Chapter Ten

Texts and Contexts in Maya Warfare: A Brief Consideration of Epigraphy and Archaeology at Caracol, Belize

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> Epigraphy and archaeology need each other. If a truly *objective* history is ever to emerge from prehispanic Mesoamerica, much of it will have to emerge at the point of a trowel. (Marcus 1992a:445)

A primary focus of research at Caracol has been the examination of the archaeological responses to and manifestations of successful warfare. Thus, we have attempted to correlate the warfare events epigraphically recorded on the stone monuments and stucco facades in Caracol's epicenter with the archaeological record found in the outlying settlement. Caracol's texts include the earliest known example of a Maya "shell-star" event, taken to be the most consequential kind of Maya warfare (Houston 1991:40). Dated to A.D. 562, it marks the defeat of Tikal, Guatemala, a site 76 kilometers distant. Other defeats, decapitations, destructions, and captures are also present in Caracol's extensive hieroglyphic record. These events generally cluster in two time horizons, between A.D. 550 and 700 and again after A.D. 790. Because the material remains at Caracol can be tightly dated, it is possible to correlate the two epigraphically recorded periods of successful aggression with other social contexts. Settlement in the post–A.D. 550 time frame indicates significant population growth, increased construction activity, as well as widespread cohesion and prosperity

among Caracol's populace. In contrast to the earlier warfare episode, the post–A.D. 790 episode is marked by epicentral but not core settlement growth conjoined with selective rather than widespread cohesion and prosperity. Our investigations have revealed that both the textual references and the archaeologically recoverable responses vary between the two definable warfare episodes in Caracol's history. Maya warfare was not a monolithic activity. The Caracol data demonstrate that the archaeological record can be effectively used to monitor the effects that different kinds of epigraphically noted warfare had on a given population.

Epigraphic Interpretation of Maya Warfare

Epigraphically recorded war events between known Maya sites span the entire Late Classic era (table 10.1). While warfare was certainly practiced by the Maya from a very early date (cf. Webster 1977; see also Brown and Garber, chapter 6 in this volume), epigraphic indications of warfare prior to the Late Classic are somewhat problematic. The hypothesized Early Classic warfare between Tikal and Uaxactún (Freidel et al., chapter 11 in this volume), for example, originally derived from the monumental texts at these two sites (Mathews 1985; Schele and Freidel 1990), has been disputed on both epigraphic (Stuart 1993) and archaeological (Laporte and Fialko 1995) grounds. Starting at the very end of the Early Classic period, epigraphic references to Maya warfare increased throughout the Late Classic period (cf. Schele and Miller 1986:209). Stuart (1993:334) argues that the explosion in Late Classic narrative exposition related to Maya warfare represents a profound shift between the Early and Late Classic periods. Whether this was a shift in written emphasis and/or a shift in the scale of warfare, however, can be addressed only with a conjunctive approach. Nowhere within the epigraphic and archaeological records of the Maya can warfare's long-term impact be better studied than at Caracol, Belize. It was here that the earliest known shell-star event was recorded (Houston 1991), and it is here that some of the latest known warfare events of the Classic period are also in evidence (Mathews 2000).

Hieroglyphic Representations of Warfare: General Considerations

A number of hieroglyphs are associated with Maya warfare. While there is some variation in emphasis and use of these glyphs among

Table 10.1   Epigraphically known war events in the Maya area[1]

Date	Distance (km)	Victor	Defeated	Nature of Warfare
9.6.2.1.11	76	Tikal	Caracol	Axe event
9.6.8.4.2	76	Caracol	Tikal	Star-war
9.6.10.14.15	25	Yaxchilan	Lacanha	Capture
9.9.13.4.4	42	Caracol	Naranjo	*Hubi*
9.9.14.3.5	42	Caracol	Naranjo	*Hubi*
9.9.18.16.3	42	Caracol	Naranjo	Star-war
9.10.3.2.12	42	Caracol	Naranjo	Star-war
9.11.1.16.3	153	Palenque	Site Q	Axe event
9.11.6.16.11	128	Palenque	Yaxchilan	?
9.11.11.9.17	51	Dos Pilas	Machaquila	Capture
9.11.17.18.19	111	Dos Pilas	Tikal	Star-war
9.12.0.8.3	111	Tikal	Dos Pilas	Star-war
9.12.5.10.1	105	Site Q	Tikal	Star-war
9.12.7.14.1	42	Naranjo	Caracol	Star-war
9.13.1.4.19	30	Naranjo	Ucanal	*Hubi*
9.13.2.16.0	40	Naranjo	Tikal	*Hubi*
9.13.3.7.18	105	Tikal	Site Q	*Hubi*
9.13.13.7.2	111	Dos Pilas	Tikal	Star-war
9.13.19.13.3	65	Tonina	Palenque	Star-war
9.14.17.15.11	25	Yaxchilan	Lacanha	Capture
9.15.4.6.4	24	Dos Pilas	Seibal	Star-war
9.15.6.14.6	47	Quirigua	Copan	Axe event
Pre-9.15.9.17.17	54	Aguateca	Cancuen	?
Pre-9.15.10.0.0	78	Machaquila	Motul de San Jose	?
9.15.12.2.2	30	Tikal	Yaxha	Star-war
9.15.12.11.13	36	Tikal	Motul de San Jose	Star-war
Ca. 9.16.0.0.0	87	Dos Pilas	Yaxchilan	?
Ca. 9.17.0.0.0	45	Aguateca	El Chorro	?
9.17.3.5.19	54	La Mar	Pomona	?
9.17.16.14.19	47	Piedras Negras	Pomona	Capture
9.18.3.9.12	47	Piedras Negras	Pomona	?
Pre-9.18.10.0.0	32	Caracol	Ucanal	Capture ?
Post-9.19.9.9.15	76	Caracol	Tikal	Axe event

