TIKAL REPORT NO. 6

THE CARVED WOODEN LINTELS OF TIKAL

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INTRODUCTION

Much has been written on the extraordinary carved lintels of Tikal. Throughout this considerable literature one encounters arguments and corrections as to which structures and doorways the various lintels, long removed from the site, originally pertained. And despite attention given in past years to locally surviving carved lintels, two partially intact ones did remain to be recorded.

Our purposes in this paper are to put on record previously unillustrated carved lintels and to assign to their original locations at Tikal the groups of whole and fragmentary lintel beams to be found in the Basel Museum für Völkerkunde, in the British Museum, and in the American Museum of Natural History. Preliminary comment and illustrations toward these ends have appeared recently (Shook, 1957, Fig. 37; Tikal Report No. 1; Coe, 1958).

Correct assignments are, we feel, possible now, principally on the basis of field work carried out in 1957. The objective of attributing a particular lintel to such-and-such a structure is motivated by something more substantial than simply eliminating loose ends with neat proveniences. That a lintel, say, now in Switzerland, belongs unquestionably over the innermost doorway of Temple I is of prime archaeological importance. Carved lintels with chronologically significant texts offer a striking opportunity for correlation of radiocarbon, stylistic, and hieroglyphic data. The lintels, of course, have real or potential value in apprehending the construction sequence, or lack of it, among those buildings carrying such lintels.

The essential facts regarding the removal of a good proportion of the carved Tikal lintels in the 1870's and in 1914 are provided by Morley (1937–1938, Vol. 1, pp. 77ff, 346ff), using Maler (1911) as a major source. Data on lintel removal supplementing that summarized for Temple I by Morley is presented in Tikal Report No. 7.

The earliest published record of the Tikal lintels resulted from the exploration of the site by a party led by Modesto Mendez and Ambrosio Tut in 1848; the party included an artist, Lara, who evidently managed to draw portions of Lintel 3 of Temple I and Lintel 2 of Temple III (Fig. 21; also Beyer, 1943; Schaeffer, 1951). In 1875, J. W. Boddam-Whetham purchased in Flores two fragments from a carved lintel. Now in the British Museum, these are known to be from Lintel 3 of Temple I (Figs. 4, 5, 13a). In 1877, Gustave Bernoulli had various lintels removed which eventually were deposited in the Museum für Völkerkunde in Basel, Switzerland; this material constitutes the bulk of Lintel 3 of Temple I (Figs. 2, 3, 13b, c), Lintel 2 of Temple IV (Figs. 6–10, 1, 18), and Lintel 3, also from Temple IV (Fig. 29). In 1914, H. J. Spinden removed two beams from the only known carved lintel of Structure 10 (Figs. 36c, d; 37b) and salvaged the surviving beam of Lintel 2 of Temple II (Fig. 17c); the three beams are in the American Museum of Natural History. Two beams from the Structure 10 lintel (Fig. 36b, e) had been removed by Peteneros prior to 1904 and presumably transported to Flores.

Our work consisted of measuring all *in situ* beams occurring in structures now carrying or known to have carried carved lintels, in addition to measuring all available mortar impressions of beams now missing. Carved lintels, or rather their remains, still at the site were fully recorded. The rooms of Temples I, II, and IV and Room 2 of Temple III were cleared of debris, in which process important fragments of wood carving were re-

covered. Finally, all Tikal lintels in the aforementioned institutions were studied and photographed, and of those in Europe latex molds were made.

Despite our inclination, perhaps naive, to deal in some way with the art of these exotic carvings, we must confine this report to the demonstrable facts, anticipating as data accumulate and appear in print (as in the case of Tikal stone monuments) an eventual comprehensive, comparative study of local sculpture in stone and wood. To facilitate gross comparisons between wood and stone sculptures, our primary illustrations here are at a scale of 1:12, a scale previously selected for stela and altar illustration (Tikal Report No. 4). All measurements are in meters. We have attempted to provide thorough illustration of the lintels, particularly of those previously unillustrated, or illustrated on the basis of a cast, in order to allow others the requisite data for art studies.

The Appendix, by Linton Satterthwaite, deals essentially with the epigraphy of the lintels but importantly contains previously unpublished style dating estimates for the lintels by Miss Tatiana Proskouriakoff.

We wish here to record our appreciation to Mr. Adrian Digby of the British Museum, London; Dr. Alfred Buhler of the Museum für Völkerkunde, Basel; and Dr. Gordon Ekholm of the American Museum of Natural History, New York for their kindnesses, interest, and aid during our studies here and abroad.

BASIC CONCLUSIONS

The bulk of this report is composed of the raw supporting data for relatively few major conclusions. To orient those wishing this data and to accommodate those mainly concerned with overall results, the following abstract is given here.

Five structures, all but one of the temple type, contained carved wooden lintels. Seven carved lintels in all are known. Texts expressing dates survive on five of these lintels.

Temple I. Doorway 2, Lintel 2 (Fig. 12). Doorway 3, Lintel 3 (Figs. 13–16). Lintel 2: Text portion comprises a small glyphic panel. Style date, 9.17.10.0.0 ± 2 Katuns. Lintel 3: Style date, 9.16.0.0.0 ± 2 Katuns. Dedicatory date of both lintels was no later than 9.14.0.0.0 (Appendix).

Temple II. Doorway 2, Lintel 2 (Fig. 17). Style date, 9.16.0.0.0 ± 2 Katuns.

Temple III. Doorway 2, Lintel 2 (Figs. 18–20). Style date, 9.19.0.0.0 ± 2 1/2 Katuns.

Temple IV. Doorway 2, Lintel 2 (Figs. 22–28). Doorway 3, Lintel 3 (Figs. 29–35). Lintel 2: Style date, 9.15.10.0.0 ± 2 Katuns. Lintel 3: Style date, 9.16.0.0.0 ± 2 Katuns. Dedicatory date of both lintels was no earlier than 9.15.10.0.0; probably 9.16.0.0.0. (Appendix).

Structure 10. Inner central doorway, 3rd story, carved lintel (Figs. 36, 37). Dedicatory date, 9.15.10.0.0. Style date, 9.16.10.0.0 ± 3 Katuns.

SURVIVING EVIDENCE OF CARVED LINTELS AT SITE

Temple I. The three doorways were spanned by lintels. The outer doorway contains

plain Lintel 1 comprising two beams, Beam *a*, the outer, and Beam *b*, the inner one. Dimensions are given in Table 2. The split remains of the inner half of Beam *a* were found in 1956 at the base of the temple stairway.

The middle doorway is spanned by carved Lintel 2, originally composed of four beams, of which only two, Beams *a* and *b*, survive. The two beams are shown in Fig. 12.

Lintel 3 is known at the site by plaster impressions in the wall masonry. As brought out elsewhere (p. 33), a fragmentary, mutilated but noticeably carved beam, found on the floor of the front room, must pertain to this lintel, indicating the whole to have been carved (see Fig. 13 e).

Temple II. Three doorways of which only the innermost retains a lintel, in this case plain. However, fragmentary carved beams, illustrated by Maler (1911, Pl. 18, 2; see our Fig. 17) are said to belong to this structure.

Temple III. Lintel 1 is totally missing. Lintel 2 is carved and lacks only Beam *a* (Figs. 18–20).

Temple IV. Only Lintel 1, plain, remains in the outer of the three doorways. Impressions of wood beams across Doorways 2 and 3 are well preserved and carved fragments and cut-off butts allow the conclusion that these doorways did once carry carved lintels.

Structure 10. While many lintels are still to be seen in this complex building, only one carved lintel (Figs. 36, 37) is on record. This lintel occurred across the central inner doorway of the third story.

In summary, substantial portions of carved lintels are today to be found *in situ* only in Temple I (Lintel 2) and in Temple III (Lintel 2). But again it should be noted that room excavation in Temples I through IV yielded many carved lintel fragments. These fragments and measurements of individual beams are primary data for our assignments of the lintels to specific temples and doorways indicated in this report.

TERMINOLOGY AND FACTORS IN RECONSTRUCTION OF MISSING LINTELS

1. Lintels are composed of three parts: a central exposed portion visible between the jambs of the doorway, and a hidden area, the butt, on either end buried in the masonry.

2. When carved, carving is on the underside only of the lintel. In no known case does carving extend to the sides of the lintel nor entirely to the doorway jambs. A plain border thus surrounds the four sides of the carved panel and shows that the panel was planned for its doorway.

3. Within this carved series, lintels are composed of four or more beams, of varying widths for a single lintel. Each lintel beam is lettered (lower case and italicized), *a* being the first, that is the outside beam, *b* the next one in, and so forth; "outside" is determined by the orientation of the doorway exit. Originally, we numbered lintel beams (Shook, 1958); for the sake of greater clarity; letters are here substituted.

4. In the case of a multi-roomed temple (e. g., Temple I), lintels are numbered from the outside in. Thus we can locate a single beam as to temple and lintel, for instance, Beam *d* of Lintel 2 of Temple III.

5. The *width* of a doorway is measured from jamb to jamb at the level of the existing or

prior resting place of the lintel. Since two jambs are not necessarily exactly parallel, we can only say that a single measurement of width is within a very few centimeters of the average width.

6. The *thickness* of a doorway is the measurement of one of the two wall jambs. The widths of paired jambs are not necessarily the same.

7. Every lintel discussed in this report is *inset* a variable amount from each wall face. Actually, the amounts of insetting vary little (Table 2), though the width of the constituent beams may vary greatly, indicating that there was selection and trimming of beams to obtain the desired fit in the particular doorway. An illustration incidentally of lintel inset has been recently published (Coe, 1958, p. 80).

8. *Lintel width* is determined across the component beams from the outside edge of the outermost beam (Beam *a*) to the outer edge of the innermost one. Where the lintel has been lost or removed, lintel width can be calculated on the following basis: doorway thickness less total of the two inset dimensions. If insets have been lost, an average can be determined from surviving insets within the structure. If the insets are preserved, a simple measurement from the innermost portion of one to the other suffices to establish lintel width.

9. The *number of beams* in a lintel no longer present can frequently be ascertained by inspection of the masonry for impressions of the beams which were set in and covered by mortar. In instances of lintels removed in relatively recent times because they were carved, when the plain areas were chopped off to lighten weight and make handling easier, these butt portions were usually discarded in the vicinity of the same doorway. If collected and properly paired and measured, they can furnish not only a true or minimum count of constituent beams but also a true or minimum width for the lintel.

10. *Lintel length* is simply a dimension from end to end of component beams. Note, though, that beams vary slightly in length for a single lintel; only a single dimension is given in Table 2. Where a lintel has been removed, lintel length can be measured from the often intact terminal impressions in the masonry. The fact that individual beam lengths do not vary greatly (and so are not given) is an additional proof that beams were worked to shape and size for use in one particular doorway.

11. *Panel width* is a "horizontal" dimension for the one design as one looks up at it. In all known cases, panel width is less than lintel width since carving does not extend to the edges of the outermost and innermost beams, but rather stops short to allow plain borders of variable width.

12. *Panel height* is a dimension of the design panel at a right angle to panel width. Panel height is taken from the bottom of carving to the top of carving. In all known cases at Tikal, panel height is a central segment of lintel length (i. e., butt to butt) and is slightly less than doorway width. The carved scene is always vertically divided by the division lines between the individual beams. It follows that if we have a beam, for example one of those in Basel, that retains total panel height, there are only certain doorways of sufficient width to be potential sources for it and all others with which it was associated. Note that panel height is the equivalent of "Height A" (the design-base to the top of the stone) employed in stone monument description (Tikal Report No. 4, p. 98).

13. *Figure references*: Figs. 13, 17, 19, 22, 29, and 36 show the positions of the lettered beams as finally determined. For convenience, these lettered beams are referred to as if they were separate figures.

CRITICAL REVIEW OF PRIOR ASSIGNMENTS OF LINTELS

Table 1

The principal studies of the carved lintels of Tikal are those of Maudslay (1889–1902), Maler (1911), Spinden (1913), Morley (1937–1938), and Beyer (1943). De Rosny's publication (1882) contains excellent plates of the lintels in Basel but is not concerned with the problem of precise assignment.

1. MAUDSLAY'S ASSIGNMENTS AND OBSERVATIONS

His floor plans (1889–1902), Vol. III, Pl. 69) and text (pp. 44–50) as well as photographs provide considerable but scattered information.

A. TEMPLE I

His Pl. 71 (comprising beams in our Figs. 1–5) is captioned "Part of a wooden lintel, probably from one of the doorways of Temple A [i. e., Temple I]. Maudslay's Pl. 72 (our Figs. 6–10) is captioned "Wooden lintel, probably from outer doorway of [Temple I]."His Pl. 69 gives a plan of Temple I with the following labels: Doorway 1, "Lintel removed"; Doorway 2, "Two carved beams in place"; Doorway 3, "Lintel removed." Pl. 70, devoted to photographs of Temple I, clearly shows a lintel across the first or outer doorway. His notes on Lintel 2 of Temple I recorded that "two beams of the middle lintel ... remain in place, well carved in medium relief, but much decayed." (Text, p. 45). He further states (*ibid.*, p. 46) that the "outer and inner lintels in [Temple I] have disappeared..."

The principal disagreement between Maudslay's and recent observations lies in his recording Lintel 1 as missing when, in fact, one beam of it appears plainly in his photographs, partly dangling, over the temple doorway.

B. TEMPLE II

His plan is labeled as follows: Doorway 1, "Plain lintel" with four beams shown in his section; Doorway 2, "Carved lintel much destroyed" with five beams depicted; Doorway 3, "Plain lintel" with five beams shown. His text (p. 47) states that the "beams over the middle doorway are ornamented with carving, now much decayed."

To anticipate our conclusions, Maudslay erred only in the number of beams depicted in his temple section; the three lintels were actually composed of five, five, and six beams respectively.

C. TEMPLE III

Captions on his plan read, for Doorway 1, "Beams fallen," and for Doorway 2, "Carved beams much destroyed." The great lintel in Basel (Pl. 77; our Fig. 29) is captioned "Temple C (?) [Temple III]. Photograph of a plaster cast from the inner doorway." In this regard, he comments in his text (p. 45) as follows:

> "This lintel I have ascribed to the inner doorway [of this temple] but am no means sure that this location is correct. The dimensions agree fairly well, but on my original plan of the building there is written across the doorway 'Carved beams much destroyed'; this note may, however, have been written on observing some small fragment of carving on one of the ends of the beams left embedded in the wall."

He goes on to suggest that perhaps alternatively the great lintel now in Basel (Fig. 29) came from Temple V (his "Temple D"). The fact is, of course, that that structure has but a single doorway which is spanned by an intact plain lintel.

D. TEMPLE IV.

No notes are given on his plan ("Temple E") nor does his text contain information on doorways and lintels. As indicated in Table 1, Doorway 3 is known to have been the source of the great lintel in his Pl. 77 (our Fig. 29) while the lintel in his Pl. 72 (our Fig. 22) is in fact Lintel 2 of Temple IV rather than Lintel 1 of Temple I.

2. *MALER'S ASSIGNMENTS AND OBSERVATIONS*

A. TEMPLE I.

The outer doorway "is spanned by two very broad but quite plain tsapote beams . . ." while the second doorway was observed to be spanned by two carved beams surviving of the original four (1911, pp. 27, 28). He noted evidence in the masonry of five beams of Lintel 3, all removed except for one "lying on the ground in 1895." "The figure carved upon it shows a handsome profile" (p. 28). This beam presumably is the partial one in our Fig. 13e.

B. TEMPLE II.

For the outer doorway, Maler notes (p. 29) that it was originally composed of five beams which "were wantonly torn out . . . Whether the tsapote beams were carved on the underside and what has become of them, nobody can tell." The second doorway was "spanned with five beams . . . with very fine carving on the underside. All these beams were torn out by plunderers . . . and three were carried away" (pp. 29, 30). One partial beam from this lintel was found by him in 1895 while a smaller fragment, "half burned," was found by him in 1904 "among the fallen masonry," as if it had been intentionally hidden. These two fragments appear in his Pl. 18, 2 and our Fig. 17. He did not believe that these two were from contiguous beams. The third doorway was spanned by six plain beams, all in position.

C. TEMPLE III.

The outer doorway was found to have been "spanned by six broad and thick . . . beams, which have been pulled out and carried away by depredators, and this makes it impossible now to say whether they were carved . . . or not (p. 37). He recorded Lintel 2 as having originally comprised ten carved beams, the outer of which (Beam *a*; see Fig. 18) had been "removed" prior to his 1895 visit (p. 37). Between 1895 and 1904 "vandals had hacked off great pieces with their machetes," thereby discouraging him from an attempt to photograph the lintel (p. 37). A brief but essentially accurate description of the carved panel is given (*ibid.*).

D. TEMPLE IV.

The first doorway was observed to have a plain lintel of six beams, all in position. Six beams, all presumed to have been carved, had been removed from the second doorway. The third doorway, similarly robbed of its lintel, showed evidence of having carried "eight (possibly only seven) tsapote beams . . ." (p. 42). By comparison of carved panel and doorway measurements, Maler demonstrated that the lintel in our Fig. 29 could have come from the third doorway, as Lintel 3 (pp. 42, 43).

E. STRUCTURE 10.

Maler was the first to record the lintel from this structure, a portion of which was later salvaged and deposited in the American Museum of Natural History (Figs. 36, 37).

> "There were formerly exactly five of these lintel beams richly carved on the underside. Two of them, of course the best preserved ones, have been carried away and only three of them, riddled by [termites] and half decayed, are still in place. But even from these, pieces of the carving have been cut away here and there . . ." (p. 17).

A fanciful description of the surviving portion of the lintel is given by Maler (*ibid.*).

Maler was a most competent observer. But curiously, at no point in handling lintels did he attempt to correct Maudslay's confusion and error (e. g., Lintel 2 of Temple III and Lintel 1 of Temple I).

3. SPINDEN'S ASSIGNMENTS AND OBSERVATIONS

Spinden's data on the carved lintels were evidently derived from extant publications rather than field work. It was not until 1914 that he visited Tikal while his study of the site was published in 1913. Information respecting the Tikal lintels is contained on p. 257 of that publication (Spinden, 1913).

A. TEMPLE I.

Spinden follows Maler's observation of Lintel 1 as plain. As to the two missing beams of Lintel 2, he suggests those in Maudslay's Pl. 71 as possibilities (our Figs. 1–5) since these "fragments seem to be parts of two beams" (note that Figs. 1–5 show fragments of four rather than two beams). For basic information on Lintel 3, he correctly follows Maler, adding only that dimensions preclude the beams in our Figs. 6 through 10 from being this lintel.

B. TEMPLE II.

Lintel 1 is described in Maler's terms (i. e., missing) but with the deceptive addition of "possibly carved." He goes on to assign the beams in our Figs. 6 through 10 to this lintel; these "probably came" from this doorway. His comments on Lintels 2 and 3 of this structure correspond to those of Maler.

C. TEMPLE III.

Maler is followed throughout.

D. TEMPLE IV.

Lintel 1 is listed as plain and in position, following Maler. He notes the loss of beams of Lintel 2 and argues on the basis of incompatible measurements that the beams in Figs. 6–10 could not fit in this doorway, making the choice of Lintel 1 of Temple II as their source "all the more certain." Without reference to Maler's conclusion, the lintel in our Fig. 29 is attributed to the third doorway of Temple IV.

Spinden, in light of more recent data, erred in three instances: in disregarding the combined widths of the beams he identified among those in Figs. 1 through 5 as the missing two beams of Lintel 2 of Temple I; in assigning the beams in Figs. 6 through 10 to the first doorway (Lintel 1) of Temple II; and in ruling out the now apparent correct assignment of these same beams to the second doorway of Temple IV on the basis of what in retrospect must have been incorrect dimensions.

4. MORLEY'S ASSIGNMENTS AND OBSERVATIONS

Morley (1937–1938; Vol. 1, pp. 346–355) summarized past attributions and in various ways clarified a rather chaotic situation. He reassigned European material on the basis of new measurements of lintels and doorways and beams proper as well as observations of plaster impressions of beams (as did Maler), measurements of insets, first hand knowledge of extant Tikal lintels, both plain and carved, and, finally, of stylistic considerations.

Morley's conclusions may be summarized as follows. The beams in Figs. 2, 3, and 4 form a partial lintel. The arrangement in Maudslay's Pl. 72 (our Figs. 6–10) is broken, taking the beams in our Figs. 6 and 7 and joining them with the beams in Figs. 2, 3, and 4 so that the nearly complete lintel, from left to right, comprises the beams in Figs. 6, 7, 2, 3, 4. These five beams (with two opposite glyph panels) comprised (though not without some doubt on Morley's part) a substantial portion of Lintel 2 of Temple IV (pp. 253–255). He also suggests (p. 355) that the beams in Figs. 1 and 5 "may possibly belong to Lintel 2 of Temple IV."

The usual data are again used to assign the lintel in Fig. 29 to Temple IV as Lintel 3 (pp. 351, 352).

Left with three pieces to be assigned (see Figs. 8, 9, 10), Morley (p. 355) writes that "Spinden may be correct in assigning the . . . three to Lintel 1 of Temple II." It will be recalled, however, that Spinden assigned all the beams in Figs. 6 through 10 to that lintel.

Morley accepts Maler's evidence for Temple II being the source of the fragmentary beams shown in our Fig. 17b, c; he also accepts Maler's precise attribution of the larger beam as Lintel 2.

One important point of confusion occurs in Morley's Pl. 73a which associates with the caption "Structure 10," the beams known to be from this structure with the larger beam found by Maler in Temple II and later salvaged by Spinden (Fig. 17c). The error in the plate caption evidently perpetuates the same misinformation encountered in the catalogue of the American Museum of Natural History (information from Gordon F. Ekholm).

In short, Morley, for all the excellence of his summary of prior studies, contributed heavily to what, with advantageous hindsight, we may say had become an awesome muddle. The incorrectness of his assignments was due in part to the assumption that outside lintels, no longer present, were "probably" carved (see his Table 13). He followed Spinden in failing to give warranted consideration to Maudslay's observation of Lintel 1 of Temple II as plain. Morley (p. 349) writes: "It is assumed that [these now missing outside lintels] were carved . . . otherwise they would hardly have been carried off." Finally, a source of more serious error was his epigraphically and stylistically motivated division of Maudslay's Pls. 71 and 72.

5. BEYER'S ASSIGNMENTS AND OBSERVATIONS

Beyer (1943) made a valuable contribution in demonstrating that Morley's grouping of the beams in Figs. 6, 7, 2, 3, and 4 was unjustified, if only because the glyphs on the beams in Figs. 6 and 7 were considerably larger than those on the beams in Figs. 3 and 4 and, furthermore, the two sets of glyphs were stylistically different. Beyer held that the text shown in Figs. 6 and 7 (see also Fig. 22a, b) closely related in style to the text on the lintel in Fig. 29, and, since the latter lintel unquestionably belonged in Temple IV (Lintel 3), the lintel in Maudslay's Pl. 72 (our Figs. 6–10; see also Fig. 22) should also have

come from this same structure.

Beyer also correctly related the beam fragment in Fig. 5 (which Morley allowed as a fragment of Lintel 2, Temple IV) to that in Fig. 3 by a comparison with a drawing (Fig. 21a) by Lara made in 1848. Since, as Beyer held, it was unlikely that this early expedition visited Temple IV, the drawing had to be made from a lintel then extant in Temples III, II, or I. Thus there is additional reason to distrust Morley's division and regrouping of Maudslay's basic arrangements.

ASSIGNMENTS ON THE BASIS OF RECENT WORK

Tables 1 and 2

Work relating to lintels in 1957 involved the complete clearing of the rooms of Temples I and IV, the clearing of the rear room of Temple III, the recording of Lintel 2 of Temple III and Lintel 2 of Temple I, and measurements and observations of all doorways and associated lintels in Temples I through IV. In 1958, Richard E. Adams cleared the debris from the rooms of Temple II; this work was in part directed to recovering any surviving fragments of wood carving; this aspect however was without results. In 1959, Aubrey S. Trik remeasured the lintel areas of Temple I in preparation for the installation of lintel replicas as well as for reconstruction of associated walls and vault soffits. In the course of this work, it was discovered that Lintel 3 had been set with a cached offering at either end; largely of marine origin, these offerings are fully described as Cache 49 in Tikal Report No. 13. Additional data on mat and cord impressions in the mortar above the fallen vaults were recorded. All pertinent structures were visited in 1959 to secure wood samples for radiocarbon analysis; in the course of this work Trik secured valuable cross-sections of various lintel beams. Finally, in 1959, the writer gathered all available data on the original location of the carved lintel from Structure 10 (Figs. 36, 37).

1. MATCHING OF LINTEL FRAGMENTS

Excavation of floor debris provided a source of information, unavailable to Morley, in the form of large quantities of zapote wood fragments, a small but important number of which were carved. These splinters and chips resulted from trimming work following the removal of the lintels as well as from relatively recent mutilation. Many fragments were charred; others had been sharpened into wedges, presumably to help split the carved surfaces from the heavy excess bulk of the beams. In all, sixty-eight fragments showing carving were recovered. Our task was to match these fragments to photographs of the Basel and London beams and eventually to certain epoxy resin casts which were taken to Tikal in 1958.

The following list, by structures which provided the fragments, summarizes the successful fits *to date*:

TEMPLE I

Fragment in Fig. 11*a* fits nose of jaguar in Fig. 11*f* (see also Fig. 2).

Fragment in Fig. 11*b* fits collar of dwarf figure in Fig. 5.

Fragments in Fig. 11*c*, *d* (other comparable specimens not shown) stylistically relate to banded frieze at base of beam in Fig. 3.

Fragment shown in Fig. 11*g* fitting area of hands of manikin figure on scepter which occurs on beam shown in Fig. 3.

Fragment (not illustrated) fitting break in upper curved projection from jaguar nose in Fig. 2.

TEMPLE IV Fragment in Fig. 11e fits in lower right corner of lintel in Fig. 29, against lashed cross-beam (detailed view in Fig. 35).

It is highly improbable that beams or fragments thereof have been transported from temple to temple. Consequently there is every reason to attribute the beams shown in Figs. 2, 3, and 5 to Temple I, and the well preserved lintel in Basel (Fig. 29) to Temple IV. This latter conclusion is of course in agreement with the conclusions of Morley and others (see Table 1). However, Morley's assignment to the second doorway of Temple IV of the beams in Figs. 2, 3, and 5 must be ruled out in light of this new evidence.

2. *PROBLEM OF OUTER DOORWAYS*

Although the preceding associations do narrow possibilities, specific assignment to doorways is still needed. If it can be shown that all outer doorways in this sample of structures were invariably plain, the range of possibilities is decidedly reduced. Morley as already noted (p. 28), held to the belief that outside lintels, now missing, were in fact carved.

Among the four major temples known to have had carved lintels, plain outside lintels survive in Temples I and IV. Maudslay (1889–1902, Vol. III, Pl. 69) recorded Lintel 1, Temple II as a "plain lintel"; published and unpublished Maudslay photographs (University Museum, print file) indicate that this lintel had not fallen at the time of his visit, though the whole doorway had by Maler's time. Excavation of the rooms of Temple II in 1958 provided no evidence one way or the other as to whether this lintel was plain or carved. All in all, it seems likely that Lintel 1 was for some reason removed between the visits of Maler and Maudslay.

The outer lintel of Temple III is totally missing, having fallen or having been removed prior to Maudslay's visit. Our excavation here was restricted to the rear room. Consequently, information is lacking on possible remains of Lintel 1 beneath the great pile of masonry and rubble blocking the outer room. The fact remains, however, that the very size of the doorway (see Table 2) excludes it as a possibility in assigning beams of unknown provenience; this point was emphasized by Morley (1937–1938, Vol. 1, pp. 351, 353). Only the rotten north ends of Beams e and *f* were found in place. This fact would tend to indicate natural decay and collapse rather than deliberate removal of the lintel. Yet deep machete scars are to be seen on the exterior masonry close to where the south end of the total lintel rested. These marks may be interpreted as supporting a case for deliberate removal. On the other hand they may be due to attempts to free the still surviving butt portions of a lintel already fallen between the door jambs and buried by the collapse of the associated overhead masonry. Such butts may have been valued as firewood by visiting chicleros and others during the wet season. These butts may also have been removed to provide blanks for wedges and prybars. We are thinking here of the possiblity that Lintel 2 of this temple was scheduled to be removed; Beam *a* is missing. But realization of its size and poor condition may have changed the minds of the depredators. Finally, the machete cuts in the masonry may have been made by visitors to provide a foothold in ascending to the roof comb. In 1960, the area was carefully inspected and on the whole it seems doubtful that the cutting of the masonry could have related to the deliberate removal of the lintel, if in fact, it was removed.

The fact that two extant outside lintels are plain, together with Maudslay's notation

that Lintel 1 of Temple II was plain, forms a substantial case for all outside lintels in our temple sample having been plain. The plainness of the single (and therefore outer) lintel of Temple V tends to confirm this conclusion, as does the tact that lintel details recorded on the Mendez expedition can all be attributed to inside lintels.

3. PROBLEM OF LINTEL ORIENTATION

In reconstruction of missing carved lintels, it is necessary to take into account the orientation of the design panel in relation to the front-rear axis of the structure. Our conclusion is that the principal or principals of a carved scene face the structure exit. In a temple facing east, the gods, priests, and animals depicted on the lintels similarly face east. Immediate evidence for this conclusion is to be found on Lintel 2 of Temple I (Fig. 12; the structure and seated figure face west) and on Lintel 2 of Temple III (Figs. 18, 19; the structure faces east; note that the central figure correspondingly faces east). Other confirmatory evidence in this regard is brought forward in the statement of final lintel assignments (pp. 38, 39).

4. ASSOCIATIONS OF BEAMS NO LONGER IN POSITION

The relationship of the beams in Figs. 2, 3, and 4 is obvious and has never been questioned in print. These three beams belong together. Furthermore, on the basis of evidence given in our discussion of excavated fragments (p. 29), these beams must come from Temple I.

Inasmuch as the fragment in Fig. 5 is also known to be from Temple I (see Fig. 11b), its position in Maudslay's Pl. 71 (our Figs. 1–5) might be correct; Maudslay recorded its position as "uncertain."

We can find no basis for relating the beam in Fig. 1 to that in Fig. 2. Morley (1937–1938, Vol. 1, pp. 353, 354) is of the same opinion. Evidence for assigning it to Lintel 2 of Temple IV is presented on pp. 37 and 38.

The beams in Figs. 6–10 cannot be placed in any single temple by matching of excavated carved fragments. Attempts at matching via photographs have been unsuccessful and there has been no chance to match fragments to casts of the actual beams. As to the beams themselves, Fig. 6 clearly belongs with Fig. 7. Study of Maudslay's plates as well as of the actual beams and new photographs convinces us that Figs. 8 and 9 belong together. A conceivable error in Maudslay's arrangement, as noted by Morley (*ibid.*, pp. 352, 353), occurs between Figs. 7 and 8 as well as between Figs. 9 and 10. Nevertheless, careful restudy confirms Maudslay's layout of the beams. Our conclusion is that the beams in Figs. 6–10 do belong in that order. At least one beam is missing, to the observer's right of the beam in Fig. 10.

In summary, the arrangements of beams by Maudslay in his Pls. 71 and 72 are considered to be essentially correct, with the possible exception of the fragment in our Fig. 5 and almost certainly the beam in Fig. 1.

The great lintel in Basel (Fig. 29) offers no problem of beam arrangement. As previously mentioned, the fitting of a carved fragment (Fig. 11e) excavated from floor debris of Temple IV corroborates the long held general assignment of this lintel to that temple.

Pertinent material not in Europe includes, first, the two beams originally shown by

Maler and found in Temple II (see our Fig. 17b, c), and, second, a partial beam still at Tikal, found on the floor of Temple I (true position reconstructed in Fig. 13e). The two Temple II beams align on the basis of continuity seen in the necklace featuring three symmetrically placed full face human heads, and of the continuity from beam to beam of feather work, transverse pectoral ornament, and so forth.

The incomplete lintel in Figs. 36, 37 is well documented as being from Structure 10 and there is every reason to associate the two surviving beams.

