

# The Investigation of Classic Period Maya Warfare at Caracol, Belize

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Prior to the 1950's the prevalent view of the ancient Maya was as a peaceful people. In 1952, Robert Rands completed his Ph. D. thesis on the evidences of warfare in Classic Maya art, following up on the important work just completed by Tatiana Proskouriakoff (1950). Since then, research has rapidly accumulated substantial documentation that the Maya were in fact warlike (cf. Marcus 1974; Repetto Tio 1985). There is now evidence for the existence of wars between major political units in the Maya area and, importantly, Maya kingship has also been shown to be inextricably joined with concepts of war, captives, and sacrifice (Demarest 1978; Schele and Miller 1986; Freidel 1986). Warfare also has been utilized as a powerful explanatory tool for several epochs of Maya prehistory such as in the «rise» and «fall» of Classic Maya polities (Webster 1976; Cowgill 1979; D. Chase and A. Chase 1982; A. Chase and D. Chase in press).

Research on Maya warfare has focused on indications found in art, interpretations of hieroglyphic texts, excavation of fortified sites, and analysis of documentary materials. While warfare is now an accepted aspect of Maya culture, there is still difference of opinion concerning the nature of Maya warfare and the effects that war had on the aggressor, the defender, and Maya society as a whole. It is particularly unclear just how much impact warfare had on the non-elite. There are those (Webster 1976, 1977) who believe that Classic Period Maya warfare played a significant role in the development of cultural and political complexity; others (Adams 1977: 153; Freidel 1986: 107), however, suggest that Maya warfare was primarily an elite activity that was not generally disruptive to the social order.

Caracol is a key archaeological site from which to attempt to determine the nature and effects of Classic Period Maya warfare. The archaeological site of Caracol, Belize is one of the largest in the Maya lowlands (A. Chase and D. Chase 1987a, 1987b); the population of its political unit lived in an area at least 365 square kilometers. Caracol parallels other Maya sites in having a series of war-

like rulers who were concerned with preserving their histories in hieroglyphic texts on stone and stucco; investigations at the site have thus far uncovered some 40 carved monuments (Beetz and Satterthwaite 1981; A. Chase and D. Chase 1987b). Caracol is unusual, however, in having left us written records that it successfully waged warfare against two of its neighboring polities at different times within the early part of the Late Classic Period.

There are two wars documented in the hieroglyphic texts: Caracol defeats Tikal in 9.6.8.4.2 or A. D. 562 (A. Chase and D. Chase 1987a:6, 1987b:33,60; S. Houston in press) and Naranjo in 9.9.18.16.3 or A. D. 631 (Sosa and Reents 1980). In addition, there are other indications of warlike activities at the site, such as in the depictions of captives (A. Chase and D. Chase 1987a:20). Research at Caracol has also suggested that there was greater prosperity and a building surge in the site epicenter following either or both of these wars (A. Chase and D. Chase 1987a:18, 1987b:59). While epicentral Caracol apparently prospered following its two victories, both of the sites that Caracol defeated seem to have suffered set-backs on all fronts (A. Chase in press; S. Houston in press). However, it was unknown if these two wars had any effect on either the population or the constructions in the outlying core area at the site.

It is already evident that warfare was important to the rulers of Maya polities, not only because of the iconographic portrayals of captives (Marcus 1974; Dillon 1982), but also because of the prominence of such events in relation to the ruler's accession to power at any given site (Schele and Miller 1986; Freidel 1986). It is, however, quite unclear to what extent, if any, warfare affected lives of the members of the polity at large. Because of Caracol's known warfare events, as found in its texts and on its monuments, it was felt that the site would provide an excellent archaeological testing ground for examining the nature and effects of Maya war (in this case the successful encounters of Caracol) on the broader Maya population of

one polity within the southern Maya lowlands.

In order to attempt to ascertain if Classic Period Maya warfare had an impact on more than just the elite of the site's epicenter, one sector of the site of Caracol, specifically an area of heavy occupation between two of the longer causeways in the Caracol core area, was investigated during 1988. This sector appears to contain a representative cross-section of Caracol's occupation; investigation of this sector will be continued during 1989. This research is also attempting to delineate the function of certain architectural features within sites (particularly *sacbeob* or causeways and certain unrestricted access groups located close to their termini) and determine their potential relationship, if any, to warfare and/or boundary-related activities (as suggested by Kurjack and Andrews 1976:323). The 1988 investigations proved to be far more successful than had been believed possible; the preliminary results are also somewhat surprising in that they strongly suggest that Maya warfare had an impact beyond the elite and affected more of the population that resided in the Caracol polity than had been expected given current models of Maya warfare.

## RESEARCH AT CARACOL

The archaeological site of Caracol is located Vaca plateau of Belize, Central America. At an altitude of 500 meters it is among the highest sites in the Maya lowlands (Figure 1). Its location, near the Maya Mountains, affords access to important resources such as hard stone and copal; however, certain things are lacking in this jungle environment, specifically natural water sources. The Maya instead were forced to capture rainwater in man-made reservoirs.

