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

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APPENDIX II
Notes on Caracol Epigraphy and Its Significance

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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 (Betz and Satterthwaite 1981:2). Carl P. Beetz revised Satterthwaite’s commentary and contributed to both a preliminary understanding of royal biographies at Caracol and a comprehensive set of line drawings prepared in part under Satterthwaite’s supervision (Betz 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 Recent 1980; Stone, Recent, 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.

![Graph and diagram]

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

![Graph and diagram]

Fig. 66 The physical characteristics of Caracol stones (stone monuments marked by "X") with information on dimensions and the number of glyphs and sculpted faces (in "") supplied in accordance to apparent or probable age; the circles to the left and the legend to the right; this top portion of the chart displays their lines. solid lines indicate height of carving, broken line refers 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.
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 k’atun 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 24, 17, 21 – spell out an association with k’atun dates. Altar 14 contains an eroded reference to a k’atun ending (note the inscription embedded in the volutes beneath the day sign, Beetz and Satterthwaite 1981: Figure 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 Dedication 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 1986: Figure 1, Beetz and Satterthwaite 1981:123). It replaces a disputed set of names with a more realistic series of names that can later be expanded or contracted. According to this system "Antenna Top 1" 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 hell count system that specifies the position of a ruler in the dynastic succession (cf. Reese 1986a, although see Stela 16:D14).

**Ruler I**

On La Rejolla Stela 3 there appears the name of a Caracol lord who must have reigned sometime around 912-0.0.0. The name glyph of the lord appears preceded by a "smoking" prefix, a third-person marker, a skull sign, and a *makh'tina* 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 subordinate 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 Kao 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 (Postournikoff 1966: Figure 1) that often precedes personal names, and just before the complete 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 surrounds a belt ornament portrayed on Stela 6. Such ornaments occasionally exhibit glyphic spellings of ancestral names, as can be seen on La Pasadilla lintel 2, where the name of a Yaxchilan ruler, Shield Jaguar, embalishes the belt assemblage of his son, Bird Jaguar (David Stuart, personal communication 1985, cf. Schleier and Miller 1980:186). In precisely the same manner a belt ornament pictured on the back of Caracol Stela 6 displays glyphs composing the name "Smoking Skull makh'tina." 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 "scarc" on pot 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 ahau at 9.15.9.12. However, the question remains of identifying his predecessor in high office. Although numerous names, such as those on Stela 6 and 14 (Beetz and Satterthwaite 1981: 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 interpretations 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 9.16.13.3.3 (Beetz and Satterthwaite 1981:57, Figure 14b), possibly an accession date. The verb accompanying the date is efected, 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 contains the "hand-scatter ing" name. Ruler II's other monument is almost certainly at "Lord Kao I" (Sosa and Roca 1990:2) or "Lord Jaguar" (Beetz and Satterthwaite 1981:116), depending on the interpretation of the name glyphs. Beetz and Satterthwaite 1981:63 show that Stela 16 was erected by a lord in the period of 9.5.0.0.0, which raises two possibilities: that nen te' 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 fifth k'atun." The first glyph is prefixed by the number seven; this compound forms a component of expressions in versions of the *makh'tina* title (David Stuart, personal communication 1985). The second glyph is partly eroded, but nonetheless the outlines are those of the "makh'tina" sign. The final glyph is a *makh'tina* head variant (Mathews 1979a), which probably combines with the "seven" title (cf. Narango Hieroglyphic Stairway 12:32-33; 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 te' or Lord Jaguar are simply his titles.

**Ruler III**

Ruler III acceded to the throne at 9.5.19.12 (Beetz and Satterthwaite 1981:120). 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 18. 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: T20;180;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 *makh'tina* sign. Second, the glyph that follows, T26, 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 T36 (Mathews and Jansen 1984: Figure 2) - and a sun god's face, employed here as a head variant of the *makh'tina* title. The one feature that appears to be absent is the "makh'tina" sign (T25).