The problem of assignments has been reduced as follows:

Figs. 2–4	Belong together, stem from Temple I, and must come from either Doorway 2 or Doorway 3.
Fig. 5	Stems from Temple I and must come from either Doorway 2 or Doorway 3.
Fig. 13e	Found in Temple I and must come from either Doorway 2 or Doorway 3.
Fig. 1	Temple assignment problematical.
Figs. 6–10	Belong together but temple assignment problematical.
Figs. 17b, c	Belong together, stem from Temple II, presumably Doorway 2.
Fig. 29	A nearly complete lintel, from Temple IV, must come from either Doorway 2 or Doorway 3.
Figs. 36, 37	Belong together, stem from Structure 10, "third story," inner central doorway.

5. *FINAL ASSIGNMENTS*

A. TEMPLE I

(Structure 5D-1). Oriented to west. Three doorways, one behind the other.

1. *Lintel 1.* Plain. Two beams. Beam *b* in position while a portion of Beam *a* has fallen. Lintel erroneously described by Maudslay as carved. Maler correctly recorded two beams while Morley incorrectly noted three beams.

2. *Lintel 2.* Carved. Originally four beams. Beams *a* and *b* still in position (Fig. 12). Whereabouts of Beams *c* and *d* are unknown. Situation today confirms Maudslay's observations in 1881 or 1882 (Table 1).

3. *Lintel 3.* No beam is in position and the overhead soffits have fallen. Absence of intact butt impressions in the plaster precludes field estimates of number of beams and of their widths. Maler however gives a figure of five beams, indicating that the masonry had not fallen at the time of his visit (Table 1). Other considerations confirm his observation (see discussion below). Lintel 3 is restored in Fig. 13 and shown in detail in Figs. 14–16.

Discussion. Excavated fragments from Temple I definitely place, as previously mentioned, those beams in Figs. 2, 3, 4, and 5 in this temple. Those in Figs. 2, 3, and 4 are unquestionably adjacent beams. These three beams cannot comprise the missing portion of Lintel 2 since three distinct beams are available while Lintel 2 requires restoration of only two. Also, the pictorial content of the two lintels is dissimilar. Additionally, the combined widths of the beams in Figs. 2–4, 0.795 m. (see Table 2 , Temple I, Lintel 3, Beams *a*–*c*; also Fig. 13a–c) exceeds the space permitted them above this second doorway (i. e., 0.54 m.; see Table 2, Lintel 2, Beams c, *d*). And, assuming that the jaguar and

seated personage in Figs. 2 and 3 faced west when originally positioned (see p. 31), duplicate sets of corners would result if forced as the missing portion of Lintel 2.

It is not only evident then that the beams in Figs. 2, 3, and 4 do belong together but collectively they must comprise a substantial part of Lintel 3 of Temple I. The fragment in Fig. 4 is from an outside beam since a portion of the expectable plain border (see p. 24) is present. The piece in Fig. 5, while proved to be from this structure (see p. 29) should also be a part of Lintel 3 on the following grounds: (a) it is the lower right hand corner of a design panel and thus cannot be from Lintel 2 which is intact in this respect; (b) it approximately agrees in width with the fragment of Lintel 3 in Fig. 4; (c) if from Lintel 3, no contradiction of composition occurs; and (d) Lara, on Mendez' visit, copied a scene showing a seated personage in front of whom a small cloaked figure stands, facing to the left (Fig. 21a). This final bit of evidence is conclusive inasmuch as the scene is unknown at Tikal except in the arrangement produced by the combination of those beams in Figs. 2, 3, *and* 5. As Beyer (1943, p. 341) showed, there are remarkable resemblances between Lara's dwarf-like figure and that in Fig. 5 (cf. Figs. 13a and Fig. 21a). Lara's drawing is also of potential value in reconstructing certain gross details subsequently lost in removing and cutting down the lintel. For the reasons stated, the fragment in Fig. 5 is considered to be the lower right hand corner of the design panel of Lintel 3 as well as the lower carved part of the first or outside beam, of which the fragment in Fig. 4 is the upper portion. And since it is highly probable that the orientation of Lintel 3 agreed with that of Lintel 2, the following would be true: Fragments in Figs. 4 and 5 comprise incomplete Beam *a* (Fig. 13a) while those in Figs. 3 and 2, are Beams *b* and c respectively (Fig. 13 b, c). The question now is whether measurements allow these otherwise plausible conclusions.

1.90 m.	Width of Doorway 3.
−.10 m.	Estimated allowance for north and south panel edges (see p. 24).
1.80 m.	Estimated carved panel height.

A lintel with a carved panel height of about 1.80 m. and certainly not more that 1.90 m. is called for. Measurement of the incomplete, actual beam in Fig. 3 (Fig. 13b) gives 1.71 m. excluding the plain area above the upper limit of carving. Since all beams are incomplete, this approach is relatively inconclusive. A second approach, that of comparing actual beam widths with width of beam impression in the mortar is thwarted by the loss of those impressions (which Maler evidently saw).

The necessary proof of the compatibility of doorway and lintel measurements is to be found in a beam, now fragmentary, found on the floor of Room 1 of this temple in 1957. The surviving fragment is shown in Fig. 13e in what should be its proper position. This fragment shows a badly mutilated panel corner with traces of a horizontal frieze of crossed bands. The corner is so composed as to preclude the fragment being from Lintel 2 (cf. Fig. 12), nor for the same reason can it be from what should be the outer beam (Beam *a*) of Lintel 3 (cf. Fig. 13a). Since it shows a corner, it must be the innermost of the beams comprising Lintel 3. The frieze motif is consistent with that seen on Beam *b* (Fig. 13*b*). Returning to the problem of doorway width and panel height, we are fortunate in having Morley's record of a then intact beam found by him in 1914 in Temple I, which showed a panel height of "between 1.82 and 1.83 m." and an overall length of 3.93 m. (Morley, 1937–1938; Vol. 1, p. 349, footnote 520). Morley concluded that this must have been either the outer or inner beam of Lintel 3. Its length agrees with the space allowed the lintel in Doorway 3 (3.96 m.; see Table 2). This beam can only have been the whole of which a fragment was

found in the course of our work (Fig. 13e). This fragment is 1.83 m. long, of which the butt occupies 1.03 m. If the butt dimension is doubled and Morley's figure for panel height is added, the result, 3.88 or 3.89 essentially agrees with Morley's measurement of the whole beam (i. e., 3.93 m.). The beam was 0.185 m. wide (intact) and 0.21 m. thick (intact). The beam must have been chopped in half since 1914. The panel height has been listed in Table 2 as 1.825 m. This figure vertically positions the lower portion of Beam *a* within the whole beam (Fig. 13a). Still to be determined are the number of beams in Lintel 3 and their total width. Lintel width may be estimated as follows (see p. 24 "lintel width" and Table 2):

1.45 m.	Doorway 3 thickness
−0.16 m.	Combined average of insets of Lintels 1 and 2
1.29 m.	Estimated lintel width
−0.975 m.	Combined widths of four known Lintel 3 beams (Figs. 13a, b, c, e)
0.315 m.	Estimated portion of lintel width to be accounted for

Since the four known Lintel 3 beams are essentially intact in their widths, this figure, 0.315 m., is roughly the width of one or more missing beams falling between Beam c and the innermost one, just described. It will be recalled (p. 26) that Maler found evidence, necessarily in the plaster, of five beams in Lintel 3. Beams *b* and c are 0.285 and 0.33 m. wide respectively; the figure, 0.315 m. as the width of a single beam therefore is not excessive. Consequently, the lintel is reconstructed (Fig. 13) as having had five beams. A fragmentary beam found on the temple floor is thus Beam e; Beam *d* is missing; and Beams *a*, *b* and c have already been correctly positioned.

On the basis of the preceding data and especially on Morley's measurement of panel height of what has been determined to have been Beam e, Lintel 3 is reconstructed in Fig. 13. Our calculated total lintel width, 1.29 m. (see above), is there corrected to 1.34 m., the width of the missing Beam *d* is revised to 0.34 m., while the carved panel width results as 1.26 m. (see also Table 2). Panel height was 1.825 m. About 4 cm. of plain area occurred between the design panel top edge and the jamb wall and the same amount between the panel bottom and its associated wall. Thickness of the beams is estimated as between 0.20 and 0.22 m. Substantial portions of all beams except *d* survive. What remains of Beam *a* is in the British Museum; Beams *b* and c are in the Museum für Völkerkunde, Basel, and the surviving portion of Beam e is in Tikal.

In summary, Temple I had three lintels—a partly collapsed outer lintel, a central carved lintel for which we have no record of Beams c and *d*, and a rear carved lintel of five beams, four of which can be substantially accounted for while Beam *d* has totally disappeared. Examination of the two carved lintels indicates a fundamental similarity, the major difference being that Lintel 2 is dominated by stylized serpents while the jaguar is the major element in Lintel 3.

B. TEMPLE II

(Structure 5D-2). Oriented to east. Three doorways, one behind the other.

1. *Lintel 1.* Fallen (or possibly removed) with no recovered evidence. Lintel believed to be plain on evidence that outside lintels were as a rule plain (see p. 30) and the fact that past assignments of various carved beams to Lintel 1 now seem insupportable. Impressions in butt sockets indicate five beams. Former position of lintel shown by Shook (1951, Fig. 11).

2. *Lintel 2.* Carved (Fig. 17); information available on only two of the original five beams. Larger beam fragment (Fig. 17c) survives in American Museum of Natural History

where it was taken in 1914 by Spinden. According to Morley (1937–1938, Vol. 1, p. 349), the smaller fragment (Fig. 17b) had been lost prior to 1914. Both were first discovered and illustrated by Maler (1911, Pl. 18, 2) as from Temple II, lying in the debris (*ibid.*, p. 30). Maudslay captioned this second doorway in his plan as "carved lintel much destroyed," a statement that would indicate that the lintel was ripped out following his visit but prior to Maler's. Through study of plaster impressions of the beams in the masonry, the lintel is known to have been composed of five beams of differing widths (full data in Table 2). Since no trace of a plain border appears on the two fragmentary carved beams, it follows that they must have been interior beams (that is, not Beams *a* or e in a five-beam lintel). Our conclusion (see below) is that they most probably represent Beams *b* and c (see Fig. 17 b, c).

3. *Lintel 3.* Plain and in position. Illustrated by Shook (*ibid.*, Fig. 10). Six beams of roughly the same widths. Full data in Table 2.

Discussion. As indicated in Table 1 and discussed in a prior section (p. 27), the first doorway of this temple was believed by Spinden to have carried the beams in Figs. 6–10. Morley held that the Fig. 17c beam belonged to Lintel 2 while that in Fig. 17b might have been from either Lintel 2 or Lintel 1 (1937–1938, Vol. 1, pp. 354, 355). Those beams in Figs. 8, 9, and 10 were treated by Morley as the bulk of Lintel 1 which he believed to have been carved.

As has been emphasized previously, we see no reason to distrust Maudslay's recorded observation of Lintel 1 as plain (see p. 25; note, however, that Maudslay incorrectly shows in section four beams rather than five, in his Pl. 69, "Temple B") and, moreover, find no reason to divide, as Morley did, the arrangement in Maudslay's Pl. 72 (our Figs. 6–10). Despite Spinden's assertions to the contrary (1913, p. 257) there is also considerable room for doubt that all or a portion of the beams in Figs. 6–10 could fit across the first doorway of Temple II. Morley (*op. cit.*, p. 352) reached this same conclusion.

The outer or first doorway of Temple II has a maximum thickness of 1.34 m. (see Table 2). The east and west insets have a total depth of 0.17 m. Subtracting, we arrive at 1.17 m. as the width of Lintel 1, composed of five beams. The only surviving measurable impression was that of Beam e, showing a width of 0.23 m.

Measurements in Basel yielded the following extant maximum widths for the beams in Figs. 8, 9, and 10: 0.34, 0.37, and 0.32 m. respectively. The combined width of the beams in Figs. 6 and 7 is 0.49 m. The first three measurements total 1.01 m; the total of the five widths is 1.52 m. (Morley, *ibid.*, p. 352 gives the identical result.) Inasmuch as the doorway width is only 1.34 m., quite clearly these five beams, as Spinden contended and Morley contested, could not have belonged here.

Turning now to Morley's assignment to this doorway of *only* those beams in Figs. 8, 9, and 10, their total width of 1.03 m. should be added to that of the width of the cast of Beam e, 0.23 m., on the grounds that Beam e is too narrow (see above) to have been one of those in the aforementioned figures. The result, 1.26 m., exceeds by 0.11 m. the reasonable estimate of lintel width, 1.17 m. Of course, the true discrepancy is far greater since the calculation takes into account four beams rather the five (indicated by casts in the masonry) which constituted the lintel. Consequently none of the carved beams known can belong to Lintel 1 which is therefore considered to have been plain.

Lintel 2 of Temple II, now missing at the site but originally made up of five beams, must have carried the two fragmentary beams shown in the schematic arrangement in Fig. 17.

Only this doorway is available. They must be portions of two of the following beams: Beams *b*, *c*, and *d*.

Both Maler and Morley tended to doubt that the two carved beams were contiguous and, in fact, Morley suggested that they might belong to different lintels (*ibid.*, p. 349). However, careful study of Maler's Pl. 18, 2 shows too great a relationship between these two beams to be coincidental. That the two belong side by side is indicated by the alignment of both shoulders, the continuity of the elaborate three-head necklace and the transverse bar-pectoral ornament, as well as the continuity of headdress and feather elements. In short, there are good reasons to associate the two. They must in this case be fragments of either Beams *b* and *c* or Beams *c* and *d*.

Spinden (1957, Pl. L, *b*) gives an evidently recent drawing of the two Lintel 2 beams. This must have been made from Maler's illustration. The drawing involves considerable unindicated restoration which nevertheless seems reasonable.

The orientation of the two related beams is guided by the face on the smaller fragment which, in profile, looks to the observer's left. The temple opens to the east. Since lintel and temple orientation coincide as a rule at Tikal (see p. 31), it follows that the smaller fragment, with the face, is the outer of the two; it thus can be only Beam *b* or Beam *c*.

Field measurements of plaster impressions (Table 2) indicate Beam *b* to have been about 0.23 m. wide, Beam *c* 0.25 m., and Beam *d* 0.31 m. The almost complete beam (positioned in Fig. 14 *c*) is 0.234 m. wide with no evidence of exceptional peripheral rot; scaling indicates that the now lost smaller fragment was about 0.21 m. wide. Comparison with the sequence of field measurements indicates that the two beams should have occupied positions *b* and *c*, Beam *b* being the smaller of the two, falling to the observer's left, and Beam *c* the nearly complete beam, to the observer's right.

C. TEMPLE III

(Structure 5D-3). Oriented to east. Two doorways, one behind the other.

1. *Lintel 1.* Lintel missing, having either collapsed or possibly been removed. Not in position at time of Maudslay's visit. Surviving plaster impressions indicate six beams. Widest doorway of series, measuring 3.93 m. (Morley, 1937–1938, Vol. 1, Table 13 gives 3.83 m.). Spanned by beams 6.09 m. long. For reasons already given (p. 31), it seems highly probable that this outside doorway was spanned by a plain lintel. As often pointed out by others, none of the assigned carved beams is of sufficient length to have spanned this doorway.

2. *Lintel 2.* Carved. Originally ten beams, all of which are in place with the exceptionof Beam *a* which has disappeared. Lintel illustrated in Figs. 18–20.

Discussion. The missing beam of Lintel 2 should have carried Columns A and B of a text comprising 19 glyphs to a column which was continued on the innermost beam, Beam *j* (with Columns C and D). The probable total of 72 glyphs thus exceeds in length the other surviving texts on Tikal lintels.

Whether or not Beam *a* was deliberately removed is difficult to say. The east edge of Beam *b* has severely decayed, suggesting total loss through decay of Beam *a*. No axe or machete scars were seen in the associated masonry. The beam was missing by 1895 (Maler, 1911, p. 37).

Our line drawing, essentially a plan, of this lintel, in Fig. 18, should be qualified. Extant separations between beams, measuring a total of 0.095 m. along the bottom of the carved panel, have been ignored. The lintel width along the bottom or south edge of the carved

panel has been drawn so that with the addition of 0.095 m. and with bisymmetrical restoration of Beam *a*, the total width would be 2.171 m. Two independent field estimates of the width of Beam *a* were 0.23 m. and 0.24 m.; our drawing shows it as 0.252 m. Field measurements along the north side, on two separate occasions, gave a figure which when coupled with a 0.23 m. width for Beam *a* yielded about 2.16 m. for the lintel width (Table 2). The fact is that the lintel is wider by 0.035 m. along the south than the north side. In our drawing just the opposite has emerged. This relatively minor distortion can be attributed to the fact that a great many photographic negatives, none of which were made at a controlled right angle to the subject, were used to build up a guide mosaic for the drawing. To have attempted to correct this horizontal distortion would have required too great an adjustment throughout.

The height of the carved panel was measured down the center and read 2.03 m. (Table 2). Another measurement taken near one side gave 2.04 m. Panel width is reconstructed as 2.07 m.; if the east glyphic column (Beam *a*) was equal in width to that to the west, it follows that the plain east and west borders were of unequal width.

Lintel 2 has been described in some detail in a recent publication (Coe, 1958). Lara, who sketched various Tikal sculptures during the Mendez expedition in 1848, appears to have copied imaginatively the central figure of this lintel and the left hand one as well (Fig. 21b; see also, Beyer, 1939, p. 342). A drawing showing the central figure was made by Blom in 1924 (in Follett, 1932, Fig. 31).

According to Maler (1911, p. 37) the lintel was seriously mutilated between his visits in 1895 and 1904. Yet, as early as 1881 the condition of the lintel was evidently poor, for Maudslay, in his temple plan, notes "carved beams much destroyed." Various fragments of carving from the lintel were recovered from the surface of the floor debris while clearing the rear room of the temple. None were successfully fitted.

D. TEMPLE IV

(Structure 5C-4). Oriented to the east. Three doorways, one behind the other.

1. *Lintel 1.* Plain, in position, complete. Composed of six beams. Dimensions given in Table 2.

2. *Lintel 2.* Missing at the site. Because of excellent impressions in masonry, this lintel is known to have been composed of six beams. On the basis of data given below, the lintel is reconstructed as follows:

Beam *a*: Fig. 22 a and Fig. 6.
Beam *b*: Fig. 22 b and Fig. 7.
Beam *c*: Fig. 22 c and Fig. 8.
Beam *d*: Fig. 22 d and Fig. 9.
Beam *e*: Fig. 22 e and Fig. 10.
Beam *f*: Fig. 22 f and Fig. 1.

Lintel details are shown in Figs. 23–28.

3. *Lintel 3.* Missing at the site. There is complete agreement that the lintel shown in Fig. 29 (details in Figs. 30–35), however, belongs across Doorway 3. The little that can be added to the evidence given by Morley and others is stated in the following discussion.

Discussion. Beams yet unassigned are shown in Figs. 6 through 10 and in Fig. 1.

By a process of elimination these beams are obvious candidates for the second doorway of Temple IV. It should be noted that no excavated carved fragment has as yet been fitted to any of these beams. Consequently they can be assigned to Temple IV and the available second doorway only on the basis of measurements, interrelationship of the beams themselves, and compatibility with surviving impressions in the masonry.

In prior discussion (p. 31) it was stated that Maudslay's arrangement of the beams (as in Figs. 6–10) was correct. But, as have others, we doubted his placement of the beam in Fig. 1 alongside the beam in Fig. 2. The problem now is to determine whether the six beams still unaccounted for do not actually comprise Lintel 2 of Temple IV which calls for six beams.

Careful study in Basel of the actual beams in question showed that limited continuity occurred between the beams in Fig. 1 and Fig. 10 (see details, lower right, Fig. 28) if the Fig. 1 beam was inverted from the position given it by Maudslay. This beam falls to the right of the beam in Fig. 10 (as in Fig. 28).

Careful alignment of the beams in Figs. 8 and 9 produces a carved panel height of 2.16 m. (Table 2). Doorway 2 of Temple IV is 2.18 m. wide (Table 2). Width of doorway and panel height are thus compatible, permitting however only a very narrow plain area at the top and bottom of the panel before meeting the jambs.

Other factors to be considered are the widths of the beam impressions and their concordance with the widths of the beams in Figs. 6–10 and Fig. 1. A summary of dimensions (in meters) follows:

Beams	Figures	Impression widths	Beam widths (unadjusted)
a	6	0.34 m.	0.215 m.
b	7	0.29 m.	0.25 m.
c	8	0.46 m.	0.34 m.
d	9	0.39 m.	0.37 m.
e	10	0.32 m.	0.32 m.
f	1	0.39 m.	0.16 m.

Although "beam widths" do not agree precisely with the "impression widths" because of rot and other reduction (see illustrations), there is significant agreement between the two series of measurements. Additional confirmation is the exact agreement between the width of the beam in Fig. 10 and the anticipated width from the beam impression. Inversion of either one of the series destroys concordance.

Conclusions respecting this lintel are diagrammed in Fig. 22. From beam impressions it is known that the width of the lintel along the north side was about 2.20 m. (Table 2). Guided by the width of the beam impressions, the lintel components are positioned. A border on the east side of 0.17 m. is called for. Bilateral symmetry would allow a plain west border of postulated equal width. A carved panel width of 1.86 m. results. Beam *f* which survives as the fragment in Fig. 1 (when inverted), emerges in this reconstruction as having been originally 0.39 m. wide.

Lintel 2 then comprises six beams: Figs. 6, 7, 8, 9, 10, and 1 (inverted), in this order and from left to right. The particular order has of course been necessitated by the sequence of correlated component beam widths and impressions, and, in our opinion, has correctly oriented the lintel so that the depicted individuals do look to the east in agreement with the orientation of the temple. The assignment of these beams here is in accord with Beyer's opinion as to the stylistic relationships in hieroglyphs between Lintel 2 and what is assuredly Lintel 3 (see pp. 28–29).

Turning to Lintel 3, all prior studies, with the exception of Maudslay (see Table 1),

agree that the third doorway of Temple IV must have been the source of the lintel in Fig. 29, Morley (1937–1938, Vol. 1, pp. 251–252) presents the basic data underlying this unquestioned provenience. The finding of the fragment shown in Fig. 11e in the debris of Temple IV is excellent confirmation of gross provenience (see p. 30). Briefly, the lintel is composed of seven beams, and only a single doorway (the third of Temple IV), conforms in the number of impressions in the masonry. Doorway width and thickness correspond well with actual lintel width and panel height when plain areas above and below the design panel as well as insetting of outer and inner beams are considered (see Table 2).

Apparently the only remaining problem concerning Lintel 3 is its orientation when in place. The seated individual in the panel center faces to the left side of the panel. In view of the data assembled on other lintels, including that for Lintel 2 in this temple (see p. 31), one would expect the left side of the panel to have been set to the east with the panel bottom to the south. Reasonable proof that this was the case occurs in the following correlation of impression width and beam width sequences: the first column of figures, to the left, gives impression widths (in meters) taken along the south end of the lintel support area, from center to center of the plaster stubs between the former beams; the second column records in the same order the measurements taken at the north end of the area formerly occupied by the beams and across each separate impression, excluding the plaster septa between beams; the right hand column tabulates existing widths of the Basel beams, derived from actual measurements not corrected for loss through rot, etc.

Beams	Impression widths		Beam widths (unadjusted)
a	0.38 m.	0.28 m.	0.29 m.
b	0.28 m.	0.31 m.	0.28 m.
c	0.29 m.	0.28 m.	0.29 m.
d	0.28 m.	0.30 m.	0.315 m.
e	0.23 m.	0.18 m.	0.27 m.
f	0.43 m	0.38 m.	0.39 m.
g	0.28 m.	0.26 m.	0.27 m.

General agreement is seen throughout, particularly when it is realized that the widths of the actual beams have been reduced by various factors (rot, hacking, etc.). The relative agreement within the total sequence of the data for position *f* is particularly noteworthy. The arrangement of the series in this order (and no other) tends to corroborate the otherwise apparent rule that the orientation of the principal individual (here in the face) agrees with that of the structure itself. The lintel must have been so positioned that the bottom of the design panel was to the south.

Plotting the beams in terms of the surviving evidence at Tikal yields a lintel with a total width of 2.20 m., a carved panel width of 2.05 m. and a carved panel height of 1.756 m. Careful arrangement of the beams in Basel showed that the seated personage's left heel falls 1.00 m. from the left panel edge (i. e., east edge) while the right heel falls 1.01 m. from the right panel edge.

In conclusion, we should like to note what is probably obvious, simply that the general arrangement or theme of Lintel 2 (Fig. 22) is strikingly like that seen on Lintels 2 and 3 of Temple I (Figs. 12, 13). Again, a giant figure is shown, subordinating a seated priest-like individual; here the giant figure is human but with the jaguar ear and the number 7 and a loop under the eyes, all attributes pointing to an identification as the "god of number 7" and a jaguar god of the underworld (see Thompson, 1950, p. 134, Fig. 12, 13). If the motif of Lintel 2 is jaguar or feline, that of Lintel 3 is the serpent, actually feathered. This

contrast is duplicated in the two carved lintels of Temple I.

E. STRUCTURE 10 (STRUCTURE 5D-52).

Oriented to the south. A multi-roomed "palace" type building (see Appendix, p. 74). Only the inner of the two central doorways of the "third" story is as yet known to have been spanned by a carved lintel. All evidence indicates that the two beams shown in Fig. 36 c, d (also Fig. 37 b) formed the medial portion of this five-beam lintel.

Discussion. The first mention of this lintel was by Maler (1911, pp. 16–17) who believed that it was originally composed of five "beautifully decorated" zapote beams. Two of them ("of course the best preserved ones") had been carried away prior to his 1904 visit, reputedly by three individuals from Flores.

Morley (1937–38, Vol. 1, pp. 341–42) studied the surviving beams in position in 1914. He states that there were three beams present out of the original five, confirming Maler's statement. All three are said to have been removed at that time; these were deposited in the American Museum of Natural History by Spinden, who accompanied Morley on this visit to Tikal.

There are good indications that Morley mistook a beam (see our Fig. 17 c), well documented by Maler as from Temple II, as one of the supposed three removed from Structure 10 in 1914. Morley's Pl. 73 a shows, on the right, two joined beams definitely from Structure 10, and, on the left, a single carved beam. These are the three beams deposited in New York by Spinden in 1914. The single beam was seen that year by Morley in Temple II (see his Table 13). Further evidence of at least consistent confusion in this regard is contained in Morley's Footnote 509 in which he gives the American Museum of Natural History catalogue numbers of the Structure 10 specimens. The final number is that of the Temple II beam, which, as previously noted (p. 28) had been erroneously catalogued as from "Structure 10." This correction of an understandable error on Morley's part is pertinent to the problem of exactly how many beams made up this Structure 10 lintel.

On investigating this doorway, we found it badly fallen and the entrance almost closed by debris. In the chamber, an apparently complete lintel beam with no signs of carving was found lying on the debris. About it were seven variably preserved lintel butts. Measurements are summarized in Table 2. The doorway opens to the south and is 1.78 m. wide. Slight excavation was required to locate the south face of the intermediate wall between the intact rear room and the wholly collapsed front room. Enough was excavated to expose the line of the jambs and the areas which had supported the lintel butts. The portion of the lintel taken to New York had been previously studied and found to comprise no more than two beams which had been joined for easy handling. Due to rot, their fit is poor but completely convincing. The outside edges also show signs of rot. They present a carved panel height of 1.76 m. Together the two beams show a maximum width of 0.68 m., with the left beam (Fig. 20 c) 0.39 m. wide, and the right beam (Fig. 20 d) 0.29 m. wide.

Discovery of the apparently complete beam (length, 3.08 m., width 0.22 m., and thickness 0.18–0.19 m.) just north of the doorway and lying on the debris near the north chamber wall, presents various puzzles. First, there is not a trace of carving on this beam though decay gives it a potentially deceptive appearance. The beam must come from this doorway as its preserved length, 3.08 m., is consonant with the total lintel length determined by socket-to-socket measurement. Secondly, both Maler and Morley claim five beams for this lintel; two were said to have been removed by people from Flores, while Spinden is said to have

removed the other three. Yet only two (carved) are in New York and a third (plain) is still within the structure.

The west door jamb measures 1.47 m. wide, and the east one 1.45 m. Each inset measures 0.06 m., giving a total of 0.12 m. Calculating in terms of the west jamb, we arrive at 1.35 m. as the width of this lintel.

Seven pieces of zapote wood were found in the chamber in addition to the evidently complete plain beam. These pieces represent the plain butt portions of the lintel which were chopped off from the carved panel. Fragment 1 and Fragment 3 are the only ones in which complete width could be determined. These measure 0.27 m. wide (thickness, 0.11+ m.) and 0.16 m. wide (thickness, 0.15 m.). These dimensions in width differ sufficiently among themselves to preclude them from being from the same beam. Consequently there is every reason to consider these widths in reconstructing the entire lintel width. Neither butt, of course, can be from the plain whole beam lying on the chamber floor debris. Fragment 1 (0.27 m. wide) might possibly be from the right hand beam of the two in New York if the latter could be shown to be complete in its extant width (0.29 m.); this does not seem to be the case.

Various schemes have been tried and the following arrangement (Fig. 36) seems the best in terms of available beams, and butts, of the known width of the lintel, and of observations by Morley and Maler.

South

Beam	Width	Location
a	0.22 m.	on floor of chamber
b	0.16 m.	Frag. 3
c	0.39 m.	see Fig. 36 c
d	0.29 m	see Fig. 36 *d*
e	0.27 m.	Frag. 1

North

The total of the individual beam widths is 1.33 m., or a mere 0.02 m. less than the apparent original lintel width of 1.35 m. Had the calculation been made on the basis of the east jamb, rather than that of the west one, there would be exact agreement.

This arrangement of beams is conditioned by the evident requirement of placing the carved beams in New York close to the center of the lintel. Furthermore, assuming that the factor of lintel–structure orientation was followed here (see p. 31), the top of the panel must have been set to the east and the bottom to the west so that the principal personage in the scene looked to the south. Beam e (Fragment 1) becomes the innermost one on the grounds that it was one butt of a carved beam (why else would it have been chopped off ?) which was sufficiently wide to have carried a border plus the completed continuation of the background and raised carving seen on Beam *d* (Fig. 36d). Beam *b* should also have been carved but without the deep carving seen on Beam c (Fig. 36c). For instance, Beam *b* would be expected to have carried at least the remainder of the heron wing on Beam c and perhaps the left side of the intricate basal panel. The intact plain beam from the chamber floor, uncut and discarded because it was plain, by a process of elimination, must be Beam *a*. Confirmation is found in the single measurement of beam impression obtainable. This was taken in the west lintel socket from the south edge of the lintel position to a plaster ridge. 0.36 m. to the north. The combined widths of Beams *a* and *b* total 0.38 m. (0.22 m. plus 0.16 m.) which sufficiently approximates the field measurement as to indicate a plausible fit.

In summary, Maler's notation of five beams appears to be justified by the surviving evidence. Beams c and *d* were certainly in place at the time of his visit (he provides a fanciful but pertinent description) as well as at that of Morley and Spinden. For the "greedy treasure seekers" from Flores to have removed and carried off two carved beams would have required their simply working out Beam e (which should have completed the carving on Beam *d*). But to remove Beam *b*, the only other one seemingly carved that could have been taken by them, would have necessitated first taking out plain Beam *a*. They would have been obliged to do so unless Beam *b* was dangling, supported only by the butt known as "Fragment 3." In any case, Maler and Morley could have seen only two truly carved beams. If they did see three in position, as claimed, it follows that Beam *a* was still in place and that they presumed it to have been carved. As has been noted, Morley did attribute the Temple II beam (Fig. 36c) to Structure 10, perhaps misguided by an error in museum cataloguing. He may have mistakenly believed that the supposed third beam in the Structure 10 lintel was this beam.