Caracol was found approximately 40 years ago and limited research was undertaken at the site prior to the onset of the present Caracol Project. Initial work was undertaken by Linton Satterthwaite of the University Museum in Philadelphia and A. Hamilton Anderson of the Department of Archaeology in Belize. Together and separately, these individuals investigated the carved stone monuments visible on the surface of the site and conducted limited excavations in the site epicenter (Anderson 1958, 1959; Satterthwaite 1951, 1954). Paul Healey of Trent University also conducted research at the site, focusing primarily on

settlement and agricultural terraces in one area of the core adjacent to the modern road into the site (Healey 1983; Healey et al 1980 and 1983).

The current Caracol Project has undertaken four full field seasons of research. These initial investigations were designed to attempt a definition of spatial and temporal limits of the site, to establish the kind and preservation of material remains that would be encountered, and to preliminarily place Caracol within the larger frame of Maya prehistory. These seasons were also directed towards delineating the kinds of questions that further research at Caracol would be best suited to resolving and the best strategies for pursuing future work.

Survey work at Caracol has proved the site to be quite large (A. Chase 1988). The site core is estimated to minimally encompass between 28 and 50 square kilometers. Reconnaissance and mapping have also shown the site to be somewhat unusual in that it contains a number of intra-site causeways running outward like the spokes of a wheel connecting the limits of the site core with the epicenter (Figure 2). Settlement within the core has also proved to be extremely concentrated with minimally 1195 people per square kilometer (D. Chase, A. Chase, and Haviland n.d.) in the Caracol core - a figure more dense than that found at Tikal (Culbert et al. in press).

Excavations at Caracol have provided evidence of occupation from the Late Preclassic (300 B.C. to 250 A.D.) through the Terminal Classic (A.D. 810-1000) Periods of Maya prehistory. Investigations in the epicenter indicate exceedingly vibrant occupation during the so called «Maya hiatus» (beginning in A.D. 534 and lasting minimally to A.D. 593 at some sites and until even later - until A.D. 692 - at Tikal), a time when most lowland centers in the area were suffering a decline (Morley, Brainerd, and Sharer 1983:115; Willey 1974, 1977); stela erection at most sites in the lowlands almost completely stopped during this era. New hieroglyphic remains at Caracol suggest that the reason for the perceived decline, at least at the site of Tikal, was successful warfare by Caracol (A. Chase in press a; A. Chase and D. Chase 1987a, 1987b; Houston in press).

## WARFARE AT CARACOL

There is hieroglyphic evidence for two successful wars waged by the Maya of Caracol on neigh-

