

Markets Among the Ancient Maya

The Case of Caracol, Belize

Arlen F. Chase, Diane Z. Chase, Richard E. Terry,
Jacob M. Horlacher, and Adrian S. Z. Chase

There is general agreement today that the ancient Maya used markets within their communities. However, much like everything else in Maya society, there was variability in the form of these markets and in the goods that were available. In some communities, imported foodstuffs may have been necessary for local consumption and traded in markets (Dahlin et al. 2007). However, in others like Caracol, Belize, foodstuffs would not have been the primary reason for markets. Rather, given the size of the urban settlement and the need to make all kinds of goods available to the population, it has previously been suggested that specific locations were created in the landscape for more varied administrative and market transactions (A. Chase 1998; A. Chase and Chase 2001; D. Chase and Chase 2004, 2014a). Thus, many of Caracol's markets focused on trade in quotidian and prestige items that were necessary for life in the site's residential households. This paper does not replicate previous work focused on defining the evidence for the existence of markets in the Maya area or at Caracol. Instead, it presents the extant archaeology relative to the areas used for Caracol's markets and the results of soil testing on two of Caracol's causeway termini plazas, which were the probable locations of the site's markets. In combination with contextual information on scholarly thoughts about Maya markets, all of these data suggest that ancient Maya markets were likely heterogeneous, rather than homogeneous, in function.

Background

Like the concept of Maya urbanism, viewpoints about the existence of markets among the ancient Maya have been both cyclical in interpretative positions and exceedingly polarized in discussions. To some extent the preconceptions of researchers—rather than solid data—have driven the arguments (see also Eppich and Freidel, and King and Shaw, this vol.). The question about whether or not the Maya had markets has been fostered by two very different social paradigms for modeling ancient Maya society (see also Hirth and Pillsbury 2013b:9–10; King and Shaw, this vol.). One is generally based on epigraphic and iconographic interpretation, and the other is more frequently grounded in archaeological data. The result has been two internally unified but divergent views about ancient Maya economic behavior rather than exploration of the variation that existed among ancient Maya societies of the Classic period. Such contrasting positions over the complexity that was once extant in the ancient Maya lowlands have an extended history in scholarly research (Becker 1979), and similar debates appear in other archaeological contexts. The American Southwest provides a case in point. McGuire and Saitta (1996:97) critique the “oppositional thinking” that appears in archaeological interpretations about contemporary Southwest societies, specifically citing the Chavez Pass–Grasshopper debate over egalitarian and hierarchical principles in prehistoric pueblos. Chazin and Nash (2013:325) suggest that this debate was based not only in field methodology and site scale but also within different academic backgrounds and training. A very similar argument can be made for Maya researchers and their views on markets.

With the breakthroughs made in hieroglyphic interpretation and the ability of the glyphs to personalize history, an epigraphic paradigm came to the forefront in interpretations of ancient Maya sociopolitical, religious, and economic systems. This epigraphic paradigm primarily emerged from an interpretation of what is and what is not found in hieroglyphic texts and iconography. Most Maya texts and iconographic scenes lack any reference to economic matters (Tokovinine and Beliaev 2013), which led some researchers to conclude that the ancient Maya economy was not overly complex and that most items of value were obtained through a system of patronage (see Stuart 1998). What the hieroglyphic texts do reflect is an elite lifestyle centered on religion, ritual, and tradition that has been translated by modern researchers into political concerns (and intrigue) with dynasty and kingship (Martin and Grube 2000). However, the focus on the texts has also led to a very hierarchical, almost feudal, view of Classic

period ancient Maya society, complete with country estates and manor houses (Adams and Smith 1981; Ball and Taschek 2001), that focuses on patronage and argues that “highly valued craft goods were probably not exchanged in the general market” (Houston and Inomata 2009:278)—a view that would be appropriate for a society and economy that was not market based, but one that is not fully consistent with the distribution of archaeologically recovered materials.

The archaeological paradigm for the economic organization of the ancient Maya has emerged slowly, with the accumulation of more detailed archaeological data within more relevant research designs. While there are some differences of opinion and interpretation based on sizes of sites that have been worked, for the most part the archaeological data have demonstrated the existence of great variability within the archaeological record. The population numbers that are reconstructed for many large Classic Maya cities range from 30 thousand to over 100 thousand people and imply that significant management strategies had to have been in place (A. Chase and Chase 1996). Differences in social status are reflected in architectural constructions, artifactual materials, and burial practices that are found in the various residential groups at any one site. The widespread distribution of items such as polychrome pottery, smaller highly crafted artifacts, obsidian, and metamorphic rock within Maya residential groups indicates that some form of economic exchange occurred. While the archaeological record itself does not specify what the exchange mechanisms were, sometimes the density of settlement and the overall urban plan can lead to the identification of locations that had to have figured prominently in management systems related to exchange and administration.

To some extent the adversarial arguments between the two traditional positions taken by Mayanists on the existence of markets among the Classic period Maya were also driven by our conception of ancient economic systems as being limited in scope, as suggested by Karl Polanyi (1957) and adopted by many economic anthropologists (Dalton and Kocke 1983; Firth 1967; Sahllins 1972; Wilk and Cliggett 2007). Polanyi (1957) stressed that pre-capitalistic systems had different economic forms and were not driven by currency but rather by elite control; he argued that only capitalistic systems had true markets in which free exchange would have taken place. It is only with the rejection of Polanyi’s grip on economic anthropology that we have come to recognize that markets and market exchange were not only available to ancient societies but also avidly embraced in the past (Feinman and Garraty 2010; Garraty and Stark 2010; Hirth and Pillsbury 2013b; King and Shaw, this vol.).

In spite of disagreement over the ancient economic system, some Maya archaeological projects identified certain constructed features as being associated with “markets.” In the 1930s, the linear features in the plaza in front of the Mercado at Chichen Itza, Mexico (Ruppert 1952:72–74), led to their consideration as a marketplace (Dahlin et al. 2007). At Calakmul, Mexico, a large plaza area containing linear constructions on the northern edge of the site epicenter, now known as the Chiik Nahb Complex, was also identified as a potential marketplace (Dahlin et al. 2007, following Ruppert and Denison 1943), and recent iconography recovered in association with a small temple in this area portrays and hieroglyphically names vendors who would appropriately be found in an ancient Maya market (Carrasco et al. 2009; Martin 2007, 2012). Similarly, at Tikal, Guatemala, the University of Pennsylvania project identified a complex double-quadrangular structure with a central, open plaza in the East Plaza as a market (W. Coe 1967:73; C. Jones 1996, this vol.) but could not demonstrate that it functioned as one with the archaeological data. Unstated in each of the above examples was the idea that each Maya center had a single central market (see also Dahlin et al. 2010:220). This inference was probably generated both from prior knowledge about the existence of the great Aztec market for Tenochtitlan at Tlatelolco that is well-known from ethnohistory (e.g., M. E. Smith 1980:878) and from conservative interpretations derived from very limited settlement samples (A. Chase and Chase 2003; A. Chase et al. 2014a). Until the advent of LiDAR, it was not possible for researchers to document completely the sizes of Maya cities (A. Chase et al. 2011). While the centers of many Maya cities were mapped, their full spatial extent was largely unrecognized, meaning that the scope and scale of their economic systems were more difficult to define. Because the mapped sample was skewed, interpretations tended to correlate with central nodes rather than with spatial landscapes.