F. SUMMARY

Seven carved wooden lintels are now known for Tikal: Temple I, Lintels 2 and 3; Temple 2, Lintel 2; Temple III, Lintel 2; Temple IV, Lintels 2 and 3; and the Structure 10 Lintel. The largest carved panel occurs on Lintel 2 of Temple III. No complete carved lintel is known to survive at Tikal. Those responsible for removing the two beams of Lintel 2 of Temple I, the bulk of the beams of Lintel 2, Temple II, and possibly Beam *a* of Lintel 2 of Temple III are entirely unknown. The bulk of Lintel 3 of Temple I and Lintels 2 and 3 of Temple IV are preserved in the Museum für Völkerkunde, Basel and the British Museum. One beam (Beam c) of Lintel 2 of Temple II and two beams (c, *d*) of the Structure 10 lintel have been preserved in the American Museum of Natural History. Two other beams from the latter lintel were removed by people from Flores in the 19th century. Nothing is on record for nine carved beams: Temple I, Lintel 2, Beams c and *d* and Lintel 3, Beam *d*; Temple II, Lintel 2, Beams *a*, *d*, and e; Temple III, Lintel 2, Beam *a*; and the Structure 10 lintel, Beams *b* and e. All outer doorways of the great temples are believed to have been spanned by plain lintels.

MISCELLANEOUS DATA

1. OBSERVATIONS ON BEAM CUTTING, CARVING, AND INSTALLATION

Two types of local wood, zapote (*Achras zapota*) and logwood (*Haematoxylum campechianum*), were employed for doorway lintels and vault beams. Both trees grow today abundantly in all the environs of Tikal. Logwood, formerly an important source of dyes, is a low growing, multiple stemmed tree found only in swamps. Zapote, in contrast, rarely occurs in logwood swamps but grows abundantly on elevated terrain with its well-drained shallow soils which overlie porous limestone base rock. Zapote is a tall, normally straight, single stemmed tree. Today it is exploited as the prime source of chicle for the chewing-gum industry. Both zapote and logwood rank among the hardest and most durable tropical woods of the world.

Logwood, though frequently used in ancient times for lintels and vault beams, evidently

was unsuited for carving because of the small diameter and the irregularity of its surface. All examples preserved in Tikal buildings are natural size logs, cut at either end to the lengths required for a particular doorway or vault, but unaltered further except for the stripping-off of the bark (which actually was not removed in all cases). Zapote, on the other hand, being a large, tall, and straight stemmed tree, had to be felled, then cut into logs. Cross-sectioning of six zapote lintel beam butts (from Temples I and IV) indicates that four beams (Temple I, Butts "A," "C," "D"; Temple IV, Butt "G") had been fashioned from logs by removing the bark and squaring the log. One other specimen (Butt "B," Temple I) appears to have been made from a halved and squared log. The sixth specimen (Butt "A," Temple IV) could have been made from either a halved or a whole log, more probably the latter. These lettered butts are further discussed on pp. 45–46.

We have good reason to respect the ancient workmen for their ability to hew beams from a zapote tree with only stone implements available to them. We are having considerable difficulty replacing the missing zapote beams in the "Great Temples" despite the advantage of modern equipment which includes steel axes, tractors for hauling, a sawmill, chisels and adzes for shaping the beams, and mechanical hoists, jacks, and steel cables for lifting them into place. The hard, tough zapote wood, estimated to weigh some seventy pounds per cubic foot, rapidly dulls steel tools. Our experience with zapote wood demonstrates that freshly cut wood, though exceedingly tough, is less hard and brittle than after drying. This factor leads to the assumption that the Maya with their stone tools carved the beams while still fresh. All the plain and carved lintels discussed in this report are of zapote wood. Normally, the lintel beams are approximately rectangular, with the four faces worked to a smooth plane.

As regards the question of carving in position, one would expect that the task of carving beams after installation would have been infinitely more difficult than carving before installation. The limited light within the temple rooms would have seriously hampered carving (Angel Fernandez, 1939) as would the elevations of the lintels above the room floors, requiring scaffolding and probably a prone working position. Previously it was felt (Coe, 1958, pp. 78–79) that the beams were installed already carved because the beams appeared to have been deliberately separated during installation, yet, when they were brought together on paper while being drawn, it was found that carving on two adjacent beams coincided exactly. The fact is that we are no longer certain that these beam divisions may not have resulted from contraction due to dessication during the long period following their installation. The plaster squeezes, so useful in reconstructing a missing lintel, may have occupied the space provided by two adjacent beams slightly trapezoidal in section.

Nothing essential can be added to the common supposition that carving was carried out by the use of obsidian flake-blades, hardstone chisels (which the bulk of recovered "celts" seem to have been), scrapers of flint and obsidian, drills of flint and reed (to rough out deep background), and abrasives for final finish. Extreme micro-photography might reveal evidence of tools and materials employed.

Observed structural practices in Tikal buildings show that masonry walls were erected to the height of, or within one course of, the vault spring and capped with lime plaster. The reason apparently was to allow the wall masonry time to dry and set before adding the structural load of the vault and superstructure. In both doorways of Temple III, however, it was noted that special, plastered areas had been prepared to receive the lintel beams (Fig. 21 c). The portions of walls adjacent to the jambs had been so constructed that when the beams

were positioned, they rested well below the true tops of the walls. A gap of 0.12 m. occurred between the south end of Beam *b* of Lintel 1 and the vertical portion of the inset, and a gap of 0.20 m. in the case of Beam *a* (north end) of Lintel 2. This particular feature of walls specially prepared for lintels is not easily observed and we are uncertain at this time of its distribution elsewhere at Tikal.

At some time before or during wall "ageing," the beams were shaped, and beams to be carved were laid against each other, the scene blocked out, and the sculptor and possibly assistants were set to work. In specifying the quantity and lengths of beams, the architect had to take into account the width of the doorway and its thickness, while the sculptor had to know the dimensions of the doorway before plotting the scene to be carved on the parallelly arranged beams, and in the case of at least Temple III, the length of the specially prepared wall beds.

The handling of the delicately carved beams during the ascent to the temple rooms must have been a problem, as must also have been their actual installation. Possibly each carved beam was protected by a padding of palm leaves or cotton, wrapped with woven mats, and firmly tied with fiber cord. Considerable engineering skill was required in transportation and installation.

Once the carved beam had been hoisted into approximate position (with the bottom of the carved panel always set to the south in Temples I through IV), the protective wrapping around each beam was removed to permit the final exact alignment and close setting. However, the lintel, once accurately assembled, still needed protection, evidently from the construction activity which followed.

It was noticed that, where a lintel had fallen or had been removed, the masonry directly above it frequently showed impressions of woven mats and cords. The positions of the mat impressions indicate that the mat just overlapped the top two edges of the lintel area between the door jambs. The cord or twine impressions are at a right angle to the long axis of the lintel and similarly occur between the door jambs. These impressions begin from 0.11 m. to 0.40 m. in from the jamb face. The cords range from 0.002 m. to 0.006 m. in diameter and show a simple twist of two or three fiber strands. The mat impressions suggest a plain weave pattern of over-and-under, probably of palm leaf. The weave is indistinguishable from that found in mats of modern highland Maya in Guatemala.

These cord and mat impressions are interpreted as evidence that mats covered the carved underside and the sides, and overlapped the upper edge of the lintel, thus affording some protection against damage during the construction of the masonry vaults and the final plastering of the building interior. Following completion of the building, the mats were cut away, revealing the carving and leaving the buried mat edges and cord to rot between the masonry and the top surface of the lintel.

There is some evidence that one, if not all, of the carved lintel panels was painted red at this time. Latex molds of the Temple I, Lintel 3 beams in London and Basel interestingly picked up traces of red paint from the carved surfaces, especially but not exclusively from deep areas of carving. The distribution of these small red patches indicates that the entire carved panel of this lintel had been painted a uniform red. Analysis of a sample by Mr. A. Eric Parkinson, University Museum chemist, clearly shows the pigment to be cinnabar. We cannot say whether or not the plain areas surrounding the panel were ever painted red. No trace of paint was noted along the tops of the door jambs although some traces of red might be expected had the plain areas been painted after installation.

Molds of two Temple IV lintels failed to provide definite traces of this red pigment. However, in view of the slight amount picked up by the molds of the Temple I beams, it is possible that all evidence of painting could have been normally lost. Still, we cannot

assume painting on all carved lintels at Tikal. No trace of red paint was seen on Lintel 2 of Temple I nor on Lintel 2 of Temple III, both at the site and carefully cleaned and studied.The possibility that the painting of Lintel 3 of Temple I was connected in some way with a two-part offering is suggested by the finding of Cache 49 below the buried portions of this lintel.

Cache 49 A had been set beneath the north end of the lintel in a simple oval hole in the wall masonry while the fairly recently looted offering, Cache 49 B, was comparably situated beneath the south portion. Full data on this two-part "dedicatory" offering is given in Tikal Report No. 13. The south repository is evidently the source of the three red-painted or impregnated stingray spines mentioned by Shook (1958 a, p. 8) in a summary of debris excavation within the temple rooms in 1957. A speculative point is that both parts of the cache contained considerable quantities of a red pigment (presumed from its color to be cinnabar); since the lintel was painted red, may not the coincidence have been meaningful and perhaps unique? Cache 49 was the first known example of a cached offering in association with a lintel but it should be emphasized that other doorways which once supported carved lintels have yet to be investigated for such deposits.

2. *THE QUESTION OF RESETTING OF LINTELS*

Keeping in mind the large amount of evidence of reset stelae and altars at Tikal, both plain and carved (Tikal Reports Nos.12, 14 in preparation), one must consider the possibility that lintels were salvaged from older structures for reinstallation in such major constructions as Temple I. We can find no indication that any carved lintel was reset; such evidence would be gross stylistic incompatibility between two carved lintels in the same structure, a carved panel height exceeding the associated door width (with concealment of some carving resulting), or even especially high plain areas above and below the design panel. All carved lintels appear to fit in their doorways. There can be less certainty with regard to the plain lintels.

3. *LINTEL BEAM BUTTS AND CARBON-14 SAMPLES*

In a program of collecting wood samples from lintel beams and vault beams throughout the site, various lintel beam butts were selected for sampling. These butts occurred on the floors of the rooms of Temples I and IV; in all cases they were so cut as to indicate that they originally belonged to the carved beams which were removed from these temples. Prior to being sampled, the butts were transversely sawed to provide a fresh face for observation of the growth pattern. Samples of wood were taken from the latest growth as indicated by the pattern. The problem is to determine to which beams of which lintels the butts belonged.

TEMPLE I

"Butt A" measures 0.32 m. wide and 0.18 m. thick; probably from either Beam c or Beam *d* of Lintel 3; too wide to be from Beams c or *d* of Lintel 2 (see Table 2); there are no other possibilities. Field C14 sample, T–95.

"Butt B" measures 0.175 m. wide and 0.20 m. thick on the prepared face; this is a surviving fragment of Beam e of Lintel 3 (see Table 2 and Fig. 13 e) with a maximum width of 0.185 m. and a thickness of 0.21 m. Field C14 sample, T–318.

"Butt C" measures 0.33 m. wide and 0.22 m. thick; Beam c of Lintel 3 seems

a likely source; if so, "Butt A" would be more probably from Beam *d*, particularly in view of the thickness difference between the two butts; there are no other possibilities. Field C14 sample, T–77.

"Butt D" measures 0.25 m. wide and 0.20 m. thick; if not from Beam *d* of Lintel 2, less likely candidates would be Beam c of Lintel 2 or Beam *b* of Lintel 3 (see Table 2). Field C14 sample, T–83.

TEMPLE IV

"Butt G" measures 0.24 m. wide and 0.205 m. thick; beam widths (Table 2) indicate Beam e or Beam *g* of Lintel 3 as the most probable source of this butt. Field C14 sample, T–478.

"Butt A" measures 0.31 (+?) m. wide and 0.20 m. thick; thickness consistent with thickness range of beams of Lintel 3; exact beam indeterminable, but Beams *a*, *d*, and *f* are likely possibilities. Field C14 sample, T–484.

APPENDIX

INSCRIPTIONS AND OTHER DATING CONTROLS

By Linton Satterthwaite

INTRODUCTORY REMARKS

We use the structure numerations of Morley (1937–1938). Temples I and IV had previously been labeled A and C by Maudslay; new names and map designations are given throughout the main text of this report, and in Report No. 11.

The carved lintel beams here considered include the total surviving corpus of legible or partly legible Tikal dates on wood. These are from Temples I and IV, and from Structure 10. Their importance is now much enhanced by attempts to apply radiocarbon controls, and to use the results as checks on correlations of the Long Count with Christian chronology. This being the case, correct assignment of contemporaneous "Dedicatory" or "Commemorative" dates is especially important. Lintels at Temples II and III, without surviving dates, will be considered last. With a single exception, the texts we are concerned with have been well studied before, and Morley's 1937–1938 decipherments are the points of departure. The inscriptions are presented in the standard manner adopted for stone monuments (Tikal Report No. 4, pp. 89–92). Before proceeding with the individual inscriptions some background exposition is desirable, most of it being directly or indirectly concerned with the problem of trying to assign correct and precise dedicatory dates.

CHANGED LONG COUNT POSITIONS

Since Morley's presentation of the texts at Temple IV, Beyer had shown that the panel giving Morley's latest four dates for Lintel 2 of that temple must belong elsewhere (see pp. 28–29). This is the panel shown on Maudslay's Pl. 71, with a drawing of the glyphs on p. 74. Coe and Shook now show that these beams are parts of Lintel 3 of Temple I (Fig. 13). This is in line with Beyer's convincing case that the opening date of this panel, 9 Ahau 3 Pop, should be placed at 9.13.3.0.0, a position once suggested by Spinden, one CR period earlier than the 9.15.15.13.0 of Morley (see pp.68–70). This requires moving back the other three dates of this panel accordingly. One has the problem of deciding whether one of the four dates, at the new LC positions, can safely be assigned DD status, a matter which Beyer did not discuss in any detail.

IMPROVED CORPUS OF ILLUSTRATIONS

Many of the carved beams have been re-photographed by the Tikal Project, with lightings from various angles to bring out details. Coe's photographs and drawings of Lintel 2 of Temple I seem to be the first ever to be published, and they include a damaged glyph-panel to

which no attention has been paid. His photographs and drawing of Lintel 2 of Temple III are the first complete and accurate ones. Though these provide no dates they have been used for style dating.

REVISED STYLE DATING

In her 1950 study Proskouriakoff lists 9.16.10.0.0 ± 2 katuns for "Temple IV (?) lintels," citing Maudslay's Pl. 71 as well as his Pl. 77. Evidently this result is a composite one involving beams from two temples, Temple I as well as Temple IV. Supplied with full (presently available) data, Proskouriakoff has applied her system anew, with separate curves for each wooden lintel at the site (see Table 3). It results that we have two mean style dates and "spreads" at Temple I and at Temple IV. In the synoptic headings we give those for each of a pair of lintels, and also the early–late limits covering the spreads from the two combined. It seems fair to say that a DD which does not fall far outside the combined limits does not seriously "disagree" with the style-date analysis. For the Temple IV lintels the two sets of limits fail to coincide by only a half katun, but at Temple I they are staggered by one and one-half katuns. We do not consider that this is sufficient ground on which to postulate different DD's for the two lintels of the latter temple (see below).

LINTELS AS "MONUMENTS"

The pictorial and inscriptional content of a Tikal wooden lintel does not differ in kind from that of stone monuments. We may, for example, compare Lintel 2 of Temple III with the early Tikal Stelae 23 and 25. In each case there are three full-scale human figures. On the lintel they face the principal figure in the center. On the stelae they are on the sides but face observer's left and right respectively–i. e., both face to the front, as if a design like that of the lintel, too wide for the front only, had been carried around to the sides. This device is even clearer on Stelae 1 and 2, though only one figure is involved. As on monuments, which may also place the "scenes" and the inscription on one surface only, the lintel inscriptions may exhibit only one date or several, fixed in the Long Count. The usual assumption that time-marking by a dedicatory date was involved in lintel texts as on monument texts seems justified. Of course the assumption implies that the same rules for recognizing DD's apply in both contexts.

Evidence tending to confirm the view that a carved lintel with dates was in effect a specialized monument was obtained during the last (1959) season when Trik found that a divided offering had been placed in the wall masonry on either side of the doorway, just below the ends of the central beam of Lintel 3 of Temple I (Tikal Report No. 13, Cache 49 A, B). Though the contents of these two deposits differ in kind from those common in sub-stela caches, in either context the offerings must have been made shortly before carved units were put in place, in the course of "dedicatory" ceremonies.

It should be conceded, I think, that if the lintels were essentially specialized monuments with dedicatory dates, these dates were not dedicatory for the completed building, as a whole. Such dates would follow completion of substructure building but would precede the beginning of vault erection on the walls of the building proper, and the still later construction of ornamented exterior upper zones and roof combs. This conclusion is inescapable, unless one supposes the carving was done after the beams were in place, which seems unlikely (this report, p. 43). It may well be that "dedicatory" ceremonies took place as various stages of construction were completed, and that installation of carved lintels involved "dedication" of the walls. If so, we still have an analogy with stelae which, at Tikal and at various other sites were positioned with reference to architectural constructions.

RELATED TEXTS ON PAIRS OF LINTELS

In two temples (Temples I and IV) we have pairs of carved lintels. Regarding them as the equivalents of stelae, we have the theoretical possibility of differing dedicatory dates in the same temple. This seems extremely unlikely, for the construction program would probably call for more or less simultaneous placement of all lintels. Morley assumed this for the lintels of Temple IV, citing various close correspondences in the two texts, which are later enlarged on (pp. 57–58). At Temple I there were no such textual similarities, but contemporaneity is suggested by the giant-sized figure of a jaguar on Lintel 3 and a giant-sized figure of a serpent on Lintel 2. Our conclusion is that we should look for single dedicatory dates in each temple, but in each case, should consider the two texts together.

While at Temple IV the texts on each lintel may be read separately, this was not necessarily the case at Temple I. At Yaxchilan, in reading a single continuous text one may obviously pass from one stone lintel to the next, but unfortunately these lintels were all in the facades, not one behind the other as in the Tikal temples. It seems a safe presumption, however, that Lintel 2, reached first by an observer, would be read first, whether or not there were two separable texts.

At Structure 10, a palace, we have only one carved lintel to deal with. It spanned the inner central doorway on the first floor of a two-story building and there is every reason to suppose its single date was the dedicatory one for in the lintel. The nomenclature which makes this a "third story" location is discussed on p. 72.

CRITERIA FOR IDENTIFYING DEDICATORY DATES

At Structure 10 we have only one lintel and one date to deal with; but at each of the two temples we have two lintels, and in each case several dates. In both cases we shall have difficulty in deciding that some one of the recorded dates was the dedicatory one. Hence some account of the rules which may be brought to bear on the problem is desirable.

Morley's writings are replete with fully explained decisions on sure, doubtful, and very doubtful dedicatory dates, but the writer has not found a comprehensive summary of his principles in some one place. He quantifies his findings in two tables (1937–1938, Vol. IV, pp. 290–291). Though these tables include dubious readings it seems clear that the great majority of recognized dedicatory dates are at tun-ends, and that these may be classified as follows, in decreasing order of frequency:

Hotun-ends:	Katun-ends
	Half-katun-ends
	Quarter-katun-ends (1st and 3d)
Odd tun-ends:	13th tun-end
	Other odd tun-ends

General discussions of the problem are to be found in Thompson 1950, pp. 154–156 and Proskaouriakoff 1950, pp. 9–10. Thompson makes the important observation that "there are no fool-proof" rules."

I think the following rules cover the great majority of accepted contemporaneous dates:

1. The recorded Dedicatory Date is at a tun-end.
2. It is the only date recorded or, if not, the latest date recorded.

   Exception 1: The latest date recorded, not fixed by secondary series, is at the end of the current katun or baktun. This amounts to adding the "name" of the current period.

Exception 2: There is one odd date, later than the dedicatory tun-end by less than a year (for examples see Morley, 1920, p. 333).

In Morley's classification of DD's there was a residuum of odd dates (non-tun-ends). Included are the earliest supposedly contemporaneous dates, such as the odd IS on the Leyden Plaque and Stela 9 at Uaxactun. Proskouriakoff accepts odd dates as DD's only if given by very early IS, and even so, evidently with some misgivings. Thompson, in the cited discussion, takes no position on odd DD's. Morley did not entirely limit them to Initial Series nor to the early period. We may cite two examples; he lists 9.13.7.3.8 (??) in his synoptic heading for Stela 5, Naranjo, this being his position for the only date given, a CR date; and 9.9.2.0.4 (?) for Naranjo Stela 25, this being the position of the latest of several odd dates given, the earliest only being by IS, though the date at 9.9.2.0.0, a tun-end, was recorded.

All "Late Period" (see p. 51) Tikal stone monuments record dates which qualify as dedicatory under Rules 1 and 2, as does the lintel of Structure 10; but in dealing with the dates of Temples I and IV the possibility and the certainty of odd latest dates not provided for in Exception 2 above must be dealt with. The safest course would appear to be to consider unsettled the question whether they might be dedicatory, but to regard such an interpretation with suspicion, especially in the "Late Period" of our lintels. Morley himself, in the case of Temple IV, considered and rejected what he thought was the latest date on the two lintels, an odd one, but not because it was in the Late Period.

Another approach to DD identification is the position of the date in the text. Both Thompson and Proskouriakoff note that it is likely to be given near the end of the text. Among the Tikal "Late Period" stone inscriptions, Stela 5 may be said to conform to this pattern—i. e., the dedicatory tun-end and latest date is the second of the two dates given. But Stelae 22, 19, and doubtless Stela 21 also carried two dates; the dedicatory tun-end dates, expressed as PE's, open these texts, followed by earlier odd dates. Since this seems to be the dominant pattern, one probably read the DD on Stela 16 first and then passed to the earliest of the earlier odd dates on the accompanying Altar 5 (instead of reading the altar first, as Morley thought). This approach to the temple lintels with several dates is not as helpful as one might hope. The texts open with tun-end dates, declared as PE's and correspond in this respect to Stelae 21, 22, 19, and probably Stela 16/Altar 5; but the count from the start is forward, as on Stela 5, though not to a tun-end. This failure of the texts on the temple lintels to correspond fully to one or the other of the patterns on the stelae tends to confirm the doubt that the recorded tun-ends were dedicatory.

Returning to the question of possible odd DD's, if they are to be admitted, Rule 2 alone would logically apply to them—such a DD would probably be the only date given, or the latest one. If such dates are not admitted as dedicatory, in a text without qualifying tun-end date, one must assume the DD was suppressed and was understood from the context. If this happened, there is a probability that the suppressed DD was not much later chronologically than the only odd date recorded, or the latest one, because when a tun-end DD is given with one or more earlier odd dates, the single earlier one, or the latest of several, is ordinarily not far behind the dedicatory tun-end. Thus when Morley suggests a non-recorded 9.16.0.0.0 (??) as the DD of the Temple IV lintels, he chose this as the end of the katun current as of the latest recorded odd date. Because of the obviously dominant katun-marking pattern at Tikal, this is the latest reasonable alternative to the odd date itself, and the one most likely to be left to be understood from the context.

In dealing with Lintel 3 of Piedras Negras, where each 5-tun period was regularly

marked, Morley proposed 9.16.10.0.0 (?), this being the end of the current 5-tun period,as of the latest of several odd dates (with no recorded tun-ending dates). Thompson later spotted a still later odd date in this text, and suggested 9.17.15.0.0 as the DD, following the same principle (Morley, 1937–1938, Vol. III, pp. 220–229; Thompson, 1944, pp. 77–78). Such DD's cannot very well be offered without question-marks. If wrong, a DD inferred in this way is probably too late, not too early, and with an error of less than a katun.

"EARLY" AND "LATE" TIKAL MONUMENTS

In Tikal Report No. 4, the writer used the terms "Early Tikal" Period for known monuments thought to be no later than ca. 9.7.0.0.0, and "Late Tikal" Period for those ranging forward from 9.14.0.0.0. These were terms of convenience referring to monuments only, used instead of "Early Classic" and "Late Classic," which have area-wide implications not confined to monuments alone. To avoid confusion we shall henceforth try to specify "Early Tikal Monuments Period" and "Late Tikal Monuments Period" unless the context makes it clear that this is all that is meant. Their meaningfulness depends on the existence of a gap in the sequence which separates them, and they will become obsolete if this gap disappears as new finds are made.

STYLE DATES FOR THE SEVEN KNOWN CARVED LINTELS OF FIVE BUILDINGS

Our style dates are by Proskouriakoff using her system, and are given here by permission. At two of the buildings involved there are no epigraphic controls on the dedicatory dates, and at two others there are doubts as to correct and precise DD's. In view of this, and the special interest in inscriptions and Maya art on wood, the style date results are considered together here, with only anticipatory reference to epigraphic evidence to be examined later. Table 3 on p. 81 makes visual comparisons of the various "spreads." The results, in usual form are:

TEMPLE	I, Lintel 2:	9.17.10.0.0 ± 2	katuns
	Lintel 3:	9.16. 0.0.0 ± 2	katuns
TEMPLE	II, Lintel 2:	9.15. 0.0.0 ± 3	katuns
TEMPLE	III, Lintel 2:	9.19. 0.0.0 ± 2 1/2	katuns
TEMPLE	IV, Lintel 2:	9.15.10.0.0 ± 2	katuns
	Lintel 3:	9.16. 0.0.0 ± 2	katuns
STRUCTURE	10 Lintel :	9.16.10.0.0 ± 3	katuns

Some little discussion of the method seems called for. The basic questions in mind are whether the findings for the Temple I lintels cast serious doubt on epigraphic limits to be suggested later for the DD there; and whether the style date limits for lintels at Temples II and III can be properly used for inferring the chronologic positions of these two buildings in the sequence of five, though in those cases epigraphic control is entirely absent.

The specified LC dates may be tagged as "central" within a "spread" or "range" which is allowed for in either direction. In any instance the "central" date and the amount of the spread depend on the position and shape of a curve which, in turn, depends on the presence of a group of specific traits judged to have chronological significance. We quote a cautionary admonition respecting this graphic method of obtaining the estimates: "It is hoped that

the very fact that it is simple and frankly arbitrary will discourage an expectation of accuracy and infallibility, which is sometimes attached to mathematical procedure" (Proskouriakoff, 1950, p. 12). It must be understood that the plus-minus style date allowances do not involve the mathematical theory of probability, as do those supplied with "Before Present" dates obtained with the C–14 method. Though the style date spreads are systematically arrived at, there is no claim that they must cover the actual dedicatory date in every case, though in general that is the expectation.

Testing with monuments firmly dated by epigraphy, Proskouriakoff constructed a "graph of error" which "reveals the fallibility of the method." But she found that "Most of the large errors, however, occur when the style estimates are based on five traits or less. Ninety-one percent of the errors are not more than two katuns when more than five traits can be used in the graph." An allowance of ± 2 katuns is the minimum used, and one assumes that in such cases the available surviving traits have yielded satisfactorily sharp curves. Among our Tikal lintel estimates we have such optimum results only at Temples I and IV. These, as well as less narrow spreads, are doubtless meant to be covered by the following: "As a method of chronological estimate, the stylistic appraisal is at best only one line of evidence which should be supplemented by others" (*ibid.*, p. 12). This means, surely, that other evidence, including epigraphic evidence, may be expected to occasionally call for stretching the limits provided by the Proskouriakoff method, especially (one supposes) when those cover the minimum four katuns.

The estimates depend ultimately on time-distributions and frequencies of selected traits as established on epigraphically datable monuments. Such monuments are most plentiful for the Late Classic Period. So far as the factor of adequate material at Maya sites generally is concerned, one would expect the estimated spreads for the Tikal lintels to be sufficient.

An admitted weakness in the system is its failure to make allowance for regional differences in the known ranges for the traits used. One gathers that there is not enough material to make this feasible. However, the method has been applied to five Tikal stelae of the "Late Tikal Monument Period." Considering these as a fair sample, they show empirically that the system works very nicely at this site and in that period.

	DEDICATORY DATE	STYLE DATE
St. 16:	9.14. 0.0.0	9.15. 0.0.0 ± 2 katuns
St. 5:	9.15.13.0.0	9.17. 0.0.0 ± 2 katuns
St. 20:	9.16. 0.0.0	9.15.10.0.0 ± 2 katuns
St. 22:	9.17. 0.0.0	9.16. 0.0.0 ± 2 katuns
St. 19:	9.18. 0.0.0	9.18.10.0.0 ± 2 katuns

Although in each case the spread is the minimum ± 2 katuns, in each case it covers a recorded and legible dedicatory date. The first three estimates are from Proskouriakoff 1950, the last two from Tikal Report No. 4. The result for Stela 19 replaces the 1950 "Late Classic, Dynamic Phase ?", illustrating the fact that estimates may be improved with better illustrations if they add more recognizable traits. The more specific estimate is entirely consistent with the earlier vague one.

The five stelae are fairly close together chronologically, as determined by the DD's, and this is reflected in overlapping style date limits. Supposing all the DD's were lost, we could legitimately infer that they all probably fell within a combined spread covering all the

individual ranges, i. e., within the range 9.13.0.0.0–10.0.10.0.0. Reasoning in the same way for the lintel series one obtains 9.14.0.0.0–10.1.10.0.0. But the qualifying "probably" is essential, since the individual spreads are not guaranteed to be sufficient in all cases, hence a combination of them is subject to some degree of doubt. Later, using epigraphic evidence, we suggest that the style date limits for the lintels of Temple I need stretching in the early direction.

The stela series illustrates what is implicit in the style date statements. The actual DD, if known, may lie either before or after the "central" style date. The latter may deviate from the DD in either direction, and there is an estimate of the maximum amount only. In the case of Stela 5 the maximum amount is approached, in the minus direction. It should be considered mere chance that the other four central dates, if substituted for the DD's, would yield a correct sequence for those four stelae. The same device would make Stela 5 the fourth instead of second in the sequence. The spreads for the lintel series are also overlapping throughout. In such a situation the style date data alone cannot be used to obtain a chronological sequence in which one can have confidence.

The specific "central date" arrived at must be conditioned in part by the particular time-indicating traits which happened to appear on the monument. The groups of traits on two monuments dedicated at the same time would not be expected to be identical, and one would expect differing central dates within overlapping spreads. An example within the Central Peten region and the Late Classic Period is provided by Stelae 29 and 30 at Naranjo. Proskouriakoff obtained style date estimates of 9.13.0.0.0 ± 2 katuns and 9.14.0.0.0 ± 2 katuns, respectively. The central dates are a katun apart, but the DD, 9.14.3.0.0, is within each individual spread.

If the DD for two lintels at Temple IV is within the limits 9.15.10.0.0–9.16.0.0.0, as concluded later on (p. 59), we have the same sort of confirmation by style date limits there. But at Temple I, if the DD for two lintels is as early as 9.13.3.0.0 (p. 71), both style date estimates must be taken as too short. To cover such situations we have used "combined limits" covering both individual ranges, in the case of the Temple I lintels, from 9.14.0.0.0 9.19.10.0.0. These must be increased by 17 tuns in the backward direction to cover the indicated DD. Proskouriakoff is not responsible for such "combined limits" and perhaps a fairer measure of the disagreement would result if the traits on both lintels were lumped together to get a single set of "combined traits" limits. The "stretch" to 9.13.3.0.0 would then be more than 17 tuns. But if we avail ourselves of the fact that the given spreads can by stretched when other good evidence requires it, the precise amount has no particular meaning.

LINTELS 2 AND 3 OF TEMPLE IV (STR. 5C-4)

Location:	*Lintel 2:* 6 beams (*a–f*) originally spanned middle (interior) doorway; see this report.
	Lintel 3: 7 beams (*a–g*) originally spanned rear (interior) doorway; see this report.
Dedicatory Date:	Suggested limits 9.15.10.0.0–9.16.0.0.0; Morley gives 9.16.0.0.0 (??) here suggested as preferred; see text.
Style Date:	*Lintel 2:* 9.15.10.0.0 ± 2 katuns; *Lintel 3:* 9.16.0.0.0 ± 2 katuns; combined extremes, 9.13.10.0.0 – 9.18.0.0.0 (Revised Proskouriakoff estimates; see Table 3).
Condition:	Some areas missing, no lost glyphs, all date-readings certain.
Photographs:	*Lintel 2:* Figs. 22–28 of this report; Maudslay, Vol. III, Pl. 72.
	Lintel 3: Figs. 29–35 of this report: Maudslay, Vol. III, Pl. 77: Morley, 1946, Pl. 32 a; 1956, Pl. 33 a; Thompson, 1950, Pl. 52, *1*, 2.
Drawings:	*Lintel 2:* Maudslay, Vol. III, Pls. 73, 74.
	Lintel 3: Maudslay, Vol. III, Pl. 78.
Other References:	This report; Morley, 1937–1938, Vol. I, pp. 355–362; Beyer, 1943, pp. 338–343; Proskouriakoff, 1950; Libby, 1954; Satterthwaite, 1956.
Carved Areas:	Undersides only, so far as known.
Material:	Wood (zapote).
Dimensions:	See this report, Table 2.
Orientations:	Bases of designs to south, principal figures faced entrance, to observer's left.