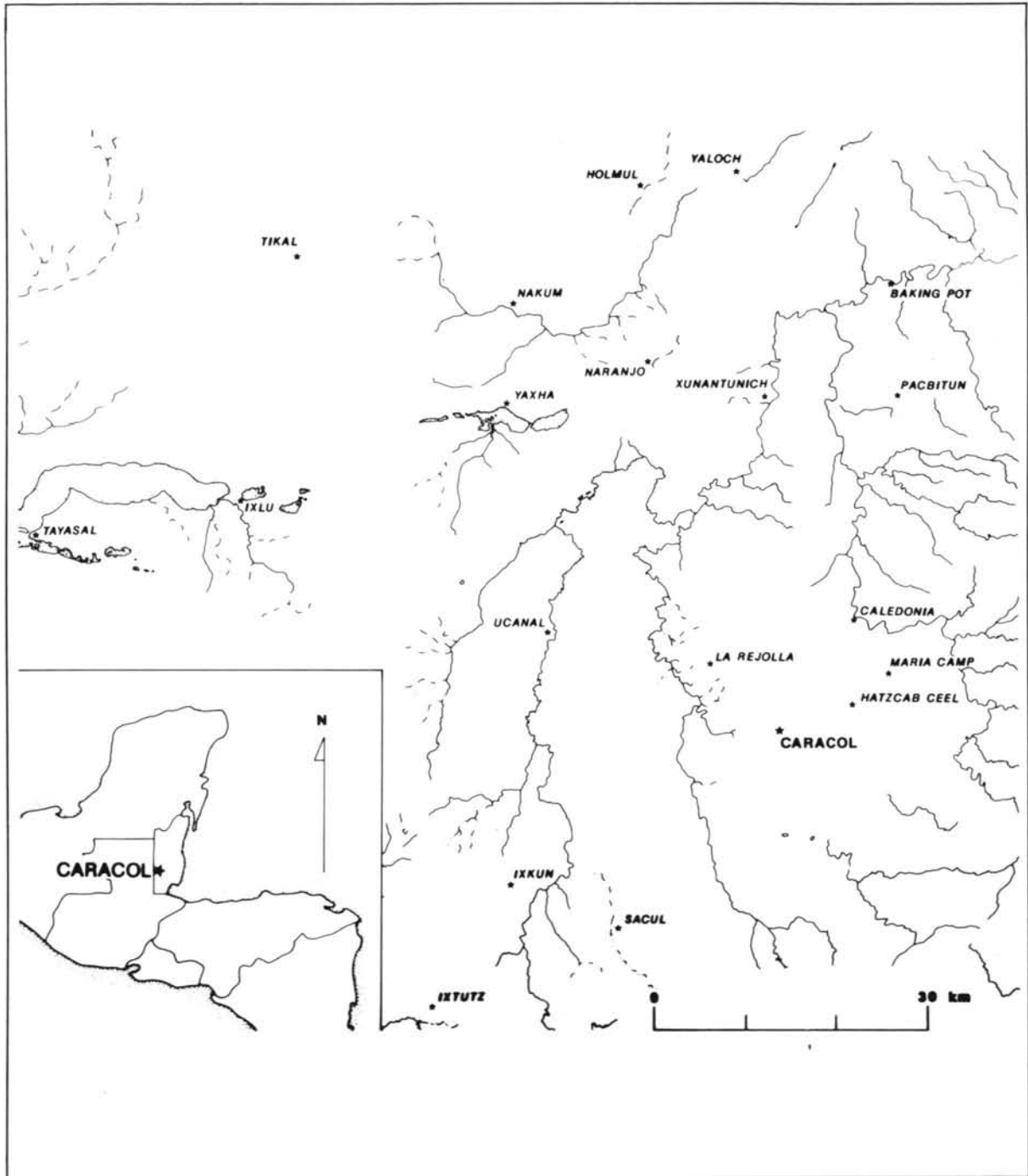


Figure 1.—Map showing the location of Caracol and other nearby Classic Period sites (from A. Chase and D. Chase, 1987 b: Fig. 1).

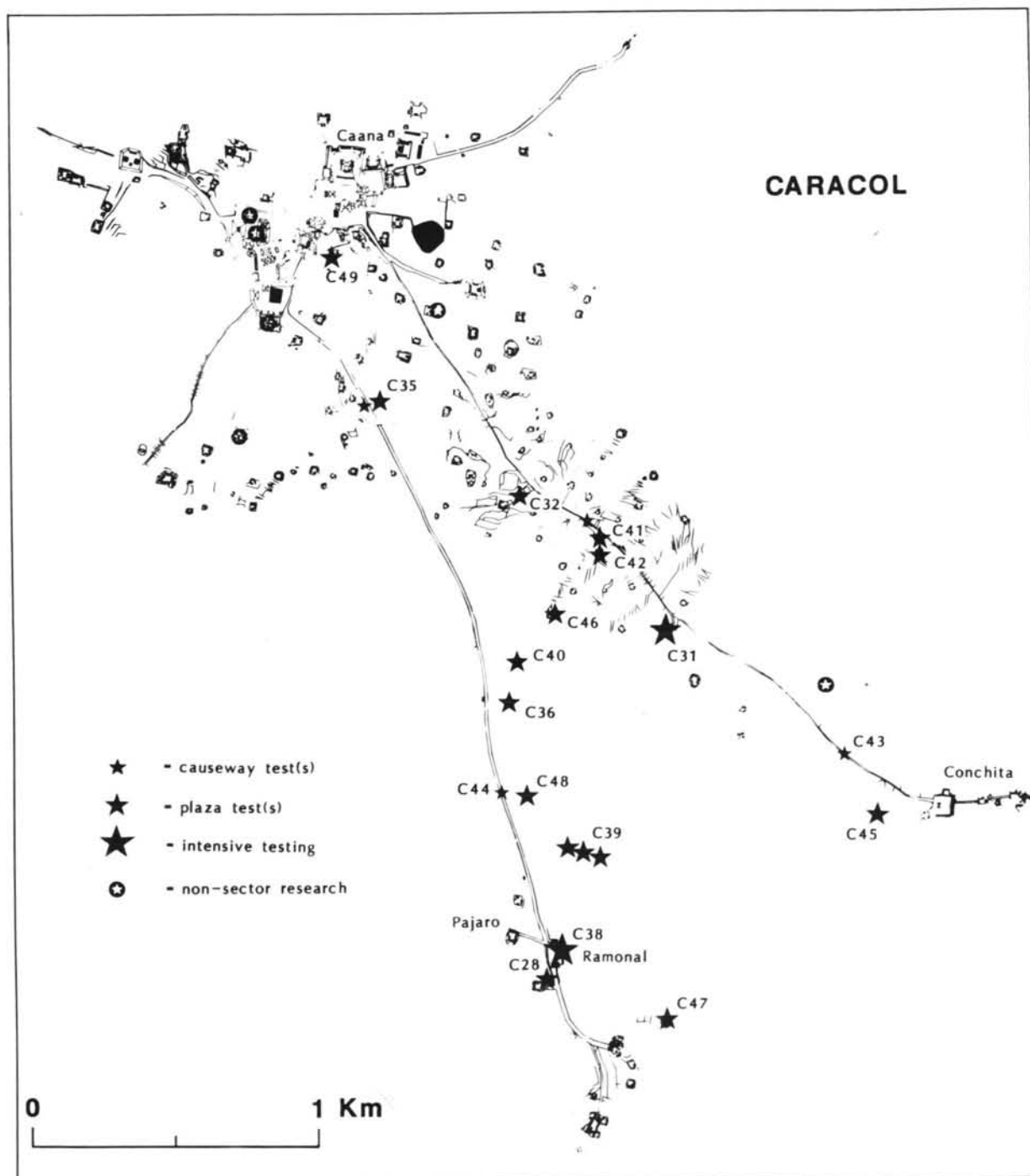


Figure 2.—Map of Caracol (as of the end of the 1987 season) showing the location of the excavations undertaken during 1988; north is to the top of the page.