A consideration of the makh'tina sign in its other contexts may explain why T36 is present on Stela 1 (Dos Planos Stela 8-13, Copan Stela 1-5, and Naj Tunich Group IVf; a makh'tina sign occurs in a position usually occupied by numerical classifiers. This implies that makh'tina was read, at least in this glyphic environment, as T36, and perhaps as T35. 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;I;I;8;S;0;41 and T12;I;I;3;I;3, respectively, David Stuart, personal communication 1985). In this textually controlled contest the *te* glyph apparently alternates with the makh'tina sign. The alteration with *te* accepted by most epigraphers to mean "tree" or some value derived thereof, explains the presence of te'uhc markings on Classic images of canoes (cf. Kelley 1976 Figure 80): the markings signify only the object from which the canoes were made. David Stuart has also shown that an ahauhual head with jaguar car (T10;5v) alternates with both the makh'tina and the te' sign in the context of numerical classifiers. The most striking evidence of this appears on the Copan Hieroglyphic Stairway, Risier 41, where an ahauhual head intrudes between the number four and the Uayeb glyph. In addition, an ahauhual head alternates with makh'tina in the Primary Standard Sequence on Maya ceramics (Coe 1973: Table 1). Thus, a body of evidence suggests that the makh'tina sign, the te' glyph, and the ahauhual head are functionally and perhaps phonetically equivalent. The substitution pattern not only provides further indication of polyvalence in Mexican script (Fox and Jansen 1984:75-76), but clarifies the puzzling absence of the makh'tina sign in Ruler III's name on Stela 1. The makh'tina glyph that appears more commonly is replaced by the ahauhual head, conflated
Regrettably, and rather inconveniently, Caracol shows no evidence of the k'at count system that specifies the position of a ruler in the dynastic succession (cf. Rice 1986a, although see Stela 16D14).

Ruler I

On La Rejojla Stela 3 there appears the name of a Caracol lord who must have ruled sometime around 912.60.3.0. The name glyphs of the lord are composed of a "smoke" prefix, a third-person marker, a skull sign, and a n'uhb' /n'uhb' / title (cf. Lounsbury 1974). By analogy with the text of La Rejojla Stela 1, where such relationships are made explicit, "Smoking Skull", or Ruler VI, probably stood in some subordinate relationship to a lord at La Rejojla, 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 Kas 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-D15, directly after the so-called "sky-god" title (Przyworski 1964: Figure 1) that often precedes personal names, and before the relationship glyph at C12. The name is the same as Ruler VI, but here in reference to an earlier lord. The other piece of evidence amounts to 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. Schaefer and Miller 1986:190). In precisely the same manner a belt ornament pictured on the back of Caracol Stela 6 displays glyphs composing the name "Smoking Skull n'uhb' /n'uhb' /-title. This ruler, rendered here as an ancestral figure, is the very 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 "scouting on pole throne" glyph at C16, Beetz and Satterthwaite 1981: Figure 136, and personal observation).

Ruler II

It is known from Stelae 6 and 14 at Caracol that Ruler III acceded to the office of abauh at 9.5.19.3.2. However, the question remains of identifying his predecessor in high office. 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. 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 116), possibly an accession date is efaced, 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" assembly at Ruler II's accession date. Stela 16, which has been attributed to "ten t'axt" (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 the text for Stela 16 bears an Initial Series of 9.5.0.0.0, which raises two possibilities: that ten t'axt 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 k'at." The first glyph is specified by the number seven; this compound forms a component of expressions of versions of the n'uhb' /n'uhb' / 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 n'uhb' /n'uhb' / head variant (Mathews 1979a), which probably combines with the "seven" title (cf. Narano Hieroglyphic Stairway II5-72, and the variant of Ruler III's name on Stela 1). Given that Ruler II is also mentioned in the headrest of Stela 16, it seems certain that he was responsible for erecting the monument. Nen ts' / or Lord Jaguar are simply his titles.