[1] After A. Chase and D. Chase 1998a:19. Data derived from Grube (1994), Houston (1993), Houston and Mathews (1985), Jones and Satterthwaite (1982), Nahm (1994), Schele (1982, 1991a), Schele and Freidel (1990), and Schele and Mathews (1991).

sites in the southern lowlands, four major warfare-related hieroglyphs enjoyed widespread and fairly consistent usage over time and space (figure 10.1). Other glyphs have also been suggested as having war-related meanings, such as "shell kin" and "flint and shield" (Schele and Freidel 1990), but the interactions implied in texts that use such hieroglyphs do not appear to be of the same order as the four major event glyphs described here. For example, the flint-and-shield glyph
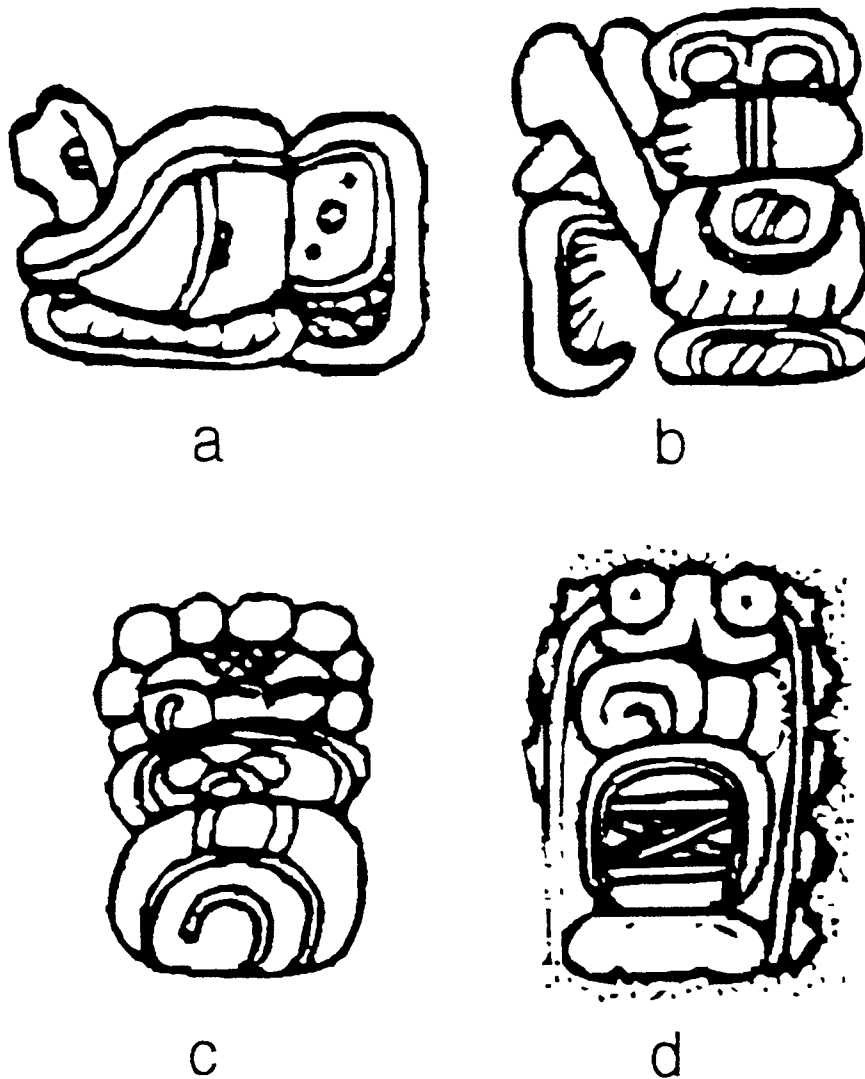
Figure 10.1 Epigraphic examples of Maya verbs referring to warfare (after A. Chase and D. Chase 1998a:20): (a) *chuc'ah*, "capture" (Proskouriakoff 1960:470); (b) *ch'ak*, "decapitation" (Schele and Freidel 1990:456, n. 17), or *batcaba* or *batelba*, "to wield an axe" or "to do battle" (Marcus 1992a:420); (c) *hubi* "destruction" (Grube 1994:103); (d) star-war (Schele 1982:99)

is often combined within texts with one of the war-related verbs, most likely indicating that the flint-and-shield glyph represents a particular object. The shell-kin glyphs that are particularly found at Naranjo (Schele and Freidel 1990:186–95) may not be involved as much in war events as in ritual burning events (Stuart 1998b). While other hieroglyphs and phrases may be related to aggression, the four most secure and consistent warfare-related hieroglyphs are *chuc'ah* (capture), *hubi* (destruction), *ch'ak* (axe), and shell-star (star-war) events. These distinct glyphic expressions surely represented different kinds of warfare events; however, their meanings also may have been contextually variable.