boring polities (Figure 3). At the onset of the Late Classic Period in 9.6.2.1.11 or A.D. 556 Caracol engaged in a battle (axe-event) with Tikal. This was followed six years later in 9.6.8.4.2 or A.D. 562 by Caracol's defeat of Tikal, limiting the power of that site's dynastic line for well over 100 years (A. Chase in press a; Haviland in press; Houston in press). Seventy years later, Caracol carried out another successful inter-polity war against the site of Naranjo in 9.9.18.16.3 or A.D. 631 (Sosa and Reents 1980; Beetz and Satterthwaite 1981; Stone, Reents and Coffman 1985; Closs 1985). Not only are there war events in the hieroglyphic record, but the archaeology appears to document Caracol's florescence immediately following these events. While a correlation could already be made between these successful wars and the onset of massive building projects in Caracol's epicenter, possibly involving forced labor from conquered sites (Figure 4; A. Chase and D. Chase 1987b:18; for a similar situation at the site of Quirigua see Sharer 1978:67), the question was whether the effects of war were also evident within the wider Caracol core, specifically in a population increase and/or in a potentially better standard of living among the general population.

The effects of the recorded war between Caracol and Tikal are distinctly evident at Tikal, which suffers dynastic upheavals, monument destruction, and apparent cessation of monument erection (A. Chase in press a; Coggins 1975; Haviland in press; Jones and Satterthwaite 1982:128-129; Miller 1986:40-41, 54, note 29). In addition, work in inter-site areas outside the central 9 square kilo-



Figure 4.—One of the massive construction projects undertaken in the Caracol epicenter at the onset of the Late Classic era raised the summit of Caana by 4.2 meters in a single construction effort, completely engulfing Caracol Structure B19-2nd, the doorway and «niched» stairbalk of which are visible in this photograph.

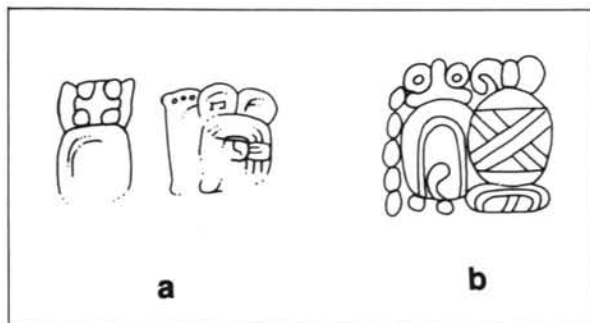


Figure 3.—Hieroglyphic texts at Caracol referring to warfare events: (a) war at Tikal recorded on Caracol Altar 21 (cf. Houston in press); (b) war at Naranjo recorded on Caracol Stela 3 (cf. Soza and Reents, 1980).

meters of Tikal has shown a decrease in occupation in this area during the Late Classic (Puleston 1974:309). Significantly, Puleston (1974:309) has suggested that this may have been caused by «increasing friction and danger of raids» which «may have made these peripheral areas less desirable». Thus, the effect of Caracol's victory over Tikal is evident in the archaeology. Similarly, Caracol's effect on Naranjo after its victory at that site is evident in the cessation of the epigraphic record at Naranjo (Houston in press).

In addition to actual mentions of war events in the hieroglyphic texts at Caracol, contemporaneous etchings of a bound prisoner appears in graffiti on the walls of Structure B20-2nd (figure

in A. Chase and D. Chase 1987a:20). During the Classic era, bound prisoners are also portrayed in a lower panel on Caracol Stela 6 dating to probably 9.8.10.0.0 (Beetz and Satterthwaite 1982: Figure 7) and in front of the main personage represented on Caracol Stela 21 dating to 9.13.10.0.0 (Beetz and Satterthwaite 1982: Figure 19). Indications also exist that Caracol continued in its warlike nature through the Terminal Classic Period. Specifically, Stela 18, dated to 9.19.0.0.0 or A.D. 810, also clearly depicts a captive, this time beneath a rearing snake (figure by S. Houston in A. Chase and D. Chase 1987a:8). Iconographic representations on the latest Caracol stelae and altars further suggest that Caracol was involved in inter-political unit alliances during the Terminal Classic Period (A. Chase 1985a:106,113). Thus, the carved iconography at Caracol also suggested that the site would prove to be an excellent location for further research into the nature and effects of Maya warfare.

### TESTING THE EFFECTS OF WARFARE AT CARACOL

The 1988 season of the Caracol Archaeological Project formed the first year of a proposed two-year study to determine the cultural implications of Classic Maya warfare at the site of Caracol, Belize. It was hoped that research at Caracol would help to resolve a series of problems (cf. Otterbein 1973:940-42): whether warfare at Caracol led to increased prosperity throughout the site; whether it contributed to greater cohesion of the populace; if there were organizational mechanisms used by the Maya themselves to further unite the population following or during these periods of war; whether warfare changed the population dynamics at the site (if, for example there were changes in the numbers of people present); and, ultimately, whether the long-term effects of warfare on Caracol's social order could be viewed as either stratification or disintegration.

In order to ascertain the effects of war on the overall Caracol population and not solely the ruling elite, the selected research area for these investigations was a sector of the site extending from the site epicenter into the site core between the Conchita and Pajaro-Ramonal causeways (see Figure 2). This area contains agricultural fields and

varied residential groups; it was home to a substantial portion of Caracol's settlement and most likely cross-cut all social classes found at the site during the Classic era. Previous research had also suggested that there was settlement within this sector that both preceded and followed the two wars, thus allowing for a consideration of change. Sampling by sector was also believed to be appropriate as it permitted consideration of the dating of the presumed purposeful integration of the site through its causeways. The sector was also advantageous for research purposes because the Conchita causeway was already the focus of a Caracol Project subprogram investigating status distribution about this roadway (Jaeger 1987).