Ruler III

Ruler III acceded to the throne at 9.5.19.12 (Beetz and Satterthwaite 1981:120). His successor, Ruler IV, acceded at 9.8.5.16.12, 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: T12.08.6.153.184.74, as rendered in Thompson's system of transcriptions. The variant portrayed on Stela 1 contains the same elements. First, the "seven" title is an expanded version of the n'uhb' /n'uhb' / sign. Second, the glyph that follows, T12, is also found in the conventional spellings of Ruler III's name. The third glyph comprises a cross-hatched headband - known elsewhere to alternate with T168 (Mathews and Justeson 1982 Figure 2) - and a sun god's face, employed here as a head variant of the n'uhb' /n'uhb' / title. The one feature that appears to be absent is the "maize" sign (TS13). A consideration of the maize sign in its other contexts may explain why TS13 is absent on Stela 1. On Dos Pilas Stela 813, Copan Stela 1C2, and Nal Ch'ajil Group IV a maize sign occurs in a position usually occupied by numerical classifiers. This implies that maize was read, at least in this glyphic environment, as 10 and perhaps as 16. 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.T53.3.5.41 and T12.T53.3.5, respectively, David Stuart, personal communication 1985). In this textually controlled contest the tz' sign apparently alternates with the maize sign. The alternation with tz' , accepted by most epigraphers to mean "tree" or some value derived thereof, explains the presence of maize markings on Classic inscriptions of canoes (cf. Kelley 1976 Figure 80): the markings name the object from which the canoes were made. David Stuart has also shown that an aquatic head intrudes between the numbers four and the Usujil glyph. In addition, an aquatic head is associated with the Primary Standard Sequence on Maya ceramics (Coe 1973: Table 1). Thus, a body of evidence suggests that the maize sign, the tz' sign, and the aquatic head are functionally and perhaps phonologically 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 maize sign in Ruler III's name on Stela 1. The maize glyph that appears more commonly is replaced by the aquatic head, conflated
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, Recents, and Coffman (1985:270-271) conclude that the same individual, whom they term "Flaming Ahau," most certainly ruled at Caracol. Ruler IV uses a name with several identifiable components: Ti29, an element of Glyph P; T33m, the ahau head; T50, a knot sign, also part of glyph P; and a zoomorphic head. Stela S22da shows an aberrant spelling of the name, the ahau sign being transposed with the knot. Ti29 alternates in other places with Ti76, a wing sign, and Ti1074v, a head glyph. It is unlikely that the affix represents flames, cutting out its adoption by Stone, Recents, 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 A24 through C25 and on the date 9.8.15.12.12, this ruler is recorded as attaining (that is, being "seated") in the office represented by the compound T10852m. The structure of the succeeding glyphic passage, in which a Distance Number is counted forward from the referenced event to a Period Ending date, demonstrates that this title is equivalent to the ahau epithet; the unusual main sign in the affix cluster of the preceding passage (T82m) probably functions as one of the derivational suffices sometimes attached to AHAH logographs (with value of -VI, Justeson 1984:232; see Mathews and Justeson 1984:227, although they do not note the T82m suffix in this connection). Thus, Ruler IV, or "Lord Ahau Kaoz," 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 calendricals of this monument (1981:33).

<table>
<thead>
<tr>
<th>Date</th>
<th>1981:30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 1</td>
<td>C30</td>
</tr>
<tr>
<td>Day 2</td>
<td>C31</td>
</tr>
<tr>
<td>Day 3</td>
<td>C32</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Date</th>
<th>1981:30</th>
</tr>
</thead>
</table>
| Day 1 | 9.8.15.12 | 9.0.0.0.0 | 5 Eb | 5 Xo (acccession)
| Day 2 | C20 | 9.9.0.0.0 | Akun | 3 Zett |
| Day 3 | C25 | 9.9.0.0.0 | Akun | 3 Mol |
| Day 4 | C25 | 9.9.0.0.0 | Akun | 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 1981:122). The most reasonable deduction from this fact of dates 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 IV's accession, followed by an explicit enumeration of kinsmen endings. It continues with an account of Ruler IV's accession, as if in inevitable culmination of events in Ruler IV's reign. This continuity is also emphasized visually. The portraits on the front and back of Stela 5 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 muis-bird feathers. From the paired glyphs above (presumably personal names, Stone, Recents, and Coffman 1985:271) it can be supposed that the second figure is Ruler III, pictured in clothing appropriate for a potentiomytho. 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, Recents, 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, Recents, 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. In the same text, we read "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:A11b), albeit with a conflated animal mouth; in one instance she apparently uses a female introductory glyph (Caracol Stela 3:A11b); and at least one other royal female excels the usual royal titles, or at least a conventional arrangement of them (Alvar 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 subordination to complete dependence during the reign of Ruler V; its life and the beginning of Ruler VI’s tenure, On La Rejolla Stela 1 it
is a local lord who is the principal celebrant; on La Rejojlla 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 Rejojlla 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 Caino. The date is clearly 12 Ik, end of Yaxkin (0 Mo), which is also the Initial Series date on La Rejojlla Stela 3: 9.11.9.16.2. It marks the 45 year (2.5.0.0) an-niversary of Ruler V’s accession. The presence of the 12 Ik at 0 Mo date on La Rejojlla 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 Rejojlla monument, the workroom possibility still exists that the text simply refers to the ancestral “Smoking Skull”, or Ruler I, in his role 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 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 “cuchinu 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 archaeologically 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 21 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” (Iezzi 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 Hatzipac Ceel Altar I dating to 10.0.5.0.0.