Chuc'ah, or "capture," is probably the least constant and most controversial kind of aggression mentioned in the hieroglyphic record. The act of capture is perhaps best represented on certain Yaxchilán lintels that combine both imagery and text to ensure meaning (cf. Marcus 1992a:419). Whether "capture" relates only to specific individuals or symbolically refers to towns, communities, and regions is a matter of current debate. The differences in opinion over this issue, however, have major ramifications on the interpretation of Maya warfare. If only specific individuals are named, then an argument can be made for elite ritual warfare with little impact on the overall population (cf. Freidel 1986a). However, if the portrayed individuals symbolically represent larger entities, then Maya warfare could be seen as involving territorial gain and tribute. For instance, it has been suggested that the Palenque ruler Kan-Xul (also now known as K'an-Hok'-Chitam) was captured and executed by Tonina (Schele and Freidel 1990:487). Kan-Xul is both named and portrayed on a Tonina carved monument. But did his capture have an impact on the general populace at Palenque? While Palenque's succession may have been altered, it is not known whether tribute was given by Palenque to Tonina as a result of this event or if there were any other local changes that would have affected the population at large. In another case, the hieroglyphs associated with a captive have been interpreted in two very different ways. On Naranjo Stela 24, Schele and Freidel (1990:188–89) suggest that the captive in the lower register, on whom the ruler stands, was an individual named "Kinichil-Cab" from the site of Ucanal. Marcus (1992a:414) alternatively reads the hieroglyphs associated with this captive as a nonpersonal name meaning "western land" and views the captive as an artistic symbol for captured territory. The implied difference between these two viewpoints, as it relates to the scale of the associated warfare, is striking. We suspect that both readings of

chuc'ah may sometimes be appropriate and that the meaning is context dependent.

Hubi and *ch'ak* events clearly represent military endeavors. *Hubi* has been translated as "destruction" (Grube 1994) and appears to refer to the attainment of specific goals and objectives in warfare. For instance, an A.D. 695 event records Tikal's "destruction" of the "flint and shield" of Jaguar-Paw of Site Q. The use of this verb to indicate warfare between Caracol and Naranjo seems fairly well established (A. Chase and D. Chase 1998a; Schele and Freidel 1990), especially given the multiple records that exist at Caracol and Naranjo for specific *hubi* events. Yet *hubi* has also been taken to read "to come down" in accession contexts (Harris and Stearns 1997:48), and it is conceivable that the translation of this glyph may be modified in the future.

Ch'ak, or "axe," events have been interpreted both as "decapitation" (Schele and Freidel 1990:456, 487) and as important "battles" (Marcus 1992a:420). Recovered archaeological records that are relevant to the verification and assessment of *ch'ak* events are available from several sites. In all cases, an argument can be made that while *ch'ak* events were undoubtedly significant to the victors, they may not have greatly impacted the losers. Perhaps the best-known *ch'ak* event is the one carried out by Quirigua against Copán in the Late Classic (9.15.6.14.6; A.D. 738) with the resultant loss of the current Copán ruler 18-Rabbit and the installation of a new Copán king thirty-nine days later (9.15.6.16.5). As noted by Sharer (1978), this event appears to have had a major effect on Quirigua. The actual impact on Copán, however, is still a matter of debate (Fash 1991; Marcus 1992a; Webster 1989). A *ch'ak* event by Tikal against Caracol in A.D. 556 (recorded on Caracol Altar 21 and, to some extent, set up textually as a propaganda counterbalance for later antagonisms by Caracol against Tikal) was obviously offset six years later by a more conclusive shell-star event against Tikal (also recorded on Caracol Altar 21).

Of all epigraphically known warfare events, shell-star, or star-war, events are interpreted to be of the greatest consequence. They are thought by most epigraphers to represent the defeat of one site by another (Schele and Mathews 1991:246). Thus, epigraphic data suggest that one polity may interrupt the succession at another site, exert dominion over another polity, and/or, alternatively, break free in a war of independence (A. Chase and D. Chase 1998a; Marcus 1992a). We have argued elsewhere for the territorial impact of this kind of warfare (A. Chase and D. Chase 1998a; D. Chase and A. Chase 2000). Indeed, the substitution of the *caban*, or "earth," glyph in lieu of a spe-

cific emblem glyph as the center sign in the shell-star hieroglyph has been taken to indicate that this kind of warfare had a territorial dimension (Hammond 1991:277; Mathews 1985:321). Despite arguments to the contrary (Haviland 1994), it would seem that the star-war event against Tikal recorded on Caracol Altar 21 had devastating consequences at Tikal while positively impacting on Caracol (A. Chase 1991; A. Chase and D. Chase 1996a, 1996c; Jones 1991).