Resolution of the above research questions was conceived of as a two-year program of investigation. During the first season, mapping of the sector was to be undertaken and a sampling program would be initiated. This work would allow preliminary dating of both the occupation within the sector and the relationships among the settlement and the causeways. The second year of the program would complete the dating of differing kinds of occupation within the sector, establish relationships among the settlement and the agricultural fields, and provide the data set from which to approach the wider questions of prosperity, cohesion, and cultural evolution. The completion of the first season of this project at Caracol has proved the utility of this sector of the site and the research design to provide information concerning the nature and effects of Classic Period Maya warfare and offers somewhat surprising preliminary indications as to the specific effects of warfare at Caracol.

During the 1988 season, the entire area between the Pajaro-Ramonal and Conchita causeways was criss-crossed with transects to locate evidence of ancient occupation. Transects were cut every 50 meters at a constant angle and then intervening areas were scoured for remains of structures, groups, and terraces. All of the visible architectural groups and structures within this area were mapped by transit. The agricultural terraces were tied into the brechas by means of transit points and then mapped by bruntun compas and 30-meter tape.

The total number of structures added to the Caracol map during work in 1988 was 453, making a total of 1,521 structures thus far mapped at

the site. Previously 42 structure groups had been mapped in the area between the Pajaro-Ramonal and Conchita causeways. The 1988 season added a total of 77 more groups to this sector of the site. Thus, not including groups either directly associated with the causeway termini and assumed to be administrative in nature or directly linked with the epicenter of the site, a total of 119 structure groups have been recorded in the area between the two causeways. The 1988 tests sampled a total of 16 structure groups in this sector of the site (excluding the «via»-linked Mujer Group); one other group within this sector had been sampled in 1987. Thus, excavation information now exists for 17 structure groups within the Conchita/Pajaro-Ramonal sector, representing a sample of 14.29% of the total groups in this part of the site.

Agricultural terraces were completely recorded in several areas of the sector (see for example, Figure 5). However, three factors mitigated against the completion of terrace recording during the 1988 season: first, the irregular nature of these terraces required far more mapping time than had originally been anticipated; second, these systems



Figure 5.—Caracol Map Grid 3G showing the relationship of the terraces to settlement; all settlement and terraces were mapped during the 1988 season (for 1987 version of this grid, see A. Chase and D. Chase, 1987b: Fig. 62); the quadrangle measures 500 meters by 500 meters; north is to the top of the page.



Figure 6.—A collapsed tomb in Caracol Structure M12, which was excavated during the 1988 season.

evinced far more complexity and largeness the farther away were from the Caracol epicenter; and third, the test excavations produced far more primary deposits than originally anticipated, meaning that more time was necessarily spent in detailed excavation and recording (see Table 1 and below). Thus, while all of the groups within the sector have been fully recorded, more time is necessary to completely map the expansive terrace systems that were found between the two causeways. It is, however, projected that these can be completely recorded during the 1989 season.

During the 1988 season, 47 total investigations were undertaken in the sector bounded by the Conchita and Pajaro-Ramonal causeways (see Figure 2 for location and Table 1 for details). Nine tests were placed on the two causeways and indicate a date of construction for these causeways in the early part of the Late Classic Period; no

earlier causeway construction was uncovered in any of the tests. Thirty-six excavations were placed within a total of 17 structure groups associated with this sector: 27 test excavations, 1.5 m square or larger, were placed in plaza areas of structure groups; 7 open chambers or tombs were investigated (Figures 6 and 7); and, 4 more intensive trenching or areal excavations were conducted. The majority of the groups were sampled by means of one or more tests or by a combination of test-pit and chamber investigation. Two of these groups, the Ramonal Plaza (Strs. 4P17-4P28) and Hilltop (Strs. 2E19-2E25) Groups, were sampled more intensively.

The sampling strategy used during the 1988 field season worked far better than was originally anticipated. While small test excavations in plaza areas of groups at other sites do not usually yield

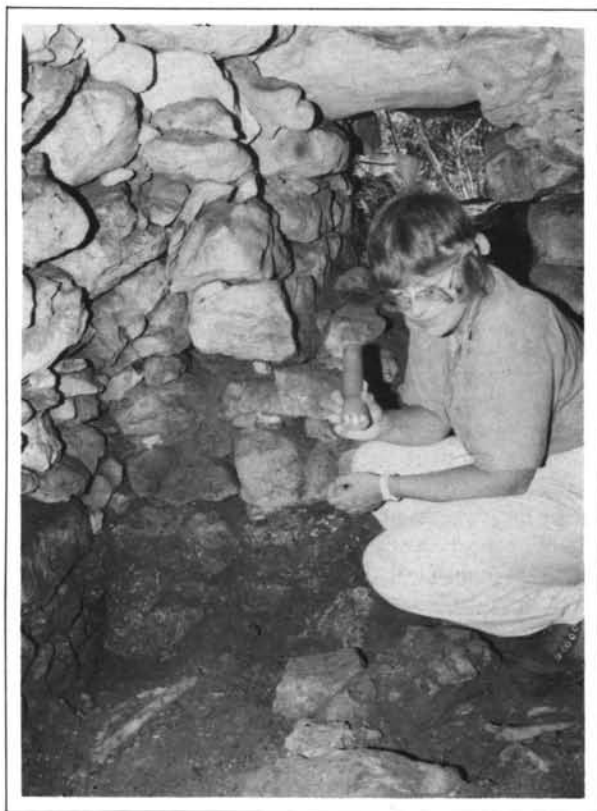


Figure 7.—An open non-collapsed tomb in Caracol Structure 2F25, which was excavated during the 1988 season; the formal entranceway to the chamber is visible behind the individual in the photograph.