GENERAL REMARKS

Lintels 2 and 3 of Temple IV are from the building on the highest known Maya pyramid, and Lintel 3, the better preserved of the two, is famous as a great example of Maya sculptural art. The two samples measured by Libby for C-14 content came from two beams of this lintel, and the average result, A.D. 451 ± 110 years, was a major factor in casting doubt on the "11–16" correlation of the Maya Long Count with Christian chronology. As of the time of writing, a check of that finding is in progress at the University of Pennsylvania C–14 Laboratory.

In noting his results and their bearing on the correlation problem, Libby used 9.15.10.0.0 as the Maya date for the lintel, and the writer assumed the same in subsequent comment. It is suggested below that this must be considered an early limit for alternative possibilities, with 9.16.0.0.0, which had been suggested by Morley with two question marks, as the latest acceptable limit. The 10-tun leeway is non-significant in amount for C-14 comparisons. On the other hand, it allows but does not require that the walls of the palace-type Str. 10 and those of the temple were going up at the same time.

COMMENT ON THE INSCRIPTIONS

Maudslay's plates cover both lintels, and Thompson has published exceptionally fine photographs of a cast of the glyphs of Lintel 3 (1950, Pl. 52, *1* and 2). New photographs appear in Figs. 22–28 and Figs. 29–35 which are intended to relate what is surviving to what is missing, at the same 1:12 scale adopted for stone monuments in this series of reports. These figures utilize a selection of photographs with various lightings, from a set obtained by Shook in 1956 from the museum at Basel. He also obtained latex molds from which epoxy casts have been made. The latter also have been useful in checking a few details.

Reasons for considering the two lintels together have been given, as well as for supposing that Lintel 2 was read first. Though they may be read separately, their parallelism is further developed below. To make this more obvious we have lettered the dates of Lintel 2, A–D, and those of Lintel 3, AA–DD, and the "Summaries of Chronology" are placed side by side, as suggested by Morley.

So far as they go, all dates, secondary series numbers and Long Count positions, are as in Morley, but as explained earlier, his last four dates for Lintel 2 belong in Temple I, not here. Thompson gives the chronological summary for Lintel 3 only (1950, Fig. 52, *1* and 2). The transfer of Morley's supposed second panel for Lintel 2 to the corresponding position in Temple I leaves the numeration of what remains unchanged. His supposed Columns D–E did not exist, and Columns G–K must be re-lettered at Temple I. The illustrations accompanying our report indicate that no glyphic areas are missing here at Temple IV. No reading of a date or its Long Count Position is questionable. The Secondary Series lack the SSIG and Anterior or Posterior Date Indicators, as is usual at Tikal.

Lintels 2 and 3 of Temple IV: Glyph Classification and Chronological Decipherment

(Order of reading: left-right and downward in double column. Number of blocks on Lintel 2: 42; on Lintel 3: 28 + 36 = 64).

Lintel 2

A	(9.15.10. 0. 0)	A1–B1	3 Ahau 3 Mol
		A2	Half-katun (half-period glyph, damaged, prefixed to head-variant katun glyph–see text)
	2.11.12	B2–A3	12 (kins), 11 uinals, 2 tuns (head-variant period glyphs)
B	(9.15.12.11.12)	B3–A4	6 Eb 0 Pop
		B4–B6	5 non-calendrical glyphs
	. 1	A7	1 kin (sun-at-horizon glyph with coefficient 1 as SS)
C	(9.15.12.11.13)	B7–A8	7 Ben 1 Pop
		B8–B15	15 non-chronological glyphs (coefficient 6 at A9)
	. 3. 2. 7	A16–B16	7 (kins), 2 uinals, 3 tuns (head-variant period glyphs)
D	(9.15.15.14. 0)	A17–B17	3 Ahau 13 Uo
		C1–D2	4 non-calendrical glyphs
		C3	4, modified katun glyph, postfix (damaged; non-calendrical ?; see text)
		D3–D4	3 non-calendrical glyphs

Lintel 3

AA	(9.15.10. 0. 0)	A1–B1	3 Ahau 3 Mol
		A2	Half-katun (half-period glyph, prefixed to head-variant katun glyph–see text)
	2. 2. 2	B2–A3	2 (kins), 2 uinals, 2 tuns (head-variant period glyphs; tun with unusual post fix–see text)
BB	(9.15.12. 2. 2)	B3–A4	11 Ik 15 Chen
		B4–C3	12 non-calendrical glyphs
		D3	4, modified katun glyph, postfix (damaged; non-calendrical ?; see text)
	. 1)	C4	1 kin (sun-at-horizon glyph with coefficient 1 as SS)
CC	(9.15.12. 2. 3)	D4–C5	12 Akbal 16 Chen (coefficients damaged–see text).
		D5–E1	6 non-calendrical glyphs
	3.(0. 0)	F1	3 tuns (abbreviated SS; head-variant tun glyph with unusual postfix; see text)
DD	(9.15.15. 2. 3)	E2–F2	13 Akbal 1 Chen
		E3–G1	15 non-chronological glyphs
		H1	4, modified katun glyph, postfix (damaged; non-calendrical ?; see text)
		G2–G9	15 non-chronological glyphs
		H9	4, modified katun glyph, postfix (non-calendrical ?; see text)

SUMMARY OF CHRONOLOGY (LINTELS 2 AND 3 OF TEMPLE IV)

Lintel 2				*Lintel 3*			
A1–B1	Date A PE	(9.15.10. 0. 0)	3 Ahau 3 Mol	A1–B1	Date AA PE	(9.15.10. 0. 0)	3 Ahau 3 Mol
A2			1/2 katun	A2			1/2 katun
B2–A3	SS	2.11.12		B2–A3	SS	2. 2. 2	
B3–A4	Date B	(9.15.12.11.12)	6 Eb 0 Pop	B3–A4	Date BB	(9.15.12. 2. 2)	11 Ik 15 Chen
A7	SS	. 1		C4	SS	. 1	
B7–A8	Date C	(9.15.12.11.13)	7 Ben 1 Pop	D4–C5	Date CC	(9.15.12. 2. 3)	12 Akbal 16 Chen
A16–B16	SS	3. 2. 7		F1	SS	3.(0. 0)	
A17–B17	Date D	(9.15.15.14. 0)	3 Ahau 13 Uo	E2–F2	Date DD	(9.15.15. 2. 3)	13 Akbal 1 Chen

NOTES ON PARTICULAR GLYPH BLOCKS

A small amount of reconstruction and interpretation is involved in the tabulated "Classification and Chronological Decipherment."

Blocks A2 of Lintel 2 and Lintel 3 (Half-katun glyphs). These blocks are read "Half katun," following in principle the "half-period of a katun" of Thompson (1950, p. 192 and Fig. 32, 53). The half-period glyphs are here prefixes of what look best as baktun heads, with hand for lower jaw, and this puzzled Morley, leading him to the speculation that the main sign was a head-variant ending or completion sign. Thompson shows that the hand may occasionally occur with the katun head, and reading thus makes perfect sense.

In Maudslay's two drawings, the main part of the half-period glyph on Lintel 2 is shown as if it surely had a two-lobed form (see Figs. 22 and 23). The sign surely did not vary significantly from its counterpart on Lintel 3, except that below the "down-balls" superfix there is one ovoid and decorated "bar" instead of three straight and plain "bars."

This sole difference in examples carved at the same time and for the same date is the best possible evidence that what look like "bars" in the half-period glyph are not numerical, as was once thought by Bowditch, and that the number of them probably had no significance.

Block D4 of Lintel 3 (Day Sign coefficient). There is some missing wood between the two dots of the coefficient and the remains of the Day Sign, the left edge of which is missing. Maudslay restores 2 Akbal The control of two SS requires 12 Akbal or a mistaken record. The two beams involved do not appear to fit snugly elsewhere and Morley's suggestion that they should have been spread further apart, making room for two bars, is doubtless correct.

Block C5 of Lintel 3 (Month coefficient). Maudslay's drawings show one oval upper dot and two reconstructed ones of the same size, so that one would read 18 Chen, though 16 Chen is required. Photographs (including Maudslay's) indicate a central element shorter than the top one; this is confirmed by the cast, and the best reading by inspection is the required 16 Chen. Thus there is no reason for postulating mistakes in this inscription.

Block E7 of Lintel 3 ("Axe element" ??). In his *Hieroglyphic Glossary and Index*, Thompson lists this block under "axe element." If present, the axe is not part of the "hand-with-axe" sign noted later in four other blocks.

Blocks C3 of Lintel 2 and D3, H1, H9 of Lintel 3 ("isolated" katuns). The complete glyphs in these four blocks, all with coefficient 4, are considered to have been substantially identical, though only that at H9 is completely preserved. There, by inspection,

the main sign is a grotesque head with nose shaped like a bird's beak, on a "tripod support," and below the prefix of the symbolic form of the katun. There are two elements not expected with a tun or katun head. The first is a "hand-with-axe" sign infixed at the rear of the head. The second is Thompson's Te (1) affix, here a postfix, on the right. Despite this we class H9 as "isolated" katun entry, discussing the matter on pp. 60–62. Here we are concerned only with showing that there are two other such entries on Lintel 3, and another on Lintel 2.

It should be noted that at H9 the base of the postfix is at the level of the base of tripod supports of the main sign—i. e., at the base of the block. Turning to H1 of Lintel 3, the outline of the base of the postfix is fairly clear in photographs, and more so on the cast, though otherwise the right half of the block is split off entirely. The surviving front half shows a grotesque head similar to that of H9, though not identical in all details. Complete identity in equivalent heads is scarcely to be expected. Restoring this head to the same proportions as at H9 leaves room for a lost hand-with-axe infix.

At D3 of the same lintel it is the front of the head which is lost. The other five elements survive completely, or sufficiently for positive identification, as may be seen in Thompson's photograph of a cast. These are coefficient, superfix, tripod support, infix, postfix. Maudslay's drawings are less than perfect.

At C3 of Lintel 2 the loss is similar, but next to the coefficient enough survives to suggest a similar head as main sign (Figs. 22, 23). Again, all the other elements of H9 can be identified with certainty, including part of the axe and the thumb of the hand which holds it, though this is not shown in Maudslay's drawings.

There is no room for doubt that each of these blocks contained the same elements in the same relationships.

INTERPRETATIVE NOTES

Common Elements and inter-relationships of the two texts. Below are tabulated various correspondences showing a high degree of parallelism between the texts on the two lintels; those marked with asterisks were pointed out by Morley, who inferred a "close chronological connection" on the basis of those alone.

GLYPH USAGES IN BOTH TEXTS

Half-period glyph as prefix of period glyph (rare).
Modified katun-sign with postfix and coefficient of 4 (rare).
Sun-at-horizon glyph with coefficient of 1 as SS (rare).
All other period glyphs of head-variant type.

DATE PATTERNS IN BOTH TEXTS

* Same opening tun-end date, fixed as PE.
Three SS numbers between connected dates, leading forward to three odd dates.
* Corresponding odd dates in same tuns, those of Lintel 3 earlier than those of Lintel 2.
* Same 1-day interval between 2nd and 3rd dates.
Non-chronological glyphs after each odd date, none after opening date.

VAGUE YEAR POSITION LIMITATIONS INVOLVED IN CALCULATIONS?

Lintel 2: First and second odd dates entered at beginning and end of first day of year ("Year Bearer").
Lintel 3: All three odd dates in same month of vague year (Chen).

MOON-AGES INVOLVED IN FINDING LATEST ODD DATES ??

Interval between the two latest dates is 237 days, only about .76 day more than 8 average lunations (but no decipherable statement that same-age relationship was noted).

It seems clear that a single priest or group of priests selected six odd dates and, instead of arranging and discussing them in a single series, did so in two series, placing one on each lintel. Being thus located, and with the common departure date stated on each lintel, either text could be read independently, but they could also be easily compared.

Whatever the related problems were, it can scarcely be coincidence that Lintel 3 gives the same number of dates as does Lintel 2, these always lagging behind, but not sufficiently to be in earlier tuns. This is very striking and unusual, whether or not our feeble speculations on some of the factors involved have any validity. The several rare glyph usages common to both texts tend to confirm the idea that they were planned and executed at the same time.

Comparisons with Stela 16/Altar 5 text. The hint of a *recognized* same-moon-age relationship between the two latest odd dates should not be taken very seriously unless it can be confirmed in some way. The age could not have been zero age, a possibility for the earliest odd date in the Stela 16/Altar 5 text, as shown by Long (1940, p. 284), calculating from recorded zero age on Altar K of Copan. Taking Age 13.26 days at the IS base to obtain arbitrary average ages at all four dates we get:

Copan Altar K	9.12.16. 7. 8	29.16 (recorded as zero age)
Tikal St. 16/Alt. 5	9.12.19.12. 9	28.94
Tikal T. IV, L. 3	9.15.15. 2. 3	20.26
Tikal T. IV, L. 2	9.15.15.14. 0	21.02

These average ages are about a half day only from the center of the spread of "Teeple's limits," which cover about seven days of deviation from average, so that as of the Altar 5 date the actual Maya age could have been zero, or a bit further back or forward in their lunation. But the dates on the lintels were surely well short of the completions of the current lunations. This seems to increase the probability that the same-age relationship is a matter of coincidence. On the other hand, various ages may have had significance in special situations.

On Altar 5 the earliest and latest dates, both odd, are at 1 Muluc, the spread being 1.0.4.0, or 28 Sacred Round Periods, as noted by Morley. On our Lintel 2 the earliest date is at half-period, and the latest is an odd date, but again these extremes are at same Sacred Round position, this time at 3 Ahau. The spread is 5.14.0, or 8 SR periods. In the Dresden Codex it is clear that the Maya of the Post-Classic Period were interested in a "Ritual Year" of 364 days (1.0.4), and its 5th multiple, 5.1.0, at which it first makes its round with the Sacred Round Period, 5.1.0 being also 7 SR periods. Clearly this Ritual Year was not involved in the lintel calculations, since the distance between the 3 Ahau entries is 8 SR periods. I think this tends to negate Long's feeling that there must be some non-fortuitous connection between the use of the interval 1.0.4.0 on Altar 5, and its importance as the 20th multiple of the Ritual Year Period in the codex (Long, 1940, p. 286). However, on both Lintel 2 and Altar 5 we seem to have discussions opening and closing with the same Sacred Round Dates.

Note on Date D of Lintel 2. Date D, at 3 Ahau, is at an odd (non-tun-end) Long Count position, with the special quality of being at the end of a uinal. This was inevitable if it had to be at the same Sacred Round position as Date A, since that is at a tun-end. Any odd date at Ahau may be classed as a "uinal-end" date. Nevertheless, if odd dates are admitted as potential dedicatory dates in the Late Period, a uinal-end date such as our Date D, considered as a DD, would seem to disagree with the usual tun-end dedicatory date pattern less drastically than a date not at Ahau. We have a check of sorts on this idea at

Copan. There, six uinal-end dates are given as IS, complete with lunar series (Satterthwaite,1948, Table 1 on p. 492). Doubtless by coincidence one of them(Copan St. 1) is precisely 6 katuns earlier than our Date D. The point to be made is that probably none of these obviously important uinal-end dates at Copan was a dedicatory date. On four of them later dedicatory tun-end dates survive. Thus the mere uinal-end character of Date D on Lintel 2 seems of dubious value as a support for its hypothetical interpretation as an odd dedicatory date.

THE DEDICATORY DATE

Usually a Maya text records a DD meeting the requirements of rules stated and discussed on pp. 49–50, and this is true for all the known stone monument texts of "Late Tikal Monument Period." Their DD's are at tun-ends (Rule 1), and are the only or the chronologically latest dates given (Rule 2). None of the stela texts provide examples of recognized exceptions to Rule 2, but in dealing with the lintels Exception 2 comes into the discussion. This allows one odd date later than the tun-end DD, but less than a year later. In general, one would expect rules valid for the stone monuments to hold for the lintels.

If we apply Rule 1 to the Temple IV lintels we choose 9.15.10.0.0, the only tun-end given, and we find it, fixed as a PE, in the locally dominant position, opening both texts (Dates A and AA). But if we choose this we must modify Exception 2 to Rule 2 drastically, allowing six later odd dates instead of one later odd date, the latest of these more than five tuns later.

Allowing that a DD in the "Late Tikal Monument Period" could be at an odd IS position, this amounts to an exception in which Rule 1 does not apply, but logically Rule 2 would stand, in this case alone. It still implies the habit of looking backward from the present, represented by the DD, in recording other dates. Applying Rule 2 thus, the DD becomes the latest date in both related texts, i. e., 9.15.15.14.0 (Date D). Favoring such an exception, this date is related to the tun-end count by having the same Sacred Round position, 3 Ahau which appeared at the end of the prior half-katun. In this respect Date D differs from the erroneous latest odd date considered and rejected as the DD by Morley. One may also suspect that this latest odd date had some special significance because of its moon-age, since this was the same as, or very close to, that of the latest date on the other lintel (Date DD). However, this may be a matter of mere coincidence.

If we hold to both Rules 1 and 2 because both usually apply (and do apply without known exception on the local "Late Series" monuments), then we must assume that a tun-end DD, later than 9.15.15.0.0, was understood but was not recorded. Under this hypothesis, since in the "Late Tikal Monument Period" there is no evidence of marking odd tuns other than the 13th, one would choose Morley's 9.16.0.0.0 as the unexpressed DD.

The foregoing attempt to apply the recognized rules leads to suggesting that the precise DD of these lintels cannot be specified with complete assurance, but that the DD was almost certainly one of three alternatives:

1:	9.15.10. 0. 0	3 Ahau 3 Mol (???)
2:	9.15.15.14. 0	3 Ahau 13 Uo (??)
3:	(9.16. 0. 0. 0	2 Ahau 13 Zec)(?) (not recorded)

Morley suggested our Alternative 3 with two question marks, but did not rank the alternatives which the question marks implied.

In justifying a preference for the latest alternative DD, a reason of sorts for suppressing

it can be imagined. The calculator desired to emphasize an unusual situation—two parallel calculations covering dates in the last half of the katun which had just ended. This emphasis was obtained by giving the "fix" in the Long Count at the (past) half-katun date, and at the beginning of each text, the usual place for the DD as evidenced by the monuments. The DD, its usual place usurped, was omitted. The forward direction of the count from the half-katun date would make it clear that this was the situation, since nowhere on the Tikal monuments is there evidence of forward counting from a dedicatory tun-end.

Our alternatives are so close together that each may be said to be equally justified by the style date limits, though it happens that the midpoint of the combined style date spread, 9.15.15.0.0, is very close to Alternative 2 (9.15.15.14.0).

If we use the supposedly preferred 9.16.0.0.0 DD in C-14 comparisons, it seems safe to say that this is either correct or else too late by not more than 10 tuns, a maximum error which would be non-significant in such comparisons. In studying the chronology of local building activity, choice among the alternatives might be significant.

It might be argued that 9.15.10.0.0 is too early, because that seems to be the date when the carved lintel of Structure 10 was being placed (see pp. 74–75). But, choosing 9.16.0.0.0 for the Temple IV lintel placements, we have the same date as Stela 20/Altar 8, when, presumably, a twin-pyramid complex was dedicated in Group H. At the least it seems clear that major building enterprises involving three types of structure were in progress at three well-separated locations during the last half of Katun 16.

ISOLATED "BATAB" KATUNS

We have concluded that despite damage to three of them, four glyphs on our lintels with coefficients of 4 were substantially identical, and for convenience will refer to them by block numbers only—C3, D3, H1, H9—without specifying that C3 is on Lintel 2, and the others on Lintel 3. The decipherment "Batab" katuns is based on very recent work by Berlin. Some exposition of his findings, and a review of other examples, seems called for.

We are dealing with isolated records of katuns apparently similar to those with coefficients no higher than 6, such as Thompson discusses for other sites under the label "Ben-Ich" katun, though the "Ben-Ich" prefix may be absent. In Tikal Report No. 4 we used the less restrictive term "isolated" in noting a probable example on Stela 19, and a certain one on Stela 22, in each case without the "Ben-Ich" prefix. Our term is the equivalent of Berlin's "ocioso" ("idle," "useless") for similar entries on Stelae 21 and 5, on the roof comb of Temple VI, and for one of the Temple IV examples, in which we are here particularly interested, i. e., that at H9 of Lintel 3 (Berlin, 1951).

In his new paper on Tikal inscriptions (1958), Berlin adds an example on Stela 16, and accepts the identifications on Stelae 22 and 19, or perhaps he made them independently. Most importantly, he establishes an intimate association between these isolated katun entries and what he suggests is a "Batab" glyph. This is a head with an infixed "hand-with-axe" element and Thompson's "Te(1)" affix as postfix. We shall use "Batab" with quotes, so that if there are readers who do not accept the decipherment the term will still be acceptable as a label of convenience. The "Batab" glyph follows the katun glyph, in the next block— or may substitute for the katun head, the whole expression then being in one block. Berlin made these discoveries after studying all the isolated ("ociosos") katuns at Tikal, but he does not state the total number found. Allowing for four examples at Temple IV there seem to be ten, which we list in three groups, below.

A Coefficient with head-variant katun glyph followed by "Batab" glyph in next block (latter a grotesque head with beak-like nose, hand-with-axe infixed at rear of head, Thompson's "Te(1)" affix as postfix, at right).

Stela 16	C3–C4	3 "Batab" katuns	(9.14. 0. 0. 0)
Stela 21	B1–A2	4 "Batab" katuns	(9.15. 5. 0. 0)
Stela 5	D11–C12	4 "Batab" katuns	(9.15.13. 0. 0)
Stela 22	B8–A9	4 "Batab" katuns	(9.17. 0. 0. 0)

B Coefficient, symbolic katun superfix over "Batab" glyph.

Temple IV, L.2, C3		4 "Batab" katuns	(9.15.15.14. 0)
Temple IV, L.3, D3		4 "Batab" katuns	(9.15.12. 2. 2)
Temple IV, L.3, H1		4 "Batab" katuns	(9.15.12. 2. 3)
Temple IV, L.3, H9		4 "Batab" katuns	(9.15.12. 2. 3)
Stela 19	A9	4 "Batab" katuns	(9.18. 0. 0. 0)

C Coefficient, glyph on tripod support without postfix to right, after "Emblem"; (probably a damaged katun glyph, next glyph destroyed).

Temple VI, L.4–M1		4 "Batab" katuns?	(9.16.15. 0. 0?)

Our "Group A" covers the two-block examples, while Group B covers the one-block recordings of the same elements, other than the katun head. The damaged isolated katun statement on Stela 19 is entered in Group B without question because a re-examination of photographs and a cast shows that there was a postfix of the same outline form as that of the Te (1) affix, and the next block does not contain the "Batab" glyph. Considering the general pattern elsewhere, we seem justified in restoring the lost interior details of the postfix and a hand-with-axe infix. We have confirmation in the fact that Berlin's "Emblem" glyph for Tikal, referred to later, precedes this glyph of St. 19, as it precedes the 4 katuns statements of Stelae 21 and 22. We are following Berlin, except that he did not specify that this is one of the cases where the "Batab" glyph replaces the katun head.

Berlin's publication is preliminary in character, and his principal interest was in identifying "Emblem" glyphs peculiar to particular sites including Tikal. In some, but not all cases, Tikal Emblem glyphs precede "Batab" katun glyphs, forming clauses. He notes that the "Emblem" glyphs, or the clauses which they begin, frequently precede secondary series (which lead to dates given later), but that they also may close an inscription. He draws the tentative conclusion that the relationships are with the prior-stated dates. A check shows that this holds for the isolated "Batab" katun entries when no "Emblem" glyph is present, H9 of Lintel 3 being an example at the end of the inscription. We seem to have a comparable situation in the same text, though apparently with the "Emblem" glyph where C3–D3 are the last of the glyphs between Date BB and an SS leading to Date CC. On the theory that our isolated katuns are associated with the last previously given CR date, in our tabulation we have given the corresponding LC positions of the prior-stated dates.

However this may be, it is clear from the tabulation that the linkage of isolated katuns and the "Batab" glyph may have been a universal phenomenon at Tikal. Our Group C may be necessary only because a "Batab" glyph following the record of 4 katuns at L4 of Temple VI has been destroyed (Berlin, 1951, Figs. 19–20). Obviously the same thing is being said in all the examples of Groups A and B.

Taking H9 of Lintel 3 as an example of Group B, space has been saved by suppressing the katun head–but not the katun superfix which still gives notice that one should read

"4 katuns." The head which is the main sign of the "Batab" glyph has a beaked nose, and Thompson allowed the possibility of Morley's "4 katuns" reading for H9 of the lintel, but expressed doubt because of the infixed hand-with-axe (1950, Fig. 52, caption). Berlin's discovery clarifies the situation. We do not here have a katun head, but still we have an isolated entry of "4 katuns," modified by "Batab" or, if this is questioned, modified in some other way.

Berlin apparently founds his "Batab" interpretation only on the hand-with-axe element, deriving "Batab" from "Baat-hacha." "Hacha" is Spanish for "axe," and "Batab" is Maya for "chief" (Spanish "cacique"). Thompson shows that his Te (1) affix, which seems firmly associated with the hand-with-axe element in this glyph, may represent a numerical classifier, but he believes it was used phonetically for the last syllable of the deity-name "Bolon-Yocte" (1950, p. 56). Before accepting the "Batab" interpretation as established, one would like to see this postfix accounted for in some way, and Berlin does not insist on the "Batab" reading (personal communication).

It will be noticed in the tabulation that we have one record of 3 "Batab" katuns, on the earliest monument, and that all the others are of 4 "Batab" katuns, though they seem to be related to Calendar Round dates in three sequent katuns. Berlin suggests a very plausible explanation which, as I understand him, is as follows. Each numbered "Batab" katun coincided with several ordinary Long Count katuns. There were probably five ordinary katuns in each such "Batab" katun, and the count was probably set so that the third of these longer periods ended at 9.15.0.0.0. When isolated "Batab" katun records were made, unless the associated date happened to be at the end of the "Batab" katun period, the coefficient recorded was that of the current, not yet completed, period. We may add that under these postulates, in mechanical effect if not in Maya concept, the coefficient of a Tikal isolated katun record associated with a date in Baktun 9 indicated in which quarter of the baktun the date falls. Since these dates were already fixed by PE or SS glyphs this information was already implicit; but since IS are lacking in all known cases, it was not actually stated, unless by these "Batab" katun records.

Discovery of additional monuments may provide evidence confirming this theory, or leading to its modification in respect to the length of a "Batab" katun, and/or the setting of these periods in the Long Count. It is proposed for Tikal only, and not for the "Ben-Ich" katuns at other sites, without the "Batab" modifier. Apparently some unknown different principle governed the coefficients of those isolated katun recordings.

Having noted the "Batab" katun theory for Tikal, it is interesting to note also that only at Temple IV do we find more than one example in a text, and that here they are all associated with odd dates. On the stelae all have dedicatory tun-end prior-stated dates, though at least one odd date also is present (in the case of Stela 16 on its associated Altar 5). Note also that on Lintel 3 we have two "Batab" katun records after the same odd date, the last given in the text. The first of these, at H1, is in the exact middle of the long statement following Date DD; the other, at H9, ends this statement, and the text as a whole. Here, if there is any relationship between the isolated katun entries and recorded CR dates, both must be related to the same date, Date DD. The final entry, one supposes, is a repetition serving the second half of the final statement which, as a whole, is related to Date DD.

The fact that several "Batab" katun records may appear with closely spaced odd dates in a single text, as well as with dedicatory tun-end dates, tends to confirm, I think, the idea that the number of a still current group of katuns was recorded.

"EMBLEM" GLYPHS

Berlin uses "Emblem" as a term for glyphs restricted to particular sites, as already mentioned. The main sign varies from site to site, but with two sorts of affixes which are constant—the "Ben-Ich" affix and a group of supposedly aquatic affixes or a head like that of the numeral 9 (1958, Fig. 28, Line 1). The aquatic affixes all involve a line of dots. For Tikal there is a symbolic type of main sign labeled T–1, and a head-variant with parallel lines labeled T–2 (Line 2). The head-variant illustrated is difficult to recognize as such but is obviously copied from C3 of Tikal Lintel 3, forming a clause with the 4 "Batab" katuns at D3. It appears as a more realistic animal head before the 2–block 4 "Batab" katun record of Stela 21 (Line 4). The affixes are the same in each case, and evidently the head-variant form T–2 can vary widely. Since T–2 is defined as an animal head, the other three "Batab" katuns seem not to be parts of the clause headed by the "Emblem" glyph. The block before C3 of Lintel 2 has the aquatic prefix, but a human head as main sign, and that at H9 also has a human head, with a destroyed prefix. The block preceding H1 is symbolic, but it is not the T–1 variety of the "Emblem" glyph.

UNUSUAL POSTFIX WITH PERIOD GLYPHS

Thompson calls attention to an "unusual" postfix with the tun-glyphs at A3 and F1 of Lintel 3 (1950, Fig. 52). It looks rather like a combination of the segmented "body" of the centipede affix and the inverted Ahau affix. In both cases it appears with the highest term of a secondary series, but the second SS is abbreviated by omission of the lowest terms, at zero.

There is a correspondence between SS and PE expressions when the latter are used to mark tun-katun "anniversaries," in that in both cases, if there are tuns and katuns, the tuns come first, the higher-valued katuns second. So, if this affix may occupy the place of the usual SS postfix in the highest term of an SS, whether abbreviated or not, one would not be surprised to find it with the katun in an "anniversary" PE statement. In fact, it seems to occur, in variant form, with the katun in the phrase "Completion of fifth haab, 1 katun" on Stela 3, Piedras Negras (Thompson, 1950, Fig. 33, 28; Fig. 50, 1, at E4). If the identification of the supposed centipede element is somewhat doubtful, the inverted Ahau at the left is not.

Although SS are normally stated in rising order of period values there are exceptions to this rule. At H7–G8 of Temple of Inscriptions, Palenque, one finds the "Inverted Ahau-centipede" sign postfixed to a record of 1 pictun followed by 8 kins. Long interpreted this as an abbreviated 6-term number with "interior" zero terms omitted (1923, pp. 67–68). Reading it thus, 1. (0.0.0.0).8, it can be properly classified as an SS leading back from the date which precedes it, 5 Lamat 1 Mol, to a suppressed anterior date 4 Ahau 8 Cumku, the base for forward counting of most Initial Series numbers. Such a reading and classification are in line with the use of the postfix at Tikal.

Acceptance of this interpretation has theoretical implications not to be discussed here, and it should not be accepted without reading Thompson's views on this part of the Palenque text (1932, table on p. 393, where the 1 pictun entry at H7 is omitted; 1950, p. 314, where it seems to be referred to but is not linked with the 8 kins as in Long's version).

LINTELS 2 AND 3 OF TEMPLE I (STR. 5D-1)

Location:	*Lintel 2:* 4 beams (*a–d*) originally spanned middle (interior) doorway; 2 outer beams (*a–b*) still in place; see this report.
	Lintel 3: 5 beams (*a–e*) originally spanned inner (interior) doorway; see this report.
Dedicatory Date:	Suggested limits 9.13.3.0.0–9.14.0.0.0, the former preferred; see text.
Style Date:	*Lintel 2:* 9.17.10.0.0 ± 2 katuns; *Lintel 3:* 9.16.0.0.0 ± 2 katuns; combined extremes 9.14.0.0.0–9.19.10.0.0 (Revised Proskouriakoff estimates; see Table 3).
Condition:	Large areas of both lintels missing, but probably no lost blocks; CR date on Lintel 2 largely destroyed; CR dates on Lintel 3 legible but not fixed in Long Count by recognized glyphs.
Photographs:	*Lintel 2:* Fig. 12 a of this report.
	Lintel 3: Figs. 13–16 of this report; Maudslay, 1889–1902, Vol. III, Pl. 71.
Drawings:	*Lintel 2:* Fig. 12 c of this report;
	Lintel 3: Maudslay, Vol. III, Pl. 74; Beyer, 1943, Fig. 1.
Other References:	This report; Morley, 1937–1938, Vol. I, pp. 358–359; Beyer, 1943, pp. 338–343.
Carved Areas:	Undersides only, so far as known.
Material:	Wood (zapote).
Dimensions:	See this report, Table 2.
Orientations:	Base of designs to south, principal figures faced entrance, to observer's right.

GENERAL REMARKS

We have noted that beams of Lintel 3 of this temple have only recently been proved to be such (p. 47). This greatly enhances the importance of the dates on the beams, for Temple I faces west on the main plaza and close to its north terrace, both with many stone monuments, and temple, plaza, and terrace are being intensively studied by excavation. Surviving beams of Lintel 2, still in place, have been adequately recorded for the first time, so that one may now deal with two associated and presumably contemporaneous wooden lintels, as at Temple IV.

The temple has been selected for consolidation, repair, and partial restoration, and replicas of what survives of the Lintel 3 beams have been installed in the building. At the time of writing, samples from this lintel and from vault beams are being dated by the C–14 method–an additional reason for desiring a firm dedicatory "contemporaneous" date for the lintels. Below we conclude that this was probably 9.13.3.0.0, but allow 9.14.0.0.0 as a possible late and limiting alternative. If this small leeway for uncertainty is accepted as sufficient, C–14 results here may be used in checking both "early" and "late" correlation hypotheses. One expects that results here will favor the same correlation as those for samples from Temple IV and Structure 10.

COMMENT ON THE INSCRIPTION

For Lintel 2 we depend on Coe's photographs and drawing (Fig. 12), and for Lintel 3 mainly on Maudslay's published photograph and drawing cited in the synoptic heading. But for checking Lintel 3, new photographs of Beams *b* and c, now at the Museum für Völkerkunde, Basel, and of Beam a, at the British Museum, London, are available. These were obtained by Shook in 1956; selected negatives are printed in our Figs. 14–16 while the whole lintel is shown in Fig. 13.

Inevitably one compares these two lintels at Temple I with the more completely surviving ones at Temple IV, noting likenesses, and also differences. Although here the mean style dates for the two lintels differ by 1 1/2 katuns, we assume strict contemporaneity for the two lintels, as at Temple IV, where the style date difference is only a half-katun.

Both designs here are like that of Lintel 2 of Temple IV in that the principal human figures, seated, are in profile, with giant figures behind them—on Lintel 3 a jaguar, on Lintel 2 a serpent (see p. 39). Unfortunately here the left halves of both designs are missing, and these giant animal gods must be largely reconstructed.

MISSING GLYPH PANELS???

Both carved panels are comparatively high and narrow, so that reasonable reconstructions of the giant beasts behind the seated priests must use all—or certainly most—of the available now blank spaces (Figs. 12 and 13). One may compare the giant jaguar depiction on Stela 10, Piedras Negras (Maler, 1901, Pl. 19).

Fixing attention first on Lintel 3, it is a fair conclusion that there was no large and now lost glyph panel at upper left, balancing the known one of 48 blocks at upper right. We have confirming evidence in Morley's failure to mention glyphs on the left beam (Beam e) which he saw lying on the floor, complete (1937–1938, Vol. I, p. 349). It is not clear how much of the carved surface of this beam survived, and nothing is said by Morley about the design on it; but the height of the design panel is given, implying survival of the carved surfaces near top and bottom, at least. In 1947, Coe saw the lower portion of this beam only, still in the temple, and quotes Maler as reporting "The figure on it shows a handsome profile." (p. 26 and Fig. 13e). This seems hard to visualize, but confirms that whatever was on this beam did not include glyphs.

It appears to be reasonably certain that Lintel 3 of Temple I had one panel of glyphs only, at the upper and right margins of the complete design, instead of at the upper and left margins, as on Lintel 2 of Temple IV. Since the principal figures in these two temples face in opposite directions with respect to the observer, it results that both not only face toward the temple entrance, but also in the general direction of the single inscription, not away from it.

Morley arrived at an erroneous total of glyph blocks for both lintels of Temple IV, "not counting a few more possible glyph-blocks in the last two columns." The columns referred to can only be E–F of our panel on Lintel 3 of Temple I, and we must ask whether there may not have been a now lost additional date, possibly the dedicatory date. Close examination of photographs as well as the cast gives a negative answer. There is still a small but definite remnant of plain border below the prefix at F12, showing that this was the closing block (Figs. 13, 14). Were it not for this, the arrangement of Fig. 13 would provide room for ten or a dozen hypothetical lost blocks. Relying on it, we conclude that all blocks on Lintel 3 are accounted for.

Turning to Lintel 2 of Temple I, if there was only one glyph panel here also, again the priest faces toward the only inscription. There is, however, a difference. There are only 7 blocks, compared to 48; and the smaller glyph panel is assigned an interior position within the carved panel as a whole, before the face and lower part of the headdress of the priest. For so small a text this is a visually more important position than would have been the upper right corner, where the whole panel would be far removed from the center of interest, the seated priest. The blocks are at the same scale as those on Lintel 3, and there is really no compelling reason to suspect a lesser importance for this text. It seems probable that no glyphs have been lost on the left, though it might be argued that, with one known small panel, another small panel may have been worked in at the upper left or elsewhere in the missing area.

We conclude that in all probability all blocks on both lintels are accounted for; but that the possibility of a missing small panel on Lintel 2, first reached after entering the building, cannot be absolutely excluded.

RELATIONSHIPS OF THE TWO TEXTS

We have no chronological parallelisms between the two texts, as at Temple IV, and may postulate either that they were read independently, or that one passed from Lintel 2, with the opening date of a continuous series, to the dates on Lintel 3. Dates and blocks are lettered independently, and on the assumption that none are missing.

Lintels 2 and 3 of Temple I: Glyph Classification and Chronological Decipherment

(Order of reading: left-right and downward in double-column except for downward in single column portion of Lintel 2 panel. Number of blocks on Lintel 2: 7; on Lintel 3: 48)

		Lintel 2	
A	(LC position unknown)	A1–B1	CR date in Yaxkin (remnants of Yaxkin glyph at right of B1–see text)
		A2	Destroyed (by position might be PE glyph)
		B2	Coefficient 17–19, main sign mostly destroyed (but position might be PE glyph–see text)
		B3–B5	3 non-calendrical glyphs
		Lintel 3	
A	(9.13. 3. 0. 0)	A1–B1	9 Ahau 13 Pop
		A2	Unusual "Yax-double-Cauac" glyph (implies PE ?; see text).
	7.18	B2	18 (kins), 7 uinals (symbolic period glyph)
B	(9.13. 3. 7.18)	A3–B3	11 Eznab 11 Chen
		A4–B6	6 non-calendrical glyphs
	(2. 0)		Suppressed SS
C	(9.13. 3. 9.18)	C1–D1	12 Eznab 11 Zac (month sign damaged)
		C2–E7	23 non-calendrical glyphs (2 coefficients at E1, 1 coefficient at E4)
	– 13.10. 2	F7–E8	2 (kins), 10 uinals, 13 tuns (symbolic period glyphs; bars and 2 dots of tun coefficient lost–see text)
D	(9.12. 9.17.16)	F8–E9	5 Cib 14 Zotz (month coefficient recontructed–see text)
		F8–F12	7 non-calendrical glyphs

SUMMARY OF CHRONOLOGY (LINTELS 2 AND 3 OF TEMPLE I)

A1–B1	Date A	(PE)	(9.13. 3. 0. 0)	9 Ahau 13 Pop
A2				("Yax-double-Cauac" glyph)
B2		SS	7.18	
A3–B3	Date B		(9.13. 3. 7.18)	11 Eznab 11 Chen
			(2. 0)	(Suppressed SS)
C1–D1	Date C		(9.13. 3. 9.18)	12 Eznab 11 Zac
F7–E8		SS	– 13.10. 2	
F8–E9	Date D		(9.12. 9.17.16)	5 Cib 14 Zotz

DATE ON LINTEL 2

All Late Tikal Period precedents on stone or wood lead one to expect a date on this lintel, and in the opening position of the glyph panel. They also call for reading in double column where this is possible. Though A1 is destroyed, enough survives at the extreme right of B2 to show there was a symbolic winged kin sign with a superfix which can be reconstructed as the Yax prefix. These remnants, in expected position, remove any doubt that this panel opened with a CR date, and that it was at some position in Yaxkin.

In the "Classification" table we note that, by position, this date might have been declared as at a period end by the following two glyphs, A2–B2. This hypothesis calls for a lost ending-sign at A2, and a period glyph with coefficient at B2, conforming to the pattern on Stelae 16, 22, and 19, and (doubtless) on Stela 21. It is very intriguing, for enough survives at the extreme right of B2 to show there was a coefficient of 17, 18, or 19 (3 bars and a dot at extreme right). Under this hypothesis we are limited to two sequent odd tun-end dates, 9.11.18.0.0 5 Ahau 18 Yaxkin and 9.12.19.0.0 1 Ahau 19 Yaxkin. There are two reasons for discarding the hypothesis. The B2 glyph was certainly not the symbolic type of tun-sign, and only symbolic period glyphs were used on the associated Lintel 3. Further, the surviving remnants do not agree with recognized forms of the head-variant tun glyph. As Coe pointed out to the writer, at upper right is an ear of the form seen with a non-calendric "Xul" animal at G5 of Lintel 3 at Temple IV. Below this in each case, an "ear plug" consists of the Kan Cross sign (Fig. 13b). As to the coefficient, Stela 12 provides a local precedent for a high coefficient with a non-calendrical glyph, though in the "Early Tikal Monument Period." Almost certainly this block should be shifted to the definitely non-chronological category.

There remains the possibility of a tun-end declaration at the wholly destroyed A2 only. On Stela 5 the 13–tun position is given immediately after the month sign, without ending sign. On Stela 20 the katun position is given immediately after the month sign, though in that case it is followed by a surely redundant "end-of-a-tun" glyph. Though here any evidence on the question is lost, there are reasons for suspecting that the Yaxkin date was actually at a tun-end, though the matter is complicated by ignorance as to whether we have two chronologically independent texts on the two lintels, or a continuous series of dates starting on Lintel 2.

Let us first consider them as independent texts. If the Yaxkin date was an odd one, the Lintel 2 text is unique among those of the "Late Tikal Monument Period" in failing to record a tun-end (barring an improbable lost panel on this lintel). Now, if we assume a single continuous text, the argument loses some of its force, for Stela 5 opens with an odd date, and then counts forward to a dedicatory tun-end. However, the dominant "Late Tikal Monument Period" pattern is to open with a dedicatory tun-end, and then to pass backward to an earlier date or dates. Assuming such a pattern here, we have a precedent involving two

monuments in Stela 16/Altar 5. Here there is no SS to take us from one lintel to the other, but neither was the presumed SS connecting the dates of the stela and altar recorded—and Lintel 3 here shows that at least one SS was suppressed.

Our conclusion is that the Yaxkin date of Lintel 2 may have been at an odd LC position, but, alternatively, it may well have been at a tun-end. If such, by position alone one would suspect it to be a dedicatory tun-end. This possibility needs to be considered, though it is rejected later on (see pp. 70–71).

DATES AND SECONDARY SERIES ON LINTEL 3

As has been noted earlier, Morley erroneously treated this glyph panel as a second one on Lintel 2 of Temple IV. Consequently the four dates and connecting SS in our tabulations, but not the LC positions for them, follow the last part of Morley's summary for Lintel 2 of Temple IV (1937–1938, Vol. I, p. 359). He allowed for supposedly lost but actually non-existent Columns E–F in the actual Temple IV panel, starting with Column G for the panel with which we are here concerned. They correspond as follows:

Morley:	G H I J K L (as if on Lintel 2 of Temple IV)
Lintel 3 of Temple I:	A B C D E F

A note on his readings follows:

Reconstructions of Dates C and D and SS between them. Morley's reconstructions are followed in our tabulations. He showed that they are mandatory, but we can arrive at them a little more simply. Damage to the month sign of Date C is unimportant for the coefficient and Zac prefix are unaffected. The legible kin coefficient of the SS requires counting backward to Cib, the 2 days alone reaching 10 Cib; the legible 10 uinals take us to the recorded 5 Cib; the only tun value possible (other than zero) is 13 tuns, reaching an earlier 5 Cib, and inspection shows a surviving dot in the tun coefficient. Counting the mandatory 13.10.2 back from the sure 11 Zac of Date C requires 14 Zotz for Date D, though both bars are lost, and one of the dots seems to be damaged or oversize in the photographs.

The only possible leeway for theoretical manipulation is supplied by suppression of an SS connecting Date B with Date C. The mere fact of its suppression seems a sufficient guarantee that this was understood to be the short forward minimum distance 2.0, as assumed by Morley.

LONG COUNT POSITIONS OF DATES ON LINTEL 3

Reference has already been made to Beyer's shift of Date A from Morley's 9.15.15.13.0 position to 9.13.3.0.0. It is clear that if we follow Beyer for Date A we must shift the other dates accordingly, and this is done in our tabulations.

Beyer tells us that Seler had already suggested Morley's position for Date A, which we may distinguish as "late," and that Spinden once chose the early position because this is at a tun-end, but that he later preferred the late position because the early one failed to give desired astronomical results in his correlation (Beyer, 1943, p. 340).

The reason different choices were possible is the lack of a recognized PE glyph or glyphs after the 9 Ahau 13 Pop (Date A). Beyer drew the following glyph, at A2, from the original in Switzerland. The main sign is the double-Cauac used in symbolic glyphs for the baktun and higher periods; a superfix seems identical with that of the Initial Series Introducing Glyph; there is a Yax sign as prefix (mis-drawn in Maudslay's Pl. 74). Considered separately, all these elements may be "calendrical," but the meaning of the combination is un-

known. Beyer noticed this same "Yax-double-Cauac" glyph following the same CR date on Naranjo Stela 29, and made the obvious inference that, with the same thing being said about the same CR date at two sites, the same LC position must apply to both. At Naranjo the position is clearly fixed at 9.13.3.0.0.

Behind the reasoning is the fact that one has no cause to suspect that a given CR would again be recorded one CR period later—and the logical supposition that if, nevertheless, the Tikal recording was an exceptional "CR anniversary" some different unusual glyph would be expected, not the same one.

We may add that at Naranjo the tun-end nature of the LC position was clearly in the recorder's mind, for the tun-end glyph appears between the date and the Yax-double-Cauac glyph, and it was not there necessary to fix the date. The text on Naranjo Stela 29 opens with a locally important odd IS; SS lead forward through two odd dates to the 9 Ahau 13 Pop date; and a final SS of 1.0.0.0 leads thence to the final and dedicatory date at 9.14.3.0.0. I think it follows that at Tikal, where the tun-end glyph is omitted, its meaning may have been implied by or included in that of the Yax-double-Cauac glyph. Thus it is not safe to assume there was no fix in the LC on the Tikal lintel.

This suggestion should not be made, however, without calling attention to an apparent record of the same unusual glyph during the "Early Tikal Monument Period," at C3 on Stela 25 (Tikal Report No. 4., p. 115 and Fig. 23). If correctly identified, here it is in the middle of a long text; possibly it follows immediately after an SS and certainly it is not closely associated with a date by position. But one wonders if it could refer back to the opening DD, fixed by IS at 9.4.3.0.0. Whether by coincidence or not we seem to have this unusual glyph in three texts at two sites, all three showing special interest in Tun 3 of a katun. At Tikal these 3d tuns are at 9.4.3.0.0 and 9.13.3.0.0 while at Naranjo they are at 9.13.3.0.0 and 9.14.3.0.0.

Beyer seems to assume that Date A, on the Tikal lintel, at his and our LC position, was a Dedicatory Date. Later we conclude that this is probable, and that 9.14.0.0.0 is as late an alternative as one ought to consider. Thus, if the "early" positions are correct there was a sizable time-gap between placement of these lintels of Temple I and those of Temple IV, and any differences tend to confirm the early LC positions at Temple I. Beyer noted such differences in recording the month Chen, and in the uinal glyph. Expanding somewhat, these may be summarized as follows. At Temple I the symbolic forms for all calendric signs are used except in the case of the month Zotz, for which no symbolic form is known. At Temple IV the three records of Chen are the head-variant or personified type, while the single Chen at Temple I is geometric or symbolic, like month signs other than Chen at Temple IV. Thus, at that temple only, Chen seems to have been singled out for personified depiction. At Temple I, not only the uinal sign, but also the tun-glyph is given in symbolic style; at Temple IV both these signs, and the katun glyph as well, are shown only in the personified style.

Another difference tending to confirm a substantial interval between the DD's of the two sets of lintels is an obvious difference in the masonry of the two buildings. Merely casual observation shows that the facing stones of the lower zone at Temple I are very much smaller than those at Temple IV. The masonry of Temple I appears to be of the "small block" type described at Structure 93, another temple, by Shook (1951, p. 30 and Fig. 24).

Beyer notes admittedly speculative attempts of Maudslay, Spinden, and Morley to arrange the "great" temples in chronological sequence, and that his epigraphic conclusion disagrees with Spinden's sequence, which places Temple IV earlier than Temple I because

of its smaller proportion of room space (Spinden, 1913 and 1957, p. 170). Spinden noted that his sequence was only a suggestion, and that "the size and character of the roof structures may explain the differences in floor space in the various temples rather than real advance in the building art." The present epigraphic dating shows the wisdom of his caution. It might still be argued that erection of an enormous roof comb, even at sacrifice of room space, might have seemed to the contemporary Maya to be a "real advance in the building art."

We close this part of the discussion with reference to a stylistic likeness in coefficients at the two temples. This is the unusual placement of two dots at center, flanked by crescentic "fillers" at the extremes. Morley noted this at A3 and A16 of Lintel 2 of Temple IV, and also at his L7 for that lintel, now F7 of Lintel 3 of Temple I, and one CR period earlier. Thus this stylistic detail must be given some time depth, if the earlier position is an approximately contemporaneous one. Looking for confirmation, we find this unusual use of fillers in the month coefficients of the earliest and latest of the odd dates on Altar 5, the dates being 1 Muluc 2 Muan and 1 Muluc 2 Kankin (Morley, 1937–1938, Vol. I, p. 339; Tozzer, 1911, Pl. 28). There is no reasonable doubt about Morley's placement of these at 9.12.19.12.0 and 9.13.19.16.9, the latter only 1.11 days before the DD on the associated monument, Stela 16, at 9.14.0.0.0.

Everything points toward the correctness of the LC positions in our tabulations and seems to justify their use without question marks.

THE DEDICATORY DATE

Although Date A of Lintel 3 was undoubtedly at Beyer's LC position for it, the tun-end at 9.13.3.0.0, taking it as the contemporaneous DD, is a question which requires review, if for no other reason than that we now know something of the accompanying Lintel 2, and should consider that one DD applied to both lintels. The question is considered in the same manner as at Temple IV, keeping in mind the usual rules and exceptions noted on pp. 49–50 and local Late Period date-recording patterns on the monuments.

Recording the DD at the beginning of the short text on Lintel 2 would be in line with expectations, especially if the reader was expected to pass directly to the panel of Lintel 3, as one probably passed from the panels on Stela 16 to the earlier dates on Altar 5. However, this date on Lintel 2 was in the month Yaxkin, and if we suppose it was at a tun-end and the latest date on both lintels (Rules 1 and 2), it can be no earlier than 9.15.11.0.0. Such a reconstruction involves a gap of more than two-and-a-quarter katuns between the latest of the Lintel 3 dates and the DD, a highly improbable situation. It also ignores a certain amount of cited evidence for a substantial difference in the contemporaneous dates at Temples I and IV. As a tun-end date closer to those of Lintel 3 the limits are 9.11.18.0.0–9.12.1.0.0, with the katun-end 9.12.0.0.0 one of the possibilities. Any of these is earlier than the tun-end 9.13.3.0.0 on Lintel 3, not later as required by Rule 2. We conclude that the Yaxkin date was not the DD. Though it may have been at one of these earlier tun-ends, there is no longer any particular reason for thinking so.

Considering the text of Lintel 3 as an independent statement which included the DD, Date A is in a position where the DD might be expected. It is at a tun-end as required by Rule 1, and this may have been actually implied by the Yax-double-Cauac glyph, with suppression of the end-of-tun glyph used at Naranjo. Though DD's at odd tun-ends are very rare, we have a precedent in the local "Early Series," also at a Tun 3 (Stela 25), while Naranjo marked the Tun 3 at 9.14.3.0.0 with two stelae (Stelae 29 and 30), reaching back on one of

them to our Tun 3 at 9.13.3.0.0 as if it also had been a date of special importance. At Tikal also this date is not the latest one given, but it fails to be such by less than a year. There are two slightly later odd dates instead of only one—apart from this, Exception 2 to Rule 2 could apply. The case for 9.13.3.0.0 as the DD seems to be very strong.

However, if we expand Exception 2 to allow two slightly later odd dates, we have an unexpected feature tending to cast doubt on this minor adjustment of the rule. Usually, where Exception 2 applies, the latest odd date is the last date given, though occasionally the final count is backward from the latest odd date to the dedicatory tun-end itself, which is then the last date given. Here the final count is backward to the earliest date in the panel, an odd one and very likely the earliest date on both lintels. Seeking to reconcile this with our modified Exception 2, we may imagine that the DD and the slightly later "future" dates had to be kept together, while the dominant local pattern called for opening the text with the DD. In that case a single count back to a past date would have to come last in the text. Such single counts backward, though directly from the DD, were on Stelae 21, 22, 19, and probably on Stela 16/Altar 5.

The case for 9.13.3.0.0 as the DD still seems good, but not entirely beyond question. This being so, it seems safest to allow for a now lost DD on Lintel 2, though this seems improbable, or alternatively for suppression of the DD, as may have been the case at Temple IV. There is here no reason for suspecting that the latest recorded odd date was the DD, and the end of the current katun seems a fair alternative guess for the DD, and a highly probable late limit for it:

1: 9.13.3.0.0 9 Ahau 13 Pop (?)
2: (9.14.0.0.0 6 Ahau 13 Muan) (??) (not recorded).

It must be conceded that the Proskouriakoff style date limits do not confirm these epigraphic limits, as the situation of Temple IV would lead one to expect. Only the later epigraphic limit makes contact with the earlier of the two style date limits, hence with the combined limits, and even this would doubtless lie before an early limit based on a single curve for the combined traits of both lintels. However, the style date limits are the minimum ± 2 katuns and they are not absolutes. The amount of potential "stretch" necessary to reconcile them with both of the epigraphic limits does not, I think, justify serious doubt respecting the latter.

As to the early alternative DD, this conclusion varies from Proskouriakoff's opinion when she supplied us with her results, which we quote with permission: "The graph for Lintel 2 of Temple 3 is not very satisfactory and I think the central date may be somewhat late, but the more flamboyant scrolls and featherwork do indicate that that and the lintel from Temple I may be a little later than those from Temple IV. I don't think any of them are earlier than 9.15.0.0.0 but, to be perfectly sure, one might extend the early limit to 9.14.0.0.0." This concedes that systematically arrived at limits may on occasion have to be expanded, and one has no dependable measure of the amount of stretch necessary "to be perfectly sure."

A choice between the two alternatives could have little effect on conclusions respecting the Maya–Christian correlations based on C–14 results. Either alternative implies extensive constructional activity at two locations during Katun 14. The earlier preferred alternative makes the dedication of the Temple I lintels (before the building was completed) less than a katun before dedication of Stela 16/Altar 5 and, presumably, completion of the associated twin-pyramid complex. The later alternative places the two dedications at the

same katun-end, 9.14.0.0.0, with completion of the temple building still in the future.

THE CARVED LINTEL OF STRUCTURE 10 (STR. 5D-52)

Location:	Five beams (a–e) originally spanned central interior doorway on the first floor of upper of two palaces comprising Maler's "Palace of Five Stories" and called "Structure 10" by Tozzer; the doorway is in the "third story" of Maler and Tozzer. For other details see this report.
Dedicatory Date:	9.15.10.0.0 3 Ahau 3 Mol (as in Morley).
Style Date:	9.16.10.0.0 ± 3 katuns (Proskouriakoff's revised estimate; given as 9.16.0.0.0 ± 2 katuns in Proskouriakoff 1950).
Condition:	Areas missing, no lost blocks, glyphs damaged but reading of date certain.
Photographs:	Figs. 36, 37 a, b of this report; Morley, 1937–1938, Vol. V, Pl. 73 a.
Drawings:	Fig. 37 c of this report; Morley, Vol. V, Pl. 8 h
Other References:	This report; Maler, 1911, pp. 15–18; Tozzer, 1911, pp. 111–113; Figs. 22–24 and Pl. 8, 1; Kulp, Feely and Tryon, 1951; Shook, 1951, p. 21; Satterthwaite, 1956.
Carved areas:	Underside only, so far as known.
Material:	Wood (zapote).
Dimensions:	See report, Table 2.
Orientation:	Base of the design to the west, principal figure facing entrance, to observer's left.

GENERAL REMARKS

We retain the "Structure 10" label for this lintel because of its use in prior publications. Tozzer applied it to Maler's "Palace of Five Stories," giving a plan of the so-called 1st and 3d stories, another of the 2nd and 4th stories, and a cross-section through all five "stories" (1911, Figs. 22–24). The identifiable walls and rooms in these figures pertain to Structure 5D-52 of the new Tikal Project small-scale map, which does not attempt to show details.

The use of a single structure number should not obscure the fact that two potentially independent palaces are covered by it, one set behind the other at a higher level. Tozzer distinguished the upper palace in his text, calling it "the main structure" and saying "it is a unit ...it is a detached building ...it faces on the south and there is no entrance to the building from the square on the south side of which it stands." The cross-section indicates that access was from an esplanade which perhaps was in part formed by the roof of the lower building, a two-story one.

We shall here speak of "lower" and "upper" palaces as components of the complex covered by "Structure 10" and "Structure 5D-52." When we make this distinction the so-called third and fourth stories become the first and second stories of the upper palace. The so-called "fifth story" is not a third story of this building, but a roof comb (Shook, 1951, p. 21, noting a similar early misconception at Structure 27).

On both floors of the upper palace a medial wall forms front and rear galleries or rooms. The carved lintel spanned an axially placed doorway through the medial wall on the first story. It was doubtless directly behind a doorway in the now collapsed facade. This

axial-interior placement corresponds to the locations of all carved lintels in the temples, but most closely to that at Temple III. There also, one could not have two associated interior carved lintels, one behind the other.

In the temples the rule seems to be that lintels of facade doorways were never carved. Applying it here we have a very high probability that there was only one carved lintel in the entire building—over the only centrally-placed interior doorway on the first floor.

The general character of the design and of the inscription corresponds to that of the temple lintels and stone monuments, and although this one is in a palace, a building-type thought by some to have been domiciliary in function, the "contemporaneous" dedicatory nature of the single date given has not been questioned. One may argue that presence of this lintel in a palace is good evidence for non-domiciliary function.

The available record of this lintel has been greatly improved by Coe, who made a series of variously lighted photographs of two of the beams now in New York, some of which appear in Figs. 36, 37 a, b, and the very careful drawing of Fig. 37 c, based on the photographs. These lead to some discussion below concerning Morley's reading of the date as a dedicatory one at 9.15.10.0.0, but this is confirmed, not questioned.

A sample from one of the New York beams has been dated by the C–14 method by Kulp, who obtained A. D. 481 ± 120 years. This was the first such result which raised doubts as to correctness of the "11–16" correlation. That of Libby, for Temple IV samples, was noted on p. 54. As of the time of writing Kulp's result is also being checked at the University of Pennsylvania C–14 laboratory, using another sample from the same beam.

It is worth noting that, as at the temples, a dedicatory date for the lintel cannot very well be regarded as dedicatory for the whole building. In this case a very large part of the total effort on the upper palace came after the placement of the lintel.

COMMENT ON THE INSCRIPTION

NO MISSING GLYPH BLOCKS

Where, as here, there are completely missing areas, one wants to know if glyphs have been lost. Coe and Shook review the somewhat confusing history of the beams of this lintel, bringing it down to date, with significant new data (pp. 40–42). It may be taken as certain that two beams were removed by three named vandals before Maler's time. These must have been Beams *a* and *b*, of Fig. 36, the "outer" ones, because on this side only, fallen debris made them the easiest to get at, and Morley noted the next two, Beams c and *d* as "outer" ones in 1914. The early vandals had to remove Beam *a* in order to get at Beam *b*. Since Beam *a* is still at the spot, complete, it was evidently discarded. On the other hand, they reduced the weight of Beam *b* by cutting off the butt ends, and presumably carried the rest of this one beam off, though Maler understood that two had been taken away. The obvious conclusion is that Beam *b* was valued because it was carved, and that Beam *a* was discarded because it was plain.

One can only guess at the design on this Beam *b*, but it provides room for postulating a lost column of glyphs to the left of Column A, so that two instead of one column would extend below the others (Fig. 37 a, c). This hypothetical possibility may be rejected, because Column A must be read vertically, and cannot be the second of two columns to be read in double-column order. Two vertically read columns side by side would violate the rules.

In Fig. 36 it is suggested that Beam e, also missing, provided a wide plain border area on the right, balancing the known one on the left. This requires that the rear of the chief

priest was cut off by the border, as are the subordinate figures on the Temple III lintel (Fig. 18). If this reconstruction is wrong, one must assume the space was used to complete the figure of the priest.

The conclusion is that all blocks are accounted for. As at the temples, the chief figure faced the entrance, looking in the direction of a glyph panel, in this case the only one.

Carved Lintel of Structure 10: Classification and Chronological Decipherment

(Order of reading: Downward in Column A; presumably left-right and downward in double column thereafter. Number of blocks: 10)

(9.15.10.0.0)	A1–A2	3 Ahau 3 Mol (damaged, coefficient at A1 restored after a presumed lost prefix; presumed lost affix after month coefficient at A2–see text)
	A3	Half-period (non-fused type, probably with lost shell prefix–see text)
	A4–A6	3 destroyed glyphs, presumably non-chronological
	B1–C1	2 non-chronological glyphs
	B2	1 destroyed glyph, presumably non-chronological
	C2	1 non-chronological glyph

THE DEDICATORY DATE

The text is covered by Morley (1937–1938, Vol. I, pp. 341–342, with drawing of A1–A3, and photograph of Beams c–*d* in V, Pl. 8h, and 73a). We follow him in reading the single date as 9.15.10.0.0 3 Ahau 3 Mol, but in the "Classification" table add some notes which require explanation. Morley's drawing of the three opening glyphs was apparently made at Tikal, when the two beams were in place; the photograph must have been made after their removal to New York. There are some discrepancies between Morley's drawing and that of Coe in our Fig. 37c which cannot be accounted for by additional damage in transit to New York. Parts of these glyphs were undoubtedly in bad shape even before Maler's time.

The two drawings agree in placing three dots of the month coefficient so that the left margin thus established requires a prefix before the little-damaged cut-off completion sign at A3. Morley fills this space with a bracket, Coe merely showing top and bottom traces of some element. The bracket could have been lost after Morley made his drawing. Instead, one would expect the "shell" sign in this area, since it is not infixed within the completion sign as it is at Temple IV. We suggest that this probably was the case, in spite of Morley's drawing of the bracket. Either way, the two drawings agree in establishing left and right margins far enough apart to require a prefix at A3, with the three dots of the month coefficient in A2 at the left margin. Morley draws the three dots for the day coefficient also at the left margin, while Coe considers this area of A1 as too damaged for reading by inspection. If we now restore these dots of A1 at the left margin on Coe's drawing, and then complete his remains of day and month signs so that their left sides come close to the dots as in Morley's drawing, both glyphs will be unbelievably asymmetrical. It is hard to escape the conclusion that Morley drew much more of those signs than he could see, and placed his vertical axis for symmetrical signs too far to the left.