In spite of the limitations of both the epigraphic and archaeological data, a growing number of researchers have embraced the concept that markets must have existed among the ancient Maya (A. Chase 1998; D. Chase and Chase 2004, 2014a; Dahlin et al. 2007; Masson and Freidel 2002, 2012; Shaw 2012; West 2002). The evidence used to demonstrate the existence of Maya markets has been primarily predicated on four sets of data (see also Shaw 2012): (1) spatial location in the landscape (A. Chase 1998; A. Chase and Chase 2001, 2004; D. Chase and Chase 2004); (2) chemical soil testing of vacant space appropriate for market exchange (Dahlin et al. 2007, 2010); (3) the association of plaza spaces with “gallery structures and/or small, usually crude alignments of structures

approximating the size of market stalls” (A. Chase and Chase 2004; Dahlin et al. 2010:220), such as are found at Calakmul and Tikal, as well as in the southeast Petén of Guatemala at Ixtutz and Pueblito (A. Chase and Chase 1983; Laporte and Chocón 2008); and (4) the distribution of artifactual materials at Maya sites (D. Chase and Chase 2014a; Masson and Freidel 2012), using the distributional method for identifying market forces pioneered by Kenneth Hirth (1998, 2009b, 2010) for the site of Xochichalco, Mexico.

Conditions for Markets, or Why Markets?

The landscape at the Maya site of Caracol, Belize, is anthropomorphic, covered by both agricultural terracing and by regularly spaced residential units. Agricultural terracing at Caracol is ubiquitous, covering most of the site’s landscape (A. Chase and Chase 1998; A. Chase et al. 2013) and indicating the continuous production of crops and other needed plants at the site (D. Chase and Chase 2014b). The residential groups at the site are also fairly evenly spaced over the landscape, ranging from 50 to 200 m distant from each other. Where there are no residential groups, there is terracing. Thus, the landscape is completely infilled with constructed features, and one key integration mechanism at the site took the form of a radial causeway system that links the Caracol epicenter with a regularly distributed series of architectural complexes and open spaces (A. Chase and Chase 2001).

Mapping at the site suggested that ancient occupation covered an area of minimally 200 km² (A. Chase and Chase 1994, 2001; D. Chase and Chase 2004), and the use of LiDAR conclusively demonstrated the extent of this settlement (A. Chase et al. 2010, 2011, 2014b; D. Chase et al. 2011). These same LiDAR data also showed that this landscape was consistently populated. Over 9 thousand residential groups once comprised the outlying settlement for Caracol. All 150 residential groups thus far tested at Caracol show evidence of having been occupied during the Late Classic period (C.E. 550–800). Given the widespread sampling, the Late Classic settlement focus and these occupation levels can be applied across the entire site. Most of Caracol’s residential groups are comprised of multiple structures and a mortuary shrine (A. Chase and Chase 2014). Given current and historic Maya residential practices (Wilk 1998; Willey 1981), it is likely that these *plazuela* units were occupied by extended families. Applying conservative population figures to these groups and assuming that

they were occupied only by an extended family unit indicates that over 100 thousand people co-existed in this region during the Late Classic period (even applying the standard Maya nuclear family figure of 5.6 people to each residential group, and not to each individual structure as is traditionally done in Maya settlement studies [see Culbert and Rice 1990], results in a calculation of 50,400 people). Thus, the question must be raised as to how this large number of people was both integrated and provisioned. The causeway system provided the means for effective communication, transportation, and integration at the site. The provisioning was accomplished through the ubiquitous agricultural terracing (A. Chase and Chase 1998) combined with a system of markets (D. Chase and Chase 2014a).

Evidence for a market economy at Caracol is present in both the production and distribution of the site's artifacts. Archaeology has demonstrated the widespread distribution of a wide variety of archaeological ceramics and artifacts in each residential group. The Caracol research has also shown that there was specialized household production of craft items in most residential groups. However, it is also clear from the archaeology that most of the quotidian items like pottery and ground stone that were used in these households were not manufactured by the occupants of the residential groups. While some items were presumably produced locally, others were brought into the site. Plentiful obsidian from the Guatemalan highlands was entering the Caracol area, and it is represented in almost all excavated residential groups. Ceramics, like Belize Red, that were manufactured at least 80 km away are well represented also in most of the site's residential groups, both in special deposits and in construction fill. Jadeite occurs in over 45% of all residential groups (n=54 of 118) tested at Caracol, even though many were only tested by means of one or two plaza tests measuring 1.5 x 1.5 m. So the question becomes, how were such quotidian and prestige items being obtained and distributed?

The Caracol Market System

In a previous paper (D. Chase and Chase 2014a), we discussed markets and the economic integration of Caracol. In that paper, following the work of Hirth (2009), we used configurational, distributional, and contextual approaches to outline the rationale and evidence for identifying both the presence and location of markets at Caracol. Factors considered included the site's population and density, the differentiation in surplus household production (based on the excavation of chert, obsidian, shell, ceramic,

and bone artifacts) rather than elite-controlled production, the contrasting homogeneous distribution of finished artifacts (ranging from polychrome cylinders to Belize Red tripods), and the evidence for household agricultural self-sufficiency. These factors suggested, among other things, that markets might contain varied inventories and that termini markets (in contrast to epicentral ones) were more likely to contain household-produced or trade items. They were also less likely to be focused on staple subsistence commodities. This paper is not intended to replace our earlier paper or to replicate its contents. Rather, the goal is to enhance the discussion of ancient Maya markets by describing excavations in Caracol's proposed termini market areas and exploring the results of geochemical analyses of their soils. This work further shows the integrated nature of Caracol's economy and reinforces the idea that ancient markets—much like modern markets—served slightly varied purposes and, importantly, that some of these markets were not associated with the exchange of foodstuffs.

At Caracol, the causeway system provided the easiest transportation route for moving people and goods throughout the various parts of the site (Fig. 8.1). The most likely focal points for the distribution of goods were the large open plaza areas at the ends of the Caracol causeways (Figs. 8.2, 8.3, and 8.4). The fact that Caracol's landscape was so infilled with settlement and terracing by the middle of the Late Classic period meant that it was more than likely that the causeway system formed the skeleton for Caracol's economic well-being—and, thus, also provides some insight into the workings of the site's economy. This skeleton is dendritic and links large plaza areas directly to the site epicenter. Thus, in overall appearance, Caracol appears to be a constellation of solar markets (C. Smith 1974, 1976b). Because of the apparent epicentral control of the outlying plazas, we previously have referred to this as an “administered economy” (A. Chase 1998; A. Chase and Chase 2004).

Based on mapping and survey, we were able to identify special plaza areas at seven causeway termini by 2004. Two rings of termini were identified. The termini from 4.5 to 8 km distant from the epicenter generally represented once-independent centers that had been engulfed by a burgeoning Caracol population (A. Chase and Chase 2001)—and all of these centers exhibited “add-on” plazas that could have served as potential markets (Figs. 8.2 and 8.3). Three other termini—all focused on large plazas—were located closer to the epicenter (Fig. 8.4), being only 3 to 3.5 km distant; they are all discussed below. Block mapping of the settlement between this inner ring of termini and the site epicenter clearly revealed how embedded each node was within the settlement matrix. Excavation