Hieroglyphic Representations of Warfare: Caracol

Two episodic periods of warfare may be found in Caracol's hieroglyphic record. The first covers a period of nearly 150 years and defines the site's early Late Classic history from roughly A.D. 550 to A.D. 700. The second period of warfare at Caracol may be inferred from the texts, iconography, and extant archaeological record that define the site's Terminal Classic era after A.D. 790.

Caracol Warfare A.D. 550–700

Initiating the first episode of widespread war at Caracol is a *ch'ak* event, most likely a battle (in our estimation) carried out by Tikal against Caracol in A.D. 556. This is followed in A.D. 562 by a full-blown star-war against Tikal. Even though recorded seventy years after the actual event, thus permitting some historical modification or correction (cf. Haviland 1994; Marcus 1992a:429–30; Webster 1993), this event left clear marks in the archaeological and iconographic records of both sites. That the war was consequential is indicated by the marked absence of hieroglyphic history from Tikal for over 120 years (A. Chase 1991) and by the fact that the Tikal settlement pattern underwent a major constriction after this date (Puleston 1974). In contrast, Caracol underwent a period of incredible growth (A. Chase and D. Chase 1989) and prosperity (A. Chase and D. Chase 1994a, 1996a, 1996b) while undertaking further warfare to maintain its hold on the eastern edge of the southern lowlands. Bound prisoners occur on four Caracol stelae (4, 5, 6, and 21) dating from A.D. 603 (9.8.10.0.0) to A.D. 702 (9.13.10.0.0). *Hubi,* or destruction, events are recorded by Caracol against Naranjo, Guatemala, twice, in A.D. 626 and once in A.D. 628. A star-war against Naranjo is recorded in A.D. 631 and again five years later. That the star-war event had a major impact on Naranjo is shown by the presence of hieroglyphic texts celebrating Caracol kings at

Naranjo itself. Naranjo is located exactly halfway between Tikal and Caracol (42 kilometers from each site). An application of military theory and the concept of marching distance (Hassig 1992b:85) have led to the suggestion that direct (as opposed to hegemonic) territorial control was possible for Maya sites within a 60-kilometer marching radius (A. Chase and D. Chase 1998a:17). Thus, we believe that Caracol, through its conquest of and incorporation of Naranjo, was able to capitalize on the A.D. 562 defeat of Tikal to at least temporarily control a larger territory. The flow of tribute from the central Petén to Caracol continued until at least A.D. 680, at which time texts suggest that Naranjo regained its independence from Caracol through a shell-star event. Reference to this event is found not at Naranjo but rather on a partial building facade at Caracol. That the text continues to extol Caracol successes after this event suggests that the A.D. 680 star-war was not the real end of the saga but rather the prelude to some other as-yet-unknown Caracol success after this date.

Caracol Warfare Post–A.D. 790

The second episode of warfare at Caracol was initiated sometime around A.D. 790 and is credited to Caracol ruler Hok Kauil by his descendants. Caracol Stela 11 indicates that Hok Kauil took a series of eight captives from neighboring sites. Like rulers from other sites (Stuart 1985:100), Hok Kauil may have claimed prisoners taken by others as his own. Two of these eight prisoners are shown on Caracol Altar 23, where both are credited to Tu-mu-ol (Chase et al. 1991; Grube 1994); another is shown on Caracol Stela 17, a posthumous monument to Hok Kauil in which a vision serpent is situated above the prisoner. It would appear to us that Hok Kauil (and his prowess in taking captives) was further lionized by his descendants to serve their political ends. Yet another set of paired and bound prisoners are portrayed on Caracol Altar 22 in a social context that is meant to demonstrate the importance of someone other than the Caracol ruler (Chase et al. 1991). Within an A.D. 820 text on Caracol Altar 12, a *ch'ak* event against *k'ul mutul*, most probably Tikal, is recorded (Grube 1994:97). An A.D. 835 text from Mountain Cow (Altar 1) contains a "he of 20 captives" expression (Stuart 1985:101). As Grube (1999) has noted, these constitute some of the latest textual (as opposed to iconographic) expressions of warfare known from the Maya epigraphic record.

From the epigraphy alone, it would appear that Caracol's two episodes of warfare are different. Most notable are distinctions in the

hieroglyphs used, particularly the mention (and/or depiction) of captives. The first episode is concerned textually mainly with *hubi* (destruction), *ch'ak* (axe), and star-war events, while the second is marked predominantly by *ch'ak* (axe) and *chuc'ah* (capture) events. The first episode is comprised generally of specific activities that are contextually and internally consistent at Caracol as well as Naranjo. The second episode contains elements that are as yet not entirely clear-cut; captives are taken and alliances are made, but the full extent of relationships among individuals and sites is not immediately apparent. Thus, contextualizing the warfare statements within the archaeological record is important to any interpretation of these events, as such analyses can provide additional information on the similarities, differences, and realities of stated aggression.

