other sites: Tikal, Uolantun (?), Xultun, and Naachtun (?), all, it should be noted, in northern central Peten, the most distant being within 50 km. of Uaxactun (fig. 3). These examples are: Tikal, Stela 1 and perhaps Stela 2, both unfortunately undated; Uolantun (?), Stela 1, 8.18.13.5.11; Xultun, Stelæ 18 and 20, both again undated; and Naachtun (?), Stela 3, 9.5.0.0.0. See Table 1.

A comparative study of Maya sculptures and especially of the older monuments indicates that the awkward archaic position of the figure was soon discarded for a more naturalistic pose and was never repeated in later Old Empire times. The foregoing brief stylistic analysis leaves little doubt that the Leyden Plate was executed in north central Peten on or very near the date inscribed upon its back. And the writers believe, furthermore, that evidence afforded by the design identifies its exact point of origin.

One of the most conspicuous elements of Old Empire stela design is that of the subsidiary captive human figure or figures. This concept has been found on the monuments of the following Old Empire sites: Uaxactun, Tikal, Xultun, Piedras Negras, Yaxchilan, Yaxha, Pusilha, Naranjo, Benque Viejo, Ixkun, Cancuen, Ucanal, Seibal, El Caribe, Calakmul, Oxpemul, and Coba. Although the distribution of this motive is fairly general, except in the Copan-Quirigua region and the Chiapas highlands, the placement of the captive figure seems to fall into four principal groups as shown in Table 2.

Type I: the earliest arrangement, which will be described last.

Type II: the captive serves as the direct support for the principal figure. Sites showing this position are Coba, Naranjo, Ucanal, Benque Viejo, Oxpemul, and Calakmul (Table 2 and fig. 3).

Type III: the captive (or captives) kneels or sits beside the principal figure, on the same level as the latter's feet—Uaxactun, Piedras Negras, Yaxchilan, Naranjo, Pusilha, Coba, Seibal, Xultun, Yaxha, El Caribe, Rio Bec V, and Calakmul (Table 2 and fig. 3).

Type IV: the captive or captives shown in a separate panel below the principal figure—Xultun, Cancuen, Ixkun, Seibal, and Calakmul (Table 2 and fig. 3).

Types II, III, and IV comprise all known examples of captive figures upon stelæ,<sup>7</sup> with the exception of those at Tikal, which we group as Type I.

Type I: At Tikal there are only three certain examples of the captive figure on stelæ: Stelæ 10, 5, and 11 (pls. 1*b*, 2*a* and *b* respectively)<sup>8</sup> and a probable fourth (Stela 12, pl. 1*a*).<sup>9</sup> But at this site the captive lies at the level of and *behind* the feet of the principal figure, a unique position as far as Maya stelæ elsewhere are concerned. Although these four representations occur at long intervals, throughout almost the entire range of the monumental sequence at Tikal, Stelæ 10 and 12 (9.3.13.0.0??), some 240 years before Stela 5 (9.15.13.0.0.), which is about

<sup>7</sup> Captive figures on lintels, altars, steps and other architectural elements will be found to fall generally within one or the other of these three groups, though they have not been included in the above stelæ comparisons.

<sup>8</sup> Permission to reproduce the photographs of Stelæ 12, 10, 5, 11, 1 and 2 at Tikal has kindly been given by the Peabody Museum, Harvard University, through the good offices of Dr. A. M. Tozzer.

<sup>9</sup> Although the lower half of Stela 12, including its date, is missing, the stylistic features that remain are such as to indicate that it was identical with Stela 10 except for the head of the principal figure which faces in the opposite direction, in short that the two were sister monuments. Hereinafter Stelæ 10 and 12 will be treated as recording the same date (9.3.13.0.0??) and the latter will be considered to have had a captive figure lying behind the principal figure, even though the lower part of this monument is now missing.