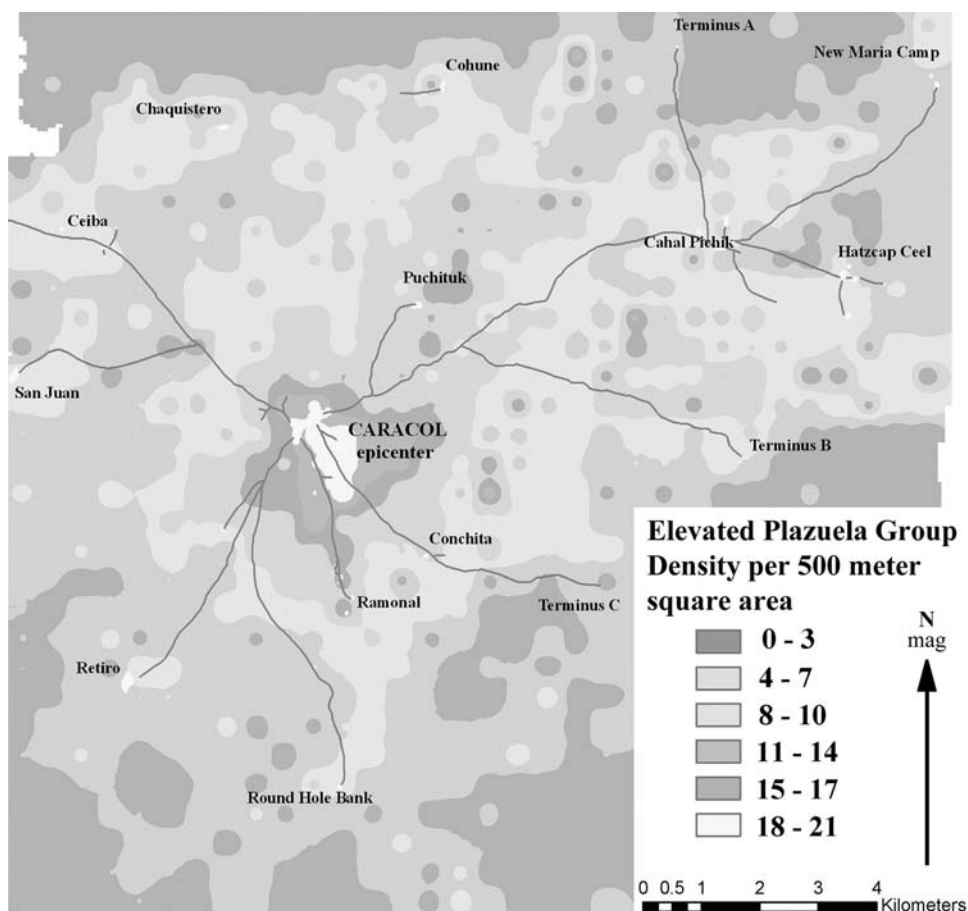


Figure 8.1. Digital Elevation Model of Caracol area showing the site's dendritic causeway system, the location of its termini, and an approximation of its settlement distribution based on elevated residential groups ($n=4,786$ or approximately half of estimated residential groups at the site; after A. Chase et al. 2011:fig. 11)

within each of the three termini closest to the site epicenter demonstrated that they were apparently constructed in the early part of the Late Classic period (i.e., between C.E. 550 and 650). All three of the first ring termini were archaeologically tested between 1989 and 1996, and in 2012, two of the first ring termini were also soil tested for chemical residues.

Excavations in the three causeway termini demonstrated several things. First, there was hardly any artifactual debris in association with the

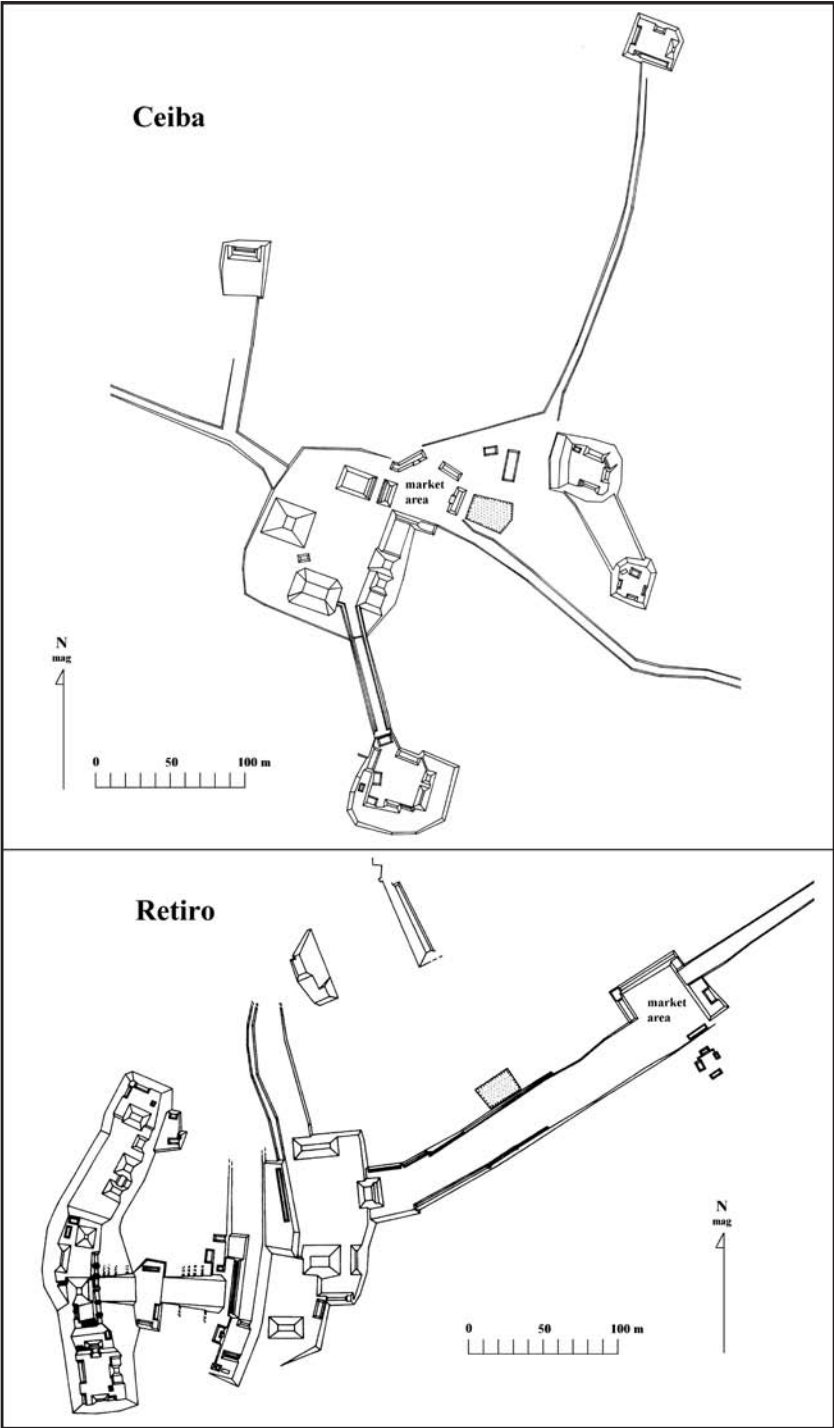


Figure 8.2. The Ceiba and Retiro Termini, showing the locations of the “add-on” markets to once-independent centers that were absorbed into Caracol’s urban system