Archaeological Interpretation of Maya Warfare

Most scholars would generally agree that the nature of Maya warfare changed over time. Innovations in both weapons and techniques of war are evident throughout Maya prehistory (Hassig 1992b:172). And the kind of warfare that was practiced may also have shifted (A. Chase and D. Chase 1992). Once thought to be primarily an elite-dominated raiding activity with little impact on day-to-day life or territorial control (Freidel 1986a; Schele and Mathews 1991:245–48), it is now apparent that Late Classic Maya warfare could be waged for territory (A. Chase and D. Chase 1996a, 1996b) and tribute (Stuart 1998c). Late Classic Maya warfare not only impacted many members and levels of Maya society (A. Chase 1992; A. Chase and D. Chase 1989, 1996c) but also involved ever larger warfare arenas (A. Chase and D. Chase 1992, 1998a) and political alliances (Martin and Grube 1995). Rather than being directly related to the agricultural cycle (Marcus 1992a:430–33) or to celestial events (Lounsbury 1982), it is also evident that Late Classic Maya warfare was a year-round occurrence (Nahm 1994) and a part of daily life.

Warfare also has become an increasingly popular topic for archaeological research. While many Maya research projects have encountered data relative to ancient Maya warfare, two recent projects have made warfare a major focus of research. These projects are the Petexbatun Regional Archaeological Project, focusing on the Guatemalan site of Dos Pilas (Demarest 1993, 1997b; Demarest et al. 1997; Houston

1993), and the Caracol Archaeological Project, focusing on its Belizean namesake (A. Chase and D. Chase 1987; D. Chase and A. Chase 1994). Both projects openly attempted to integrate hieroglyphic texts with archaeological data. The Petexbatun Project examined Maya warfare from the standpoint of a site that was both largely produced and destroyed by warfare. Dos Pilas appears to have rapidly expanded its polity in the Late Classic period (at least according to the epigraphy) and then suffered a relatively early and catastrophic decline through a siege and sacking shortly after A.D. 760 (at least according to the archaeology). Continued Classic period warfare resulted in a subsequent destabilization of this region despite the presence of Seibal, a Terminal Classic capital (A. Chase 1985; Willey 1990). The archaeological record demonstrates the influx of new populations to Seibal in both the ceramic and the burial data (Tourtellot 1990); the epigraphic interpretations associate this influx with Ucanal (Schele and Mathews 1998:179; Thompson 1970). Almost two decades of research at Caracol, Belize has also revealed a site whose Late Classic rise and decline was directly related to warfare. Epigraphic evidence of warfare events has been recorded at Caracol on stone monuments, stucco facades of buildings, and monuments at Naranjo. Archaeologically, Caracol appears to have sustained benefits from successful aggression throughout the Late Classic era, at least until its own epicenter was burned and presumably destroyed at the very end of the tenth century by unknown individuals. Caracol's elite utilized the spoils of war to integrate its huge population and to build and maintain a large primate city and polity (A. Chase and D. Chase 1989, 1996a, 1996b, 1998a; D. Chase and A. Chase 2000).

Despite the flurry of interest in Classic period war by Mayanists, warfare is extremely difficult to see in the archaeological record. There are any number of reasons for this. Warfare activities often leave little tangible archaeological residues (but see Ambrosino et al., chapter 7 in this volume; Brown and Garber, chapter 6 in this volume; Pagliaro et al., chapter 5 in this volume). Warfare may take place in vacant terrain. Other cultural activities may result in material manifestations that are very similar to those that would be expected to result from aggression, leading to problematic or nonconclusive interpretations of the archaeological record. Weapons and hunting items may not always be distinctive. Buildings may be burned, but the burning may be accidental or purposeful; Maya burning may as easily result from a purposeful reverential termination ritual (Pagliaro et al., chapter 5 in this volume) as from hostile aggression (Brown and Garber, chapter

6 in this volume). Artifacts found smashed on building floors likewise may be the result either of termination rituals or of rapid abandonments. Archaeological data are more often than not open to multiple interpretations with careful analysis of context providing the only potential resolution of meaning.

Notwithstanding the previously mentioned caveats, material remains of weapons and defensive systems have been recovered and reported throughout the Maya lowlands (A. Chase and D. Chase 1992; Repetto Tio 1985). While Caracol evinces no permanent fortifications, such as those noted for Dos Pilas (Demarest et al. 1997), Becán (Webster 1976a), and possibly Tikal (Puleston and Callender 1967), its archaeological record has yielded a multitude of artifactual materials that are suggestive of aggression, especially at the end of Caracol's epicentral occupation (ca. A.D. 900). Various kinds of remains are found on the floors of Caracol's buildings. Some of the artifacts, such as mace heads (found both on palace floors and in outlying residential areas at Caracol), are likely weapons based on their form. Other artifacts, such as bifacially worked points, are viewed as weapons primarily because of their archaeological context. Broken vessels on Caracol's floors (mostly epicentral palace but also in some outlying residential groups) are interpreted as the evidence of latest occupation rather than as the remains of termination rituals for a variety of reasons. They are generally found in residential as opposed to ritual areas, the recovered ceramics are predominantly residential rather than ritual debris, and the vessels are generally found unburned and broken in situ (or in localized areas) as opposed to being burnt and smashed over a large area. Importantly, the articulated bones of an unburied child on a palace floor also imply rapid abandonment and, presumably, aggressive activity. Where burning does occur, it appears as a layer over these remains, suggesting (at least to us) sacking as opposed to reverential termination. Carbon-14 dating of this burning indicates the possibility of a single event throughout most of Caracol's epicenter at about A.D. 895. Only Caracol Structure A6, the primary eastern temple in the A Group, appears to have been the locus of long-term use-related activity that included the deposition of cooking vessels and burning into the eleventh century.