TABLE 2—CLASSIFICATION OF THE MAYA STELÆ BASED UPON THE POSITION OF THE CAPTIVE FIGURE\*

Type	Site	Stela	Date	Reference
I. Captive figure behind feet of principal figure.	Tikal	10	9. 3.13. 0. 0(??)	Maler, 1911, pl. 21, no. 2
	"	5	9.15.13. 0. 0	<i>Id.</i> , pl. 17, no. 2
	"	11	10. 2. 0. 0. 0	<i>Id.</i> , pl. 22
II. Captive figure as direct support for principal figure.	Coba	4†	9. 9.10. 0. 0	Thompson, Pollock, Charlot, 1932, fig. 65
	"	2	9.10.10. 0. 0	<i>Id.</i> , pl. 4a, fig. 63
	"	8	9.11. 0. 0. 0(???)	<i>Id.</i> , pl. 7b, fig. 68
	"	1	9.12.10. 0. 0	<i>Id.</i> , pls. 1, 2, figs. 61, 62
	"	20	9.12.12. 0. 5(?)	<i>Id.</i> , pl. 12
	"	12	Undecipherable	<i>Id.</i> , pl. 9a
	"	15	Undecipherable	<i>Id.</i> , pl. 8b
	"	19(?)	Undecipherable	
	Naranjo	9	9.10.10. 0. 0(??)	Maler, 1908a, pl. 22, no. 2
	"	11	9.11.10. 0. 0(??)	<i>Id.</i> , pl. 30, no. 2
	"	24	9.13.10. 0. 0	<i>Id.</i> , pl. 39, no. 2
	"	21	9.13.15. 0. 0	<i>Id.</i> , pl. 35, no. 2
	"	23	9.14. 0. 0. 0	<i>Id.</i> , pl. 37, no. 2
	"	29	9.14. 3. 0. 0	<i>Id.</i> , pl. 41, no. 1
	"	30	9.14. 3. 0. 0	<i>Id.</i> , pl. 42, no. 1
	"	13	9.17.10. 0. 0	<i>Id.</i> , pl. 32, no. 2
	"	19	9.17.10. 0. 0	<i>Id.</i> , pl. 34, no. 1
	"	14	9.18. 0. 0. 0	<i>Id.</i> , pl. 33, no. 2
	"	20	9.18.10. 0. 0(?)	<i>Id.</i> , pl. 35, no. 1
	"	8	9.18.10. 0. 0	<i>Id.</i> , pl. 23, no. 2
	"	12	9.18.10. 0. 0	<i>Id.</i> , pl. 31, no. 2
	"	7	9.19. 0. 0. 0	<i>Id.</i> , pl. 22, no. 1
	Ucanal	4	10. 1. 0. 0. 0	Morley, 1937-38, V, pl. 94a
	Benque Viejo	1	10. 1. 0. 0. 0	Maler, 1908a, pl. 19
	Oxpemul	17	9.15. 0. 0. 0	
	Calakmul	28	9. 9.10. 0. 0	
		29	9. 9.10. 0. 0	
		51	9.14.19. 5. 0	
		52	9.15. 0. 0. 0	
		54	9.15. 0. 0. 0	
		89	9.15. 0. 0. 0	
		88	Undecipherable	
	III. Captive figure at side of principal figure.	Uaxactun	20	9. 3. 0. 0. 0
Piedras Negras		26	9. 9.15. 0. 0	Maler, 1901, pl. 23
"		35	9.11.10. 0. 0	<i>Id.</i> , pl. 28
"		39	9.12. 5. 0. 0	Morley, 1937-38, V, pls. 145c, 51b
"		8	9.13. 0. 0. 0	Maler, 1901, pl. 17
"		4	9.13.10. 0. 0	<i>Id.</i> , pl. 14
"		7	9.14.10. 0. 0	<i>Id.</i> , pl. 16
"		9	9.15. 5. 0. 0	<i>Id.</i> , pl. 18, no. 1
"		12‡	9.18. 5. 0. 0	<i>Id.</i> , pl. 21
Yaxchilan		20	9.12. 0. 0. 0(??)	Maler, 1903, pl. 78
"		18	9.12. 0. 0. 0(??)	<i>Id.</i> , pl. 77, no. 1
"		15	9.12. 8.14. 1(??)	<i>Id.</i> , pl. 79, no. 1
"		19	9.12.10. 0. 0(??)	<i>Id.</i> , pl. 77, no. 2
"		11	9.16. 1. 0. 0	<i>Id.</i> , pl. 74, no. 1
Naranjo		5	9.13. 7. 3. 8(??)	Maler, 1908a, pl. 21, no. 1
Pusilha		C	9. 9. 0. 0. 0(???)	Morley, 1937-38, V, pl. 166c
"		K	9.12. 0. 0. 0	<i>Id.</i> , pl. 166d
"		E	9.15. 0. 0. 0	<i>Id.</i> , pl. 166e
Coba		6	9. 9.10. 0. 0	Thompson, Pollock, Charlot, 1932, pl. 6, fig. 67
"		4	9. 9.10. 0. 0	<i>Id.</i> , fig. 65
"		3	9.10. 0. 0. 0	<i>Id.</i> , pl. 4b, fig. 64
"		8	9.11. 0. 0. 0(???)	<i>Id.</i> , pl. 7b, fig. 68
"		21	9.11. 0. 0. 0(?)	<i>Id.</i> , pl. 10b
"	5	9.11.10. 0. 0	<i>Id.</i> , pl. 5a, fig. 66	