Recent Epigraphic Finds at Caracol
The 1985 through 1987 investigations undertaken by the current Caracol Project have recovered a series of new artificial 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” composed from the left side of Piedras Negras Stela 12, a monument commemorating a war by Piedras Negras against the site of Pomona, Tabasco (at 79.184.9.12). 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. Engravings 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 inserted 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 54). 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 sun sign. Further search at the University of Pennsylvania resulted in the discovery of tests and sculpted fragments not presented in the Beetz and Satterthwaite monograph (Figure 79).
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 17; and a possible stela approximately 500 meters north of Cuauh. Thus, Caracol demonstrably possesses plain monuments, a fact questioned by Bectz and Satterthwaite (1961:47).

The redrafting of several monuments add considerably to our knowledge of Caracol epigraphy. Stela 10, for example, dates to 9.19.0.0. 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 Ro 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 record 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 16). Its edges are neat and the painting is unharried; the brushstroke rarely exceeds 1.4 centimeters in width. Overlapping brushstrokes also indicate that the central cornice was the first to be outlined, followed by details above and finally to the side. In contrast, the painting from the innermost tomb exhibits curvilinear brushwork, so curvilinear, 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 dripping 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 zoonomotic form. The inner tomb displays a fragmentary ISIG followed by destroyed balton and katen signs as well as tum, 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)22.12.15 3 Men (W Yaxkin) or (9.7)22.12.15 3 Meca (E Pan). From the spacing of the similarly incised tum coefficients, 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 booters.

The tomb under B19 includes more glyphic flourishes than those under B20 (note the schematic T66 variant). It is possible that the date is 5.10.1.12.7; 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 capa 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 10 K'ak', the date can be placed at either 9.15.16.0.16 or 9.13.13.15.16, given the chronological parameters suggested by associated ceramics. Since several dishes from the tomb bear day signs of 6 Ahau, which may specify the katum in which the ceramics were made, 9.13.13.15.16 may well be the best choice. The event associated with this date - a human skull with proposed "death eye" (cf. Tikal MT-28 and MT-29) - unequivocally refers to death. The remaining glyphs include the personal names of the interred individuals; the final component is the Caracol Emblems, 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 perennial black background appears less spattered than the A3 stone. The date is also much clearer. Assuming that the glyph at C1 is a toon sign, as its formal attributes suggest, the only possible reconstruction is 9.0.9.16.17 2 Caban 15 Uos. The glyphs that follow the date are of especial interest. The verb at C3 consists of at least two phonetic elements: mu (T'aj) and ka (T'az), as well as a possible wa allograph (TS96, cfr. Machaquilla Stela 5a3 and Stela 2a36). The presumed root, mu-ku, or -ka, enjoys wide distribution as a verbal meaning "to cover or close." (Kaufman and Norman 1964:125; Barroca 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 functioning as a possessor along the lines documented for Chorti (MacLeod 1984:236-247, although note here the absence of third-person marker; see also Matthews, 1979b, for a semblable 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 Structure 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 suspected fragility of stucco is belied by the resilience of these large fragments and the surviving case 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 portions suggests a variety of numbers. A majority of the stucco, which probably fell from temple façades and stairway features, formed scenes containing bearded serpents with open jaws (possibly containing deity heads) in addition to pop design, sky bands, and seated personages with jade and carved bone ornamentation. The scene denoted on Structure B18 probably consisted of bearded serpents disposed around at least three seated or standing gods, who wore feathered headdresses that included stacked deity heads as well as "feathered 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 (SYR 794) 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 corpus text. Another consists of glyphs in circular modellations. The remaining texts comprise a smaller set of glyphs, painted red and surrounded by a bine border (cf. the paint schemes at Lastunich and Palenque, Schele and Miller 1986: Plate 80; 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).