Apart from the artifacts themselves, other archaeological data permit extrapolation about the potential impact of aggression. Among the data that can be considered are changing population numbers and/or the spatial location of a given population. Still other kinds of data permit the archaeological determination of changes in the degree

of a population's relative prosperity and cohesion (for a general discussion of the potential effects of successful warfare, see Otterbein 1973). While population increases or large building efforts do not directly reflect warfare and aggression, if tightly dated, these data may be correlated with historically known warfare events to reveal the potential scope and/or the effects of warfare on a local population.

Archaeology and Warfare: Caracol

Because of Caracol's rich hieroglyphic history, warfare has been the focus of two distinctive programs of the Caracol Archaeological Project. During 1988 and 1989, under the sponsorship of the Harry Frank Guggenheim Foundation, Caracol Archaeological Project research focused on testing the settlement in the southeast sector of the site during and following the Tikal-Naranjo wars (A. Chase and D. Chase 1989). This sector of Caracol is located between and to the sides of the Conchita and Pajaro-Ramonal Causeways (see figure 10.2). Following initial survey of this approximately 2.5-square-kilometer area, investigations focused on ascertaining the time of occupation, construction activities, and the indications of prosperity and cohesion within the sample. Excavations were undertaken directly in residential groups, causeways, and fields. This program of work, in combination with Jaeger's (1987, 1991, 1994) dissertation research, resulted in the testing of thirty-seven groups. Overall, recovered remains were found to date from approximately 300 B.C. to post–A.D. 900.

From 1994 through 1996, with support from the National Science Foundation, investigations focused on comparing growth, cohesion, and prosperity for the two defined epigraphic episodes of Caracol aggression (A.D. 550–700 and post–A.D. 798) in a different part of the site. Investigations focused on the systematic survey and excavation of settlement in the northeast sector of the site, mostly located east of the Puchituk terminus (see figure 10.2). Four square kilometers of settlement were transit mapped as part of this program, with 2 square kilometers being intensively surveyed to include all agricultural terraces (A. Chase and D. Chase 1998b). Excavations were undertaken in thirty-three groups with additional tests being undertaken in causeways, fields, and "vacant terrain." A chronological sequence extending from approximately 600 B.C. to post–A.D. 900 was recovered.

Significant additional information has also been derived from other investigations undertaken at Caracol that were not specifically focused on war and aggression. The current Caracol settlement map
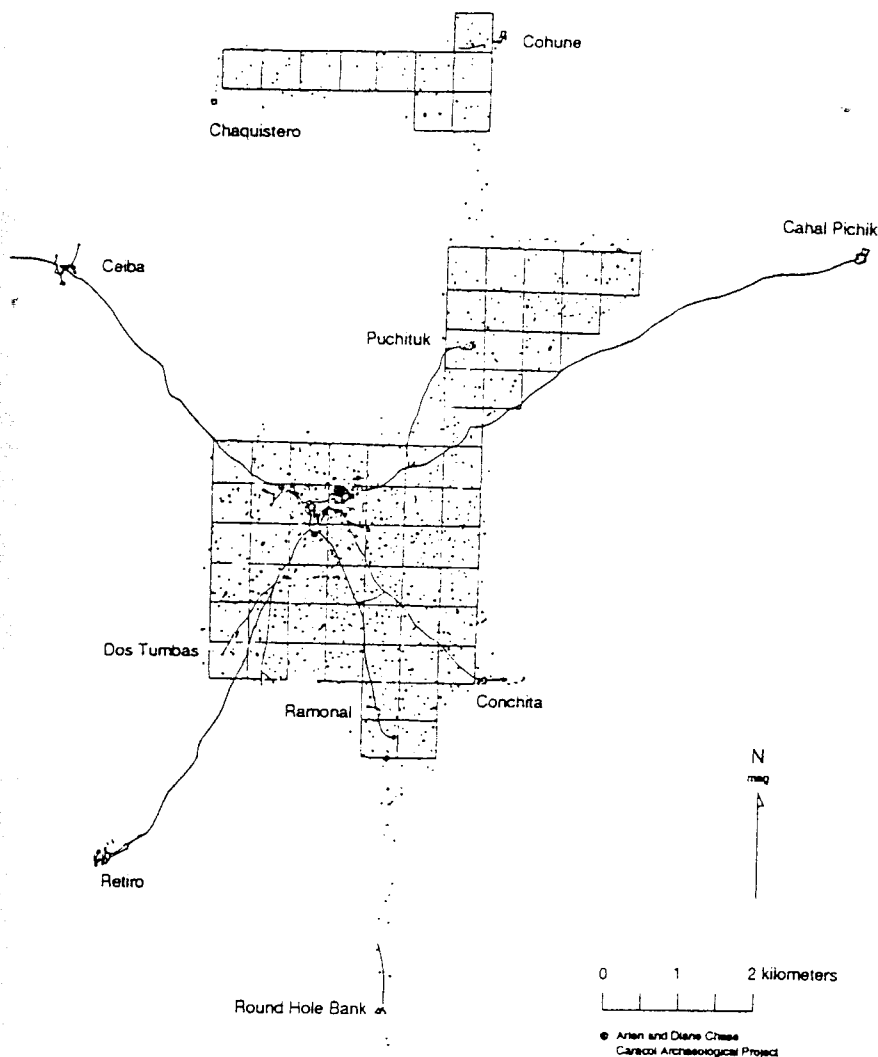
Figure 10.2   The mapped settlement of Caracol, Belize (as of 1998)