TABLE 2—CLASSIFICATION OF THE MAYA STELÆ BASED UPON THE POSITION OF THE CAPTIVE FIGURE\*—Continued

Type	Site	Stela	Date	Reference
III. Captive figure at side of principal figure. —Continued	Coba	1	9.12. 0. 0. 0	Thompson, Pollock, Charlot, 1932, pls. 1, 2, fig. 61
	"	20	9.12.12. 0. 5(?)	<i>Id.</i> , pl. 12
	"	12	Undecipherable	<i>Id.</i> , pl. 9a
	"	15	Undecipherable	<i>Id.</i> , pl. 8b
	Seibal	5	9.17.10. 0. 0(?)	Maler, 1908, pl. 5, no. 2
	Xultun	3	10. 1.10. 0. 0	Morley, 1937-38, V, pl. 79b
	"	10	10. 3. 0. 0. 0	<i>Id.</i> , pl. 80b
	"	12	Second quarter of Baktun 9	<i>Id.</i> , pl. 77c
	"	13	9.18. 0. 0. 0(???)	<i>Id.</i> , pl. 77d
	Yaxha	6	Middle Period(?)	Maler, 1908a, pl. 17, no. 1
	"	10	Great Period(?)	<i>Id.</i> , pl. 18, no. 1
	El Caribe	2	9.17.10. 0. 0(?)	Morley, 1937-38, fig. 42
	" "	1	9.17.10. 0. 0(?)	<i>Id.</i> , fig. 43
	Rio Bec V	3(?)	Undecipherable	
	" " "	4	Undecipherable	
Calakmul	43	9. 4. 0. 0. 0		
		53	9.15. 0. 0. 0	
IV. Captive figure in panel below principal figure.	Xultun	8	9. 8.10. 0. 0(?)	Morley, 1937-38, V, pl. 77b
	"	4	9.11. 0. 0. 0(?)	<i>Id.</i> , pl. 76b
	"	5	9.12. 0. 0. 0	<i>Id.</i> , pl. 76c
	Cancuen	2	9.18. 0. 0. 0	Maler, 1908, pl. 12, no. 2
				Morley, 1937-38, V, pl. 97d
	Ixkun	4	9.16. 0. 0. 0	<i>Id.</i> , pl. 93c§
	"	1	9.18. 0. 0. 0	Maudslay, 1889-1902, II, pl. 68
	Seibal	11	10. 1. 0. 0. 0	Maler, 1908, pl. 9
	Calakmul	9	9.12. 0. 0. 0	
		24	9.13.10. 0. 0	
		15	9.19. 0. 0. 0	

\* By captive figure is meant those subsidiary figures, generally though not always bound, in attitudes of degradation (used as pedestals for the principal figures or with hair grasped by the principal figure, etc.) or of supplication (kneeling before principal figures, etc.).

† Stelæ 4, 8, 1, 20, 12, 19 and 15 at Coba show captive figures as direct supports for, as well as at the sides of, the principal figures and have therefore been included in both Types II and III in the above classification.

‡ Stela 12 at Piedras Negras differs from other Type III stelæ but has been included here for purposes of simplification.

§ Stela 4 at Ixkun has been incorrectly designated Stela 5 here.

127 years before Stela 11 (10.2.0.0.0), the placement of the captive remains practically unchanged.