an abundance of primary deposits (see for example A. Chase 1983: Table 42; Ford 1986:38-41; Culbert and Rice in press), the test excavations at Caracol did; a total of 20 burials and 15 caches were excavated in 27 test-pits in plaza areas of groups located within the sector bounded by the Conchita and Pajaro-Ramonal causeways; these 35 primary deposits were recovered in a total excavation area of just over 78 square meters (see Table 1).

Of the 16 groups tested in the sector by test excavations, 13 yielded primary deposits, an unusually high total. There is every indication that future excavations in this sector of Caracol will be similarly productive. In addition to these totals, 7 open tombs were also investigated, 1 in a group not tested by other excavations and 1 in a group whose 2 other test did not yield primary deposits. The majority of these excavations also produced associated vessels and artifacts. A total of 91 whole or reconstructible vessels were recovered; all of these may be seriated into the tightly dated sequence established for Caracol based on previously undertaken excavations.

Excavations within the site epicenter and its immediate core undertaken during 1985 and 1986 produced four deposits with associated vessels which could be directly dated because of an association with dated hieroglyphic texts (A. Chase and D. Chase 1987b:15, 20, 26-27, 43, 59). The earliest group of some eighteen vessels was located in a tomb in Structure B20-2nd which in turn was associated with a wall text dating to 9.7.3.12.15 or A.D. 576. Four vessels from a tomb in Structure L3 could be precisely placed as being deposited in 9.9.0.16.17 or A.D. 613. Eight vessels from Structure B19-2nd were dated to 9.10.1.12.7 or A.D. 634. And, finally, eight vessels from Structure A3 could be dated to 9.13.3.15.16 or A.D. 695. Because enough stylistic variability is evident between the various dated groupings of vessels, it has proved possible to seriate other hieroglyphically undated, but contextually recovered, vessels sets into the epicentral sequence. Thus, the vessel groupings found during 1988 in between the Conchita and Pajaro-Ramonal causeways were not only able to be fitted into an already established epicentral sequence, but these groupings were also able to help to refine and broaden the seriation of types into a dateable sequence for the entire Caracol core area. The abundance of datea-



ble materials for this sector of the site has also facilitated an assessment of the population and construction history within this sector.

Based on the remains recovered during the 1988 season, it is possible to place contextual groupings of vessels into any number of categories that either bracket or comprise the earlier part of the Late Classic Period (roughly A.D. 550 to 700; see Figures 8, 9, and 10). The first grouping of interest to this consideration falls before 9.6.10.0.0 (A.D. 564), roughly coeval with both the shift from Early to Late Classic Periods and Caracol's war with Tikal (9.6.8.4.2); vessels pertaining to this era have thus far only been recovered from Caracol's epicenter and from Tulakatuhebe (A. Chase and D. Chase 1987b:45-49). With the advent of the early part of the Late Classic Period, ceramic styles shifted and certain kinds of vessel shapes and styles occurred at Caracol between 9.6.10.0.0 and 9.10.0.0.0 (see Figure 8). The second ceramic shift

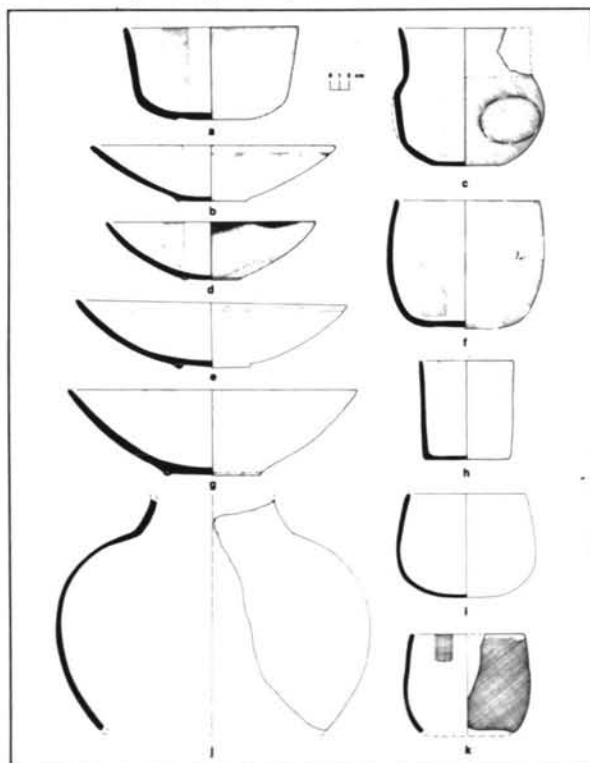


Figure 8.—Grave lot recovered during the 1988 season showing Operation 36A vessels; these vessels from a tomb interment may be dated to between 9.6.10.0.0 and 9.10.0.0.0.

that is now recognizable at Caracol seemingly occurred sometime just before 9.10.0.0.0 (A.D. 633) or immediately after Caracol's war with Naranjo (9.9.18.16.3); many of the groups in the Conchita/Pajaro-Ramonal sector have burials from this era (see Figure 9). By 9.13.0.0.0 (A.D. 692), yet a further shift is visible in the Caracol ceramic repertoire (Figure 10). While these differences had been hinted at in epicenter deposits associated with both Maya hieroglyphic dates and radiocarbon dates, the data recovered during the 1988 season confirms that such divisions can also be seen within Caracol's core.