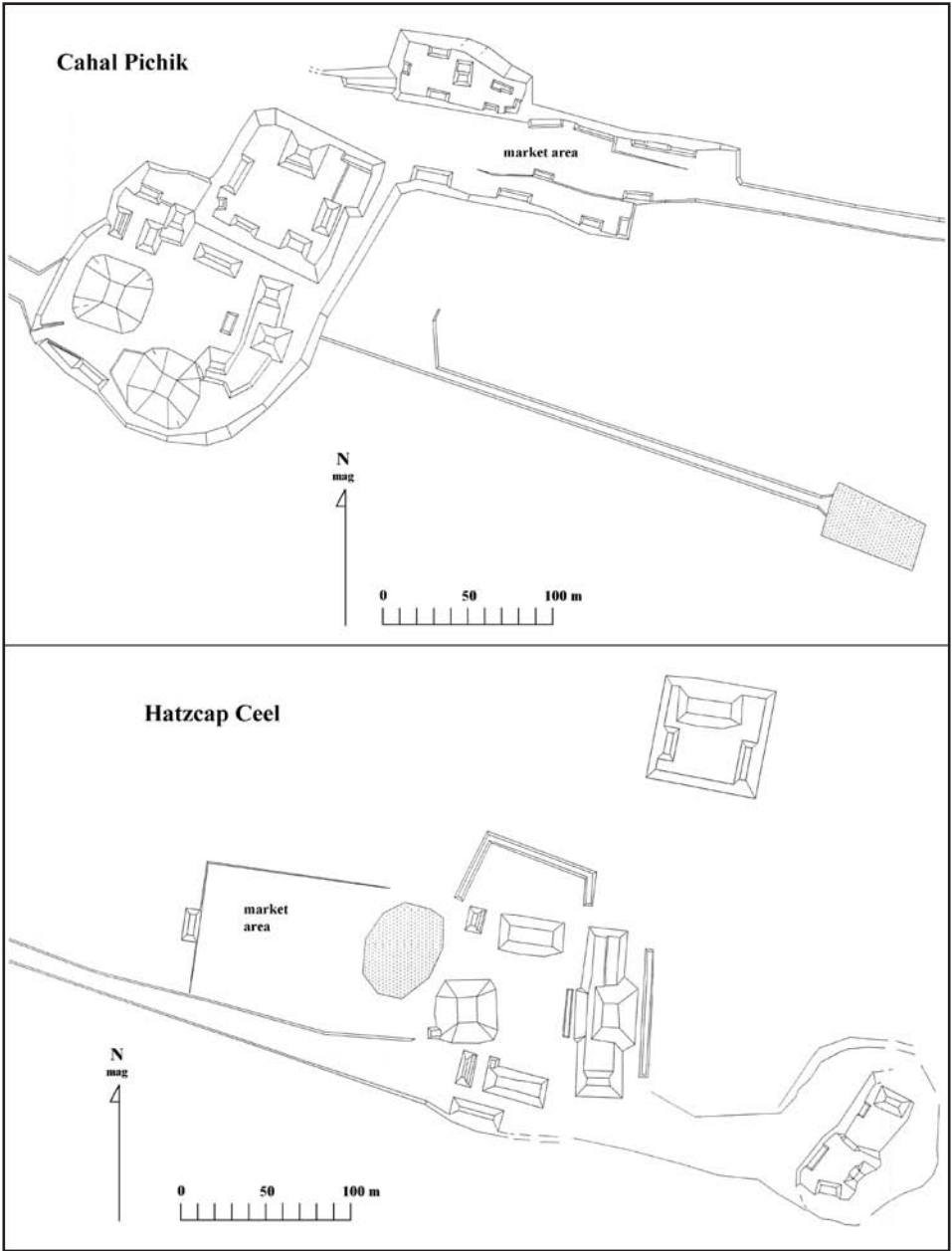


Figure 8.3. Plans of Cahal Pichik and Hatzcap Ceel Termini showing locations of suspected market areas (after Morris 2004 with modifications by the Caracol Archaeological Project)

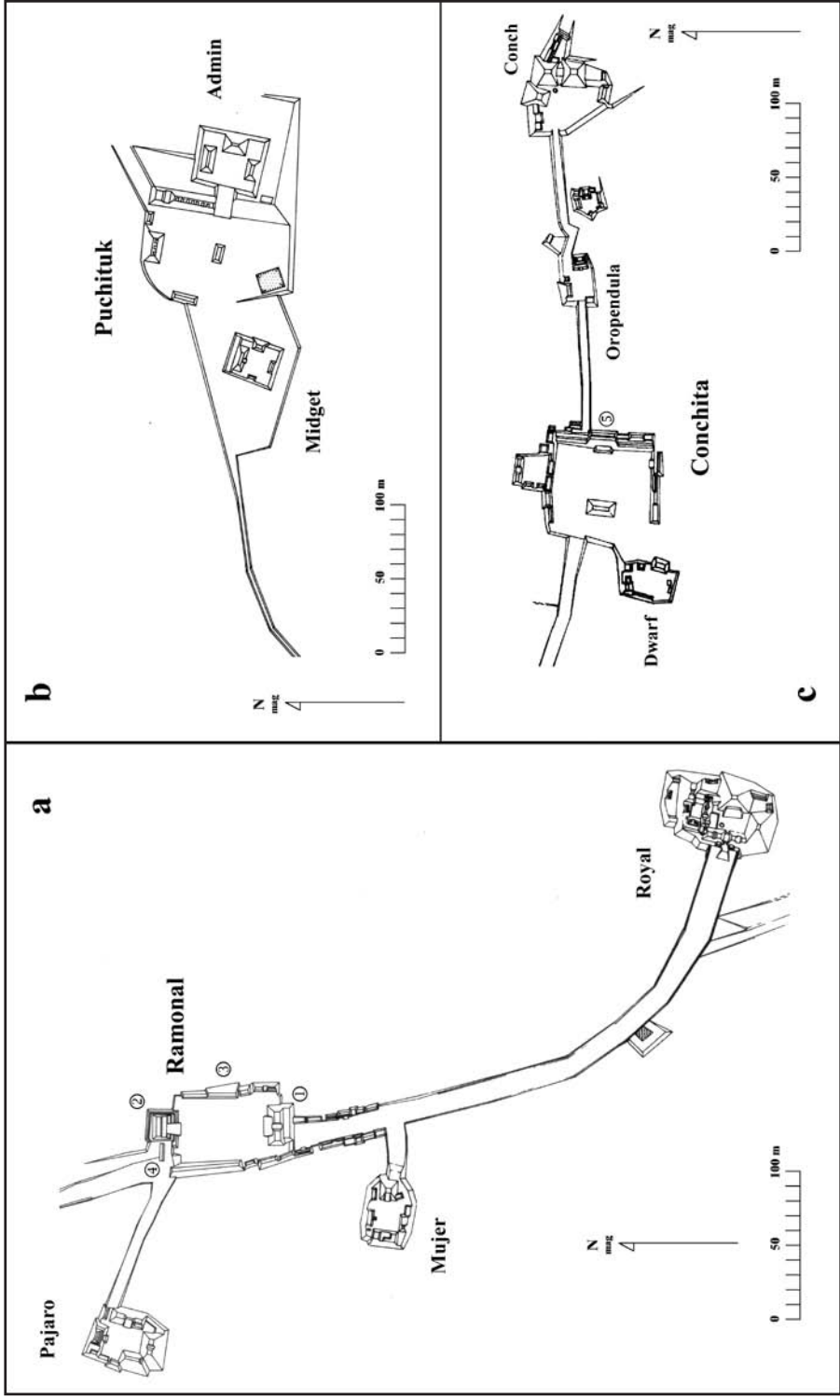


Figure 8.4. The Ramonal, Puchituk, and Conchita Termini, representing plazas that were purposefully constructed in the Caracol settlement landscape at the beginning of the Late Classic period to serve administrative and economic purposes

structures and the open plazas. There also did not appear to be any deposits associated with the structures that bounded the plazas. Thus, the first ring of causeway termini plazas was composed of large open spaces that were ostensibly for civic use (e.g., M. L. Smith 2008:220). As is shown here, their positioning on the landscape in a regularized fashion also implies that specific civic uses were made of these spaces within urban Caracol.