covers some 17 square kilometers out of an estimated 177 square kilo-
meters and portrays approximately 1,000 residential groups repre-
senting almost 5,000 structures (figure 10.2). Within this area, other
excavations have focused intensively on epicentral remains, exposing
several palace complexes (A. Chase and D. Chase 2001), and have also
tested thirty-eight additional residential groups that were not

included in the warfare program samples (A. Chase and D. Chase 1987; D. Chase and A. Chase 1994). In combination with the warfare samples, this work has resulted in the recovery of approximately two dozen in situ floor deposits as well as over 250 burials (D. Chase 1998) and over 200 caches (D. Chase and A. Chase 1998). By combining hieroglyphic statements of warfare with such archaeological information, it becomes possible to assess the impact and manifestations of Maya warfare at Caracol.

Caracol Warfare A.D. 550–700

Investigations indicate substantial growth, prosperity, and cohesion at Caracol following the conclusion of the Tikal-Naranjo wars in A.D. 636. There was a building boom at Caracol that included all parts of the site. Population growth is indicated by a substantial increase in residential units following A.D. 550. Elsewhere, we (A. Chase and D. Chase 1989:15) have suggested that Caracol underwent 325 percent population growth in a span of 130 years. Monumental architecture was constructed in the site epicenter at the same time that major public works projects, such as the construction of causeways and agricultural terraces, were undertaken in the surrounding Caracol core. Information suggests that much of the special function architecture found in the Conchita, Ramonal, and Puchituk causeway termini also were constructed and utilized shortly following Caracol's wars with Tikal and Naranjo (A. Chase 1998; A. Chase and D. Chase 1989, 1994a). Thus, the causeways and termini themselves may have formed important mechanisms for site integration and boundary maintenance (cf. Kurjack and Andrews 1976:323) as well as have directly resulted from successful war.

Other recovered data additionally indicate increased prosperity and cohesion throughout all parts of the site during the beginning of the Late Classic period. This is especially seen in ritual activity as expressed in caching practices and the widespread interment of the dead in tombs (A. Chase 1992; A. Chase and D. Chase 1994b, 1996a; D. Chase and A. Chase 1998). Caracol's Late Classic burial pattern, with the site's notable emphasis on interments in specially prepared chambers containing multiple individuals (D. Chase and A. Chase 1996), is distinctive from the pattern found at excavated northern Petén sites (cf. W. Coe 1990:917; Smith 1950:88–91:table 6; Haviland et al. 1985:142) and at sites in northern Belize (Pendergast 1969, 1979, 1981:38–40, 1982, 1990). Mortuary patterns similar to those at Caracol

have been noted for the settlement in the southeast Petén (Laporte 1994; Laporte et al. 1989), and it is probable that this area was under direct Caracol dominion during most of the Late Classic. The specially prepared domestic cache containers found throughout the core of Caracol (A. Chase 1994; A. Chase and D. Chase 1989, 1994b, 1996a, 1996c; D. Chase and A. Chase 1998; Jaeger 1991) are not, however, noted from this southeast Petén region, thus potentially suggesting the existence of hierarchical relationships within the broader Caracol polity (perhaps similar to those that existed in the ritual realm during the Postclassic period in the province of Chetumal [D. Chase 1986]). We have argued (A. Chase and D. Chase 1996a, 1996b) elsewhere that these distinctive burials and caches were part of an intentionally fostered Caracol identity and may well have been a key part of Caracol's successful internal organization during the Late Classic period.

Caracol Warfare Post–A.D. 798

From A.D. 702 to 798, there are no known hieroglyphic texts carved on stone monuments at Caracol. Archaeologically, however, this era is correlated with substantial continued prosperity (D. Chase and A. Chase 2000). After A.D. 798, while aggressive activity is again indicated in the monument texts, the archaeological manifestations of such warfare are different from those of the earlier episode. Specifically, there is uneven prosperity, no clear population growth, and decreased cohesion between central and outlying settlement. Substantial prosperity and monumental construction activity are evident only in the site epicenter. This is perhaps best seen in the massive rebuilding effort undertaken on the largest palace compound, Caana (A. Chase and D. Chase 1994a); its final phase dates to well after A.D. 800, and this massive complex is not abandoned until shortly before A.D. 900. Use-related debris left on the floors of epicentral palaces indicates substantial prosperity for at least the elite segment of Caracol's population (A. Chase and D. Chase 2001). Palace debris includes consistent groupings of artifactual items, including specific ceramic trade wares (including Pabellon Modeled-Carved, Trapiche Incised, Sahcaba Modeled-Carved, and Silho Orange but no slateware), jadeite, and carved bone. The palace diet continued to be good, as indicated by the extremely varied faunal remains that have been recovered (Giddens 1997) as well as through stable isotopic analysis of bone (D. Chase et al. 1998; A. Chase and D. Chase 2001). Indications that warfare may have been widespread during this era also are found both in the on-