The 1988 sample indicates that the vast majority of structure groups within the sector were built and occupied within 130 years after the initial war with Tikal and strongly suggest that the area between the causeways was apparently largely, but not completely, uninhabited before the conflicts. Of the 17 groups investigated during 1988, 3 produced evidence of materials indicating initial occupation before 9.6.10.0.0, 4 were first occupied between 9.6.10.0.0 and 9.10.0.0.0, 9 had initial evidence for occupation between 9.10.0.0.0 and 9.13.0.0.0, and all the investigated groups were apparently occupied by 9.13.0.0.0; none of this occupation appears to extend beyond the end of the Late Classic Period. In addition, excavation of the causeways suggest that these labor intensive communication systems were also constructed following the war with Tikal, but before 9.13.0.0.0. The special function Ramonal Plaza terminus was

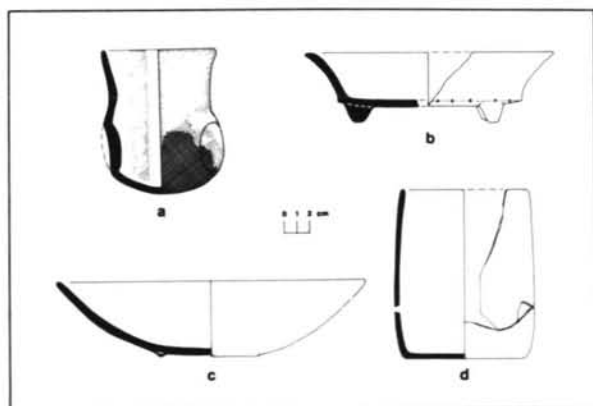


Figure 9.—Grave lot recovered during the 1988 season showing Operation 40C vessels; these vessels from a crypt burial may be dated to between 9.10.0.0.0 and 9.13.0.0.0.

TABLE 1: Summary of Caracol 1988 Investigations in Conchita-Pajaro-Ramonal Sector

Operation	Group	Kind and Amount of Investigation (in sq m)				Deposits		Vessels
		Plaza Test	Open Tomp	Causeway	Other	Bus.	Cas.	
C28B	Mujer		2.48			1		2
C31A	Hilltop		4.72			1		2
C31B	Hilltop	4.99				1	2	7
C31C	Hilltop	4.00						
C31D	Hilltop				17.25			
C32A	Mosquito		1.56			1		6
C32B	Mosquito		1.84			1		6
C32C	Mosquito	2.25				2	2	4
C35A	J's	3.00				1		1
C35B	(P-R C.)			2.50				
C35C	(P-R C.)			2.00				
C35D	(P-R C.)			1.50				
C36A	Arana		3.20			1		11
C36B	Arana	2.25				1	1	2
C38A	Ramonal	6.00						
C38B	Ramonal				10.20			
C38C	Ramonal				12.00			
C38D	Ramonal	4.00						
C38E	Ramonal	4.00						
C38F	Ramonal				41.00			
C39A	Rooster	2.25						
C39B	Rooster	2.25				2	4	18
C39C	Chick	2.25				2		4
C39D	Hen	2.25				1		2
C40A	Chachala		3.36			1		1
C40C	Chachala	3.00				1	1	5
C41A	Midway	4.43						
C41B	(Con. C.)			1.95				
C41C	(Con. C.)			2.25				
C41D	Midway	2.25				1		
C42A	Lost	2.37						
C42B	Lost	3.27				2		
C43A	(Con. C.)			3.00				
C43B	(Con. C.)			2.36				
C44A	(P-R C.)			3.75				
C44B	(P-R C.)			5.25				
C45A	Kahlua	2.25						
C45B	Kahlua	2.25					3	3
C46A	Dash	2.25						
C46B	Dash	2.25						
C46C	Dash		3.53			1		
C47A	Vine	2.25						
C47B	Vine	2.25						
C48A	Dove	2.97				1		7
C48B	Dove	2.25						
C49A	Ultimo	2.25				5	2	10
C49B	Ultimo	2.25						
Totals*	17	27 (78.03)	7 (20.69)	9 (24.56)	4 (80.45)	27	15	91

\* Other Investigations Undertaken During 1988: C8E (tomb); C12C (consolidation); C22A (1 burial; 3 vessels); C33A (tomb; 4 vessels); C33B (tomb); C34 (1 vessel, surface); C37 (tomb); C40B (surface).