Ramonal Plaza

The Ramonal Plaza is located 3 km south-southeast of the Caracol epicenter (Fig. 8.4a). It measures 55 m east-west by 75 m north-south. Long low platforms that would have supported perishable buildings line its eastern and western sides; its southern and northern sides are defined by large elevated platforms that also supported perishable buildings. The structures that surround the plaza bound an open space of 3,209 m². The Ramonal Plaza is directly connected to the Caracol epicenter by a 10 m wide causeway that connects the northwest corner of the plaza to the northeast corner of Reservoir A and the South Acropolis. A broad 20 m wide causeway connects the Ramonal Plaza to a hilltop residential complex (Royal) 500 m to its south; where this causeway leaves the southwestern corner of the plaza, it is bounded on either side by small buildings (ca. 3 to 4 m in length), possibly serving as stalls, that act like a “balustrade.” These constructions end at a spur causeway that runs west and connects another high-status residential group (Mujer) to the causeway system. One other high-status group (Pajaro) is connected by causeway to the northwest corner of the Ramonal Plaza.

During the 1986 field season, a large quantity of artifactual materials was recovered from looters' excavations into the various groups that are connected by causeway to the Ramonal Plaza. Two looted tombs in the eastern building of the Pajaro residential group produced 14 ceramic vessels, all dating to the Late Classic period. A looted tomb from the Mujer residential group was associated with 16 ceramic vessels and again dated to the Late Classic period. The looted eastern structure in the Royal residential group also yielded 3 vessels from an early Late Classic painted chamber. As all of these groups are directly connected to the Ramonal Plaza causeway system, these looted deposits serve as a good proxy for the early Late Classic dating of this architectural terminus, a fact also borne out in the archaeological excavations that were undertaken in the plaza.

During the 1988 field season at Caracol, excavations took place in four different locations associated with the Ramonal Plaza. A test excavation

(2 x 2 m) was placed in the plaza on axis to the southern building, Structure 4P24. Basal (2 x 3 m) and summit (1.7 x 6 m) trenches were excavated on the axial line of Structure 4P18, the northern building. Two eastern platforms were also dug. Structure 4P20 was axially trenched (2 x 6 m) and Structure 4P17 was areally excavated (6 x 7 m). These investigations yielded few artifactual remains and even fewer sherds. The sherd material sealed within the cores of the two buildings largely dated to the early part of the Late Classic period; however, a single late Late Classic figurine fragment in the sealed substructure fill of Structure 4P18 suggests that this building had its summit elevated after its original construction. Excavations in the plaza showed that bedrock was not too far below the surface in all three areas tested (from 24 to 58 cm) and that there were not multiple plaza floors, but rather only a single eroded surface. Both Structures 4P18 and 4P20 evince facings suggestive of having supported perishable buildings. Structure 4P17 also had once served as a foundation for a perishable range structure, revealing a single-unit line-of-stone construction with a frontal platform that faced the plaza.

During the 2012 field season, the Ramonal Plaza was tested for soil chemical residues of human activities (Fig. 8.5) as an extension of earlier research pioneered by Bruce Dahlin and his colleagues (2007, 2010) relative to the recognition of ancient Maya markets. The specific elements that were tested were Mehlich extractable phosphorus (P), DPTA extractable zinc (Zn), and DTPA chelate extractable iron (Fe) (Horlacher and Terry 2013). Mehlich extractable P is associated with the accumulation of plant material on soil particles and often used as a proxy for once-extant organic refuse residues (see Terry et al., this vol.). Research elsewhere in the Maya area has shown that extractable Zn levels “correlate to a certain degree with middens” as well (Eberl et al. 2012:436). While issues exist in using only extractable P to interpret middens (Eberl et al. 2012:436), the co-occurrence of both P and Zn may serve as a good proxy. No discernable patterns of elevated P concentrations were found in the Ramonal Plaza; rather, the distribution of P concentrations appears along and just outside the edges of the plaza, and the levels were very low. Similarly, there were no linear patterns in the Zn concentrations in the plaza. While P and Zn were correlated in this location, the lack of organization in the geospatial distribution of these chemical extracts may indicate that the processing or trade of foodstuffs was not the focus of activities here. The distribution of extractable iron (Fe), believed to be associated with mineral pigments and workshop activities, is suggestive of unknown anthropogenic activities and has a strong negative correlation with extractable Mehlich P and DTPA

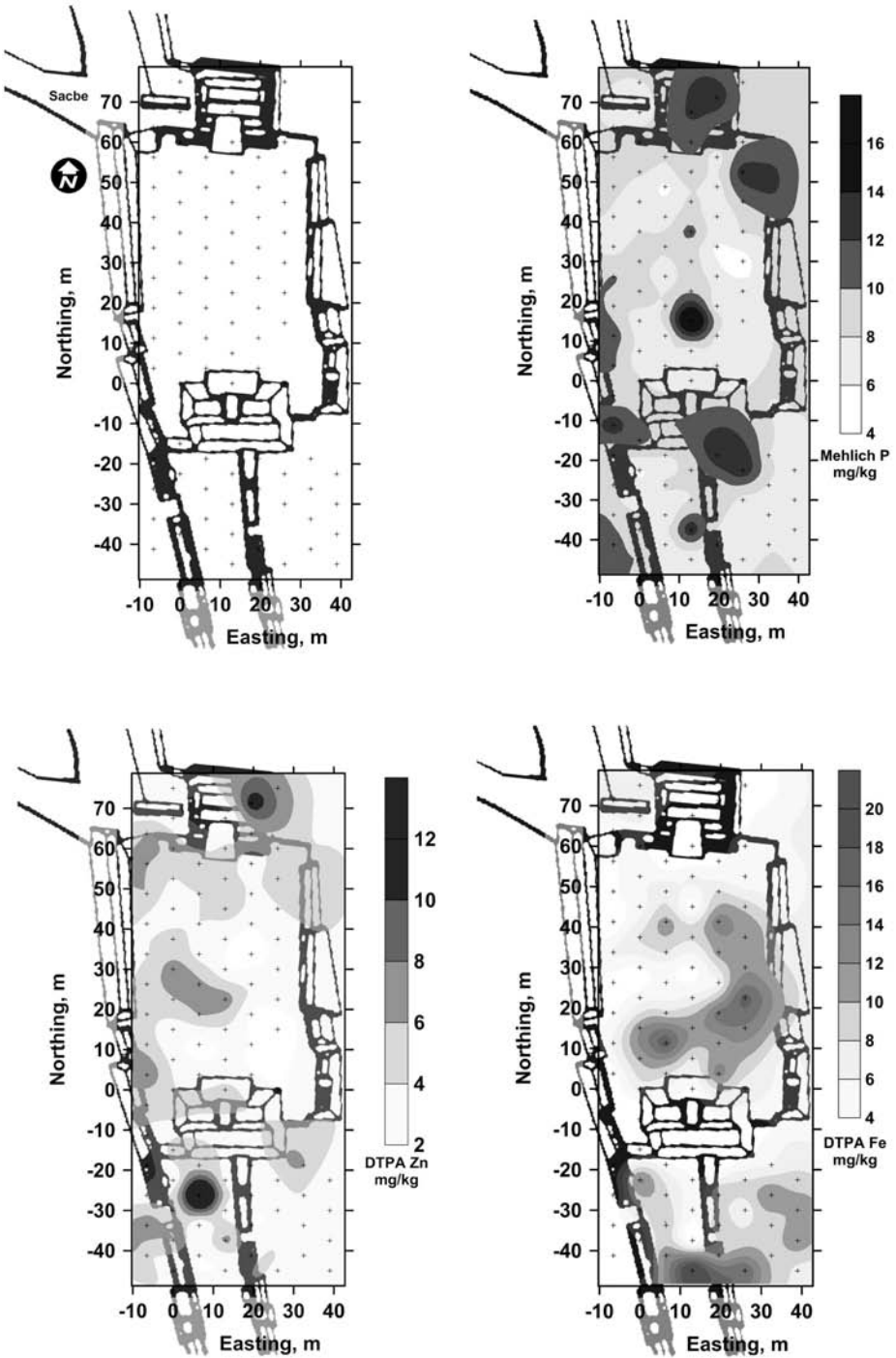


Figure 8.5. Geochemical testing of soils associated with the Ramonal Plaza of Caracol, showing sampling strategy and distributions of Mehlich extractable P, DTPA extractable Zn, and DTPA extractable Fe (after Horlacher and Terry 2013)