Nowhere in Maya art is there another example of the Type I placement of the captive figure in relation to the principal figure save on the Leyden Plate. This remarkable coincidence raises strong suspicion that the Leyden Plate was made at Tikal.<sup>10</sup>

We have already seen that the esthetic characteristics of the Leyden Plate indicate that the early date inscribed upon its back corresponds very closely to the date of its execution; and that, granted this contemporaneity, it must have originated in northern central Peten, since only at sites of that region had stone sculpture been developed at so early a date. We have further seen that the placement of the captive figure closely connects the Leyden Plate with Tikal and with

<sup>10</sup> One other similar example is known—Altar VIII, also at Tikal—where a captive figure is shown lying on the ground in exactly the same position as those on Stelæ 10, 5, and 11 without an accompanying principal figure, however. This altar is associated with Stela 20 and dates from 9.16.0.0.0 (pl. 4).

no other city of the Maya culture. But leaving this unique stylistic element aside, let us examine further the posture and ornamentation of the principal figure on the Leyden Plate.

The principal figure, as already noted, is presented with the head and lower half of the body in left profile, feet tandem, arms and torso in full front (fig. 2*a*). It clasps horizontally across the breast the Double-headed Ceremonial Bar, perhaps the most constant accessory of Old Empire relief. The headdress is an animal head surmounted by a grotesque human head, both elaborately ornamented. There is a pectoral representing a human head, also shown in left profile, and a wide belt terminating in profile heads, that on the left is an animal head, that on the right, a human head, both enriched with pendants which are presumably shells. A fringed knee-length kirtle, trifurcated breechclout, and ornate sandals complete the costume. The nearest analogues to the principal figure on the Leyden Plate which we can find are the figure on the front of Stela 1 at Tikal and that on the front of its more mutilated sister monument, Stela 2 (pl. 3*a* and *b*). Part for part the personages there represented resemble closely that on the Leyden Plate (compare fig. 2*a* with pl. 3*a* and *b* and fig. 4). They are, however, more elaborately treated. Indeed such unlikenesses as do exist may be explained by discrepancy in size, by difference in the workability of limestone and jadeite, and by the fact that, as we shall proceed to show, about a century probably elapsed between the carving of the Leyden Plate and that of the two stelæ in question.

Stelæ 1 and 2 at Tikal unfortunately have no decipherable dates. Stylistically, however, they are so nearly identical that in spite of the fact that their principal figures face in opposite directions, it is necessary to conclude that they are nearly if not exactly contemporaneous. We also believe them later than the Leyden Plate (8.14.3.1.2) because the overlapping of the feet on Stela 1 (pl. 3*a*) evidences greater sophistication than does the tandem foot arrangement of the Leyden Plate (fig. 2*a*). We nevertheless consider the stelæ to be relatively early because their full front presentation of the torso is a less sophisticated treatment than full profile, which first surely appears in Maya sculpture on Stela 9 at Tikal (9.2.0.0.0). Where, then, in the 150 years separating the above two dates, should Stelæ 1 and 2 be placed? In attempting to answer this question, we must extend our comparisons to other sculptures of the same stylistic category (Group II, Table 1).

Stela 4 at Uaxactun (8.18.0.0.0?) and Stela 1 at Uolantun (8.18.13.5.11), though they are badly weathered, are both probably to be included in Group II. Their treatment, however, is so much simpler than the elaboration, amounting to incipient flamboyancy, exhibited by Stelæ 1 and 2 at Tikal, that the latter presumably post-date them, and so can tentatively be assigned to the 67 years between 8.18.13.5.11 (Stela 1 at Uolantun) and 9.2.0.0.0 (Stela 9 at Tikal). In fact, as will shortly appear, it is not improbable that both may have been erected to commemorate the baktun ending in 9.0.0.0.0.

On the front of Stela 2 (pl. 3*b*), resting on each shoulder of the figure, is a glyph with a numerical coefficient—9 with the left glyph, 7 with the right one (fig. 5*a* and *b*). In each case this glyph appears to be the same. It has a flattened

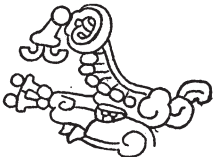


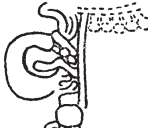




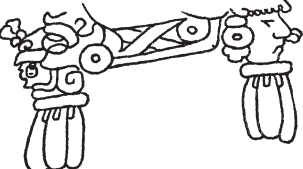
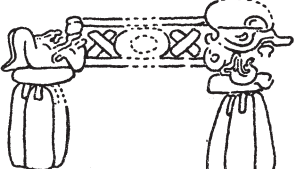
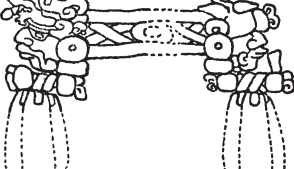


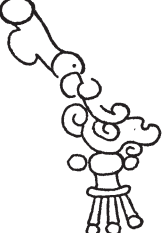



THE LEYDEN PLATE	STELA 1 AT TIKAL	STELA 2 AT TIKAL
		
		
		
		
		
		
		

FIG. 4.—Comparison of similar decorative elements on the fronts of the Leyden Plate, Stelæ 1 and 2 at Tikal.

oval superfix, above which rise three scrolls, the main element in each being a day sign; that on the left has the typical trinal support common to day signs, that on the right presents the characteristic notched interior outline of early day signs. The coefficient 9 on the left shoulder, facing the figure, modifies only the day sign proper, while the coefficient 7 on the right shoulder modifies only the superfix of the glyph. Reference to plate 3*b* and figure 5 will show that these two glyphs form the headdresses of two grotesque heads facing to the left and right respectively.

There are four other cases now known of pairs of identical glyphs in apposite positions with numerical coefficients in which, as here, the one on the left has a value of two higher than that on the right: (1) on the front of Altar T at Copan; (2) on Sculpture A" from Temple 11, also at Copan; (3) on the north and south markers of the second ball court between Structures 9 and 10, also at Copan; and (4) on the front of Stela 3 at Seibal.

The first pair, as has been shown elsewhere,<sup>11</sup> presents two days Caban, i.e. 6 Caban and 4 Caban which are just 7200 days, or one katun, apart, i.e. 9.16.12.5.17 6 Caban 10 Mol and 9.17.12.5.17 4 Caban 10 Zip.

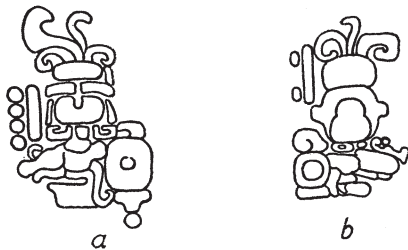


FIG. 5—Drawing of the glyphs on the left and right shoulders respectively of the human figure on the front of Stela 2 at Tikal.

The second pair, presenting the same two coefficients as here, i.e. 9 and 7, probably stands for two hotun-endings in the Long Count one katun apart, 9.15.15.0.0 9 Ahau 18 Xul and 9.16.15.0.0 7 Ahau 18 Xul.<sup>12</sup> The third pair, also presenting the same two coefficients 9 and 7, may stand for two other hotun-endings, also one katun apart, 9.12.10.0.0 9 Ahau 18 Zotz and 9.13.10.0.0 7 Ahau 3 Cumhu.

The fourth pair have the coefficients 7 and 5, which, if representing hotun-endings, may stand for the Long Count positions 9.16.15.0.0 7 Ahau 18 Pop and 9.17.15.0.0 5 Ahau 3 Muan, or, if representing even katun-endings, which is chronologically much more probable at Seibal, they may stand for 10.0.0.0.0 7 Ahau 18 Zip and 10.1.0.0.0 5 Ahau 3 Kayab respectively.

Returning to Stela 2 at Tikal, if we assume that the two glyphs shown in figure 5 represent the ends of two hotuns of the Long Count one katun apart, as may well have been so in the cases of the four other pairs just cited, then they presumably stand for the following successive lahuntun-endings, 8.19.10.0.0 9 Ahau 3 Muan and 9.0.10.0.0 7 Ahau 3 Yax.

It will be noted that these two lahuntun-endings immediately preceded and followed 9.0.0.0.0. In other words what few chronological indications there are agree with the position previously assigned to these two monuments on stylistic grounds. Thus it appears not improbable that Stelæ 1 and 2 at Tikal were dedicated either on 9.0.0.0.0 or 9.0.10.0.0.

<sup>11</sup> Morley, 1920, pp. 334-338.

<sup>12</sup> *Idem*, 1938.

In conclusion we believe that:

1. The style of both glyphs and figure of the Leyden Plate are appropriate to the early date engraved upon it, which, accordingly, may be accepted as the date of its execution.
2. Because of its antiquity it seems certain that the Leyden Plate must emanate from northern central Peten, in which region lie the only Old Empire sites of comparable age.
3. As the only four carvings now known in the Maya area which show the captive figure behind and at the level of the feet of the principal figure are Stelæ 10, 5, and 11 at Tikal and the Leyden Plate, it seems necessary to conclude that the Leyden Plate is closely associated with Tikal, perhaps that it was executed there, and that, in view of its close analogies to Stelæ 1 and 2 at the same site, it may even have served as a model for the figures on the fronts of these two stelæ.

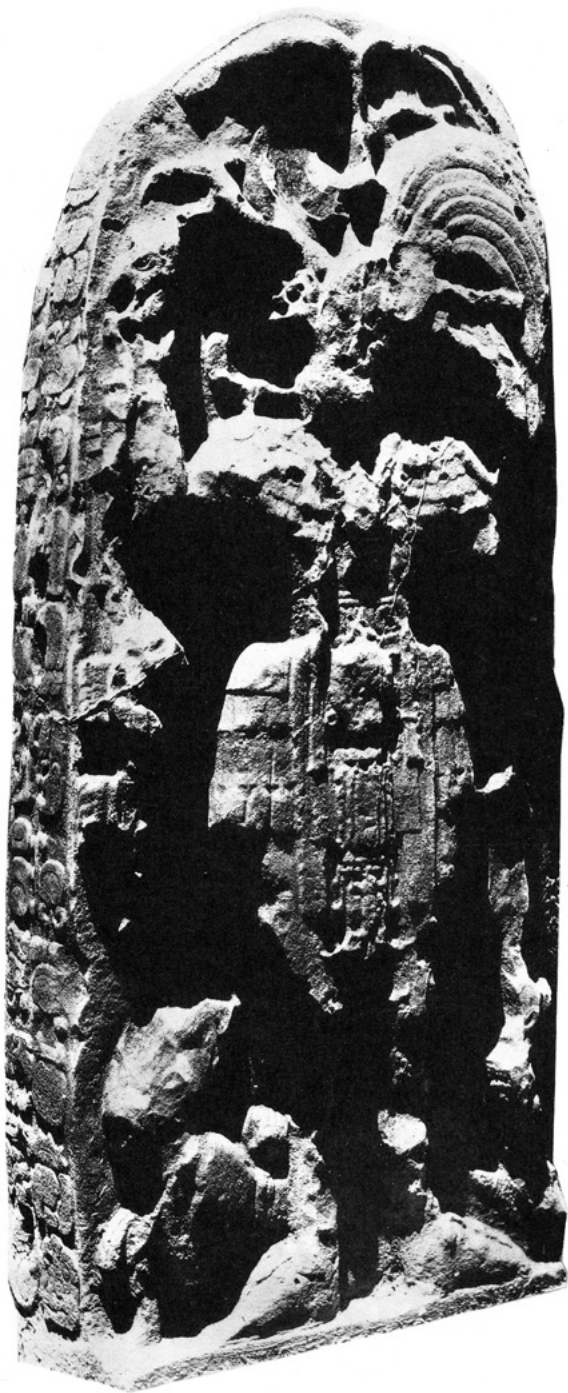
How so outstandingly valuable an object as this jadeite pendant could have found its way into such a distant and relatively insignificant mound on the swampy coast plain of northern Guatemala must remain a mystery. There is no site of importance near the Bahia de Graciosa nor is this welter of swamps and jungle on any of the main highways from the central Peten cities to Quirigua or to the southern metropolis of Copan, the only great centers in the southeast. Indeed all that may be affirmed at the present time is that this earliest surely dated record in the Maya hieroglyphic writing, because of its stylistic characteristics and affinities, almost certainly must have been wrought at Tikal.