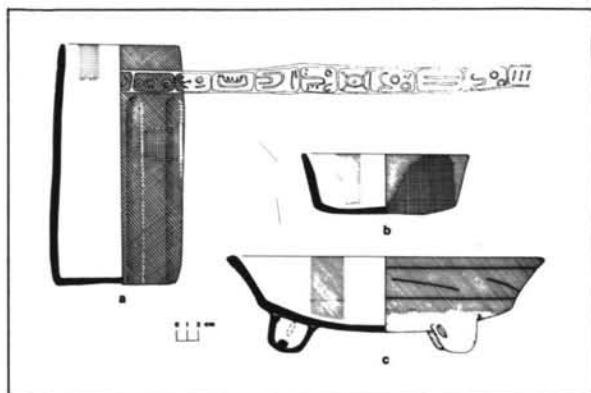


Figure 10.—Grave lot recovered during the 1988 season showing Operation 49A vessels; these vessels from a cist burial may be dated to shortly after 9.13.0.0.0.

likewise built at this time. These findings, should they be substantiated by the investigations in 1989, would indicate over a 325% population increase in this site sector during the 130 year period in question — in combination with a substantial public building effort in causeways and special function termini. For comparative purposes, during the same time span at Tikal, Central Tikal witnessed a growth rate of 27.5% and the Tikal sustaining area saw a decreased growth rate of 15% (Culbert et al. in press, extracted from Tables 3 and 4); Haviland (personal communication, 1988) argues for «zero growth at Tikal after ca. 550 A.D.». Thus, even though causality cannot be demonstrated, the correlations are highly suggestive of expanded prosperity and growth at Caracol following or associated with successful warfare. And, all evidence suggests that this growth was not limited to the elite members of the population. The 1989 testing will ascertain whether or not the agricultural fields and Conchita terminus are likewise post-war phenomena as well as allow for a discussion of cohesion of the settlement and any changes in material well being of the population.

During the 1988 season, a research focus was undertaken which compared structure groups aligned to the causeway with structure groups not aligned to the causeway. Five groups (Operations C32, C35, C41, C42, and C48) that were believed to be aligned with the causeway were investigated; one of these groups produced associated material that primarily dated to between 9.10.0.0.0

and 9.13.0.0.0 (Operation C48) while the other groups (Operations C32, C35, C41, and C42) all appeared to have been primarily occupied subsequent to 9.13.0.0.0 based on the recovered materials. In conjunctions with extensive Late Classic material directly overlying the Pajaro-Ramonal causeway in two tests (Operations 35A and 35B), it would appear that this causeway had been constructed before 9.13.0.0.0 and that groups aligned to it are coeval or later in date than the causeway. In contrast, three non-aligned groups that were investigated during 1988 and one non-aligned group that was investigated during 1987 produced materials dating before 9.6.10.0.0 (Operations C29, C31, C39B, and C49). This would apparently affirm that directional alignment to a causeway can suggest the nature of a group's date of construction and use prior to its excavation.

As most of the major construction efforts in this sector of Caracol preceded 9.13.0.0.0 and as this sector appears to have been fully occupied by this date, it is likely that the extensive terrace systems within this sector of the site were also constructed during the earlier part of the Late Classic Period; this relationship will be tested during 1989. Additionally, most of the loci investigated during 1988 indicate that the standard of living was fairly high among the groups occupying this area and that most of them had access to many of the same goods. Tombs are found throughout this sector of the site in groups of all sizes and locations (A. Chase in press b); the grave goods compare favorably with those found in the site's epicenter. Additionally, elaborately painted cylinders, usually associated with high status burials elsewhere in the Maya area (Coggins 1975) have been located in non-structural crypts (see also A. Chase 1985 b). It will require the intensive excavations of the 1989 season to test the degree to which this apparent prosperity was a post-war phenomena.

## Conclusions

The 1988 season work at Caracol suggests that archaeological research at this site can answer questions raised concerning the nature and effects of Maya warfare and that the 1989 season of research will strongly complement these findings. Investigations at Caracol to date cast serious doubt

that Classic Maya warfare, at least as practiced at Caracol, was the limited activity that some researchers have suggested.

Work this far at Caracol provides a clear indication that warfare was not only an elite undertaking with limited impact on the society as a whole. Instead, the preliminary indications at Caracol suggest that successful warfare resulted in a population increase and a planned urban expansion of that city. The large expenditure of manpower that is represented in the activities associated in this expansion—specifically in the large constructions that constitute the Late Classic site epicenter and causeway termini and in the massive amount of materials that went into the formally finished causeway systems and even more extensive terrace systems—was probably gained as a direct result of Caracol's successful warfare. Perhaps some of this labor may have been in the form of forced migrations and/or labor tribute. The increased occupation, building activity, and prosperity seen at Caracol during the early part of the Late Classic Period may be directly contrasted to an apparent decline at Tikal, as evidenced in a decrease in elaborate burials and construction activities as well as by the coagulation of that site's population around its epicenter. Because of the warfare relationship that

may be established between these two centers from the textual material, the conclusion may be drawn that the victor prospered to the detriment of the loser.

This prosperity/decline relationship was not only limited to the elite, but was also felt in a very real way by the other levels of Classic Maya society. The archaeological data from Caracol strongly suggest that the general populace shared in the spoils of successful warfare; the data from Tikal may also be used to suggest that a loosing population also shared in the defeat. That the effects of successful Classic Maya warfare at Caracol appear to have been more extensive than has previously been anticipated indicate that Classic Period Maya warfare, in general, may be encompassed within broader patterns seen elsewhere in different temporal and cultural situations.

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