Accepting Coe's Fig. 37c as showing all that is safely recognizable by inspection, it only tells us that we are at a half-katun-end in Mol. There was room for one or even two bars as well as for dots in either or both coefficients. However, if the extra spaces were filled with bars the date would have to be 12 Ahau 8 Mol at 9.4.10.0.0, in the Early Period. This may be rejected because the text is certainly a Late Period one on stylistic

grounds. Though the Maya sometimes recorded dates which were in the past by many katuns, such a date would not be the only one recorded. We have been at some pains to show that no other date has been lost from this lintel, and that it is unlikely that there was another carved lintel associated with it.

To reconcile Morley's fully justified reading with the new photographs and drawing, we postulate loss of affixes, though no local precedents have been found. At A2 the missing affix was probably Thompson's Te (1) affix which, as a numerical classifier, belongs between the coefficient and the month sign, where the space is available. This has been suggested to the writer by several competent Mayanists.

To fill the available space in A1, one immediately thinks of the centipede affix. This sign may project from the upper left corner of a Day Sign which partly hides it. But it may also appear complete, above or to the left of the Day Sign. A not necessarily compelling objection is that one would not expect its use with a Day Sign here at so late a date; still later such uses in northern Yucatan have been classed as archaisms in a peripheral area (Thompson, 1950, p. 57). The sign itself, in complete space-needing form, appears at D6 on the approximately contemporaneous Lintel 3 of Temple IV, at left margin, but as prefix in a non-calendrical glyph. In earlier times and in full form, it could appear between the coefficient and the Day Sign (Copan Stela 9 at 9.6.10.0.0) or at left margin before the coefficient of the Day Sign (Caracol Stela 6 at 9.8.10.0.0). The cited example at Copan is within Proskouriakoff's Hiatus Period between Early and Late Classic Periods; the Caracol example is very early in her Late Classic Period, and much closer to Tikal. For illustrations and readings of these two dates see Morley 1915, p. 173 and Pl. 8B; Satterthwaite 1954, Table 2 and Fig. 22.

In the Caracol text, not yet fully published, the affix is used with two dates, but it is not used with others. Bearing this in mind, and the fact that only three "Late Tikal Monument Period" texts before 9.15.10.0.0 are known, it seems at least a reasonable guess that the centipede affix appeared here on the Structure 10 lintel. If this was the only "Tikal Monument Period" usage with a Day Sign, there is evidence of conscious local archaism at about this time, on Stela 5 (Morley, 1937–1938, Vol. I, p. 343; Proskouriakoff, 1950, p. 125). If the complete centipede affix postulate is rejected, good evidence seems to require some other of similar size and form.

If we are correct in claiming that affixes of one sort or another must have been lost from both blocks, then there were interesting differences in all three of the date-recording blocks, as compared with those recording the same date at Temple IV. This tends to support the view that this date was a dedicatory one at Structure 10 only. Being the only date recorded here, 9.15.10.0.0 3 Ahau 3 Mol as the DD satisfied Rules 1 and 2 (pp. 49–50) and this is confirmed by Proskouriakoff's mean style date for it, only a katun later (9.16.10.0.0 $\pm$ 3 katuns). In this case the 1 katun of difference is within a total spread of 6 katuns, not the usual 4 katuns.

LINTEL 2 OF TEMPLE III

Location:	Eight beams (*a–h*) spanned the only interior doorway; *b–h* still in place; see this report.
Dedicatory Date:	"Late Classic" (latest of "great" temples ??)
Style Date:	9.19.0.0.0 ± 2 1/2 katuns (Proskouriakoff estimate).
Condition:	Beam *a* missing; presumably with a left glyph panel; glyphs of right panel extensively damaged by termites.
Photographs:	Figs. 19, 20 of this report; Shook, 1957, Fig. 36; Coe, 1958, pp. 75, 77.
Drawings:	Fig. 18 of this report; Shook, 1957, Fig. 37; Coe, 1958, p. 77.
Other References:	This report; Morley, 1937–1938, Vol. I, p. 350.
Carved Areas:	Underside only, so far as known.
Material:	Wood (zapote).
Dimensions:	See Table 2.
Orientation:	Base of design to south; principal figure faces entrance, to observer's left.

GENERAL REMARKS

Coe and Shook's new data on wooden lintel beam proveniences have led them to infer that Lintel 1 of this temple was plain, not carved and ripped out as supposed by Morley and others. If they are correct as is here assumed, one seems justified in reasoning with a general rule that carved wooden lintels were placed over interior doorways only. We applied this rule at Structure 10 where, as here, it requires that there was no associated second lintel.

For the first time we have an adequate visual record of the carved lintel, supplied by Coe's photographs and drawing (Figs. 18–20). Though Beam *a* is missing, the others are still in place. Damage by rotting and termites is very extensive; nevertheless, much more of the design has been preserved than prior accounts would have led one to expect.

COMMENT ON THE INSCRIPTION

The illustrations confirm what little Morley could say about the inscription. The symmetrical layout of the design panel as a whole calls definitely for a lost panel of two columns of glyphs at the extreme left, balancing the preserved one of 38 blocks on the right. The columns of the right glyph panel accordingly have been lettered C–D. Presumably the total count was 38 + 38 = 76 blocks. This was the longest single text from the "Late Tikal Monument Period" of which we know. As we shall see, it does not break down into two parallel texts like those of the two carved lintels at Temple IV; it is slightly longer than the longer of those (64 blocks on Lintel 3). There are in addition two one-column panels of two blocks each, which we letter E and F for identification. Blocks F1–F2, destroyed, are spatially associated with the subordinate figure on the right, while E1–E2 are before the staff of the left attendant figure, and therefore before the staff of the principal figure also. E2 is definitely non-calendrical, and both small panels probably refer to the subordinate figures. Counting these, the total probable count of blocks rises to 80.

Morley reported that the right main panel here contained no dates. Coe's drawing confirms this as fully as can be expected, considering the fact that termites have been active

since Morley's time. At C6 there is a coefficient of 9 or 14. Conceivably this could have been the uinal term of an SS, with a CR date at C7–D7. Nowhere else could one restore a CR date with the required coefficients in sequent blocks. It follows that there was almost certainly a continuous text, beginning in the left and now lost main glyph panel. In the surviving panel there is an unexpected post-fixed and inverted numeral 9, like the coefficient of Glyph A of the Lunar Series, which presumably did not appear here.

On stylistic grounds we are definitely in the "Late Tikal Monument Period," when the dominant pattern was to open a text with the Dedicatory Date, declared to be a Period Ending. Probably this date was given at the beginning of the lost left panel. One has no means of judging whether that panel carried additional dates.

THE DEDICATORY DATE

Presumably the dedicatory date was recorded, but has been lost. We are limited to speculating on the relative chronological position of this lintel among the others. We have assumed that position in sequence cannot be safely inferred from overlapping style date spreads, but this does not mean that such may be entirely useless when other types of evidence can be brought to bear.

The central date at Temple III is later than any other by 1 1/2 katuns, but Proskouriakoff reports a somewhat unsatisfactory graph and a suspicion that the central date is somewhat late (see quotation on p. 71). Nevertheless she saw indications that the Temple III lintel "may be a little later than those from Temple IV." This is linked to the same opinion respecting the Temple I lintels. On the basis of epigraphy we have taken the position that the later of two spreads there may be short by 2.7.0.0 in the minus direction, or, with the hotun as the unit, an allowance of – 4 1/2 katuns instead of – 2 katuns may be required to cover the actual DD. To be safe, logically we should not exclude the possibility that the Temple III spread is also too short to cover the actual DD. If short by a comparable amount the DD of Temple III could have been as early as 9.14.10.0.0, though of course, there is no affirmative reason for accepting such a postulate.

The Proskouriakoff limits usually work so well that this would seem to be an acceptable extreme early limit. With it, and using epigraphic DD controls at Temples I and IV and Structure 10, all one can say about the sequent position of the Temple III lintel is that it is after those of Temple I. This is in line with the "small block" masonry at Temple I, not found at the other three buildings.

LINTEL 2 OF TEMPLE II

Location:	Five beams (*a*–*e*) originally spanned the middle (interior) doorway; none now in place, and only Beam c partially survives; see this report.
Dedicatory Date:	"Late Classic."
Style Date:	9.15.0.0.0 ± 3 katuns (Proskouriakoff revised estimate; given as Late Classic, Ornate Phase in 1950).
Condition:	All but parts of two beams missing; presumed inscription entirely lost.
Photographs:	Fig. 17 c of this report: Maler, 1911, Pl. 18.
Drawings:	Fig. 17 b of this report; Spinden, 1913, p. 257.
Other References:	This report; Proskouriakoff, 1950.
Carved Areas:	Underside only, so far as known.
Material:	Wood (zapote).
Dimensions:	See Table 2, this report.
Orientation:	Base of design probably to south with principal figure facing entrance, to observer's left.

GENERAL REMARKS

Coe and Shook provide evidence that here only one of the two available interior doorways was spanned by a carved lintel. We have in this, perhaps, a hint that at Temples I and IV, the lintels over the middle doorways were in favored positions. This might, of course, be nothing more than a matter of better lighting. If their reasoning that lintels over facade doorways were never carved is sound, Lintel 2 was the only carved one here, as at Temple 3 and Structure 10, where there was room for only one interior carved lintel.

THE DEDICATORY DATE

We have every reason to suppose that a chronological inscription appeared on this lintel, but it is completely lost. As at Temple III, we can only speculate on the position in the sequence of all carved lintels.

Proskouriakoff's revised style date limits are more precise than the original "Late Classic, Ornate Phase." In her scheme that phase runs from 9.13.0.0.0 to 9.17.0.0.0 but we were warned against taking these limits literally. We have no reason to suspect that the present ± 3 katuns allowance is either inadequate or excessive. It covers the range 9.12.0.0.0 – 9.18.0.0.0.

This spread permits one to substitute epigraphic for stylistic limits at Temples I and IV and Structure 10 and still insert Temple II anywhere in the sequence. But if we are correct in believing that Temple I was no later than 9.14.0.0.0, and probably was at 9.13.3.0.0, we may guess that Temple II belongs with it at the early end. The evidence for this is that even superficial observation shows only these two temples share the "small block" type of masonry facing for walls of the buildings containing the lintels (see p. 69). The locations of the two temples, which face each other across the Great Plaza, tend to confirm the view that they were close together in time. For full discussion of the stratigraphic relations of these two structures, see Tikal Report No. 12 in preparation.

Accepting this as probable, though not proved, the style date limits permit placing either temple first in the series. If Morley's not unreasonable guess that, among the great temples heights increased with time is given weight, the balance tips in favor of Temple II as the earliest of all. The carving of one instead of a pair of lintels would fit the picture. But before accepting such reasoning one would like proof by excavation that all great temple buildings proper were built at the same time as their supporting pyramids.

TABLE 1

SUMMARY OF PAST AND PRESENT ASSIGNMENTS OF LINTELS

STRUCTURE, LINTEL AND NUMBER OF BEAMS	*Maudslay* (1889–1902)	*Maler* (1911)	*Spinden* (1913)	*Morley* (1937–38)	*Present Assignments*
T. I, L. 1, two beams	Figs. 6, 7, 8, 9, 10	Plain	Plain	Plain	Plain
T. I, L. 2, four beams	Carved, two beams missing	Same as Maudslay	Same as Maudslay	Same as Maudslay	Fig. 12
T. I, L. 3, five beams	Figs. 1,2, 3, 4, 5	Fig. 13 e	Same as Maler	Same as Maler	Figs. 13 e, 2, 3, 4, 5 (see Fig. 13)
T. II, L. 1, five beams	Plain, evidently in place	All beams missing; unknown whether carved	Figs. 6, 7, 8, 9, 10	Figs. 8, 9, 10; Fig. 17 b, either here or in L. 2	Plain
T. II, L. 2, five beams	Carved, evidently in place	Fig. 17 b, c; three beams lost	Same as Maler	Fig. 17 c; possibly Fig. 17 b	Fig. 17 b, c
T. II, L. 3, six beams	Plain, all in place	Same as Maudslay	Same as Maler	Same as Maudslay	Same as Maudslay
T. III, L. 1, six beams	Beams fallen	Same as Maudslay; unknown whether carved	Same as Maler; may have been sculptured	Probably carved	Plain
T. III, L. 2, ten beams	Carved, in place, except for one; also confusedly suggests Lintel in Fig. 29 may belong here	Carved; one beam missing	Same as Maler	Same as Maler	Figs. 18, 19
T. IV, L. 1, six beams	No data	Plain, in place	Same as Maler	Same as Maler	Same as Maler
T. IV, L. 2, six beams	No data	All carved beams missing	Area could not have been spanned by beams in Figs. 6–10	Figs. 6, 7, 2, 3, 4 and possibly 1 and 5	Figs. 6, 7, 8, 9, 10, 1 (see Fig. 22)
T. IV, L. 3, seven beams	Fig. 29	Same as Maudslay	Same as Maudslay	Same as Maudslay	Fig. 29
Str. 10, Lintel, third story, five beams	No data	Five beams including those in Fig. 36 c, d	No data	Same as Maler: but confused regarding T. II, L. 2, Beam c	Fig. 36 c, d,

Note: All Figures refer to this report.

TABLE 2

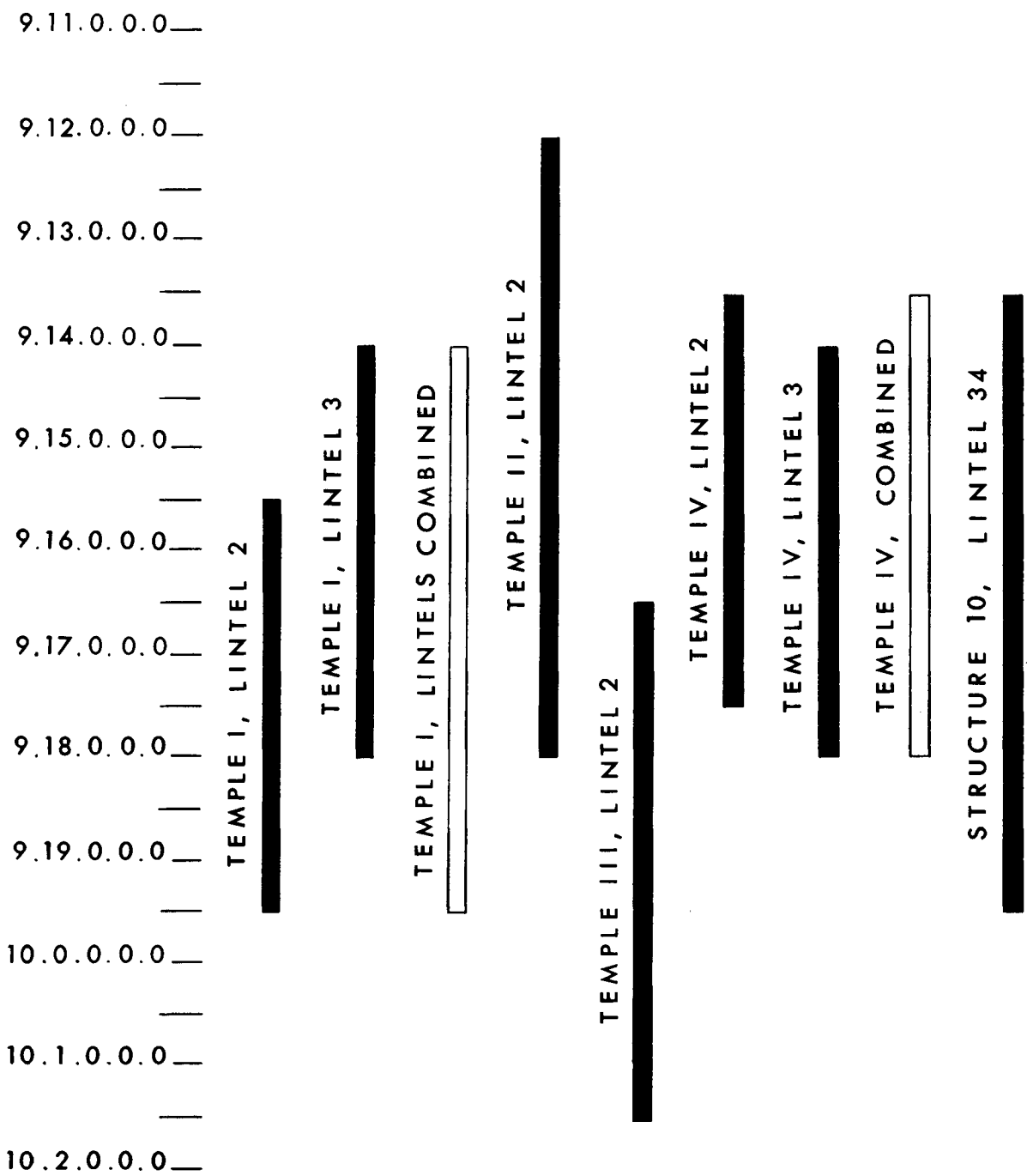
DIMENSIONS OF DOORWAYS, INSET OF LINTELS, LINTELS AND COMPONENT BEAMS

LOCATION	DOORWAY		INSET DEPTH		LINTEL				BEAMS	
	width	*thickness*	*outer*	*inner*	*width*	*length*	*panel width*	*panel height*	*width and thickness*	
T. I, Doorway 1, L. 1	2.20	1.04	0.10	0.10	0.84	4.20	Plain	Plain	a. (0.39) by 0.185	b. 0.43 by 0.185
T. I, Doorway 2, L. 2	2.47	1.24	0.06	0.06	(1.12)	(4.01)	(1.05)	2.368	a. 0.33 b. 0.25	c. (0.28) by ca. 0.18 d. (0.26)
T. I, Doorway 3, L. 3	1.90	1.45	(0.55)	(0.55)	(1.34)	(3.96)	(1.26)	1.825	a. 0.18 by ? b. 0.285 by ? c. 0.33 by ?	d. (0.34) by ? e. 0.185 by 0.21
T. II, Doorway 1, L. 1	2.24	1.34	0.07	0.10	(1.17)	(4.54)	Plain	Plain	e. (0.23) by ?	
T. II, Doorway 2, L. 2	2.15	1.43	0.06	0.05	(1.32)	(4.42)	?	?	a. (0.27) by ? b. 0.21 by ? c. 0.235 by ?	d. (0.31) by ? e. (0.25) by ?
T. II, Doorway 3, L. 3	1.99	1.97	0.08	0.08	1.81	4.45	Plain	Plain	a. 0.33 b. 0.32 c. 0.29 by 0.20–22	d. 0.25 e. 0.30 f. 0.31
T. III, Doorway 1, L. 1	3.93	1.75	0.12	0.14	(1.49)	6.09	Plain	Plain	a. (0.23) by ? b. (0.22) by 0.15 c. (0.20) by 0.15 d. (0.18) by 0.18	e. (0.20) by 0.18 f. (0.16) by 0.17 g. (0.16) by 0.18 h. (0.14) by 0.22
T. III, Doorway 2, L. 2	2.18	2.30	0.07	0.07	(2.16)	4.37	(2.07)	2.03	a. (0.23) b. 0.22 c. 0.22 d. 0.28 e. 0.25	f. 0.21 by 0.17–0.19 g. 0.21 h. 0.17 i. 0.27 j. 0.20
T. IV, Doorway 1, L. 1	3.07	2.04	0.09	0.09	1.86	4.75	Plain	Plain	a. 0.31 b. 0.31 c. 0.32 by 0.23	d. 0.28 e. 0.315 f. 0.324
T. IV, Doorway 2, L. 2	2.18	2.32	0.06	0.06	(2.20)	(3.84)	(1.86)	2.16	a. (0.34) by 0.23 b. (0.29) by 0.17 c. (0.46) by 0.24	d. (0.39) by 0.24 e. 0.32 by 0.23 f. (0.39) by 0.22
T. IV, Doorway 3, L. 3	1.83	2.37	0.09–0.10	0.05–0.09	(2.20)	(3.76)	(2.05)	1.756	a. (0.335) by 0.21 b. 0.28 by 0.22 c. 0.29 by 0.23 d. (0.315) by 0.21	e. (0.27) by 0.21 f. (0.39) by 0.21 g. (0.27) by 0.20
Str. 10, Lintel, 3rd story	1.78	1.45–1.47	0.06	0.06	(1.34)	(3.08)	?	1.76	a. 0.22 by 0.18 b. 0.16 by 0.15 c. 0.39 by ?	d. 0.29 by ? e. 0.27 by ?

Note: Dimensions in parentheses are reconstructed. This distinction has not been made in the case of "beam thickness." All dimensions are in meters.

TABLE 3

PROSKOURIAKOFF'S STYLE-DATE LIMITS OF TIKAL CARVED LINTELS



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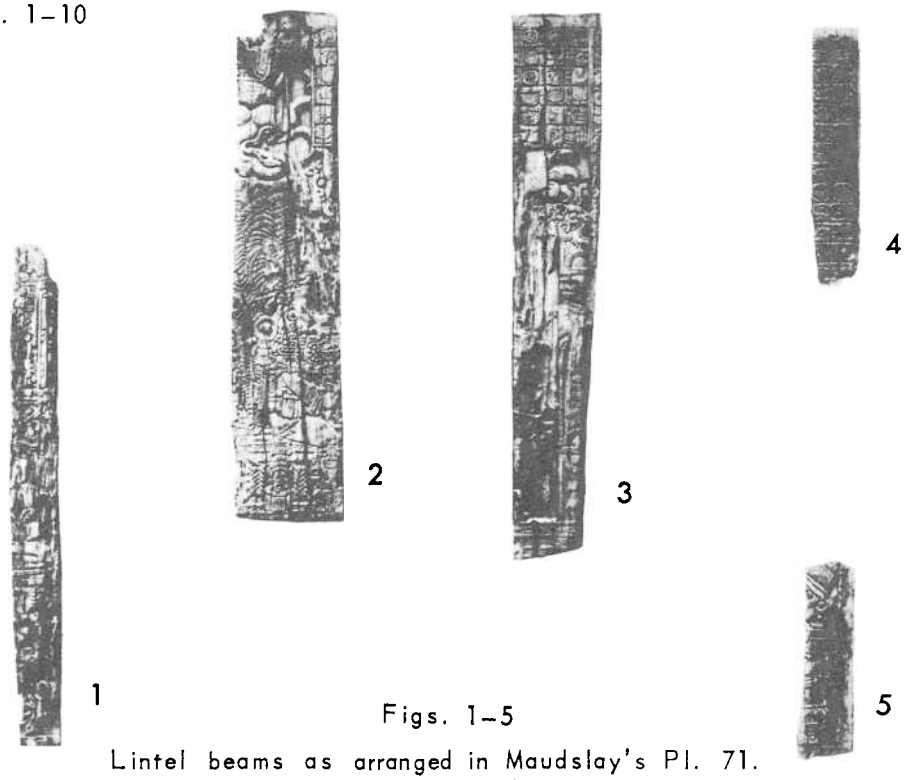
TIKAL REPORTS

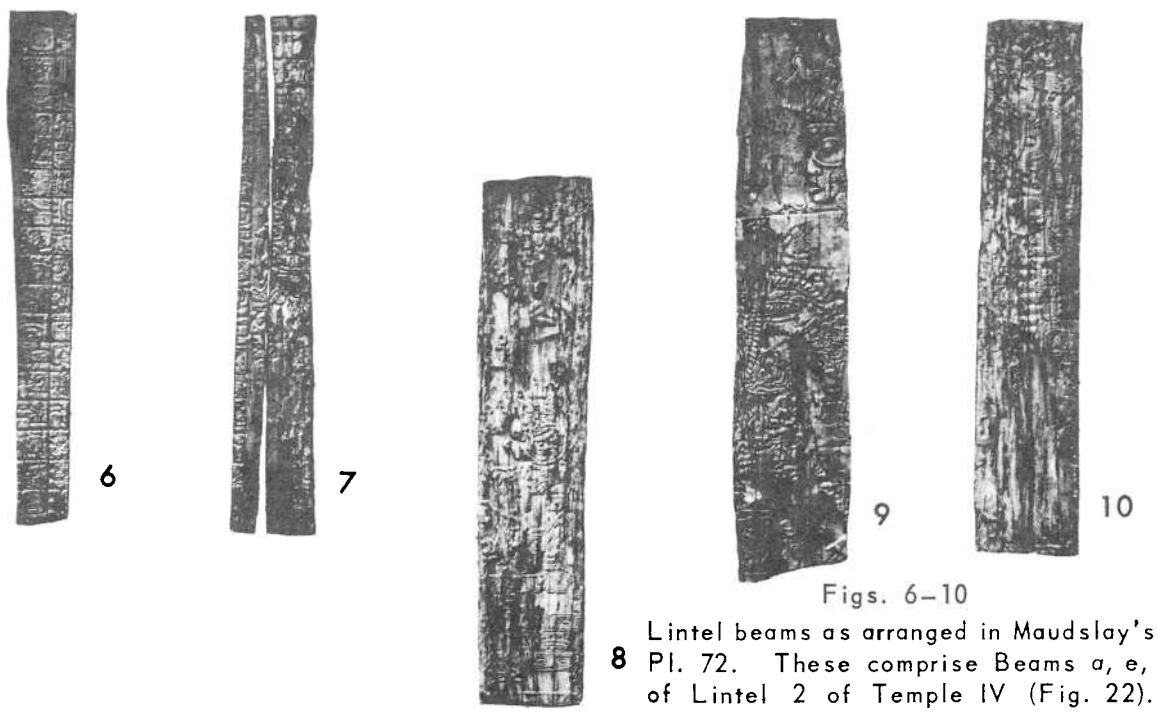
Nos. 1, 4; also Nos. 12, 13, 14 in preparation.

Figs. 1–10



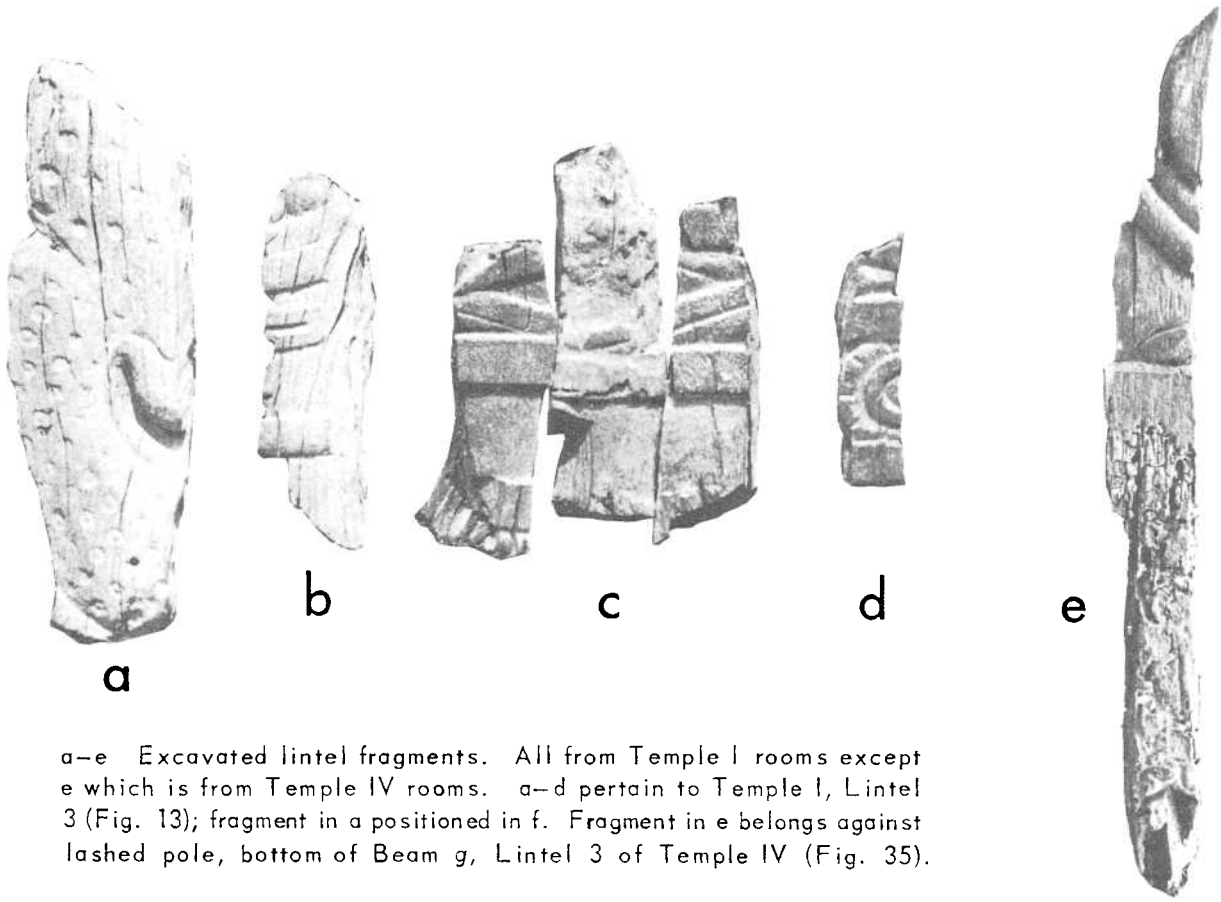
Figs. 1–5

Lintel beams as arranged in Maudslay's Pl. 71. Figs. 2–5 comprise Beams *a*, *b*, and c of Lintel 3 of Temple I (Fig. 13), and Fig. 1, when inverted, is Beam *f* of Lintel 2 of Temple IV (Fig. 22).

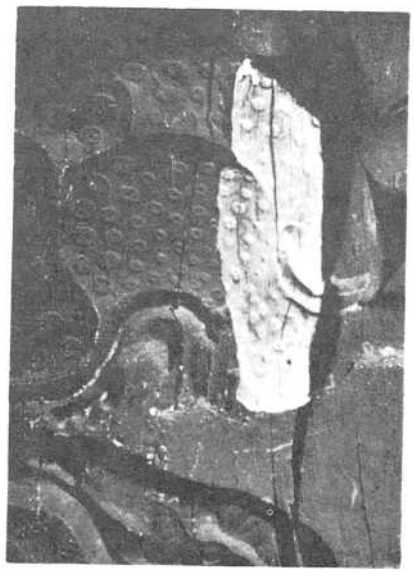


Figs. 6–10

Lintel beams as arranged in Maudslay's Pl. 72. These comprise Beams *a*, *e*, of Lintel 2 of Temple IV (Fig. 22).

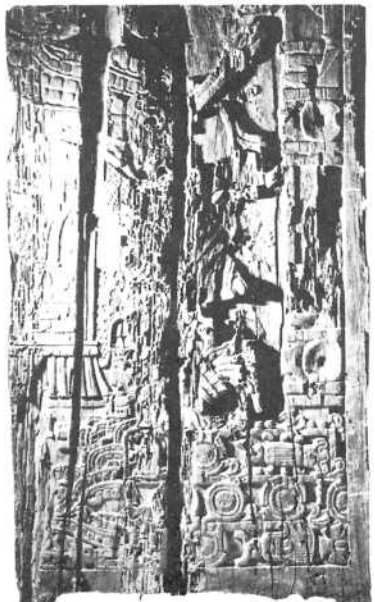


a–e Excavated lintel fragments. All from Temple I rooms except e which is from Temple IV rooms. a–d pertain to Temple I, Lintel 3 (Fig. 13); fragment in a positioned in f. Fragment in e belongs against lashed pole, bottom of Beam g, Lintel 3 of Temple IV (Fig. 35).



f. Fragment in a, fitted on epoxy resin cast of Beam c, of Lintel 3, Temple I.

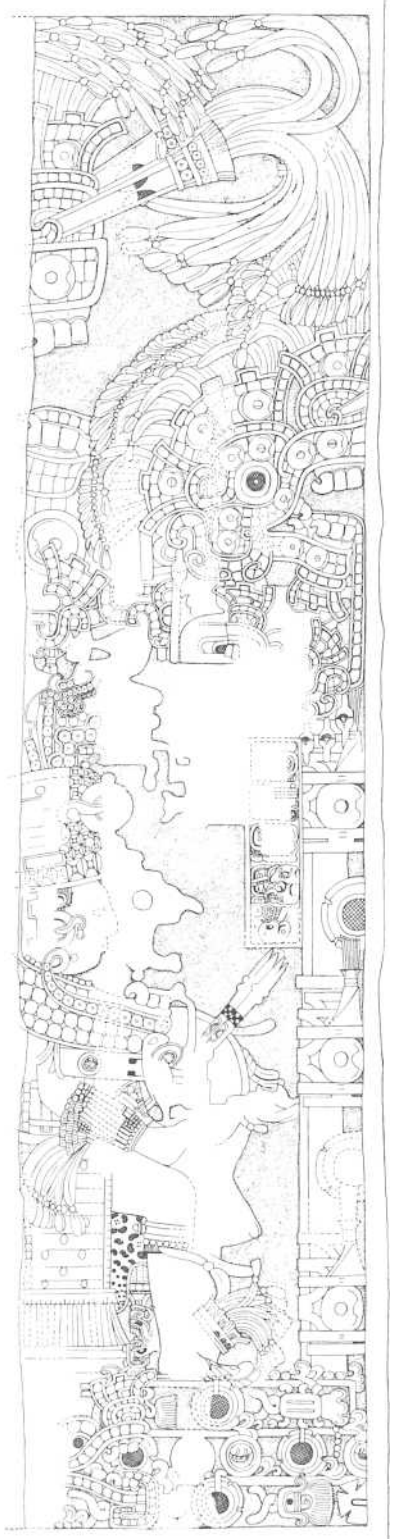
g. Fragment, from Temple I, fitted to cast of same lintel in f. Fragment fits manikin scepter.



b

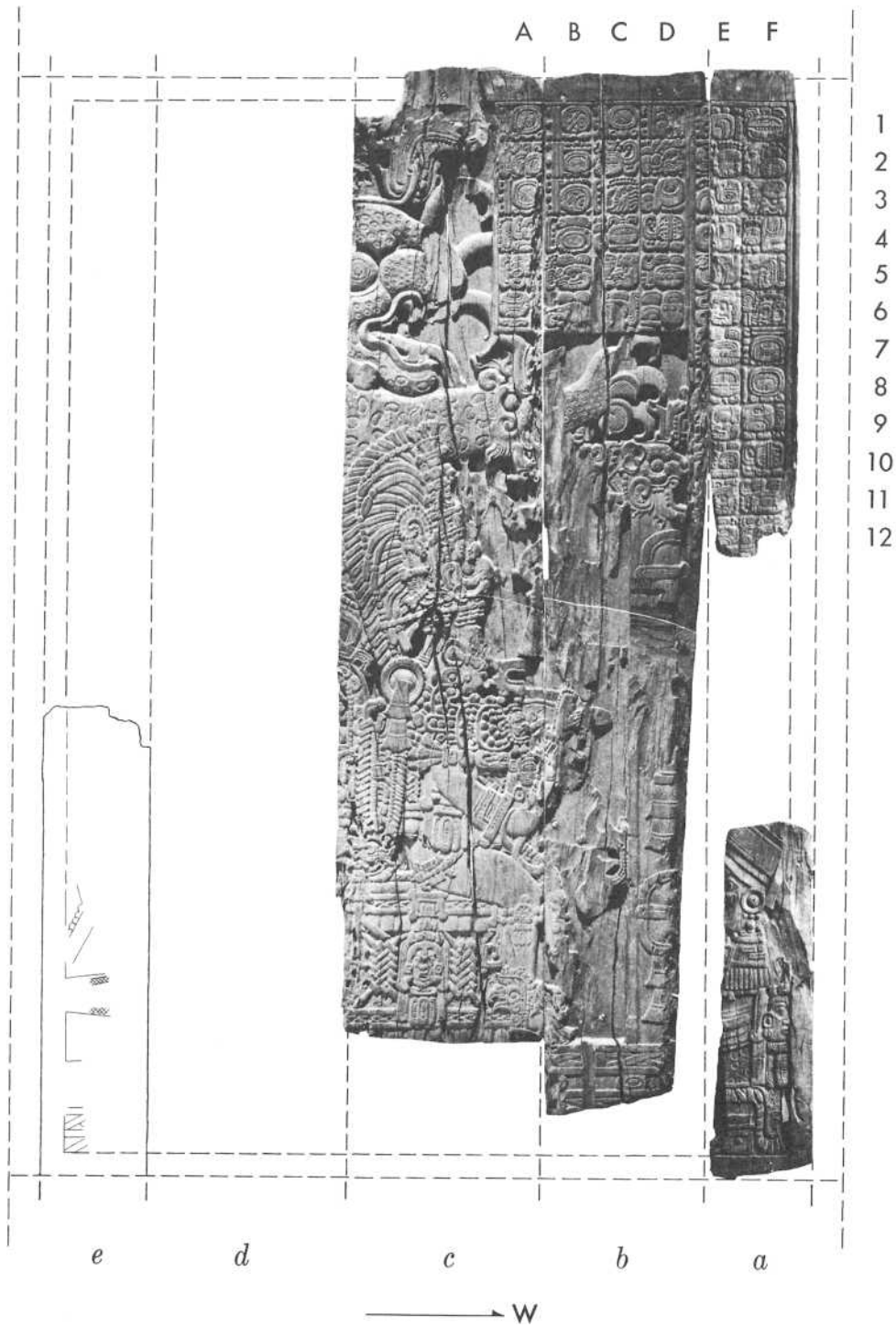
B

c



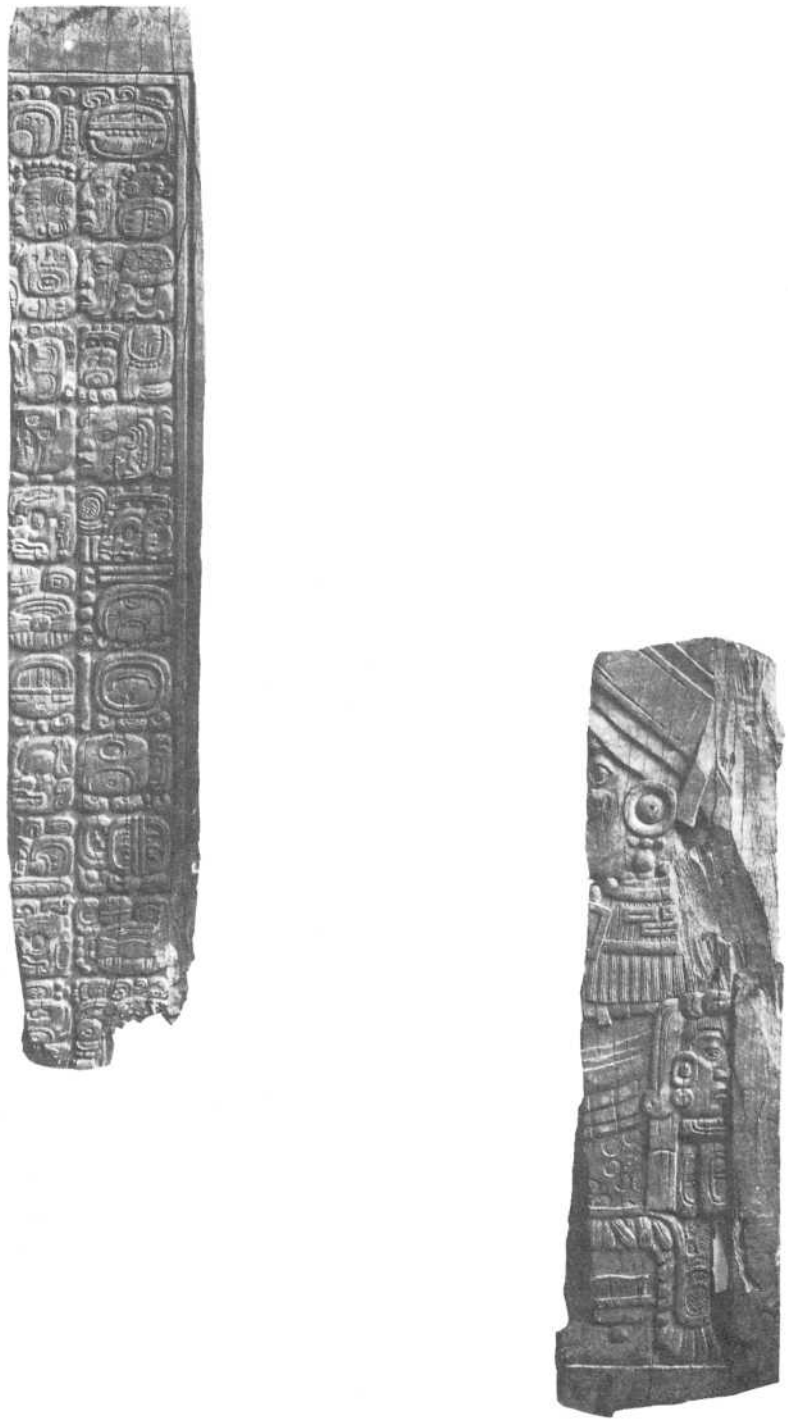
d

a. Temple I, Lintel 2, Beams *a* (right), and *b* (left). b, c. Detail of text, Column B, in c; with greater detail of Glyphs B1 and B2 in *b*. d. Drawing of the two beams with division between them ignored. Background



Temple I, Lintel 3, reconstruction. Beams lettered. Beam e fragment drawn from photograph. Scale 1:12. See Figs. 14–16 for details.

Fig. 14

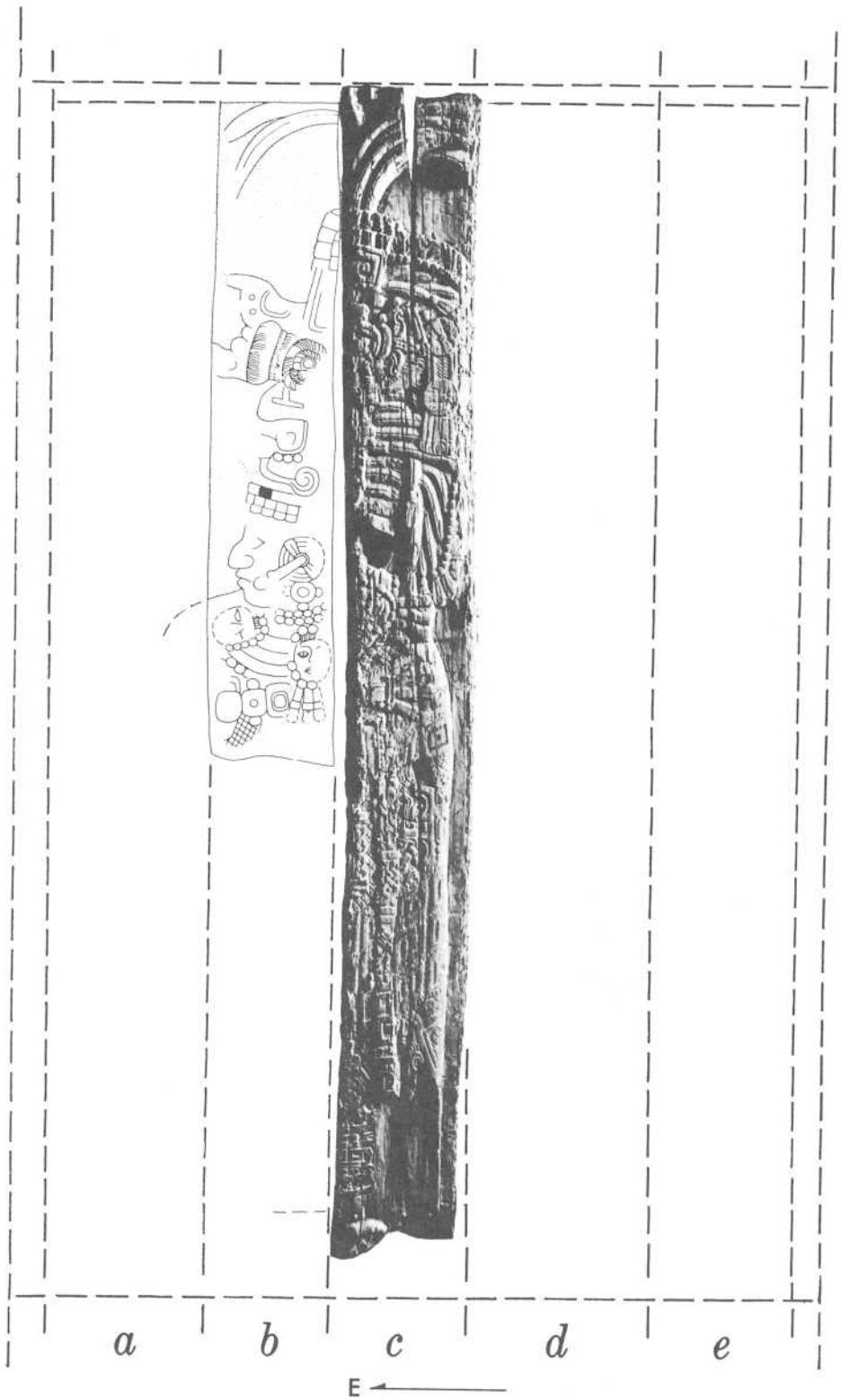


Temple I, Lintel 3, top and bottom fragments of Beam *a*. Not to same scale as Figs. 15, 16 which show Beams *b* and *c*. See Fig. 13 for position.

Temple I, Lintel 3, top portions of Beams *b* and *c*. See Figs. 14 and 16 for other details of lintel. Beam positions shown in Fig. 13.

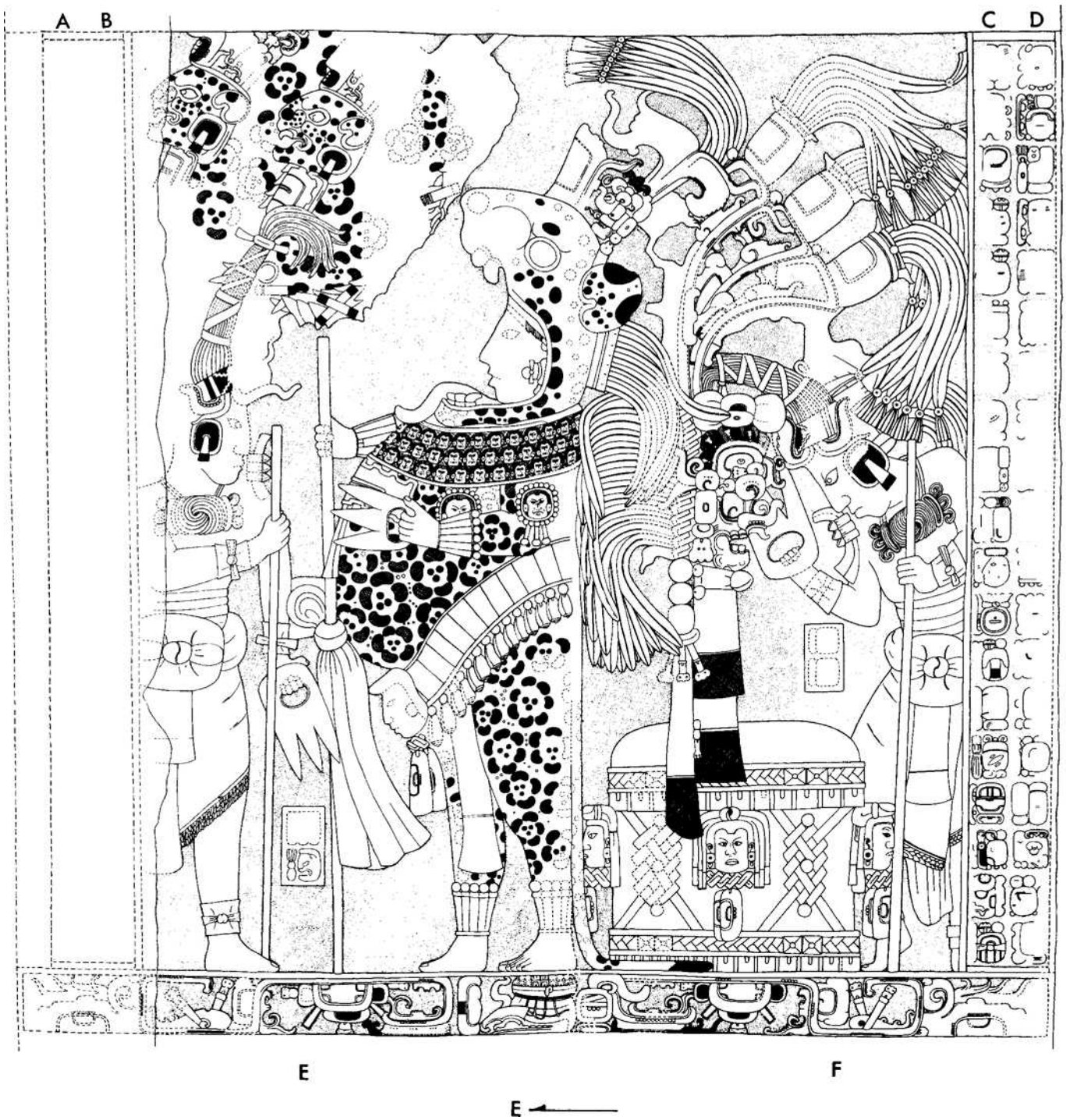
Fig. 16

Temple I, Lintel 3, bottom portions of Beams *b* and c. See Figs. 14 and 15 for other details of lintel. Beam positions shown in Fig. 13.

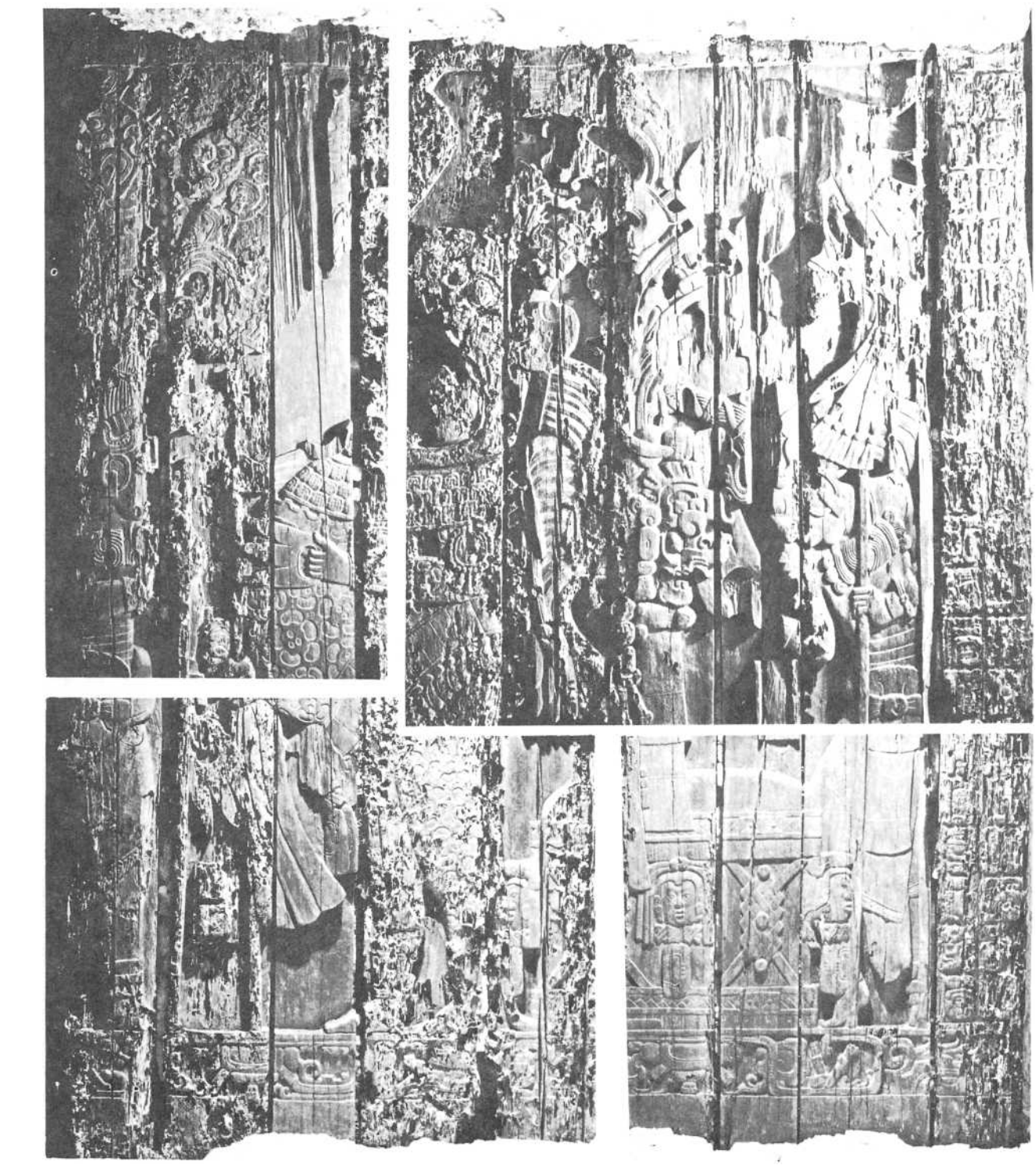


Temple II, Lintel 2, reconstruction. Beams lettered. Beam *b* drawn from photograph in Maler, 1911. Probably oriented to east. Scale 1:12.

Fig. 18

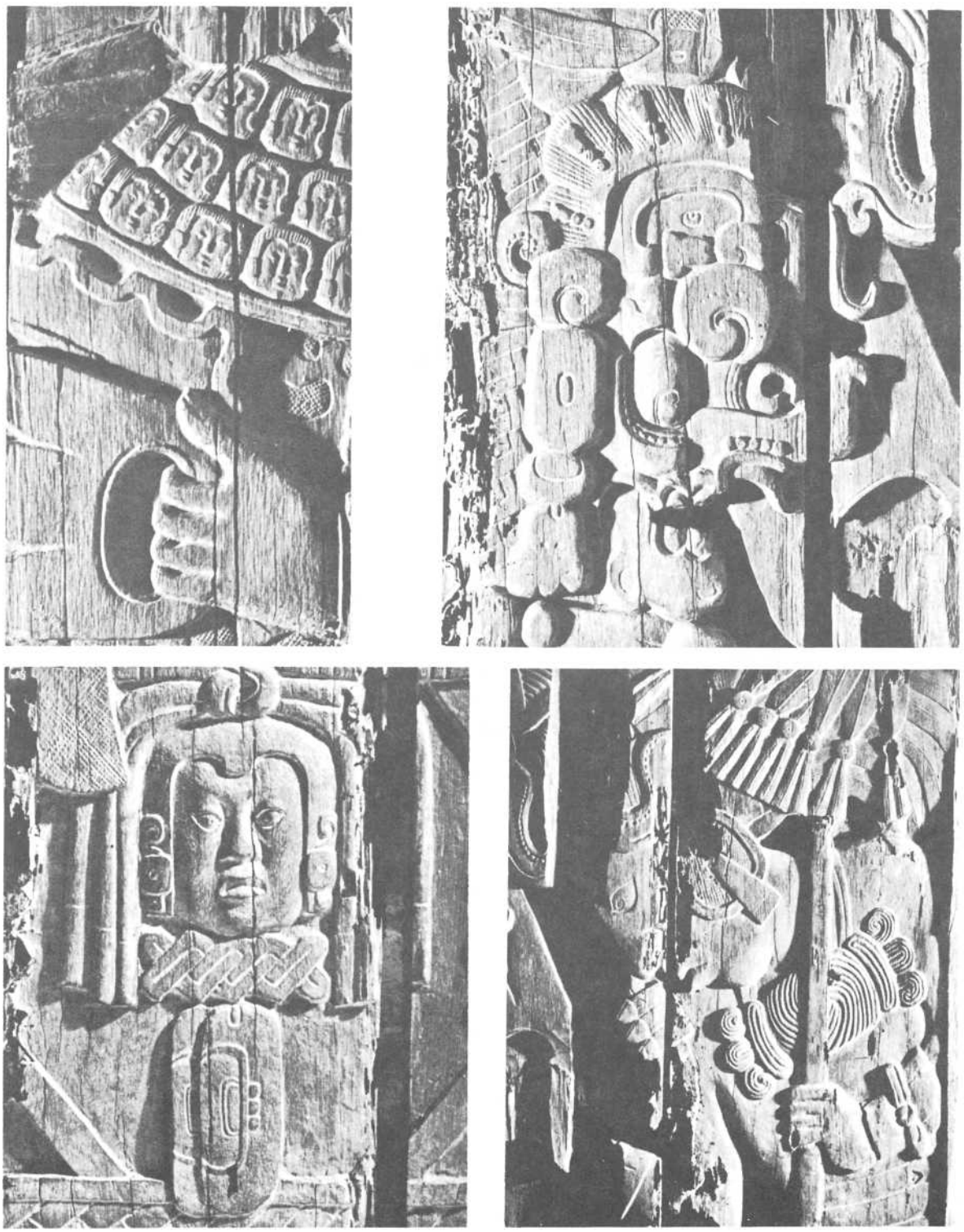


Temple III, Lintel 2, plan of design panel. Existing divisions between beams ignored (See Fig. 19). Background stippled. Reconstructed portions in broken line. Columns of two-block interior panels "E" (left) and "F" (right). Scale 1:12.



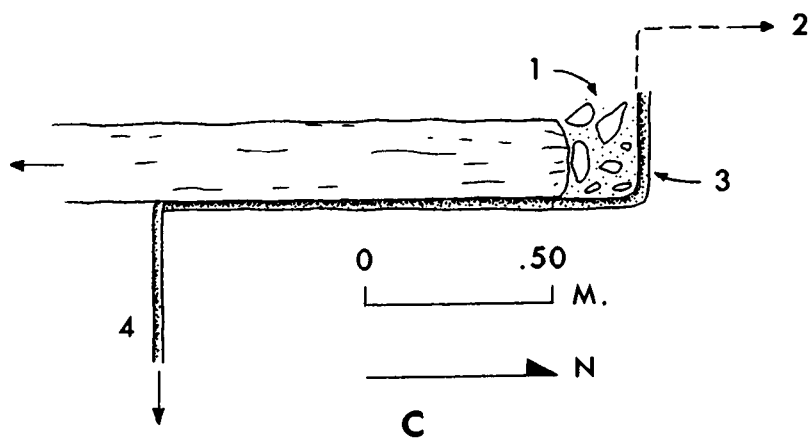
Temple III, Lintel 2, photo-mosaic. Scale ca. 1:12.
See detail photographs and line drawing in Fig. 18.

Fig. 20



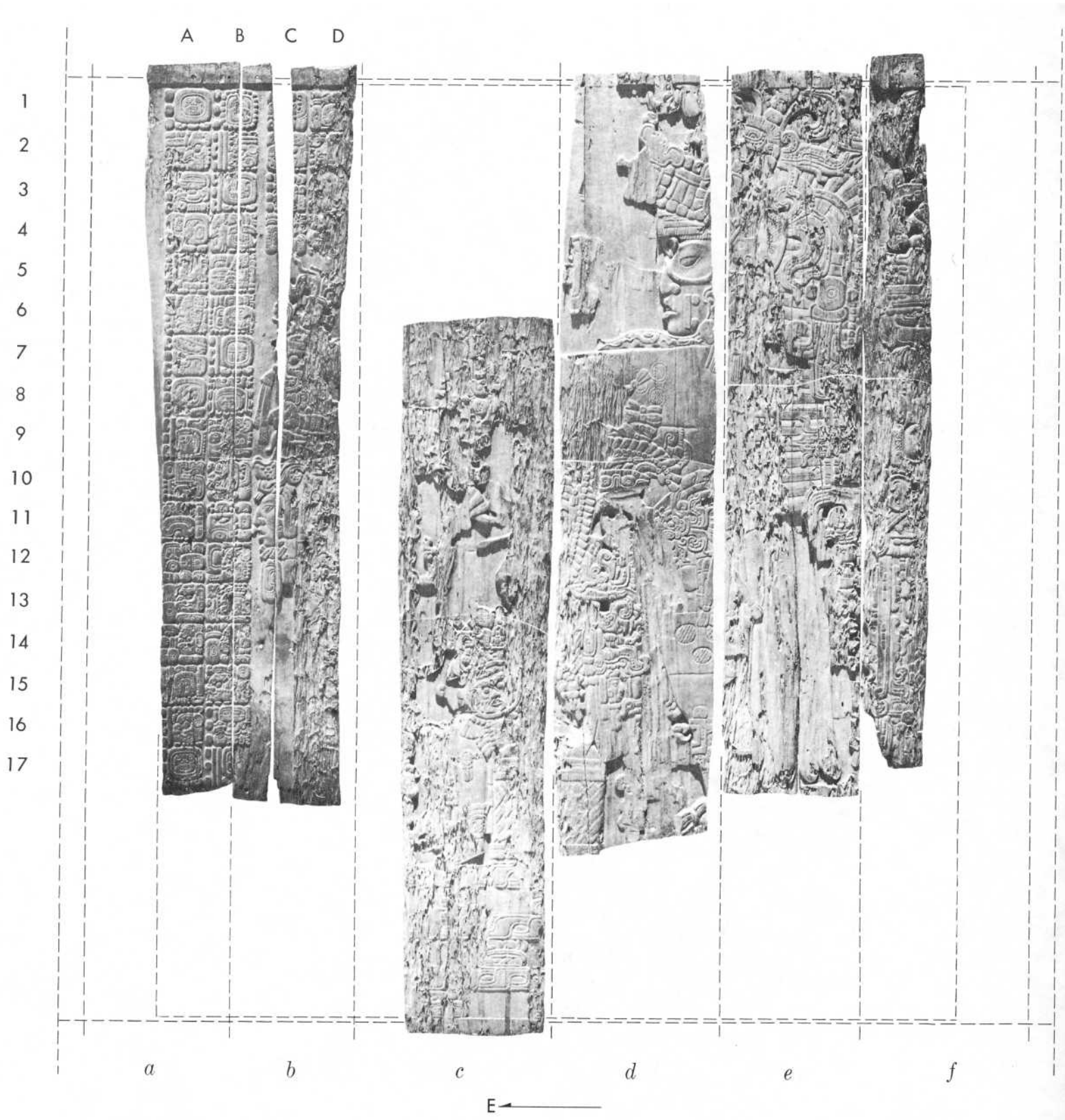
Details of Lintel 3, Temple III. For position, see preceding figures.

a, b. From Ritter, 1853. Detail from Lara drawings. Portion of Temple I, Lintel 3 shown in a. Dwarf figure occurs on Beam *a*, seated figure on Beams *b* and *c*, while the head behind the throne presumably occurred on the now missing Beam *d*. Cf. Fig. 13. Temple III, Lintel 2 is substantially depicted in b. Cf. Fig. 18.



Temple III, Lintel 2, Beam *a* (restored from impression), elevation showing specialized inset for lintel in wall masonry. (1) restored level of top of wall on basis of Lintel 1 of temple which shows same inset feature; (2) mortar between beam end and inset wall; (3) plaster; (4) north jamb of doorway to Room 2.

Fig. 22

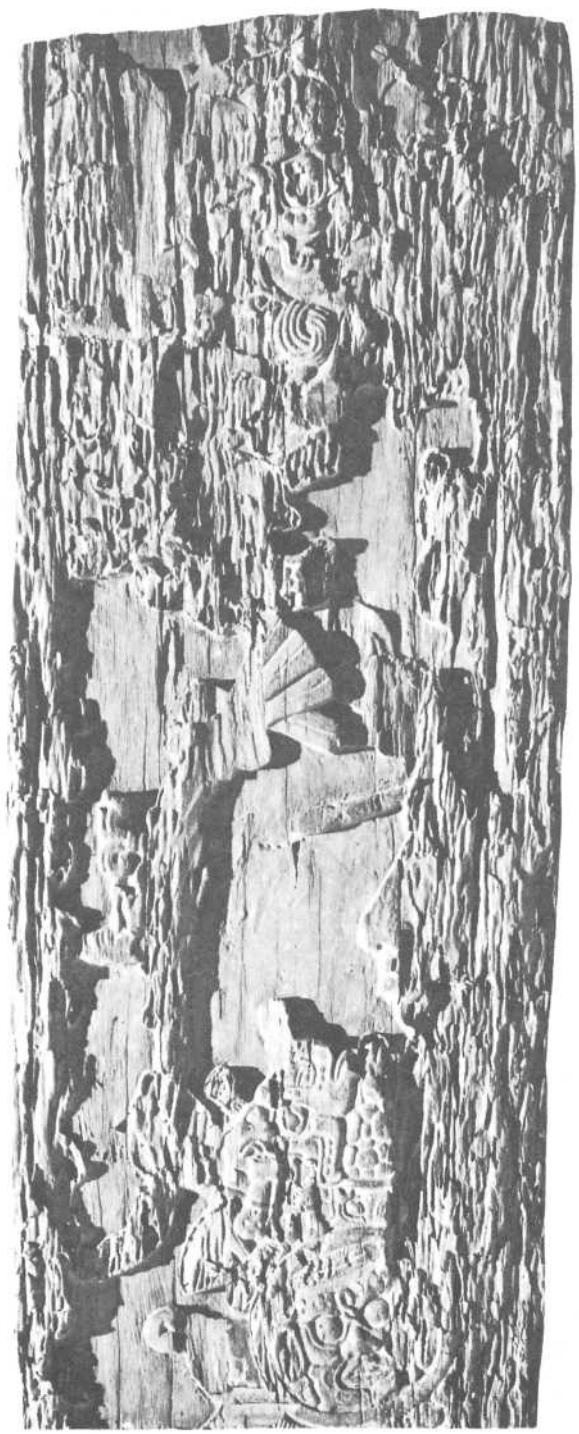


Temple IV, Lintel 2, reconstruction. Beams lettered. Scale 1:12. See Figs. 23–28 for details.

Temple IV, Lintel 2, top portions of Beams *a* and *b*. See Figs. 24–28 for other identically scaled details of lintel. Beam positions shown in Fig. 22.

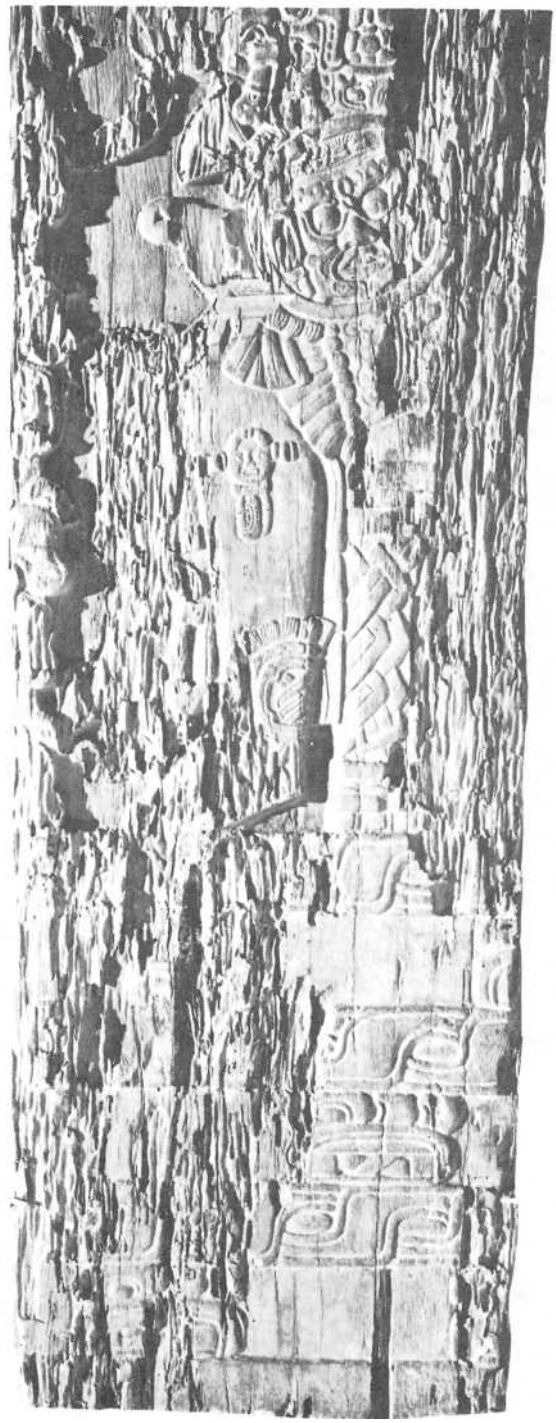
Fig. 24

Temple IV, Lintel 2, bottom portions of Beams *a* and *b*. See Figs. 23, 25–28 for other identically scaled details of lintel. Beam positions shown in Fig. 22.

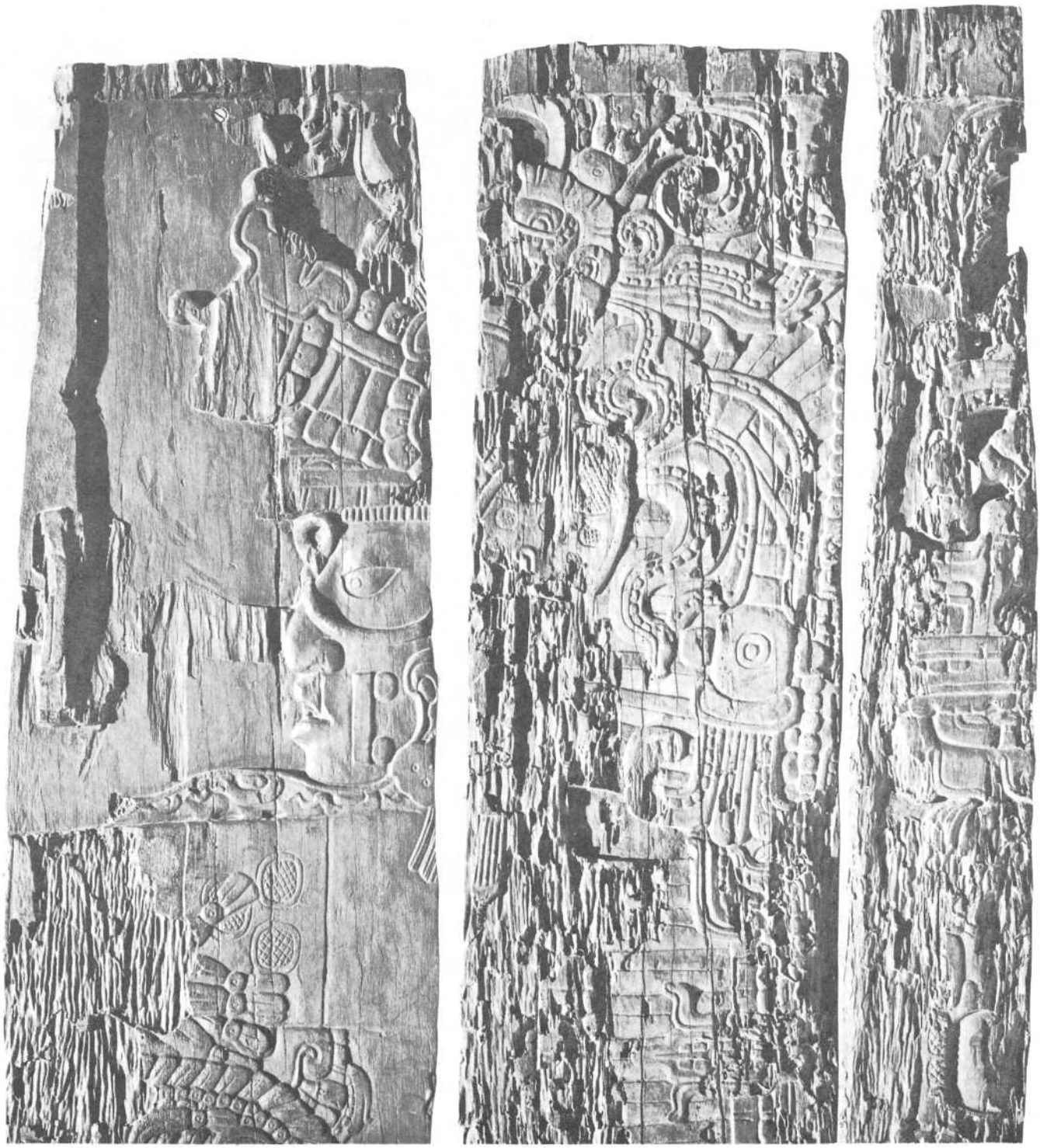


Temple IV, Lintel 2, top portion of Beam c in incomplete state. See Figs. 23, 24, 26–28 for other identically scaled details of lintel. Beam position shown in Fig. 22.

Fig. 26

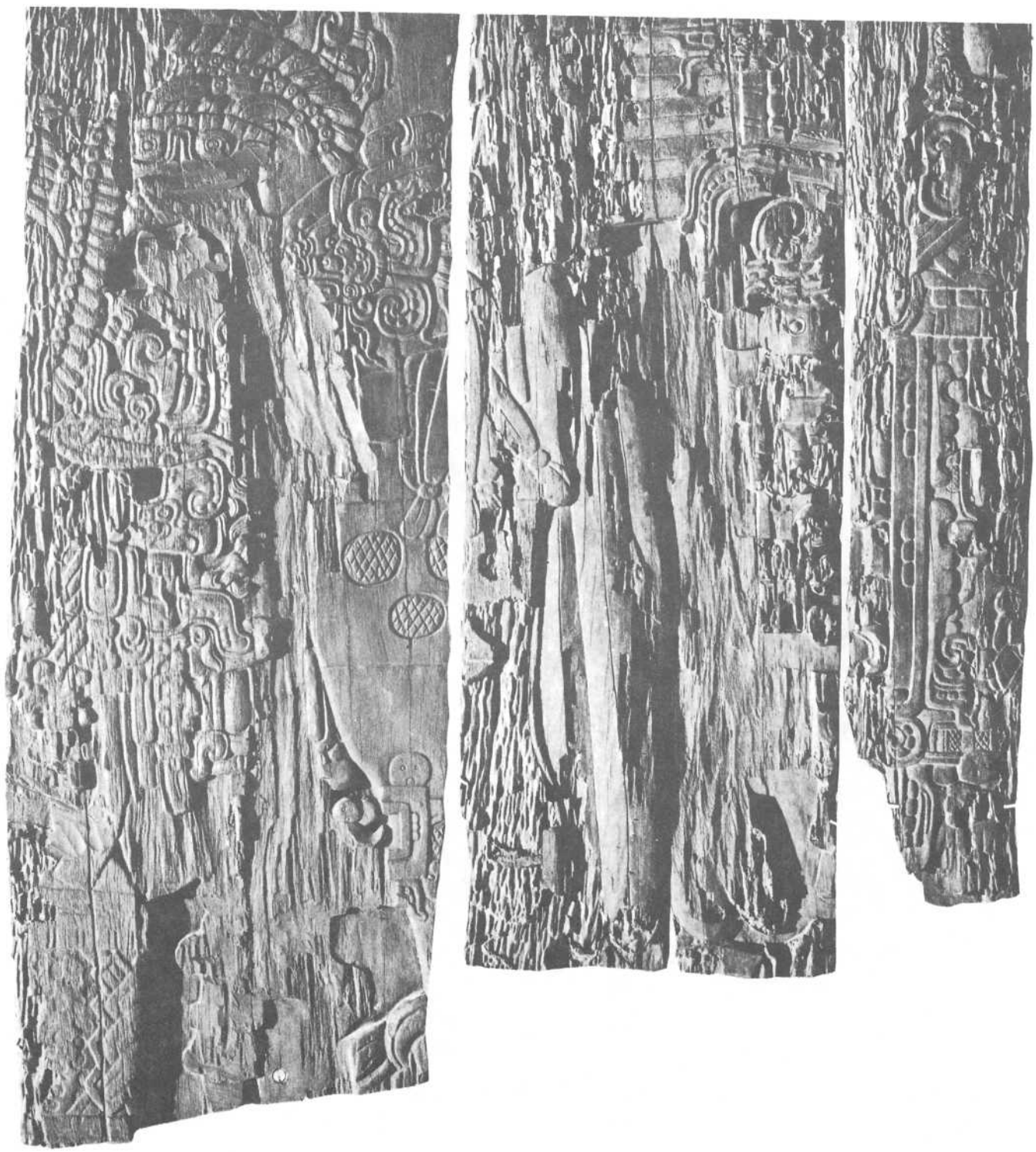


Temple IV, Lintel 2, bottom portion of Beam c. See Figs. 23–25, 27, 28 for other identically scaled details of lintel. Beam position shown in Fig. 22.



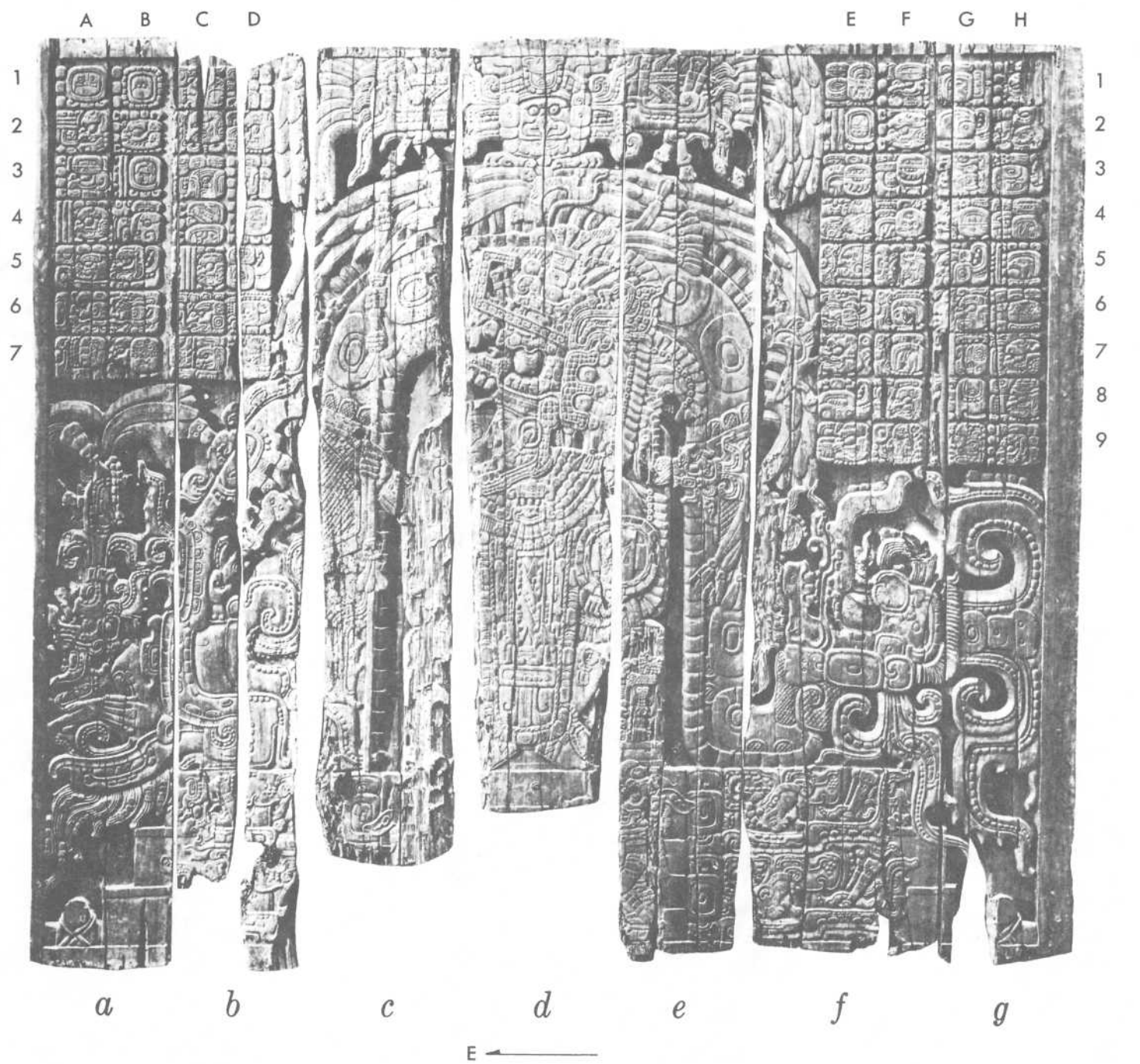
Temple IV, Lintel 2, top portions of Beams *d*, *e*, *f*. See Figs. 23–26, 28 for other identically scaled details of lintel. Beam position shown in Fig. 22.

Fig. 28



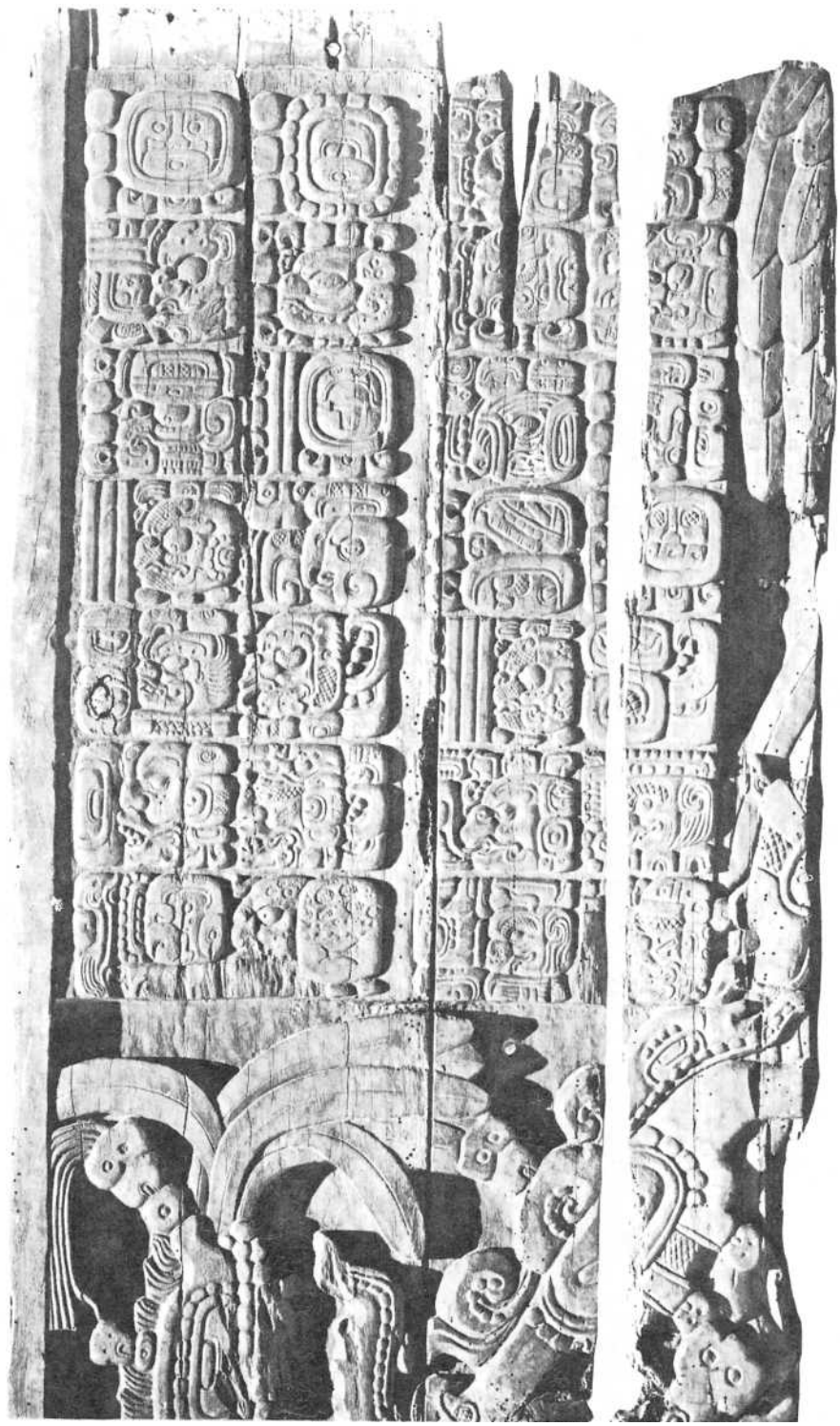
Temple IV, Lintel 2, bottom portions of Beams *d*, e, *f*. See Figs. 23–27 for other identically scaled details of lintel. Beam positions shown in Fig. 22.

Fig. 29



Temple IV, Lintel 3. Scale 1:12. Photograph courtesy of Museum für Völkerkunde, Basel, and the photographers, Moeschlin and Bauer, Basel. See Figs. 30–35 for details.

Fig. 30



Temple IV, Lintel 3, top portions of Beams *a* and *b*. See Figs. 31–35 for other identically scaled details of lintel. Beam positions shown in Fig. 29.

Temple IV, Lintel 3, bottom portions of Beams *a* and *b*. See Figs. 30, 32–35 for other identically scaled details of lintel. Beam positions shown in Fig. 29.

Fig. 32

Temple IV, Lintel 3, top portions of Beams c, *d*, *e*. See Figs. 30, 31, 33–35 for other identically scaled details of lintel. Beam positions shown in Fig. 29.

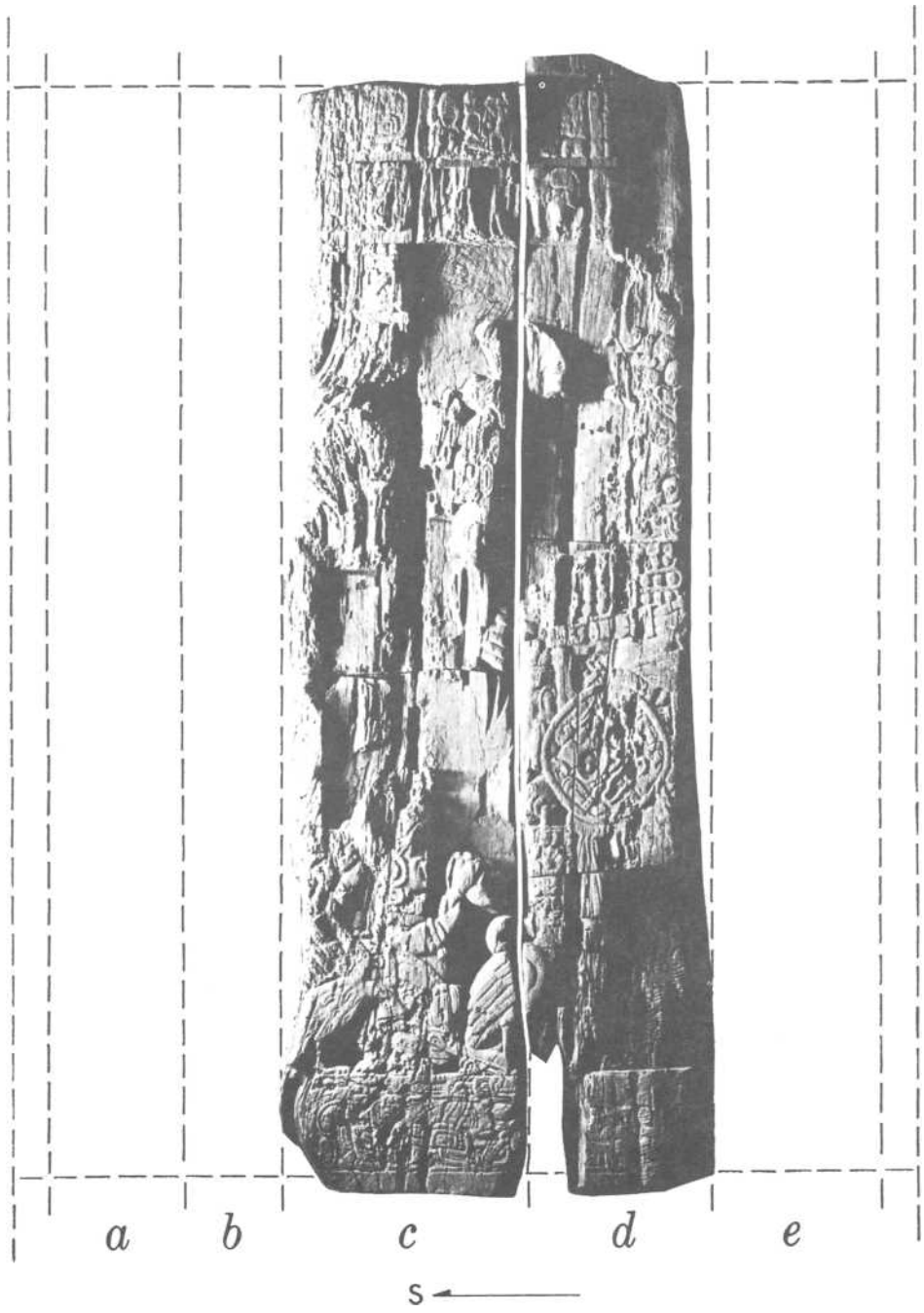
Temple IV, Lintel 3, bottom portions of Beams *c*, *d*, e. See Figs. 30–32, 34, 35 for other identically scaled details of lintel. Beam positions shown in Fig. 29.

Fig. 34

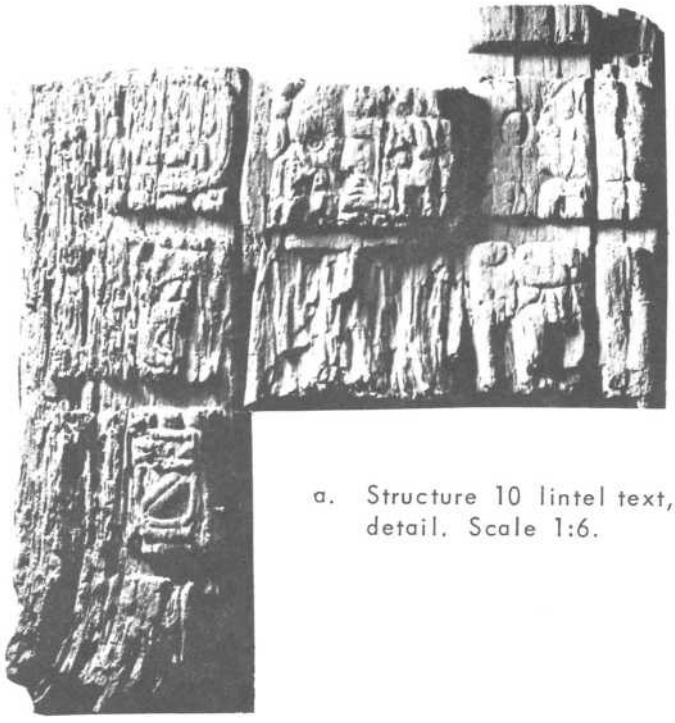
Temple IV, Lintel 3, top portions of Beams *f* and *g*. See Figs. 30–33, 35 for other identically scaled details of lintel. Beam positions shown in Fig. 29.

Temple IV, Lintel 3, bottom portions of Beams *f* and *g*. See Figs. 30–34 for other identically scaled details of lintel. Beams positions shown in Fig. 29.

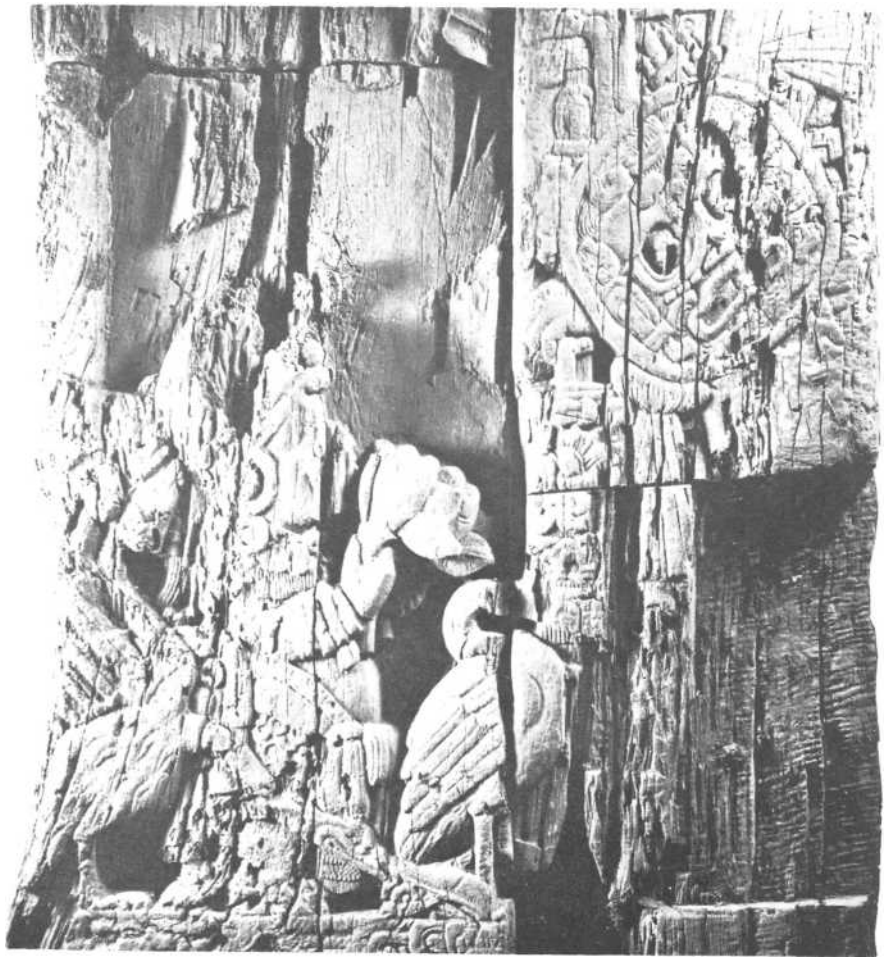
Fig. 36

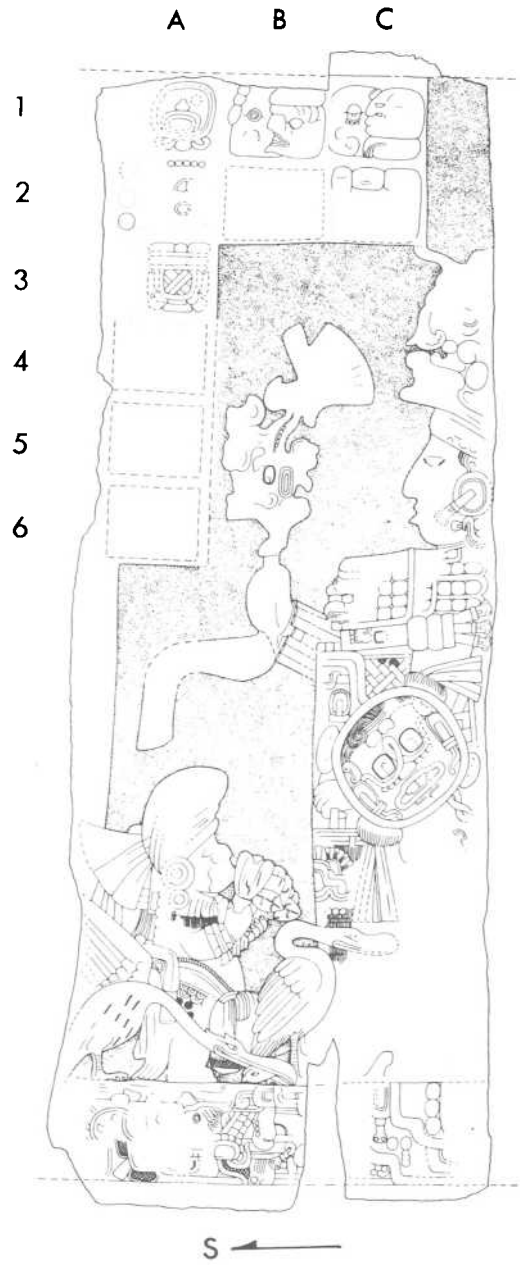


Structure 10 (Str. 5D-52), carved lintel, reconstruction. Beams lettered. Details in Fig. 37. Scale 1:12.



a. Structure 10 lintel text, detail. Scale 1:6.





b. (Above). Structure 10 lintel, drawing of Beams c and *d* in Fig. 31. Beam division ignored. Background stippled. Reconstruction in broken line. Scale 1:12.

c. (Left). Structure 10 lintel, detail of carving showing dwarf and two cranes, and shield.