Tests on Vessels

Caracol has only a small collection of tests on ceramic. At least two such tests consist of the Primary Standard Sequence (Figure 26; Coe 1975), which has recently been identified as a glyphic formula relating to ceramic vessels (Houstoun and Taube 1987). Dishes form the A3 tomb (Figure 11a,d,g) exhibit the day sign 6 Ahau, possibly as a reference to the katum in which the tomb was furnished and some ceramic fragments from Structure B20 contain four discrete clusters of glyphs (Figure 15a). One of these clusters names an illustrated hawk-head. 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 "Hatus," a period that witnessed a significant decline in monumental activity (Proskouriakoff 1959:114-112; Willey 1974; Mathews 1983:31-32). 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 1983:31), but unlike these centers Caracol continues to flourish. In many respects its chronological patterns are at discordance with sites in the Petén. Caracol behaves energetically at the same time as sites longuin; and yet when extrinsic antagonists such as Tikal and Naranjo begin to erect monuments, Caracol's record falls silent. The negative correlation is probably not fortuitous, as we have strong glyphic and archeological evidence that Caracol was in intensive contact with the Petén.

A key problem before Maya epigraphy is the elucidation of inter-site relations (e.g. Mathews 1983). As a general observation, it can be stated that Classic politico-religious 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 relationships (i.e. relations of explicit subordination, 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 Puerta, lie at a median distance of 11.36 km. from their controlling centers.

The median distance between autonomous centers is 40 km. at 8.180.0.0 (n = 6), 62.5 km. at 5.3.0.0 (n = 6), 58.33 km. at 9.3.0.0 (n = 18), 35.54 km. at 9.130.0.0 (n = 22), and 52.38 km. at 9.180.0.0 (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 spac-
ing seem to contradict some empirical facts, namely that the Maya did on oc-
casion seize foreign centers, such as Naranjo and numerous centers near
the Pasin. What prevented such centers from being held persistently as pos-
tions of self-aggrandizing politics? And, why did no larger policy emerge as a conse-
quence of success in war? The key to this question may lie in the realm of ad-
ministration 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 neces-
sarily risked political fissions. Subordinate sites already shared with their con-
 trolling centers the infrastructure of dynastic rule, including such items as rites of
acclaim and a preoccupation with legitimate descent (see Stuart n.d.; Mathews
and Jutson 1984:213, for a discussion of subordinate titles). By their very na-
ture 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 Hatziac Coclé, some
suggestions of progressively diminished autonomy. Elsewhere, there exists
documentary evidence that subordinate titles were of an ephemeral character (as
at La Pasadita and Chicopepe) and that much ritual activity at dependent sites
involved either the direct participation of overlords or at the least the pat-terning
of local rituals on events at the controlling center. These data indicate tight control
over dependent sites, and also some hints that such centers eroded monuments
only briefly, possibly because of the imposition of ever more direct control by su-
perordinate 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, follow-
ing Demarest (1984), the removal or destruction of redundant political structures.
That larger politics did not emerge resulted partly 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
urgently needed at Caracol and its hinterland.

Table 2. Dates of the Caracol Dynasty

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### APPENDIX III

The Conchita Causeway and Associated Settlement: Investigating Social Integration

SUSAN E. JÆGER, Southern Methodist University

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’s (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. Kirch (1979), 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. Benardos Castillo 1981; Folan et al. 1983; Preidel and Sahlbock 1986; Kirch 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 methodology, 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 concluded 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 plaza 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, 7 to 4 workers
A total of 51 plaza groups were mapped along the northern 2/3 of the road during the 1987 season (see Appendix D). The mounds are generally less than 2 meters in height, but some are 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 (Hecker 1982; Haviland 1983; Leventhal 1985; Turtelroth 1983).

The Chacels have proposed a group typology (see above pp. 54-55) 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 unmarked 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 "Tobacoz" (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.

Aral excavation of Structure C11 revealed the roughly-dened 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
structure, so the presence or absence of a tomb in this building remains in question.

A looted group consisting of Structures C55-C59 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, undecorated, deep-sided bowl, two shell car 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-orange cylinder, a complete mano, and a stone ax. 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 had been precipitated into this deposit.

Implications

Some of the more immediate questions concerning the settlement along the Conchita causeway arc: who occupied this area; and what is their relationship to those who used the "Cauna" 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 plaza/sub groups with respect to the causeway and to the ecclesiastical 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 or disrupt 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.
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 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 report is reported. As with any site, some 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.