Zn. The elevated concentrations of both extractable and total Fe in the southern and eastern sections of the Ramonal Plaza and in the area south of it were likely caused by ancient anthropogenic activities. The geophysical area that may be consistent with ancient marketplace activity involving organic and non-organic materials occurs south of the Ramonal Plaza in the causeway area that is bounded by the small linear buildings or stalls. Thus, both the geochemical tests and the architectural forms immediately south of the Ramonal Plaza might support the use of this area for commercial activities, something that future testing should demonstrate.

Conchita Plaza

The Conchita Plaza measures 78 m north-south by 72 m east-west and is located approximately 3.5 km southeast of the Caracol epicenter at the base of a very steep hill. The plaza is directly connected to the epicenter by a 5 m wide causeway that broadens slightly at its entrance into this termini complex. The Conchita Plaza encompasses 3,770 m² of open space and is ringed on three sides by single-room low range structures; a single taller free-standing range building is situated in the western portion of the plaza (Fig. 8.4c) and may have functioned for administrative purposes (see Becker, Jones, and Shaw and King, this vol., for discussions of similar structures in ethnohistoric contexts). A smaller plaza, encompassing an additional 288 m² of space and with several additional low range buildings, is attached to the main Conchita Plaza but formed a more private, non-residential area—perhaps one that could have been monitored for high-value items.

A causeway from the Conchita Plaza runs to the east up a steep hill through one residential group (Oropendula), ending in a large looted elite residential group (Conch) just below the hill's summit (Fig. 8.4c). Excavation in the first residential group encountered a cache and sherd material dating to the early part of the Late Classic period. Some three dozen ceramic vessels spanning the Late Classic period were recovered in association with the three looted tombs in the elite residential group at the end of the hillside causeway. Yet one more residential group (Dwarf) is attached to the southwest corner of the Conchita Plaza; excavation here also encountered a tomb and multiple cache vessels that, again, all dated to the Late Classic period. Thus, the Conchita Plaza was clearly in use during the entire Late Classic period.

A single test excavation, measuring 2 x 2 m, was placed in Conchita Plaza on axis to and in front of the eastern Structure 4L38 during the 1989

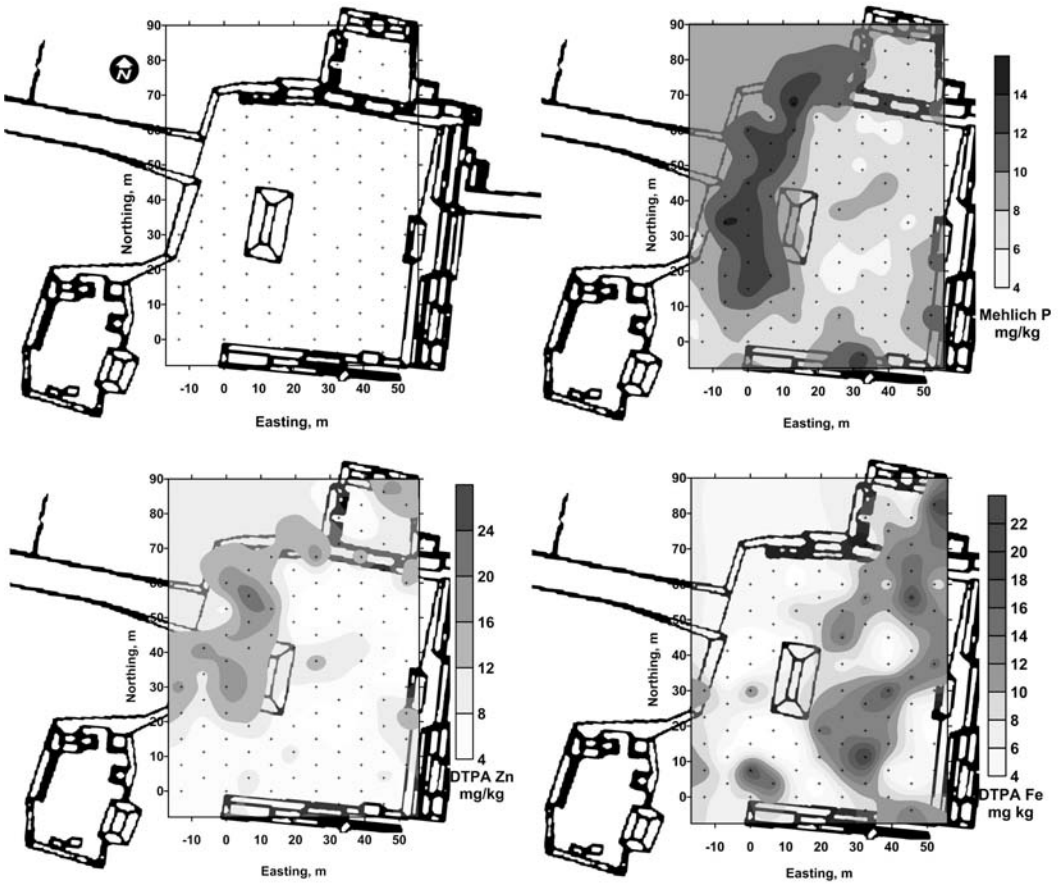


Figure 8.6. Geochemical testing of soils associated with the Conchita Plaza of Caracol, showing sampling strategy and distributions of Mehlich extractable P, DTPA extractable Zn, and DTPA extractable Fe (after Horlacher and Terry 2013)

field season. This excavation encountered bedrock at 48 cm below the surface and only recovered three sherds. Investigation of the heavily looted taller range structure in the same plaza showed it to have been built of dry core fill and did not reveal any artifactual materials that could be directly dated.

The Conchita Plaza was also geochemically tested during the 2012 field season (Fig. 8.6). Like the Ramonal Plaza, soil testing was done relative to Mehlich extractable P, DTPA extractable zinc (Zn), and DTPA chelate extractable iron (Fe) (Horlacher and Terry 2013). Mehlich extractable P

showed a strong linear pattern west of the western structure in the Conchita Plaza. Similarly, DTPA extractable Zn is concentrated in the same west and slightly northern portion of the plaza. The combination of these two isopleths (P and Zn) between the *sacbe* entrance to the plaza and the central western structure provide strong evidence for ancient foodstuffs having once been traded in this area. The DPTA extractable Fe concentration was correlated with the east and south side of the Conchita Plaza, possibly indicative of a trade in workshop goods in this portion of the Conchita Plaza; the robust correlation between the geospatial distribution of chemical concentrations related to the architecture in the Conchita Plaza strongly suggests that its distribution is related to ancient anthropogenic activities (either trade of mineral workshop items or structures that were once painted with Fe pigments). The clear change in chemical signatures on either side of the Conchita Plaza indicates that the activities once undertaken in this plaza were spatially separated in terms of tasks or economic activities.

Puchituk Plaza

The Puchituk Plaza is located 3 km northeast of the Caracol epicenter atop an elevated ridge (Fig. 8.4b); a causeway that is no more than 3 m in width links this plaza to the Cahal Pichik causeway just west of the Plaza of the Two Stelae. The Puchituk Plaza measures 86 m north-south by ca. 55 m east-west and contains a large constructed reservoir and a central range building (like Conchita). Other range buildings line the northern, western, and eastern sides of this plaza. The plaza itself has 4,620 m² of space. An elite complex with stone buildings is also attached by a broad causeway to the eastern side of this plaza (Admin); excavations in this complex recovered a carved stela, Caracol Stela 23, that was badly flaked but that stylistically dates to the early part of the Late Classic period.

Excavations associated with the Puchituk Plaza were undertaken in 1994 as part of a National Science Foundation settlement pattern program. A single excavation, measuring 2 x 4 m, was placed atop the eastern range structure, which was approximately 1 m in height, and revealed a well-plastered floor that rose in three slight steps, each approximately 1 m deep, from west to east and abutted a rear base wall. This kind of floor would be suitable for displaying goods but not for occupation. Within the vicinity of the Puchituk Plaza, investigation was undertaken in two residential groups. As noted above, the larger structures in the Admin Group immediately east of the Puchituk Plaza were investigated and revealed

well-finished stone buildings, Caracol Stela 23, and finger caches. The residential group immediately west of the Puchituk plaza, named Midget, produced burials and deposits that dated to the early Late Classic period. The dating for these groups is consistent with an early Late Classic establishment of the Puchituk Plaza. No geochemical soil analysis has been undertaken for this plaza.

Operationalizing Markets at Caracol, Belize

The market system that is in evidence at Caracol apparently developed at the beginning of the Late Classic period. This can be deduced from archaeological excavations in several ways. First, in some cases the causeways connecting the Conchita, Puchituk, and Ramonal Plazas (Fig. 8.4) to the Caracol epicenter had been built over pre-existing agricultural terracing, indicating that the landscape was already in use before the transportation routes were established. Second, investigations of the Conchita, Puchituk, and Ramonal Plazas revealed no materials earlier than the Late Classic period and no ritual deposits associated with these broad spaces. Instead, it appeared that all three of these plazas were inserted into the landscape at the beginning of the Late Classic period during a time when Caracol's population increased exponentially as a result of successful warfare. Third, high-status residential groups directly connected to these three plazas all appear to have been occupied and constructed during the Late Classic period. Fourth, large architectural complexes in the vicinity of the termini plazas appear to have been built in the Early Classic period (C.E. 250–550) but were apparently bypassed by the later causeway systems. In particular, two architectural complexes, Tulakatuhebe south of the Ramonal Plaza and Talking Trees west of the Conchita Plaza, are massive and represent some of the largest architectural constructions outside the epicenter, yet neither complex is linked to the causeway system. Thus, it appears that the purposeful placement and construction of Caracol's inner ring of markets reoriented the urban organization of the site after the onset of the Late Classic period. The placement of these markets on the Caracol landscape resembles what Garreau (1991) identified as edge cities, where specific architectural complexes relative to administration and economic purposes were placed in such a way as to provide support to suburban populations, as are found at Caracol (A. Chase et al. 2001; D. Chase et al. 2011).

Similarly, the identified market spaces at Ceiba and Retiro to the west (Fig. 8.2) and at Cahal Pichik and Hatzcap Ceel to the east (Fig. 8.3; see

Fig. 8.1 for locations within the site)—all formerly independent centers incorporated into Late Classic urban Caracol—are all potential “add-ons” that would have functioned in much the same way as edge cities (Figs. 8.2 and 8.3; A. Chase and Chase 2007:67; A. Chase et al. 2001; D. Chase and Chase 2014a). The market plaza at Ceiba was placed adjacent to the northeast corner of the main—and already existing—plaza at the site, being also situated precisely at the junction of the Caracol-Ceiba causeway and the Ceiba-La Rejolla extension. At Retiro, the market plaza was created at the eastern end of a broad causeway area and then connected directly to the Caracol epicenter. Like Ceiba, Cahal Pichik’s market plaza is appended to the northeast corner of the main plaza and brackets what becomes the causeway to Hatzcap Ceel. Hatzcap Ceel’s market plaza is located immediately west of that site’s large reservoir and north of the Cahal Pichik causeway as it enters the main architectural plaza at Hatzcap Ceel. Thus, the location of all of these areas was clearly secondary in their conception and likely established at the beginning of the Late Classic period. While there were surely Early Classic market areas within broader Caracol, the system appears to have been formalized at the beginning of the Late Classic period.

There is a broader question about the role that markets served within the Caracol economy. Modern markets are venues for individuals to purchase a wide variety of foodstuffs. However, given that most of Caracol’s households would have been largely self-sufficient because of the fields and gardens that surrounded the residential plazas, it is likely that Caracol’s markets facilitated the distribution of a wide variety of goods beyond basic staples. Limited foodstuffs and specialized food items also may have been available in these venues—but so too were ceramics, lithics, shell, and other products, both finished and unfinished.

The geochemical soil testing for markets was designed for the site of Chunchucmil, Mexico (Dahlin et al. 2007), where the importation of foodstuffs must have occurred, given both the poor agricultural soils in the region and the settlement size and density (Dahlin et al. 2005). For this ancient Maya city, markets would have been venues that handled significant amounts of foodstuffs for the general population, and it would be to some degree expected that chemical residues would have approximated a modern Maya market. However, the Caracol market system is embedded within an agriculturally productive landscape (A. Chase and Chase 1998; D. Chase and Chase 2014b) that was capable of supporting the large population that occupied the site (Murtha 2009). Thus, the trade in foodstuffs was probably not as extensive as it may have been at Chunchucmil and

other sites. Certainly, specialized food products would have been brought to markets and made available, but the bulk food items were likely only available in certain locations (as is indicated in the geochemical evidence above). Given the large number of market plazas at Caracol, it also would not be unusual to expect that certain market plazas offered a variety of specialty items that were not available in other than the central markets of the city center. Thus, it is to be expected that there would be different geochemical signatures in each of Caracol's market plazas that provide some idea of the wide variety—and differences—of potential activities that could have occurred in each location.

Dahlin and his colleagues (2010:220) have suggested that there is specialized architecture, specifically gallery structures and stone alignments forming stalls, associated with markets. Within architectural terminology, we prefer the use of the word “range” to “gallery” because a “range” structure has only a single room that is broken into units and “gallery” buildings may have tandem rooms; the buildings that ring Caracol's termini plazas appear to have consisted of single rooms. The existence of “stalls” at Caracol is not correlated with the plaza spaces themselves, as is argued for Chichen Itza, Pueblito, and Chunchucmil, but rather with the causeways that attach to the large plaza spaces. At several places within Caracol, it is clear that small stone base-wall buildings that could have formed “stalls” existed. These small platforms are raised, are small (usually ca. 2 to 4 m broad) in size, and are usually set right next to each other in rows, acting as balustrades for causeways in at least two cases; visual inspection of some of these small collapsed structures suggests interior spatial division. Such features are found along the Conchita causeway immediately before it enters the Caracol epicenter (Fig. 8.7). In particular, the features on the south side of the causeway are very suggestive of small collapsed rooms; the features on the north side of the causeway meld with a boundary wall, which is broad enough to have supported small perishable buildings astride its top. Similar small raised buildings, or potential stalls, occur on either side of the causeway leading out from the Ramonal Plaza to the sizeable residential group referred to as “Royal.” A series of small raised platforms are also in evidence in the presumed market area immediately north of Cahal Pichik that joins with the causeway running to Hatzcap Ceel (Fig. 8.3a). Finally, small raised platforms, or stalls, may also be in evidence along the broad causeway running from the Retiro market plaza to the old Retiro central “ceremonial” plaza. It is important to note, however, that not all termini appear to be associated with these features and that these raised and usually joined constructions appear

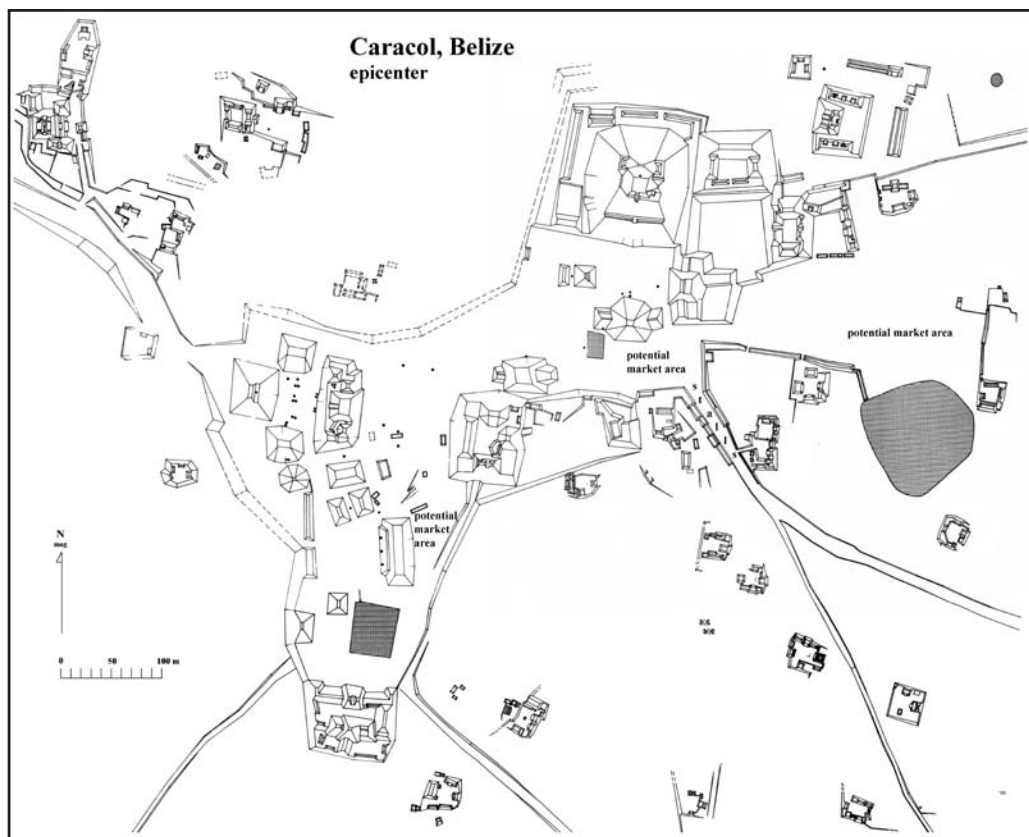


Figure 8.7. Rectified map of epicentral Caracol (after A. Chase and Chase 1987) showing where potential markets are thought to have been located as well as the linear platforms or “stalls” lining the Conchita causeway where it joins the epicenter. These small platforms have not been excavated, but visual inspection suggests interior features within the collapse.

to be more formal than the simple stone alignments noted at Chichen Itza, Chunchucmil, Pueblito, and probably Ixtutz (A. Chase and Chase 1983). Importantly, however, the ancient use of space need not mirror the contemporary use of space. Unlike the modern regulated markets, it is not evident that stalls would be linear, fill entire plazas, or be permanent in nature, as Hirth (1998:453) has noted relative to periodic markets. The Caracol archaeological and geochemical data fill an important gap in our understanding of the relationship between ancient and modern markets—and their differences.

The association of permanent range or gallery structures with markets is consistent with ethnohistoric descriptions of markets in the Yucatán Peninsula (A. Chase 1998; A. Chase and Chase 2004) and is found in the formal constructions of gallery or “arcade” buildings at Tikal in the East Plaza and presumably in the rock alignments of Calakmul’s Chiik Nahb Complex. The structures that line Caracol’s termini plazas probably formed similar single-room arcade-like buildings. Range buildings definitely were constructed at all three of Caracol’s inner-ring termini. The Ramonal plaza has tall range constructions on its north and south sides with lower range constructions on its east and west sides. It is suspected that the taller range construction may have had administrative purposes, while the lower range structures articulated with the market plaza. The Conchita plaza has a tall range construction within the plaza on its western side and lower range structures on its southern, northern, and eastern sides; a smaller attached plaza to the north is also bounded by low range structures. Similarly, the Puchituk plaza is characterized by range constructions on its northern, southern, and eastern sides. Generally, these structures may have had a low rear base-wall and were situated on slightly elevated substructures, but they were not vaulted buildings. However, they are raised and some evince tiered floor space. Given the distance between the tiers, the space would be ill-suited for residential purposes, but would have been ideal for storing and/or showcasing goods. Thus, there is replication in the form of suspected markets at Caracol in the combination of large plazas conjoined with low range structures. Caracol’s market complexes may in fact have been more formally constituted than markets identified at many other Maya sites.

The large “elite” residential households that are associated with the causeway termini, which are usually directly connected to the termini by means of a separate causeway, strongly suggest that there was some administrative control of these open spaces. Given the spatial distribution of the marketplaces and their associated elite residences at Caracol, these locales were probably also the venues for other administrative duties. They were likely governed by specific secondary elites, who would have administered not only the markets but also portions of Caracol, called districts (*sensu* M. E. Smith and Novic 2012) elsewhere in Mesoamerica (e.g., M. E. Smith 2010a). There is also usually a residential group of lesser status attached to some of Caracol’s marketplaces, such as at Conchita and Puchituk (both residential groups are off the southwest corner of the market plazas) that may have been occupied by an extended household that was in charge of the care and upkeep of the market facilities.

The markets of Caracol would have housed a wide variety of goods that were available to the general populace. Given the differential artifact distribution signatures at the site, the contents of each market may have differed at least slightly, and the items available at termini markets probably varied significantly with items obtainable in the site epicenter. Because the outlying population was producing their own food, organic foodstuffs were probably more available in the epicentral markets than in the termini markets, although the soil testing suggests that part of the Conchita Plaza hosted foodstuffs (see above and Terry et al., this vol.). Specialty items like fruits, cacao, and medicinal plants may have been found in most venues. Utilitarian pottery and manos and metates would have been available in the majority of markets, possibly brought there by traders who were channeled to these spatial locations by the administrative elite. Other long-distance trade items, like obsidian, sea shell, salt, and pyrite, were probably available, too. Importantly, the distribution of Caracol's artifactual materials strongly suggests that prestige goods, like ritual and polychrome pottery and perhaps even jadeite, could be found in these venues as well. These marketplaces were likely also the locations where the inhabitants of each of Caracol's residential groups brought their surplus crafts (A. Chase and Chase 2004, 2007; A. Chase et al. 2008; D. Chase and Chase 2014a; Martindale Johnson, 2014). