

PRE-COLUMBIAN ART RESEARCH INSTITUTE

MONOGRAPH 3

**Investigations At
The Classic Maya City
Of Caracol, Belize:
1985-1987**

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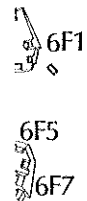
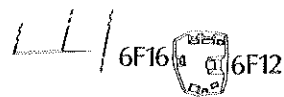


Fig. 65 Caracol Map Quadrangle 6F; magnetic north is to the top of the page; the scale is 1:4000.

APPENDIX II Notes on Caracol Epigraphy and Its Significance

STEPHEN D. HOUSTON, Vanderbilt University

The first statements about Caracol epigraphy were made by Linton Satterthwaite (1951, 1954a), who later undertook a monument-by-monument commentary that remained unfinished at the time of his death (Beetz and Satterthwaite 1981:2). Carl P. Beetz revised Satterthwaite's commentary and contributed a both a preliminary understanding of royal biographies at Caracol and a comprehensive set of line drawings prepared in part under Satterthwaite's supervision (Beetz and Satterthwaite 1981:128-130). A group of students at the University of Texas, Austin, arrived independently at many of Beetz's conclusions (Sosa and Reents 1980; Stone, Reents, and Coffman 1985). The present study builds upon these valuable treatments of Caracol's glyphs, but also presents new interpretations of Caracol's epigraphy based on recently excavated texts and a re-examination of monuments at Caracol, Belmopan, Belize City, and Philadelphia.

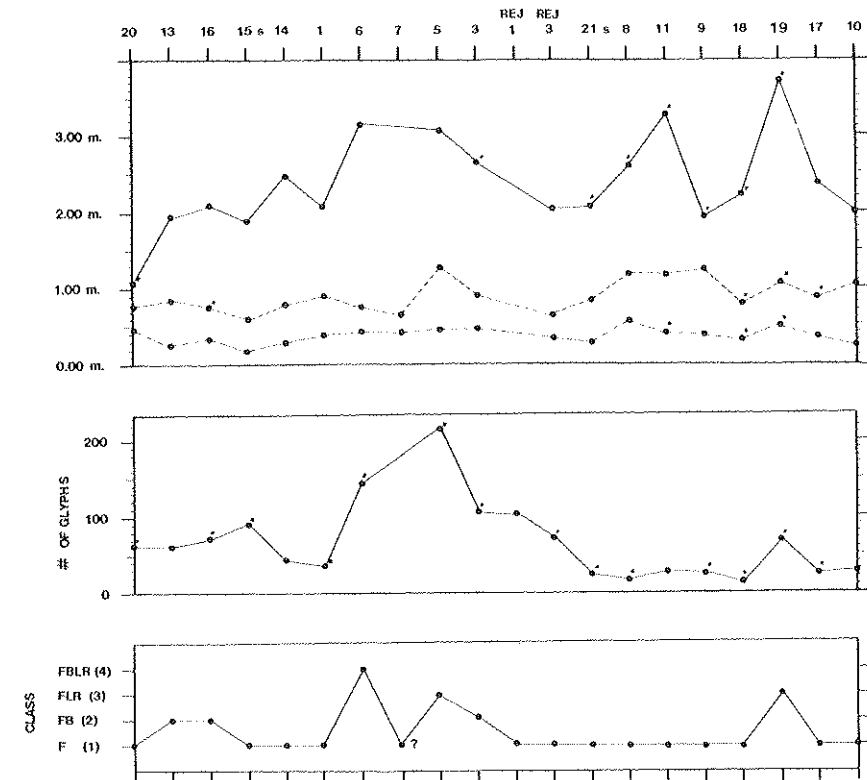


Fig. 66 The physical characteristics of Caracol stelae (slate monuments marked by "s") with information on dimensions and the number of glyphs and sculpted faces (an "s" signifies an estimate); the stelae are graded according to supposed or probable age, the oldest to the left and the latest to the right; the top portion of the chart displays three lines: solid lines indicate height of carving, broken lines refer to monument width, and dash-dot lines refer to thickness of monuments; much of the information comes from Beetz and Satterthwaite (1981), although changes have been made where necessary.

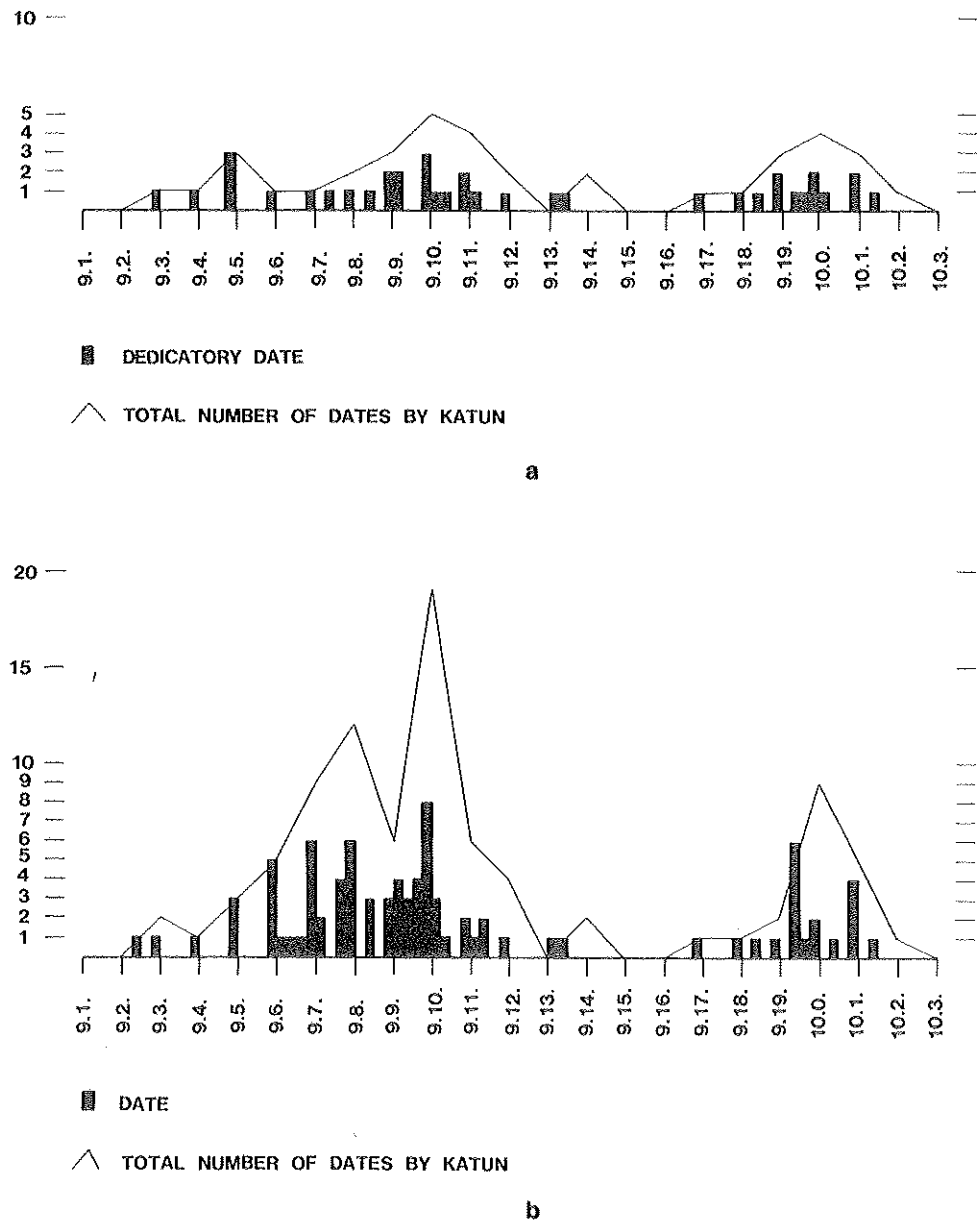


Fig. 67 a) Dedicatory dates at Caracol and at dependent centers; b) Dates at Caracol and at dependent centers; all dates are indicated by hotun.

Dynastic Chronology at Caracol

The dynastic chronology of Caracol can be presented in a variety of ways (see Table 2 and Figures 66 - 68). Table 2 displays a complete list of Caracol dates, including those deciphered from recent finds. Caracol "Giant Ahau" altars, which are somewhat controversial in their dating (cf. Mathews 1985: Table 1), appear here as records of katun endings (cf. the evidence adduced by Satterthwaite, 1951:33, in favor of this argument). This interpretation appears to be valid since three of these altars - Altars 14, 17, 21 - spell out an association with katun dates. Altar 14 contains an eroded reference to a katun ending (note the inscription embedded in the volutes beneath the day sign, Beetz and Satterthwaite 1981: Figure

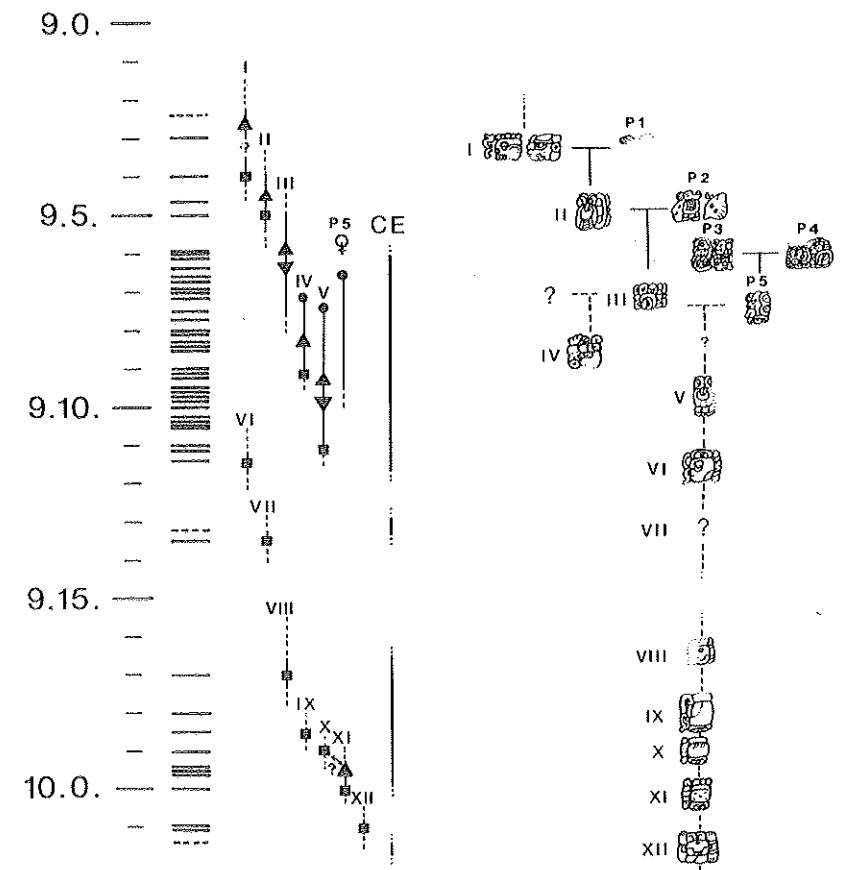


Fig. 68 Graphic summary of Caracol dynasty; to the far left, by the tabulation of katuns, is the general pattern of dates at Caracol; the solid lines represent secure dates and the dashed lines are more conjectural reconstructions; immediately to the right lies a set of broken vertical lines - these illustrate the lifespans of Caracol dynasts; rulers are identified by roman numerals and other personages by arabic numbers; various symbols describe important events: circles = birth; upright triangles = war; inverted triangles = accession; squares = last associated date; the single line marked "CE" denotes when the Caracol emblem was in use based on the inscriptions; the genealogical chart to the far right features the glyphic names of Caracol rulers and their consorts; the relationships between Caracol lords is indicated by the use of solid lines to show definite genealogical connections and dashed lines to indicate less certain ones.