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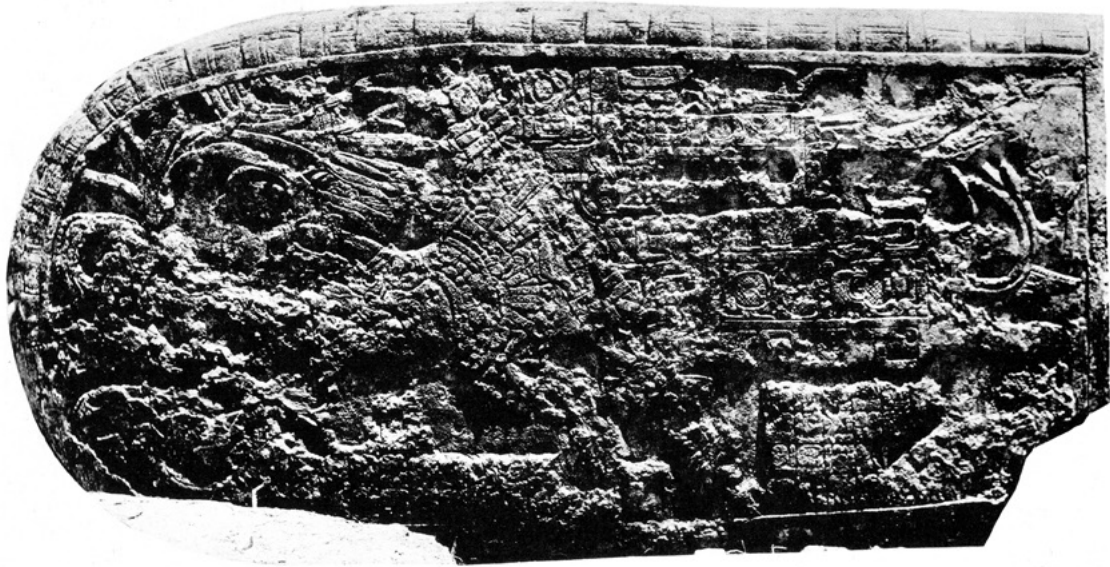


*a*: Stela 12 at Tikal, front.

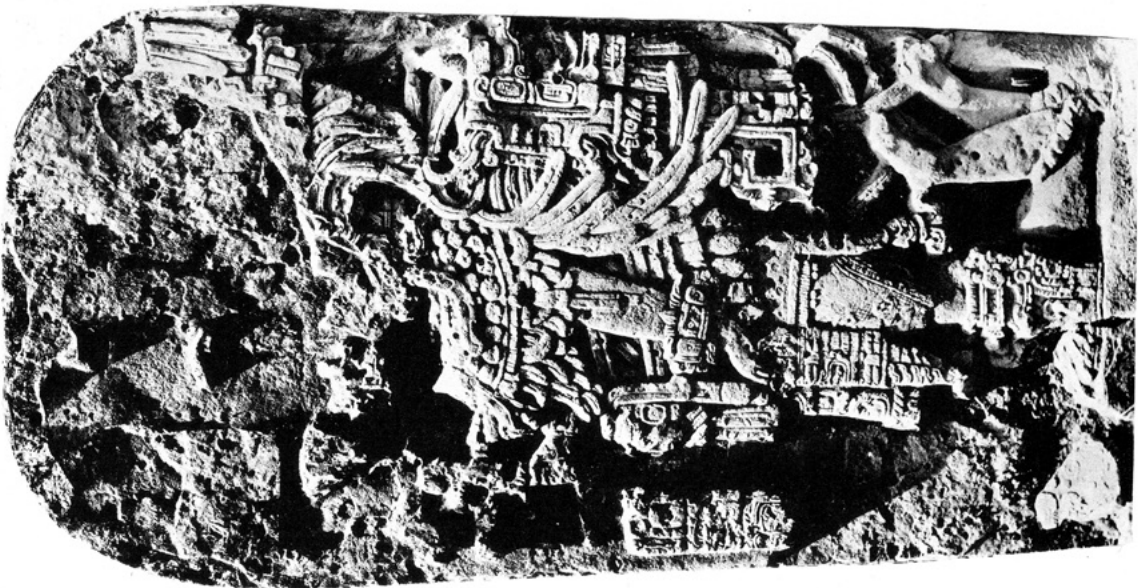


*b*: Stela 10 at Tikal, front and left side.





*b*: Stela 11 at Tikal, front.



*a*: Stela 5 at Tikal, front.



*a*: Stela 1 at Tikal, front.



*b*: Stela 2 at Tikal, front.



Altar VIII at Tikal, top.