<table>
<thead>
<tr>
<th>ID.</th>
<th># OF ID.</th>
<th>MIN</th>
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</thead>
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<tr>
<td>Philander opossum</td>
<td>3</td>
<td>1</td>
<td>5.6</td>
</tr>
<tr>
<td>Ocytorhynchus phyllostoma</td>
<td>28</td>
<td>15</td>
<td>83.2</td>
</tr>
<tr>
<td>Pteronura brasiliensis</td>
<td>1</td>
<td>1</td>
<td>5.6</td>
</tr>
<tr>
<td>Trichosurus</td>
<td>1</td>
<td>1</td>
<td>5.6</td>
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<tr>
<td>Totals</td>
<td>33</td>
<td>18</td>
<td>100</td>
</tr>
</tbody>
</table>

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 "clear" 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 femur 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 rats bones were found in the cultural deposits, a minimum of three individuals in a looted tomb in Operation 5, 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 rapper, 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 Harmelin (1984) discusses, and the probable identification of those found in a tomb at Altamira (Patoncic 1968b). It is hoped that a comparative sample will be found to confirm this.

Of the animals mentioned here, most probably would 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. It's 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 identified were 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 cassowary or turkey were found. The identified species agree well with the ceremonial nature of the areas excavated. The Bobwhites were found in the Icote's trench on B20, in the tomb on R19, 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 this. 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.

<table>
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<tr>
<td>Calidris niger</td>
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<td>23</td>
</tr>
<tr>
<td>Manacus manacus</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Aru rufus</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>407</td>
<td>25</td>
</tr>
</tbody>
</table>

Though there was no evidence of butchering, there were cross-batch scratches on two of the Bobwhite bones from the C12A tomb. The bones were a humorous and a radius. One of the bones from operation CAC 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 bones. 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, coecael, 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 those 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 cranial bones 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?

<table>
<thead>
<tr>
<th>C. nigricans</th>
<th>Head</th>
<th>Axial</th>
<th>Extremities</th>
<th>#ID.</th>
<th>MIN</th>
</tr>
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<tr>
<td>C12A/2-9</td>
<td>5</td>
<td>9</td>
<td>19</td>
<td>30</td>
<td>9</td>
</tr>
<tr>
<td>C12A/2-9</td>
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<td>0</td>
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<td>C12A/2-10</td>
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<td>1</td>
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</table>

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 Macaw probably would have been 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 (Smith 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 Maya 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 tapiar 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 precary, and the presence of cervids confirm that such fields existed here.

The only specimen 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

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<tbody>
<tr>
<td>CH221-24</td>
<td>4</td>
<td>C. nigripilis</td>
<td>6</td>
<td>5</td>
</tr>
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<td>CH221-28</td>
<td>1</td>
<td>C. nigripilis</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>CG2FA-9</td>
<td>1</td>
<td>manus. (one)</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>C2A2/5-1</td>
<td>1</td>
<td>manus. cf. P.</td>
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<td>1</td>
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<tr>
<td>9.2</td>
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<td>9.3</td>
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<td></td>
</tr>
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<td>9.4</td>
<td>C. nigripilis</td>
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<td>5</td>
<td></td>
</tr>
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<td>9.5</td>
<td>C. nigripilis</td>
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<td>1</td>
<td></td>
</tr>
<tr>
<td>9.6</td>
<td>C. nigripilis</td>
<td>331</td>
<td>331</td>
<td></td>
</tr>
<tr>
<td>CPB2A-8/9</td>
<td>1-5</td>
<td>Deltopogon phylli</td>
<td>6-10</td>
<td>12</td>
</tr>
<tr>
<td>C192A-12</td>
<td>4</td>
<td>O. phylli</td>
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<td>7</td>
</tr>
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<td>C2A2/12-2</td>
<td>1-2</td>
<td>O. phylli</td>
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<td>C192A-4</td>
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<td>11</td>
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<tr>
<td>C221A-4</td>
<td>1-6</td>
<td>Rodenticidae</td>
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<td>11</td>
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<td>C192A-12</td>
<td>4</td>
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#### NON-SPECIAL DEPOSITS

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<td>5</td>
</tr>
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<td>60</td>
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<tr>
<td>C221A-2</td>
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<td>C. nigripilis</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>C221A-3</td>
<td>1</td>
<td>Tapinoselvix</td>
<td>2</td>
<td>2</td>
</tr>
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<td>1</td>
<td>Eumetallus</td>
<td>1</td>
<td>1</td>
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<tr>
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<td>Eumetallus</td>
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