42c). Altar 17 refers to the completion of katun 11 and to Ruler V, or "Lord Kan II." On textual grounds, Altar 21 must also bear a katun date (Houston n.d.).

Chronological trends in the monuments of Caracol are illustrated in a presentation of the physical characteristics of Caracol Monuments (Figure 66) and in simple tabulations of dates at Caracol and its dependent centers compiled by Dedicatory Date (Figure 67a) or by the full list of dates (Figure 67b). Figure 68 supplements Table 2 and Figure 67 with a graphic chronological summary of the Caracol dynasty. The dynastic summary presented here differs from previous studies (cf. Sosa and Reents 1980: Figure 1, Beetz and Satterthwaite 1981:123). It replaces a disputed set of names with a more neutral series of numbers that can later be expanded or contracted. According to this system "Antenna Top I" or "Lord Storm-Water Moon" becomes Ruler II, although on occasion the ruler may be identified as "Lord Kan I" to acknowledge the glyphs that compose his name as well as the fact that several Caracol lords share similar name glyphs.

Regrettably, and rather inconveniently, Caracol shows no evidence of the *hel* count system that specifies the position of a ruler in the dynastic succession (cf. Riese 1984a, although see Stela 16:D14).

Ruler I

On La Rejolla Stela 3 there appears the name of a Caracol lord who must have ruled sometime around 9.12.0.0.0. The name glyphs of the lord are composed of a "smoke" prefix, a third-person marker, a skull sign, and a *mahk'ina* title (cf. Lounsbury 1974). By analogy with the text of La Rejolla Stela 1, where such relationships are made explicit, "Smoking Skull", or Ruler VI, probably stood in some superordinate relation to a lord at La Rejolla, a small site lying less than 13 kilometers from the center of Caracol.

Two pieces of evidence suggest that Ruler VI was a royal name used more than once by the Caracol dynasty. The first evidence occurs on Stela 16 (Beetz and Satterthwaite 1981: Figure 15), a monument that can be attributed to Ruler II, or "Lord Kan I". Beetz and Satterthwaite (1981:116) point out that the name of Ruler II's mother is inscribed at B19 and beyond. Since parentage expressions almost always include the names and titles of both mother and father, it stands to reason that the name of Ruler II's father should follow. An excellent candidate for this name can be found at positions C11-D11, directly after the so-called "sky-god" title (Proskouriakoff 1964: Figure 1) that often precedes personal names, and just before the relationship glyph at C12. The name is the same as Ruler VI's, but here in reference to an earlier lord. The other piece of evidence surmounts a belt ornament portrayed on Stela 6. Such ornaments occasionally exhibit glyphic spellings of ancestral names, as can be seen on La Pasadita Lintel 2, where the name of a Yaxchilan ruler, Shield Jaguar, embellishes the belt assemblage of his son, Bird Jaguar (David Stuart, personal communication 1985, cf. Schele and Miller 1986:196). In precisely the same manner a belt ornament pictured on the back of Caracol Stela 6 displays glyphs composing the name "Smoking Skull *mahk'ina*". This ruler, rendered here as an ancestral figure, is most likely the individual mentioned on Stela 16. He may also have erected Stela 14, the earliest dated monument at Caracol and probably the earliest with a reference to accession (note the apparent "seating on po throne" glyph at C16, Beetz and Satterthwaite 1981: Figure 13b, and personal observation).

Ruler II

It is known from Stelae 6 and 14 at Caracol that Ruler III acceded to the office of *ahaw* at 9.5.19.1.2. However, the question remains of identifying his predecessor in high office. Although using different names, Sosa and Reents (1980: Figure 1) argue that Ruler III's father was Ruler II on clear evidence from parentage statements. Yet this interpretation raises the problem of finding other inscriptions that can be attributed to the reign of Ruler II. Stelae 15 and 16 are good candidates for monuments from Ruler II's reign. The text of Stela 15 begins with an Initial Series of 9.4.16.13.3 (Beetz and Satterthwaite 1981:57, Figure 14b), possibly an accession date. The verb accompanying the date is effaced, yet the remaining portion of the name glyph identifies this individual as none other than Ruler II. His name glyph is also found in the text that captions the "hand-scattering" scene. Ruler II's other monument is Stela 16, which has been attributed to an "*nen tz'i*" (Sosa and Reents 1980:3) or "Lord Jaguar" (Beetz and Satterthwaite 1981:116), depending on the interpretation of the name glyphs. Beetz and Satterthwaite (1981:62) show that Stela 16 bears an Initial Series date of 9.5.0.0.0, which raises two possibilities: that *nen tz'i* or Lord Jaguar came to power sometime between the reigns of Ruler II and Ruler III, or that the ruler's name is incorrectly identified. Two lines of evidence demonstrate that the second

possibility is the correct one. Three glyph blocks occur at positions A10-A11 on Stela 16, after a verb denoting "the completion of the 5th katun." The first glyph is prefixed by the number seven; this compound forms a component of expanded versions of the *mahk'ina* title (David Stuart, personal communication 1985). The second glyph is partly eroded, but nonetheless the outlines are those of the "maize" sign. The final glyph is a *mahk'ina* head variant (Mathews 1979a), which probably combines with the "seven" title (cf. Naranjo Hieroglyphic Stairway:S2-T2; and the variant of Ruler III's name on Stela 1). Given that Ruler II is also mentioned in the headress of Stela 16, it seems certain that he was responsible for erecting the monument. *Nen tz'i* or Lord Jaguar are simply his titles.

Ruler III

Ruler III acceded to the throne at 9.5.19.1.2 (Beetz and Satterthwaite 1981:129). His successor, Ruler IV, acceded at 9.8.5.16.12, some 46 years later. Despite the long reign, Ruler III seems only to have erected two monuments with texts of any length: Stela 1 and Stela 14. Stela 1 - a late monument dating to 9.8.0.0.0 - does not clearly exhibit Ruler III's name. This raises two related questions: did Ruler III enjoy as long a reign as the inscriptions suggest, and can Stela 1 be securely attributed to this lord?

Starting with the second question, it can be argued that the glyphs at positions E2-F2 on Stela 1 represent a variant spelling of Ruler III's name. Most versions of the name contain the following: T126.168:513.184.74, as rendered in Thompson's system of transcription. The variant portrayed on Stela 1 contains the same elements. First, the "seven" title is an expanded version of the *mahk'ina* sign. Second, the glyph that follows, T126, is also found in the conventional spelling of Ruler III's name. The third glyph comprises a cross-hatched headband - known elsewhere to alternate with T168 (Mathews and Justeson 1984: Figure 2) - and a sun god's face, employed here as a head variant of the *mahk'ina* title. The one feature that appears to be absent is the "*muluc*" sign (T513).

A consideration of the *muluc* sign in its other contexts may explain why T513 is absent on Stela 1. On Dos Pilas Stela 8:113, Copan Stela 1:C2, and Naj Tunich Group IV:f a *muluc* sign occurs in a position usually occupied by numerical classifiers. This implies that *muluc* was read, at least in this glyphic environment, as *tV* and perhaps as *te*. Some support for this interpretation comes from the Mexican site of Tortuguero on a text incised around a jade earring and on the inscription of Monument 6 (rendered as T12.III:87:35:41 and T12.III:513.35, respectively, David Stuart, personal communication 1985). In this textually controlled context the *te* glyph apparently alternates with the *muluc* sign. The alternation with *te*, accepted by most epigraphers to mean "tree" or some value derived thereof, explains the presence of *muluc* markings on Classic images of canoes (cf. Kelley 1976: Figure 80): the markings name expressly the object from which the canoes were made. David Stuart has also shown that an agnathous head with jaguar ear (T1013v) alternates with both the *muluc* and the *te* signs in the context of numerical classifiers. The most striking evidence of this appears on the Copan Hieroglyphic Stairway, Riser 41, where an agnathous head intrudes between the number four and the Uayeb glyph. In addition, an agnathous head alternates with *muluc* in the Primary Standard Sequence on Maya ceramics (Coe 1973: Table 1). Thus, a body of evidence suggests that the *muluc* sign, the *te* glyph, and the agnathous head are functionally and perhaps phonetically equivalent. The substitution pattern not only provides further indications of polyvalence in Mayan script (Fox and Justeson 1984:75-76), but elucidates the puzzling absence of the *muluc* sign in Ruler III's name on Stela 1. The *muluc* glyph that appears more commonly is replaced by the agnathous head, conflated

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in this instance with other crucial elements of the appellative. Ruler III, then, is the principal celebrant on Stela 1 and by extension a lord who enjoyed exceptionally long tenure as ruler of Caracol.

Ruler IV

In their discussion of Caracol Stela 6, Beetz and Satterthwaite (1981:120) remark that "(a)n unlikely possibility exists that a second character is mentioned by the name of Ahau-Serpent," but that "(e)conomy and the pattern of statement in the last known clause of Stela 6 argue against this interpretation." Stone, Reents, and Coffman (1986:270-271) conclude that this same individual, whom they term "Flaming Ahau," most certainly ruled at Caracol.

Ruler IV uses a name with several identifiable components: T128, an element of Glyph F; T533v, the ahau head; T60, a knot sign, also part of glyph F; and a zoomorphic head. Stela 5:D22a shows an aberrant spelling of the name, the ahau sign being transposed with the knot. T128 alternates in other places with T76, a wing sign, and T1074v, a head glyph. It is unlikely that the affix represents flame, casting doubt on the name adopted by Stone, Reents, and Coffman. Nonetheless, there exists abundant evidence that they are correct in identifying a Caracol ruler who is distinct from Ruler III. On the right side of Stela 6, at positions A14 through C15 and on the date 9.8.5.16.12, this ruler is recorded as attaining (that is, being "seated" in) the office represented by the compound T168:82ms. The structure of the succeeding glyphic passage, in which a Distance Number is counted forward from the reiterated event to a Period Ending date, demonstrates that this title is equivalent to the ahaw epithet; the unusual main sign in the affix cluster of the preceding passage (T82ms) probably functions as one of the derivational suffixes sometimes attached to AHAW logographs (with value of -VI, Justeson 1984:322; see Mathews and Justeson 1984:227, although they do not note the T82ms suffix in this connection). Thus, Ruler IV, or "Lord Knot Ahau", succeeded Ruler III, who attained the same office 46 years earlier.

Another record of Ruler IV's accession occurs on the right side of Stela 5. Beetz and Satterthwaite consider, and then reject, one interpretation of the calendrics of this monument (1981:30).

Date 1 (Date 3)	C23	(9.9.0.0.0) 9.9.0.4.0 (1.)18.3.17	3 Ahau 5 Ahau	3 Zotz 3 Mol
Date 2 (Date 1)	C24 C25b	(9.7.2.0.3) 9.9.0.0.0 4.(0)	2 Akbal 3 Ahau	16 Mac 3 Zotz
Date 3	D25	(9.9.0.4.0)	5 Ahau	3 Mol

A new drawing of this Stela 5 text (Figure 69) reveals a revised chronology containing details missed by Beetz and Satterthwaite.

Date 1	? D21	(9.8.5.16.12) 14.1.8	5 Eb	5 Xul	accession
Date 2 (Date 4)	C23 D23-?	(9.9.0.0.0) 9.9.0.4.0 (1.)18.3.17	3 Ahau 5 Ahau	3 Zotz 3 Mol	PE
Date 3 (Date 2)	C24 C25	(9.7.2.0.3) 9.9.0.0.0 4.(0)	2 Akbal 3 Ahau	16 Mac 3 Zotz	birth PE
Date 4	D25	(9.9.0.4.0)	5 Ahau	3 Mol	

These data also provide some insights into the biography of Ruler IV. Date 3, almost certainly a reference to Ruler IV's birth, is only some 12 years before the birth date of his successor, Ruler V (Beetz and Satterthwaite 1981:121). The most reasonable deduction from this set of facts would be that Ruler IV and Ruler V were brothers. Yet there is a problem with this interpretation for not a single parentage statement survives on Stela 5 and 6, the two monuments known to have been erected by Ruler IV. This is in contrast to Ruler V, who apparently was the son of Ruler III, perhaps by a junior wife (cf. Naranjo Panel 1).

It is equally possible, however, that Ruler IV was not a son of Ruler III. The inscription of Stela 6 seems to place great stress on dynastic continuity, perhaps because lineal continuity was in fact absent. The text begins with a record of Ruler III's accession, followed by an explicit enumeration of katun endings. It continues with an account of Ruler IV's accession, as if in inevitable culmination of events in Ruler III's reign. This continuity is also emphasized visually. The portraits on the front and back of Stela 6 may not be of the same individual; the portrait facing the plaza may show Ruler IV, who in his attire contrasts vividly with the figure on the back. The individual on the reverse wears ornaments adorned with "night" markings and a headdress containing bone elements and muan-bird feathers. From the paired glyphs above (presumably parental names, Stone, Reents, and Coffman 1985:271) it can be supposed that the second figure is Ruler III, pictured in clothing appropriate for a posthumous portrait. Since Stela 6 is the only known monument at Caracol with such a double-sided image, it may be that Ruler IV felt the need to strengthen his connection with a royal predecessor through this unusual graphic presentation.

Ruler V

Ruler V, or "Lord Kan II," is capably discussed by Beetz and Satterthwaite (1981:129) and Stone, Reents, and Coffman (1985:271-274). Their one point of disagreement seems to be his parentage. Beetz and Satterthwaite (1981:129) see Ruler V's mother as "God C Star" and his father as "Lord Water", or Ruler III. Stone, Reents, and Coffman view "God C Star" (or "Batz' Ek", as they term the individual) as the father of Ruler V. Unfortunately, the only relevant parentage statement is couched in an obscure text on Naranjo Panel 1. For the moment, the most economical interpretation is probably the former. Personage 5, as we prefer to call "God C Star" (an inaccurate gloss) or "Batz' Ek", has many female characteristics: her name is linked with Ruler III in a way consistent with expressions of parentage; her name glyph incorporates a probable female head (cf. facial details on a female head on Caracol Stela 3:A10b), albeit with a conflated animal mouth; in one instance she apparently uses a female introductory glyph (Caracol Stela 3:B8b); and at least one other royal female eschews the usual female titles, or at least a conventional arrangement of them (Altar de Sacrificios Stela 4, Graham 1972: Figure 12). Also, to judge from her birth date she was able to bear Ruler V, if still too young to have given birth to Ruler IV.

It is during Ruler V's reign that the subsidiary site of La Rejolla first declares its connection to Caracol. From La Rejolla's perspective this relationship apparently progressed from subordinacy to complete dependence during the end of Ruler V's life and the beginning of Ruler VI's tenure. On La Rejolla Stela 1 it

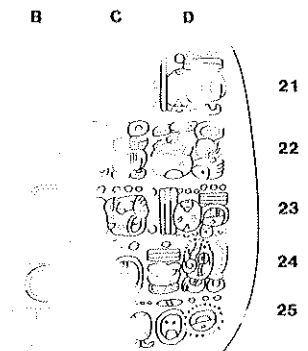


Fig. 69 Caracol Stela 5: B23-D25.

is a local lord who is the principal celebrant; on La Rejolla Stela 3 it is instead Ruler VI of Caracol (yet note that this eroded text may have contained more than is now visible).

Ruler VI

Only a single text (La Rejolla Stela 3) explicitly attests to the existence of Ruler VI, although a date on stucco appears to date to his reign. This stucco text (Figure 14b) comes from recent Caracol Project excavations at the summit of Caana. The date is clearly 12 Ik, end of Yaxkin (0 Mol), which is also the Initial Series date on La Rejolla Stela 3: 9.11.9.16.2. It marks the 45 year (2.5.0.0) anniversary of Ruler V's accession. The presence of the 12 Ik 0 Mol date on La Rejolla Stela 3 is further testimony to Caracol's close control of that small site. The version on stucco is equally significant as a unique citation at Caracol of an event during or just slightly before Ruler VI's reign. Although Caracol Ruler VI is mentioned on the La Rejolla monument, the worrisome possibility still exists that the text simply refers to the ancestral "Smoking Skull", or Ruler I, in his rule as possible founder of the Caracol dynasty. Analogous references have been documented at Copan (Linda Schele, personal communication 1986).

Ruler VII

Ruler VII is probably, although not certainly, distinct from Ruler VI. Details of his reign may be fleshed out by the recovery of additional fragments of Stela 21, the butt of which eluded concerted search during the 1986 field season.

Ruler VIII

Ruler VIII receives notice only on an eroded glyphic passage from Stela 11 (Figure 71a). The structure of the passage suggests that he may have been the father of Ruler IX, but the record is less than clear. At the least, he lived to be a 3 katun lord.

Ruler IX

Ruler IX is documented on Stela 11, along with his putative father, Ruler VIII. His personal name comprises glyphs that spell "*mahk'ina* God K." It is perhaps during his reign, or more likely slightly before, that Caracol loses some of its anomalous and innovative character; the site apparently becomes integrated, at least in artistic terms, into the archaeological traditions of the central Peten.

Ruler X

Ruler X, who caused Stela 18 to be erected at 9.19.0.0.0, may well be the same as Ruler XI; their dates are in rough alignment, and their name glyphs share points of similarity. The rulers are distinguished for the sole reason that Altar 12 associates Ruler XI with an apparent accession date of 9.19.9.17.0, about 10 years later than the dedicatory date of Stela 18.

Ruler XI

As mentioned above, Ruler XI's accession date is probably 9.19.9.17.0. His name glyphs display a great deal of formal variety, particularly on Altar 12.

Ruler XII

Ruler XII is the last known monarch at Caracol. Both Stela 17 and Altar 10, the two local monuments that can definitely be assigned to his reign, were found by Satterthwaite "lying in situ in an unmapped area of low mounds some 350 meters to the southeast of Group B" (Beetz and Satterthwaite 1981:64). In spite of extensive searching by the current project, it has proved impossible to determine the original location of these monuments. Ruler XII shares with Ruler VI the distinction of being mentioned first at a subordinate center, in this case on Hatzcap Ceel Altar 1 dating to 10.0.5.0.0.

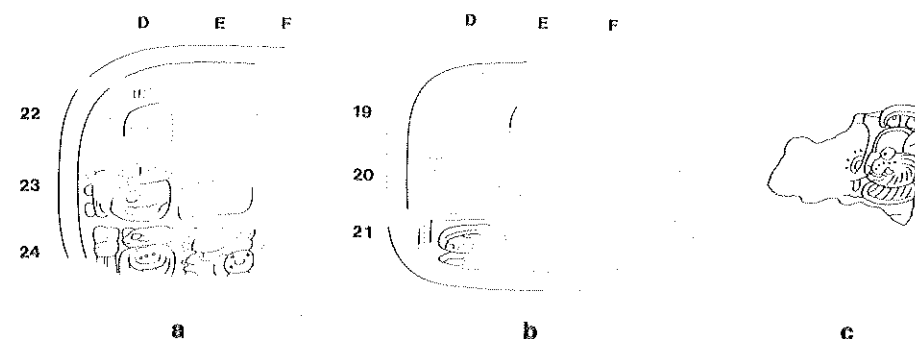


Fig. 70 Unpublished texts from The University Museum: a, b) lower left side of Stela 6; c) slate fragment from an undesignated monument.

Recent Epigraphic Finds at Caracol

The 1985 through 1987 investigations undertaken by the current Caracol Project have recovered a series of new artifactual remains which are relevant to any consideration of epigraphy. The most substantial of these are discussed here.

Stone Monuments

Three carved stone monuments, all ballcourt markers, have been found since 1985. The most important find is "Altar 21", a marker from the Grid A ballcourt that has been discussed in detail elsewhere (Figure 27, Houston n.d.). The marker records a "Shell-Star" or "Venus war" against Tikal at 9.6.8.4.2, a date that coincides with the first stationary point of Venus according to the 584285 correlation (cf. Riese 1984; Lounsbury 1982). Composition of the event glyph is similar to another "Venus war" compound from the left side of Piedras Negras Stela 12, a monument commemorating a war by Piedras Negras against the site of Pomona, Tabasco (at ?9.18.4.9.17). The effect of the conflict between Caracol and Tikal may have been profound; not a single stela at Tikal can be conclusively assigned to the period between the event and the Late Classic (Jones and Satterthwaite 1982: Table 5; although note Tikal Stela 17). Moreover, many Early Classic monuments at Tikal witnessed systematic violence during this period (Satterthwaite 1958:75), a pattern perhaps consistent with a successful campaign by Caracol against the Tikal dynasts (cf. A. Chase n.d.).

The other two markers are entirely iconographic. Excavations in the Grid B ballcourt yielded one monument. Its design consists of opposed heads, apparently of the "God of Number Nine" and a skeletal deer (Figure 26). The other marker, heavily eroded yet quite obviously of a set with the Grid B monument, lay in an inverted position some 8 meters southeast of Structure 12. It too exhibits opposed heads: a sun god and an animal, possibly a rabbit or a jaguar (Figure 24). The position of the marker at some distance from its original location exemplifies the preponderance of re-set monuments at Caracol. It is uncertain how many carvings are in primary context.

In addition to the complete carvings, several monument fragments were recovered. Two pieces are from slate sculptures, and one of these can be fitted to the basal register of Stela 4. A portion of the full figure Initial Series on Stela 20 was found within feet of the monument; the fragment confirms a low numerical coefficient for the tun sign. Further search at the University of Pennsylvania resulted in the discovery of texts and sculpted fragments not presented in the Beetz and Satterthwaite monograph (Figure 70).

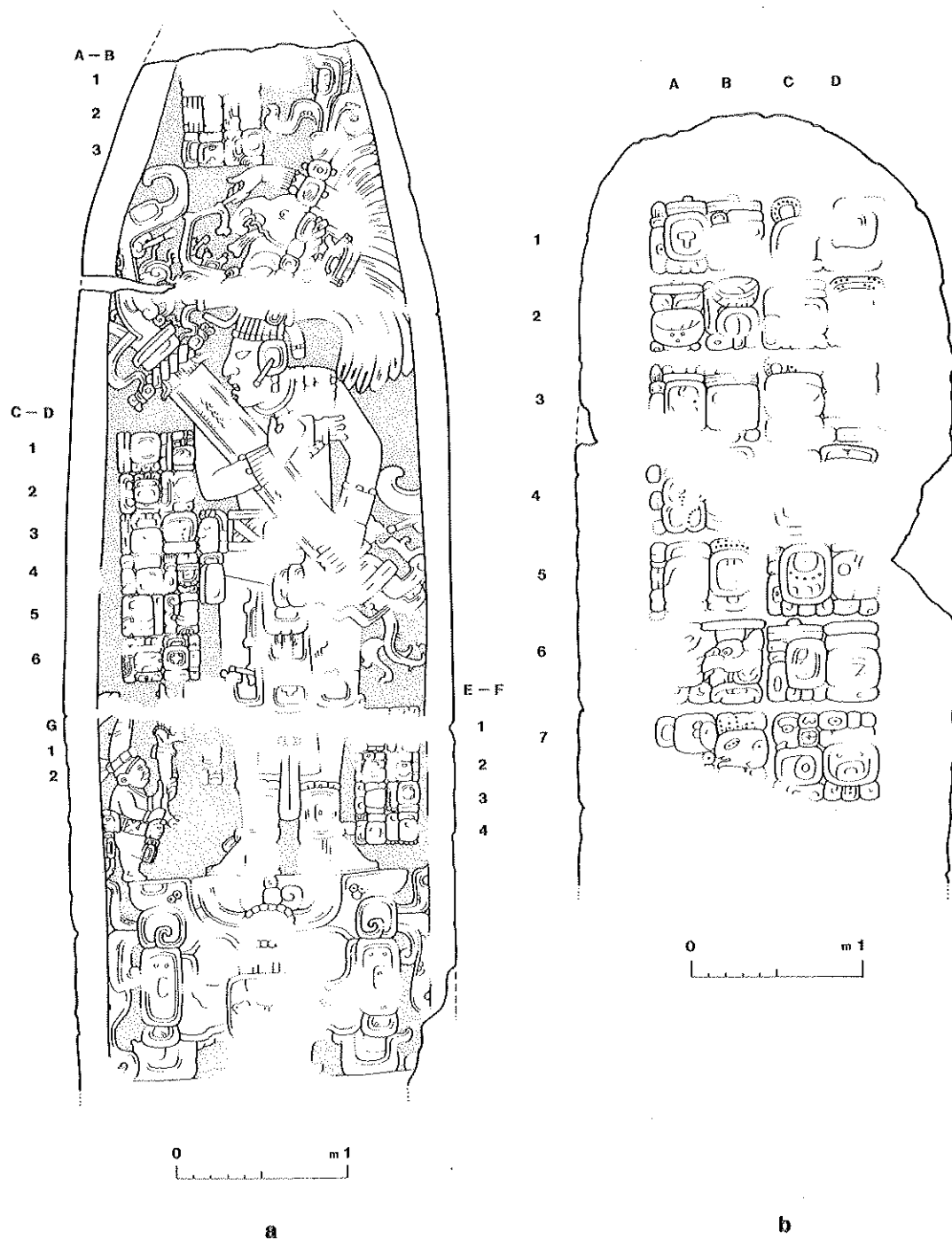


Fig. 71 Redrawn Caracol monuments: a) Stela 11; b) Stela 10.

Several plain monuments have also come to light. These can be enumerated briefly: two additional plain stela from the area in front of Structure A6; a plain rounded altar from the middle of the "North Group" plaza; a standing stela accompanied by a broken monument, both located to the west of Structure 2A3; a stela in front of Structure P15; a possible stela associated with Structure C17; and a possible stela approximately 500 meters north of Caana. Thus, Caracol demonstrably possesses plain monuments, a fact questioned by Beetz and Satterthwaite (1981:47).

The redrafting of several monuments adds considerably to our knowledge of Caracol epigraphy. Stela 18, for example, dates to 9.19.0.0.0. Further, the discovery of glyphs and a human figure beneath the main sign shows conclusively that a great deal of the monument is now missing. Another monument, Stela 11, contains a wealth of detail not apparent in an earlier rendering (Figure 71a). Redrafting of Stela 10, an all-glyphic monument, indicates that it must be one of Caracol's latest sculptures, as is indeed suggested by the absence of Distance Numbers and the crudity of carving (Figure 71b).

Painted Tombs

Most painted tombs from the Maya Lowlands, such as the finds at Rio Azul, date to the Early Classic period. Caracol alone continues the painted tomb tradition into the Late Classic. Three painted tombs are now known at Caracol: two under B20 and another under B19. In all cases, the wall-paintings appear opposite the point of ingress and consist of a rectangular field of specular hematite wash with glyphic designs painted in charcoal black. In general the texts are brief, containing little more than the absolute minimum required to write an Initial Series.

The tomb paintings differ greatly in their execution. The painting from the middle tomb under B20 shows signs of careful finish (Figure 14b). Its edges are neat and the painting is unhurried; the brushstroke rarely exceeds 1.4 centimeters in width. Overlapping brushstrokes also indicate that the central cartouche was the first to be outlined, followed by details above and finally to the side. In contrast, the painting from the innermost tomb exhibits cursive brushwork, so cursive, in fact, that the scribe at times neglected to fill his brush with charcoal pigment, producing an effect more like rough incision than conventional painting (Figure 14a). Moreover, the extensive dribbling and bleeding of paint suggest that the text was rendered when the undercoat of plaster was still wet. The best-preserved tomb is by far the one under B19 (Figure 23). The Initial Series dates on the tombs presumably refer to death or burial; however, this must remain an assumption in the absence of longer, more informative texts.

As for dates, the middle tomb under B20 contains an Initial Series Introductory Glyph (ISIG) with a "patron" of zomorphic form. The inner tomb displays a fragmentary ISIG followed by destroyed baktun and katun signs as well as tun, uinal, and kin glyphs with numerical coefficients. A day sign with coefficient completes the painted text. Given the archaeological constraints imposed by artifacts from the tomb, there can be only two possible decipherments of this Initial Series: (9. 7.)?3.12.15 3 Men (18 Yaxkin) or (9. 9.)?2.12.15 3 Men (8 Pax). From the spacing of the partly eroded tun coefficient, which would seem to favor a "two" over a "three", the second date is perhaps the more likely placement. However, Arlen Chase feels the former is more likely, judging from the associated ceramics left by looters.

The tomb under B19 includes more glyphic flourishes than those under B20 (note the schematic T60 variant). It is possible that the date is 9.10.1.12.?. The tun sign is exceedingly faint and was determined by an examination of brush strokes.

Capstones

A total of four painted capstones are now known at Caracol. Two appear in association with painted tombs, that is, with the vault under B19 and the innermost tomb under B20. In neither case is the capstone well-preserved, as little more than charcoal outlines on specular hematite meets the eye. The other two capstones are by contrast rich in glyphic information. The first caps a tomb found just below the summit of Structure A3 (Figure 11). Its glyphs are rendered in faint black pigment on a background of hematite. The date is ambiguous because of an error in the coefficient of the month sign, which reads as "ten" in place of the expected "nine" (cf. similar shifts in the cave paintings at Naj Tunich). If corrected to 13 Cib *9 Kayab, the date can be placed at either 9.15.16.10.16 or 9.13.3.15.16, given the chronological parameters suggested by associated ceramics. Since several dishes from the tomb bear day signs of 6 Ahau, which may specify the katun in which the ceramics were made, 9.13.3.15.16 may well be the best choice. The event associated with this date - a human skull with preposed "death eye" (cf. Tikal MT-28 and MT-29) - unequivocally refers to death. The remaining glyphs include the personal names of the interred individual; the final compound is the Caracol Emblem, demonstrating that the occupant of the tomb enjoyed exalted rank. The other capstone, from Structure L3, is in much better condition (Figure 37). The black paint features crisp outlines, and the hematite background appears less saturated with moisture than the A3 stone. The date is also much clearer. Assuming that the glyph at C1 is a tun sign, as its formal attributes suggest, the only possible reconstruction is 9.9.0.16.17 2 Caban 15 Uo. The glyphs that follow the date are of especial interest. The verb at C3 consists of at least two phonetic elements: *ma* (T74) and *ka* (T25), as well as a possible *wa* allograph (T506, cf. Machaquila Stela 5:A3 and Stela 2:K3b). The presumed root, *ma-k(a)* or *mak*, enjoys wide distribution as a verb meaning "to cover or close" (Kaufman and Norman 1984:125; Barrera Vasquez 1980:479). This gloss is entirely appropriate for a capstone text, in that the date may commemorate the closing or covering of the vault, with the *wa* allograph possibly functioning as a passivizer along the lines documented for Chorti (MacLeod 1984:246-247, although note here the absence of third-person marker; see also Mathews, 1979b, for a semblant glyphic passage on a painted capstone from Becan).

Stucco

To date, an enormous quantity of painted and modeled stucco has been found at Caracol. Most of this comes from Structures A3 and the buildings on the summit of Caana, especially Structure B18. The stucco can be divided into two categories: non-glyphic and glyphic fragments. Most of the non-glyphic stucco is of substantial size and weight. The supposed fragility of stucco is belied by the resilience of these large fragments and the surprising ease with which some can be re-fitted. Several are still attached to cylindrical stone armatures that bear a vague resemblance to manos. The armatures contrast strikingly with those from Palenque and Tonin (Robertson 1983: Figure 5), which are rectangular in form and of dense, fine-grained limestone. A preliminary study of non-glyphic motifs permits a number of observations. A majority of the stucco, which probably fell from temple faades and stairway features, formed scenes containing bearded serpents with open jaws (possibly containing deity heads) in addition to pop designs, sky bands, and seated personages with jade and carved bone ornaments. The scene denoted on Structure B18 probably consisted of bearded serpents disposed around at least three seated or standing lords, who wore feathered headresses that included stacked deity heads as well as "Jester god" headbands,

a good indication of supreme rank. Large, grotesque heads supported both the figures.

In comparison to the great quantity of non-glyphic stucco, only fifty-three glyphic pieces have been found thus far. Virtually all of these come from the vicinity of B18. The fragments are in highly friable condition with only faint vestiges of a ferrous red (5YR 7/4) and blue pigment. Many fragments show evidence of burning, at least in those instances where paint remains. A minimum of four distinct texts can be documented. One is a large cornice text. Another consists of glyphs in circular medallions. The remaining texts comprise a smaller set of glyphs, painted red and surrounded by a blue border (cf. the paint schemes at Laxtunich and Palenque, Schele and Miller 1986: Plate 86; Schele and Mathews 1979: frontispiece) and a much larger group in high relief with little or no paint. One stucco text (Figure 13b) contains a date falling within the reign of the poorly known Ruler VI (see above).

Texts on Vessels

Caracol has only a small collection of texts on ceramic. At least two such texts consist of the Primary Standard Sequence (Figure 38; Coe 1973), which has recently been identified as a glyphic formula relating to ceramic vessels (Houston and Taube 1987). Dishes from the A3 tomb (Figure 11b,d,g) exhibit the day sign 6 Ahau, possibly as a reference to the katun in which the tomb was furnished and sealed. One calcite vessel from Structure B20 contains four discrete clusters of glyphs (Figure 15a). One of these clusters names an illustrated hunchback. The other glyphs are of unknown meaning.

Caracol Epigraphy and its Significance

The most compelling feature of Caracol is perhaps its concentration of dates from the "hiatus," a period that witnessed a significant decline in monumental activity (Proskouriakoff 1950:111-112; Willey 1974; Mathews 1985:31-32). A few other sites erect monuments during this time, but Caracol is by far the most active. Moreover, Caracol's glyphic record begins at much the same time as "the initial spurt of activity" at other major centers (Mathews 1985:31), but unlike these centers Caracol continues to flourish. In many respects its chronological patterns are at disconformity with sites in the Peten. Caracol behaves energetically at the same time such sites languish; and yet when erstwhile antagonists such as Tikal and Naranjo begin again to erect monuments, Caracol's record falls silent. The negative correlation is probably not fortuitous, as we have strong glyphic and archaeological evidence that Caracol was in intensive contact with the Peten.

A key problem before Maya epigraphy is the elucidation of inter-site relations (e.g. Mathews 1985). As a general observation, it can be stated that Classic political relations seem to have been conditioned by relative distance, with the direction of much of the conflict apparently being channelled along stream and river valleys. A tabulation of distinct classes of inter-site relationship (i.e. relations of explicit subordinacy, relations of hostility, and relations of marriage) reveals that warfare and marriage occur between sites at a median distance of 38.62 and 38.83 km., respectively. In contrast, sites of subordinate political status, such as La Rejolla, lie at a median distance of 11.36 km. from their controlling center. The median distance between autonomous centers is 40 km. at 8.18.0.0.0 (n=6), 62.5 km. at 9.3.0.0.0 (n=6), 58.33 km. at 9.8.0.0.0 (n=18), 59.54 km. at 9.13.0.0.0 (n=22), and 52.18 km. at 9.18.0.0.0 (n=27, data from Mathews 1979: Figures 10-14). This diachronic perspective provides little evidence of progressive political compaction or of great differences in the size of Classic polities. In short, unknown constraints seem to have limited the size of the polities and to have

created conditions for their uniform distribution. Yet the data on political spacing seem to contradict some empirical facts, namely that the Maya did on occasion seize foreign centers, such as Naranjo and numerous centers near the Pasin. What prevented such centers from being held persistently as possessions of self-aggrandizing polities? And, why did no larger polity emerge as a consequence of success in war? The key to this question may lie in the realm of administration and in the repetitive sociopolitical structure outlined by Demarest (1984:146-147). It is suggested here that Classic rulers failed to control larger areas for the reason that by delegating authority to provincial lords they necessarily risked political fission. Subordinate sites already shared with their controlling centers the infrastructure of dynastic rule, including such items as rites of accession and a preoccupation with legitimate descent (see Stuart n.d.; Mathews and Justeson 1984:213, for a discussion of subordinate titles). By their very nature the smaller centers tended to develop into autonomous units.

The relations between dependent and controlling sites are instructive in this regard. We have seen at La Rejolla, and possibly even at Hatzcap Ceel, some suggestions of progressively diminished autonomy. Elsewhere, there exists documentary evidence that subordinate titles were of an ephemeral character (as at La Pasadita and Chicozapote), and that much ritual activity at dependent sites involved either the direct participation of overlords or at least the patterning of local rituals on events at the controlling center. These data indicate tight control over dependent sites, and also some hints that such centers erected monuments only briefly, possibly because of the imposition of even more direct control by superordinate sites, or perhaps because such hierarchic arrangements tended towards inherent instability. In this respect, political consolidation may have had as its result the systematic suppression of local rulers and dynasties or, following Demarest (1984), the removal or destruction of redundant political structures. That larger polities did not emerge resulted possibly from the deliberate nature of this process or from competition by neighboring dynasties.

Caracol's epigraphy promises to assist greatly in interpreting Classic Maya society. The anomalous character of its dates and artistic traditions make it of further interest as Caracol's activity during the hiatus is surely related to the lack of activity elsewhere. Although the arguments presented here are preliminary in nature, they should provide a background for the future excavations that are so urgently needed at Caracol and its hinterland.

Table 2. Dates of the Caracol Dynasty

#	POSITION	LONG COUNT	C.R.	JULIAN
St. 13	C15-D15	(9. 2. 29. 2.16)	10 Cib ?	484?
Alt. 4	A1	(9. 3. 0. 0. 0)	2 Ahau (18 Muan)	495 I 29
St. 13	A1-A9	9. 4. 0. 0. 0	13 Ahau 18 Yax	514 X 16
St. 15	A1-A3	9.(4.)16. 13. 3	4 Akbal 16 Pop	531 IV 13
St. 16	A1-B8	9. 5. 0. 0. 0	11 Ahau *18 Tzec	534 VII 13
Alt. 14	A1	?(9. 5. 0. 0. 0)	11 Ahau (18 Tzec)	534 VII 13
St. 6	A1-A3	9. 5. 19. 1. 2	9 Ik 5 Uo	553 IV 16
Alt. 21	K2b-L2a	(9. 5. 19. 1. 2)	9 Ik 5 Uo	553 IV 16
St. 6	A7-B7a	(9. 6. 0. 0. 0)	9 Ahau 3 Uayeb	554 III 20
Alt. 5	A1	(9. 6. 0. 0. 0)	9 Ahau (3 Uayeb)	554 III 20
Alt. 21	N3-M4	(9. 6. 0. 0. 0)	9 Ahau 3 Uayeb	554 III 20
Alt. 21	P1	(9. 6. 2. 1.11)	6 Chuen 19 Pop	556 IV 9
Alt. 21	Q2b-R2a	(9. 6. 8. 4. 2)	7 Ik 0 Zip	562 IV 29
St. 3	A1-A8a	9. 6. 12. 4.16)	5 Cib 14 Uo	566 IV 22
Alt. 21	W2b-X2a	(9. 6. 17. 17. 0)	8 Ahau 13 Mac	571 XI 26
Alt. 21	X3-W4	(9. 6. 18. 2.19)	9 Cauac 12 Kayab	572 II 13
St. 3	B11b-A12a	(9. 6. 18. 12. 0)	8 Ahau 8 Mol	572 VIII 12
St. 6	C7	(9. 7. 0. 0. 0)	7 Ahau3 Kankin	573 XII 5
Alt. 6	A1	(9. 7. 0. 0. 0)	7 Ahau (3 Kankin)	573 XII 5
Alt. 21	A'1b-B'1b	(9. 7. 0. 0. 0)	7 Ahau 3 Kankin	573 XII 5
St. 5	C24	(9. 7. 2. 0. 3)	2 Akbal 16 Mac	575 XI 28
B 20 Tomb	A1-A6	?(9. 7.)?3. 12.15	3 Men (18 Yaxkin)	577 VIII 1
St. 3	A14b-B14a	(9. 7. 10. 16. 8)	9 Lamat 16 Chen	584 IX 6
St. 3	A17a-A17b	(9. 7. 14. 10. 8)	3 Lamat 16 Uo	588 IV 18
Alt. 21	A1-?	9. 7. 14. 10.*8	(3 Lamat 16 Uo)	588 IV 18
NAR P.1	A1-B1	(9. 7. 14. 10. 8)	3 Lamat 16 Uo	588 IV 18
Alt. 21	B'4-C'1a	?(9. 7. 19. 10. 0)	*1 Ahau 3 Pop	593 III 15
St. 3	A19b-B19a	(9. 7. 19. 13.12)	8 Eb 15 Zotz	593 V 26
St. 1	A1-D1	9. 8. 0. 0. 0	5 Ahau 3 Chen	593 VIII 22
St. 6	C8	(9. 8. 0. 0. 0)	5 Ahau 3 Chen	593 VIII 22
Alt. 1	A1	(9. 8. 0. 0. 0)	5 Ahau (3 Chen)	593 VIII 22
Alt. 21	E'1a	(9.)8. 0. 0. 0	5 Ahau 3 Chen	593 VIII 22
St. 5	?	(9. 8. 5. 16.12)	5 Eb 5 Xul	599 VI 24
St. 6	A14-B14	(9. 8. 5. 16.12)	5 Eb 5 Xul	599 VI 24
St. 6	C17-A18	(9. 8. 10. 0. 0)	4 Ahau 13 Xul	603 VII 1
St. 5	C23	(9. 9. 0. 0. 0)	3 Ahau 3 Zotz	613 V 9
Alt. 11	A1	(9. 9. 0. 0. 0)	3 Ahau (3 Zotz)	613 V 9
Alt. 15	A1	(9. 9. 0. 0. 0)	3 Ahau (3 Zotz)	613 V 9
St. 5	D25	(9. 9. 0. 4. 0)	5 Ahau 3 Mol	613 VII 28
L3 Tomb	A1-D2	9.*9. 0.*16.17	2 Caban 15 Uo	614 IV 11
B20 Tomb	A1-A6	?(9. 9.)?2. 12.15)	3 Men (8 Pax)	616 I 8
St. 3	C3a-C3b	(9. 9. 4. 16. 2)	10 Ik 0 Pop	618 III 6
St. 3	D7a-D7b	(9. 9. 5. 13. 8)	4 Lamat 6 Pax	619 I 6
St. 3	D10b-C11	(9. 9. 9. 10. 5)	3 Chic. 3 Ceh	622 X 14
St. 3	C15ba-C15b	(9. 9.)10. 0. 0	3 Ahau 13 Pop	623 III 18
St. 3	C17a-C17b	(9. 9. 13. 4. 4)	9 Kan 2 Tzec	626 V 25

Table 2. Dates of the Caracol Dynasty (continued)

#	POSITION	LONG COUNT	C.R.	JULIAN
NAR HS.	?	(9. 9. 13. 8. 4)	11 Kan 2 Chen	626 VIII 13
St. 3	C19a-C19b	(9. 9. 14. 3. 5)	12 Chic. 18 Zip	627 V 1
NAR HS.	P1	(9. 9. 14. 3. 5)	12 Chic. 18 Zip	627 V 1
NAR HS.	A'1b-B'1a	(9. 9. 17. 11.14)	13 Ik 12 Zac	630 X 1
St. 3	F2-F3	(9. 9. 18. 16. 3)	7 Akbal 16 Muan	631 XII 24
NAR HS.	M1b-N1a	(9. 9. 18. 16. 3)	7 Akbal 16 Muan	631 XII 24
St. 3	E7a-E7b	(9. 10. 0. 0. 0)	1 Ahau 8 Kayab	633 I 24
Alt. 19	A1	(9. 10. 0. 0. 0)	1 Ahau (8 Kayab)	633 I 24
Alt. 21	G'1	?(9. 10. 0. 0. 0)	*1 Ahau (8 Kayab)	633 I 24
NAR P. 1	G2-II2	(9. 10.) 0. 0. 0	1 Ahau 8 Kayab	633 I 24
NAR HS.	N3	(9. 10. 0. 0. 0)	1 Ahau 8 Kayab	633 I 24
B19 Tomb	A1-?	9. 10. 17. 12. ?		634
NAR HS.	A1	(9. 10. 3. 2.12)	2 Eb 0 Pop	636 III 1
St. 3	F9a-b, uh	(9. 10. 4. 7. 0)	8 Ahau 3 Tzec	637 V 26
NAR HS.	V1	(9. 10. 4. 16. 2)	8 Ik 5 Kan	637 XI 21
NAR IIS.	I1-?	9. 10. 10. 0. 0	13 Ahau (18 Kankin)	642 XII 3
Alt. 7	A1	(9. 11. 0. 0. 0)	12 Ahau (8 Ceh)	652 X 11
Alt. 17	A1-B1	?)11. 0. 0. 0	12 Ahau 8 Ceh	652 X 11
REJ 1	A1-A8	?*9.*11.*3.*16.1	9 Imix 9 Chen	656 VIII 12
C4B/45-8	A1-B1	(9. 11. 9. 16. 2)	12 Ik *0 Mol	662 VII 13
REJ 3	A1-?	9. 11. 9.*16. 2	(12 Ik 0 Mol)	662 VII 13
REJ 3	A7-B7a	(9. 12. 0. 0. 0)	10 Ahau 8 Yaxkin	672 VI 28
A3 Tomb	A1-B1	?(9. 13. 3. 15.16)	13 Cib *9 Kayab	696 I 10
St. 21	A1-A2	9. 13. 10. *0. 0	7 Ahau 3 Cumhu	702 I 22
Alt. 2	A1	(9. 17. 0. 0. 0)	13 Ahau (18 Cumhu)	771 I 20
Alt. 3	A1	(9. 18. 0. 0. 0)	11 Ahau (18 Mac)	790 X 7
St. 11	A1-B4	9. 18.*10. 0. 0	10 Ahau 8 Zac	800 VIII 15
St. 8	A1-?	?9. 18. ?. ?. ?		
St. 18	A1-B1	(9.)19. 0. 0. 0	9 Ahau 18 Mol	810 VI 24
MCW 2	A1-D4	9. 19. 0. 0. 0	9 Ahau 18 Mol	810 VI 24
Alt. 12	A1-A2	?(9. 19. 9. 9.15)	12 Men 8 Pax	819 XI 19
MCW 1	C1-D1	?(9. 19. 9.10. 6)	10 Cimi 19 Pax	819 XI 30
Alt. 12	C2-D1	(9. 10. 9.17. 0)	1 Ahau 8 Tzec	820 IV 12
St. 19	zC2-zD2	(9. 19. 10. 0. 0)	8 Ahau 8 Xul	820 V 2
Alt. 12	I1-II2	(9. 19.)10. 0. 0	8 Ahau 8 Xul	820 V 2
Alt. 13	C2-C3	(9. 19. 10. 0. 0)	8 Ahau (8 Xul)	820 V 2
Alt. 12	A18-A19	?(9. 19. 10. 2. 3)	12 Akbal 11 Mol	820 VI 14
Alt. 13	H1-II	(10. 0. 0. 0. 0)	7 Ahau 18 Zip	830 III 20
Alt. 16	A1	(10. 0. 0. 0. 0)	7 Ahau (18 Zip)	830 III 20
MCW 1	A1-A2St.	(10. 0. 5. 0. 0)	13 Ahau 13 Uo	835 II 13
St. 17	B1-C1	(10. 0. 19. 6.14)	13 Ik 17 Tzec	849 IV 14
Alt. 10	A1-B1	(10. 0. 19. 6.14)	13 Ik 17 Tzec	849 IV 14
St. 17	B5	(10. 1. 0. 0. 0)	5 Ahau 3 Kayab	849 X 26
Alt. 18	A1	(10. 1. 0. 0. 0)	5 Ahau 3 Kayab	849 XI 26
St. 10	D7	?(10. 1. 10. 0. 0)	*4Ahau (13Kankin)	859 X 5

Note: The Julian dates accord with the 584285 correlation (Lounsbury 1982). MCW denotes "Mountain Cow," where Hatzcap Ceel is located; REJ refers to the site of La Rejolla. Asterisks precede unattested but reconstructible forms.

APPENDIX III

The Conchita Causeway and Associated Settlement: Investigating Social Integration

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The settlement pattern of Caracol is characterized by a series of intra-site causeways linking groups of monumental architecture with the central precinct. While correlating the sociopolitical organization of a center with the settlement pattern is a research problem posed for virtually every site - Caracol, in particular, presents an opportunity to discern how the Maya organized themselves by using large scale public works as a guide to significant relationships among the elite.

Willey (1986:189) recently characterized Classic Maya sociopolitical organization as "a study in coherence and instability." This description reflects the prevailing view of the development of Maya civilization and has major implications for the process of state formation in the Maya area. Focusing on the aspect of coherence, one of the most obvious indicators of integration and alliance among social groups is a causeway. Such large scale construction represents a public, hence political, definition of social integration. Kurjack (1974), for example, notes that construction of this kind of feature represents a statement made by the elite about their social and political relationships with each other. (cf. Benavides Castillo 1981; Folan et al. 1983; Freidel and Sabloff 1984; Kurjack and Garza T. 1981; Willey et al. 1978). A causeway is also a communication route along which information flows, either intentionally or unintentionally. Access to and control of information is an important variable in developing sociopolitical complexity (Flannery 1972). In terms of archaeological method, a causeway represents a culturally defined transect from which a sampling universe can be selected.

With all of this in mind, a research design was developed to address this problem. Archaeological work was begun during the 1986 field season and continued during the 1987 season, its purpose being to concentrate on the settlement pattern associated with one of the longer intra-site causeways in order to understand who lived in the site center, what their relationships were to each other and to those who occupied and/or used the ceremonial complexes located at either end of the causeway. The causeway that was selected for this investigation was discovered by Drs. Arlen and Diane Chase during the 1986 field season; it led from Caracol's epicenter to the southeast where it ultimately ended in a large monumental group, called "Conchita," which had been the focus of recent looting (Figures 4 and 60). Informal survey revealed dense settlement and extensive terracing along the entire 3 km length of the causeway to either side. The research design was developed to consider the settlement pattern along the Conchita causeway as a part of the larger Caracol project, employing a combination of survey and excavation.

Survey

In 1986, the northern half of the causeway and 6 adjacent plazuela groups were cleared and mapped by Arlen Chase. Based on the results of the informal survey in 1986, systematic survey and mapping were begun in 1987 in a defined area along the causeway between the central precinct and the terminus of the road. The first task was to clear the southern half of the road for mapping and, then, to set up stakes to guide the survey. The survey stakes were placed every 100 meters along the length of the causeway. From these stakes, 2 to 4 workmen

cut 1 meter wide brechas, 200 meters long, to either side of the road. Reconnaissance was then conducted by myself and the workmen along, as well as between, the brechas to locate structures, reservoirs and agricultural terraces.

A total of 51 plazuela groups were mapped along the northern 2/3 of the road using a transit and stadia during the 1987 season (see Appendix I). The mounds are generally less than 2 meters in height, but some are almost as high as 5 meters. The number of mounds per group ranges from 2 to 16, situated to define one courtyard per group. Based on comparative evidence from throughout the Maya Lowlands (e.g., Copan, Tikal and Seibal) it is quite probable that the majority of these groups functioned as households (Becker 1982; Haviland 1963, 1981; Leventhal 1983; Tourtellot 1983).

The Chases have proposed a group typology (see above pp. 54-56) based on structure focus because, at Caracol, group composition and layout appear to reflect functional and behavioral differences better than such criteria as number of structures per group and structure size. Groups representing Types 1 through 4 have been mapped along the northern portion of the "Conchita" causeway; Structures C11-14, for example, form a north and east structure-focused group (Type 2), while just southwest of this, Structures C43-59 form a south and east structure-focused group (Type 3). If the group typology were based on number of structures per group and structure size, (e.g., Willey and Leventhal 1979), the "simplest" type would be exemplified by Structures C11-14 and the most complicated type would be represented by Structures C43-59. This simplification, however, would not adequately reflect the variability and integration found at Caracol.

Extensive agricultural terraces, integrated among the groups in this area, were also mapped using a Brunton compass and 30 meter tape. The terraces are on the sides of hills as well as in the low areas and are readily identified by retaining walls, 0.5 to 1 meter in height. The hillside terraces are fairly irregular but form a step-like pattern to the majority of the hills. The low lying terraces are more regular and actually enclose areas for cultivation. Terraces and groups have been found in such intimate association in other areas of the site (see Appendix I and Healy et al. 1983). Informal survey along the unmapped portion of the causeway suggests that the density of settlement and terracing along this part of the causeway is similar to that found to the north.

Excavation

During the 1986 and 1987 seasons, excavation was conducted in a small group of 4 structures, colloquially referred to as "Tabanos" (Structures C11-C14; Figure 51). This group is arranged on a low platform, located towards the north end of the causeway and immediately adjacent to it. The northern Structure C11 is 1.5 meters in height; the eastern Structure C13 is 1.75 meters in height; the other two constructions, Structures C12 and C14 (Figure 72), are located on the northeast and southwest corners of the platform and are identifiable only from lines of stone visible on the surface. Very little fallen masonry was found, thereby leading to the conclusion that these structures were made primarily of perishable materials.

Areal excavation of Structure C11 revealed the roughly-dressed stone foundations of a two room, tandem plan building with a low bench or altar in the rear room. A trench was placed along the central north-south axis and yielded two special deposits below the bench. The first was a poorly preserved multiple burial of at least one child and one adult with one small jade bead and two small polished, but otherwise unworked, jadeite pieces. The second deposit, located below the multiple burial, was the burial of a female in a prone position with one



Fig. 72 Caracol Structure C14.

small partial unslipped, red dish and one stone mosaic fragment. Preliminary analysis of the ceramics from this building indicate a Late Classic occupation.

Excavation of the eastern building in the group, Structure C13, uncovered a construction similar in plan to that found in Structure C11; two special deposits were also encountered. The first deposit was encountered below the front steps of the structure and consisted of a multiple burial of minimally four individuals (Figure 73). At least one individual had jadeite inlays in the upper and lower incisors; the burial goods included one shell ring with pyrite inlays and three ceramic vessels. Perhaps one of the more intriguing aspects of this deposit is that one of the vessels (Figure 33), a black cylinder with 7 sets of concentric squares incised around the exterior, is very similar to one of the vessels recovered from the looted area of the Conchita precinct, also a black cylinder with 2 sets of incised concentric squares. The second deposit was located below the front wall of the building and consisted of an unslipped red cache vessel with an applied face.

The northeast and southwest buildings, Structures C12 and C14, were also exposed by areal excavation; the material remains recovered from these buildings include an abundance of metate fragments, sherds, and broken obsidian blades. A small jadeite bead was also recovered from a humus lot inside the back wall of Structure C14.

The evidence thus far suggests that Structures C11 through C14 served residential and domestic functions for an elite group of people. Based on excavation data and evidence from looters' activity in other areas of Caracol, it is probable that further excavation would recover the tomb of one or more individuals in the eastern building. A deep trench excavation of this building, however, was hampered by the presence of a mature Ramon tree growing on the summit of the

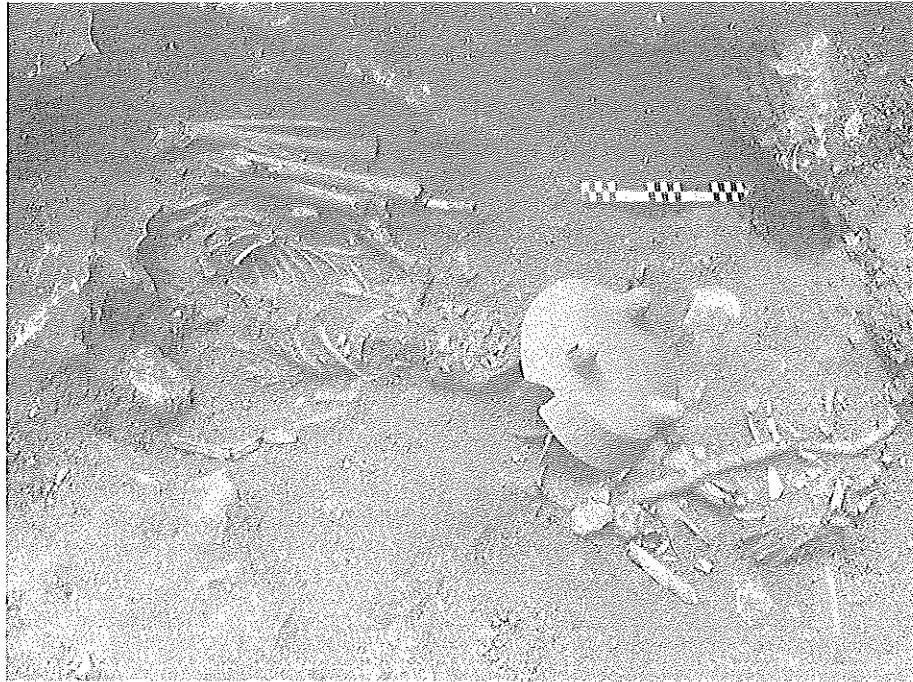


Fig. 73 Interment beneath front part of Caracol Structure C13.

structure, so the presence or absence of a tomb in this building remains in question.

A looted group consisting of Structures C95-C99 was discovered approximately 300 meters southwest of Structures C11-14 and was nicknamed "Estrellas" because of two star-like cuts the looters had carved into a nearby tree. The looters had cut into the back of the eastern structure of this group and had found a small north-south oriented tomb. Clean-up excavation of the looters' debris recovered one small paint pot, one large red-slipped tripod dish, one small grey, unslipped, deep-sided bowl, two shell ear plugs, and some bone fragments from an adult and from an infant. The front of this same eastern building had also been tunneled into and an already collapsed tomb had exposed by their probe; fortunately, they did not pursue their efforts. Salvage excavation of the front tomb uncovered a well-preserved interment of a male individual (his lower legs had been cut through by the looters, but he was otherwise intact and undisturbed) accompanied by a red-on-cream cylinder, a complete mano, and two shell markers. Another red-slipped dish, dug through by the looters, was found within the front trench. As pieces of this vessel were recovered from just above the tomb floor in the trench section, the dish has been provenienced to this deposit.

Implications

Some of the more immediate questions concerning the settlement along the Conchita causeway are: who occupied this area; and what is their relationship to those who used the "Caana" and "Conchita" complexes? This question is particularly interesting because the plaza groups were frequently built on top of the agricultural terraces or were connected to other groups and to the causeway itself by the retaining walls (see Appendix I). Even a cursory inspection of the map is enough to realize that there is not a simple correlation between plaza type

(whether it is defined in terms of structure focus or size and number of mounds) and proximity to the causeway or proximity to the central precinct. Based on excavation and looters' activity, it is very likely that all the groups, or at least a good majority of them, were occupied or used by the elite members of Caracol society. Collapsed and looted tombs are found in just about every type of group along the causeway and open tombs, which have been discovered in comparable groups in other parts of the site, contain pottery and other objects which may have been trade items. However, one question remains: if the occupants of this area were elite, were they all the same level of elite? The focus of the 1988 and succeeding seasons will be to test the hypothesis that different plaza types, or the location of plazuela groups with respect to the causeway and to the ceremonial complexes, can be correlated with different levels in the sociopolitical organization of Caracol society.

A further question may be raised about the settlement pattern along the Conchita causeway: did construction of the causeway promote occupation of the zone or was the causeway built through an already existing settlement because of a change in the sociopolitical complexity of the center? The continuing research will try to determine the sequence of development of occupation for this portion of Caracol as this question is related to Caracol's activities within the larger Maya realm, which, from the epigraphic data, appear to have been wide-spread and rather disruptive.

Conclusion

During the transition between the Early and Late Classic Period, Caracol was a dynamic, rapidly expanding, and aggressive polity. It is believed that by using a cultural feature, such as an intra-site causeway, to define the sampling universe that the general principles of sociopolitical organization employed by the Maya at Caracol can be more readily inferred. The work along the causeway thus far suggests that it may be possible to define different orders of elite who occupied the area between the central precinct and the "Conchita" group. When considered in a wider sense, the settlement at Caracol can be taken as a case study for examining the integration of social groups and the maintenance or dissolution of sociopolitical stability among the Classic Period Maya.

APPENDIX IV
A Preliminary Report on the Faunal Analysis of Caracol, Belize

JUNE D. MORTON, McMaster University

Caracol is a Classic Maya ceremonial center located in the foothills of the Maya Mountains at an elevation of approximately 500 meters above sea level. This area of Central America is under subtropical rainforest and within the Peten Biotic Province (L. Stuart 1964). The faunal species present are typical of the moist tropical forests that Caracol is still located within today.

The faunal material reported here was found during the excavations on the site in 1985 and 1986. Within the site sixteen different areas, referred to as operations, were examined. This report concentrates on the special deposits discovered within these areas. Special Deposits are defined by the archaeologists wherever unusual concentrations of cultural material are found, such as caches, burials and tombs. Several other finds of faunal bone are also included in this report because their identifications were such that they may be of special interest.

The artifact numbers, as recorded here, are those assigned to the bone in the site laboratory. All faunal bone was assigned one number relating it to its excavation/operation. A further number was added during the analysis to allow each bone to be identified, and therefore discussed separately. The only exception to this was a tomb in Operation 12, where five clusters of bone were found. With these bones the group number was added and then a separate bone number.

This report covers nine of the excavated operations, four of which contain special deposits. These nine operations have not been analyzed in their entirety. The special deposit lots are: 1) C4C/21, a tomb in Structure B19 (Caana), 2) C6B/16, a burial in Structure B108, 3) C12A/72, a tomb in Structure A3, and 4) C19A/28, 32, 38 and 39, four burials from Structure L3. The other operations for which faunal identifications are included here are: C1C, C3B, C4B, C8B, and C2A. These operations represent excavations in Structures B20, A37, B19 and A6 respectively, as well as in the area of the camp.

The faunal identifications in this report were obtained at the H. Savage Faunal Laboratory. Many identifications were verified by comparison with the reference collections at the Royal Ontario Museum. There are many Belizean animal species that are not represented in either of these collections. Attempts are being made to find nearby collections that can provide some of these missing species. Due to this disadvantage many identifications are only to the family level; it is hoped that these will be better identified by the final report. The bone specimens are predominantly avian and mammalian, with the amphibians and reptiles poorly represented. The significance of this may be related to the ceremonial use of these animals, but it remains to be seen if this is a distinct trend when the analysis is complete.

	# OF ID.	%
MAMMALIA:	60	11.2
AVIA:	407	75.8
AMPHIBIA:	12	2.2
REPTILIA:	1	0.2
UNIDENTIFIED	57	10.6
TOTAL	537	100%

Mammalia

The mammalian species identified were the Four-eyed opossum, Big-eared climbing rat, Jaguar, a peccary, and the Baird's tapir. The minimum numbers of individuals were calculated for these species. Minimum numbers were calculated based on the most frequently occurring bone element and taking into account its side and its context at the site. This assumption may introduce errors, but due to the rather small nature of the animals it seems unlikely that the same individual animal was divided up and carried to more than one area of the site. The climbing rat is the most abundant species identified so far. Its identification was based solely on the cranium. This was due to the lack of postcranial material in the reference collections. As mentioned above, it is hoped that this will be changed before the final results are reported. As with any site, one suspects that rodents are intrusive to the cultural remains. This may not necessarily be true, but as of yet no modifications such as cut marks or charring indicate that man was responsible.

ID.	# OF ID.	MNI	% OF TOTAL
Philander opossum	3	1	5.6
Otodylomys phyllotis	24	15	83.2
Panthera onca	1	1	5.6
Tapirus bairdii	1	1	5.6
Totals	29	18	100.0

Much of the faunal material was found in association with human remains on the site. This was mainly in the form of burials and tombs. Five pieces of sting-ray spines were found in a looted tomb in Structure B20, where a few human remains were still present. A "claw" was found in the tomb in Structure B19. This appears to have been smoothed and shaped by human hands. Unfortunately it has not been successfully identified yet. A charred fragment of what may be a feline femur was found in Operation 6, as was a skull fragment of an opossum and of a cervid, all three in association with human remains. As mentioned above some of the rat bones were found in the cultural deposits, a minimum of three individuals in a looted tomb in Operation 3, and a total of 11 individuals in burials in Operation 19. The fact that these last two mentioned deposits were not well sealed tombs further suggests that the rats could have been intrusive.

Man-made modifications were found on some of the bone. A jaguar tooth was found with a drill hole through the root. It was probably used as a pendant. It was found in Operation 8, from Structure A6. The tapir bone is the distal end of a humerus. It has a series of parallel cuts across the shaft. These appear to be too high to have been done during butchering, but may have been a form of counting. It has been suggested by Hammond (1975) that such a bone may have been a rasper, for making music.

The sting-ray spines were found in the looter's trench into Structure B20. There were five pieces in total, but one can not give a minimum number for these. Though they are reported as having been identified only to order, it is probable that they are *Dasyatidae*. This is the family that Hamblin (1984) discusses, and the probable identification of those found in a tomb at Altun Ha (Pendergast 1969b). It is hoped that a comparative sample will be found to confirm this.

Of the animals mentioned here, most would probably have been hunted for food. The likely exceptions to this would be the jaguar and the sting-ray. The jaguar is known to have been highly praised by the Maya. Its pelt could have

been used in ceremonies, and it's teeth and possibly it's claws as jewelry. The sting-ray spines were known to have been used for bloodletting.

Avia

Within the avian class, most of the bones were identified to the Black throated Bobwhite. The other two species identified were the Blue-crowned Motmot and the Scarlet Macaw. No large species, such as the curassow or turkey were found. The identified species agree well with the ceremonial nature of the areas excavated. The Bobwhites were found in the looter's trench on B20, in the tomb on B19, and in the tomb on Structure A3, all associated with human remains. Within the tomb on A3, the bones were found in five piles at the foot of the human burial. The minimum numbers show that there were at least thirteen birds represented there, based on the occurrence of tibia. The Motmots were found in Operation C4B, on Structure B19 and there is a possibility that more of this bird will be found as the analysis continues. The Scarlet Macaw was found in the same locality.

	# OF ID.	MNI	% TOTAL MNI
Colinus nigrogularis	404	23	92
Momotus momota	2	1	4
Ara macao	1	1	4
Total	407	25	100

Though there was no evidence of butchering, there were cross-hatch scratches on two of the Bobwhite bones from the C12A tomb. The bones were a humerus and a radius. One of the bones from operation C4C showed traces of green. Usually a green tint is believed to have been from copper staining but no copper was found with this bone. Two other bones from the same location had traces of red on them, but this is easily explained by the abundance of red paint in this tomb. There were no other modifications found on the avian bone.

To see if the Bobwhite bones represent whole birds, the identified bones were divided into groups based on their position in the body. These groups are: head (skull, mandible, and furculum), axial (sternum, scapula, coracoid, vertebrae and pelvis), and extremities (wing and leg bones). As was mentioned above, the birds from C12A were found in five piles within the tomb. Any bones that could not be clearly assigned to one of these piles was collected in a "miscellaneous" bag. Considering these piles only, one can see that the cranial bones are poorly represented in piles 2 and 5. Despite this, it can be seen that all portions of the skeleton are present, though not in the natural proportions. One possible explanation is that the crania does tend to preserve poorly. Another unusual detail about these Bobwhites is that the accompanying human skeleton was in very bad condition whereas the Bobwhite bones are in very good state of preservation. Could these have been a later addition to the tomb?

C. nigrogularis	Extremities					#ID.	MNI
	Head	Axial	Wings	Legs	Tarsals		
C1B/4-10	5	9	19	36	0	69	8
C1C/29-2	0	1	0	0	0	1	1
C4C/21-10	1	1	1	0	0	3	1
						73	10

C12A/72-9	C. nigrogularis					#ID.	MNI
	Head	Axial	Wings	Legs	Tarsals		
C12A/72-9-1	2	28	16	18	10	74	3
C12A/72-9-2	0	14	8	5	1	28	1
C12A/72-9-3	8	17	7	6	0	38	2
C12A/72-9-4	16	56	30	26	6	134	5
C12A/72-9-5	0	15	7	2	1	25	3
C12A/72-9-M	0	15	8	9	0	32	3
						331	13

All three species of birds identified would appear to have been caught by the Maya for ceremonial purposes. These three are not the species that one might expect to have been eaten. The Macaw and the Motmot probably were caught for their beautiful feathers. The Bobwhite is not as colorful but it does not have much meat either. The fact that there were so many Bobwhites in the one tomb on Structure A3 suggests their use as an offering. For comparison, the Bobwhite and the Macaw were found in ceremonial deposits at Tikal (Smithe 1966).

No comments will be made on the amphibians and reptiles included in this report. It is hoped that if identifiable to below the present level of identification that comments can be made about the Mayan use of these. Were these used as food, or for ceremonial purposes, or are these just intrusive elements?

Environmental Inferences

Despite the relatively small amount of bones that this report is based on, some clues to the nature of the environment around the site during its occupation can still be provided. Just as Caracol is located within the forest today, many of the animals identified suggest that the forest was present, at least nearby, when they were alive. The opossum, the rat, the jaguar, the Scarlet Macaw and the Motmot all are forest dwelling animals. Despite the scarcity of water in the area during the dry season today, these animals would require that some body of water be present. A river or a pond must have been located somewhere nearby. The presence of a tapir indicates that water was here, for it inhabits swamps and watercourses. But the area was not just forest, there must have been open areas near the site. One thinks of the agricultural fields that the Maya were tending. The Bobwhite, the peccary, and the presence of cervids confirm that such fields existed here.

The only specimens that point to the occurrence of trading among the Maya are the sting-ray spines. These were probably traded in from a coastal site. The other animals present here can be accounted for in the immediate area. Though it is possible that some may have been traded for as well, there is no evidence for this on these bones.

Conclusion

Though this is only a preliminary report, based primarily on the special deposits found on the site, it has provided a view of the past occupancy of Caracol. As one would expect the identifications have confirmed the ceremonial function of the special deposits, and the site as a whole. Some of the fauna would have been for food only, but most analyzed at this point had more significance than just food. No unexpected environmental inferences were made in this report. It remains to be seen if the rest of the fauna will follow these trends too.

Table 3. Caracol Fauna

SPECIAL DEPOSITS:

Artifact #	Add. #	Identification	Total ID.	Total
C4C/21-10	4	Colinus nigrogularis		
	5	C. nigrogularis		
	6	C. nigrogularis	3	8
C4C/21-28	1	mammal (claw)	1	1
C6B/16-9	1	mammal cf. Felidae	1	1
C12A/72-9-1		C. nigrogularis		
	9-2	C. nigrogularis		
	9-3	C. nigrogularis		
	9-4	C. nigrogularis		
	9-5	C. nigrogularis		
	9-M	C. nigrogularis	331	331
C19A/28-9	1-5	Otodylomys phyllotis		
	6-10	Rodentia		
	11	O. phyllotis	11	32
C19A/32-4	1-4	O. phyllotis		
	5	Rodentia	5	7
C19A/38-2	1-2	O. phyllotis	2	2
C19A/39-4	1-7	O. phyllotis		
	8-11	Rodentia	11	24

NON-SPECIAL DEPOSITS

C1B/4-3	1-5	Rajiformes cf. Dasyatidae	5	5
C1B/4-10	1-69	Colinus nigrogularis	69	69
C1C/29-2	2	Rodentia		
	3	C. nigrogularis	2	3
C2A/3-3	1	Tayassuidae		
	6	Mammal cf. Felidae		
	8	Testudines	3	10
C3B/2-4	1	O. phyllotis		
	2	O. phyllotis		
	3	O. phyllotis		
	4	O. phyllotis		
	6	mammal		
	7	mammal		
	8	mammal		
	9	mammal		
	10	P. opossum		
	11	P. opossum	10	11
C4B/5-2	1-11	amphibian		
	14	Momotus momota		
	15	amphibian		
	16	M. momota	14	16
C4B/6-2	1	Canidae		
	2	Chiroptera		
	3	Soricidae ?		
	4	Soricidae ?	4	4
C4B/8-2	1	Ara macao	1	1
C4B/16-2	3	mammal cf. Cervidae	1	3
C4C/10-1	1	mammal	1	1
C6B/10-6	1	Tapirus bairdii	1	4
C6B/27-10	1	Otodylomys phyllotis		
	2	Philander opossum	2	2
C6B/31-5	1	mammal cf. Cervidae	1	1
C8B/59-2	1	Panthera onca	1	1

TOTAL

480
=89.4% 537

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