floor remains of weapons and in the presence of an unburied child on the floor of one of the palaces (A. Chase and D. Chase 1994a). In contrast to the successful epicenter, the population in the outlying settlement only infrequently buried their dead in elaborate tombs or participated in vestiges of the earlier pan-Caracol caching practices. Unless more formal palace-type buildings are present, the outlying inhabitants also do not appear to have been included in distributions of trade wares and specific types of ceramic vessels. These data suggest a Terminal Classic breakdown in Caracol's unique and carefully crafted Late Classic social and ritual identity, a breakdown that may well have played a key role in the site's ultimate demise.

Conclusions

The research at Caracol affirms the legitimacy of hieroglyphic texts relating to the site's successful warfare but also indicates the need to use archaeological information as part of a critical methodology to test the validity and significance of historic statements. The combined archaeological and historic information indicate both the reality and the variability in Maya warfare. Maya warfare cannot be considered as a single monolithic activity. It was not merely comprised of insignificant raiding activity, as it has sometimes been portrayed (Freidel 1986a; Webster 1993). Different levels of aggression are indicated within Maya hieroglyphic texts, and it is logical to assume that more than one kind of warfare activity was practiced during the Classic period. At least in the case of Caracol, shell-star warfare resulted in the physical incorporation of Naranjo into the Caracol polity. This is amply attested to in the hieroglyphic records and in the physical presence of stone monuments celebrating Caracol's ruling dynasty at the site of Naranjo itself. Thus, Caracol's warfare during the early part of the Late Classic had a manifest territorial aspect. This successful warfare also materially benefited a large segment of Caracol's residents; it may be credited with the extension of what is normally an elite ritual realm into most residential groups at the site. These combined factors indicate that Maya warfare could be both large scale and regional in nature. This finding, in turn, has implications for how the Maya world was organized, especially as it brings the Maya into line with general military theory involving such considerations as marching distance and the maintenance of territory (A. Chase and D. Chase 1998a; D. Chase and A. Chase 2000).

We have previously used archaeological data, ethnohistorical

inference, hieroglyphic statements of aggression, warfare distance, and military theory to argue that Maya warfare could be broken into wars between primary centers and wars for border control (A. Chase and D. Chase 1998a). Border wars between primary and secondary centers that are recorded as formal star-wars had an average distance of 36 kilometers between the two antagonistic centers. In contrast, the distance between primary centers who warred with each other averaged 96.5 kilometers. Both of these distances are in accord with military theory concerning marching distance (Hassig 1992a) and suggest that Maya polities could reasonably maintain physical and territorial borders to a radius of 60 kilometers, which translates into the distance that could be effectively marched by an army in three days. The direct territorial control implied by effective marching distance, in turn, has implications for the average size of Classic Maya polities. Following the logic of this military theory, polities that were dominated by primate centers (such as Caracol) could approach a spatial size of approximately 11,300 square kilometers. Larger-size polities could have been accommodated but likely would have been correlated with hegemonic control, more like that undertaken by the later Aztecs.

Marcus (1992a:360) has stressed that Maya epigraphic texts contain selective propaganda and self-serving history and that such records should not be accepted on face value alone. Archaeological data from Caracol indicate that the site's epigraphic record of aggression in the early part of the Late Classic period is strongly correlated with stunning growth, site cohesion, and great prosperity throughout all social levels. These are all expected outcomes of successful warfare. However, relatively similar hieroglyphic and iconographic expressions may have dissimilar outcomes. Although the epigraphy and imagery would lead one to conclude that Caracol enjoyed a similar success in war at the close of the Classic period, the archaeological record indicates a far different situation. And a closer examination of the Terminal Classic hieroglyphic records finds only *chuc'ah* and *ch'ak* events with a complete lack of *hubi* and shell-star events. Thus, while the results of some forms of successful warfare are amply reflected in Terminal Classic imagery at Caracol (not only on monuments but also on molded-carved ceramics), the general Caracol populace does not appear to have benefited from warfare in the same way that it did earlier. Prosperity is evident only among the site's latest epicentral elite and not at all materially evident among the site's general populace. Thus, Caracol's cultural contexts help interpret and amplify differences that are apparent in the epigraphic statements. *Hubi* and shell-

star warfare impacted the site as a whole, while *ch'ak* and *chuc'ah* events appear to have impacted mainly the elite sector of Caracol.

In summary, warfare played a significant role in the waxing and waning of individual sites and in regional Maya political history. As indicated in the Caracol data, increased aggression appears to be a factor in transitional eras of Maya history, especially those that have been labeled the "hiatus" and the "collapse." While epigraphy permitted initial insight into Maya warfare and political relations, the diverse and variable nature of the recorded events (their impacts and their broader relationships) can be fully understood and explored only through the archaeological contextualization of the epigraphic history.

Note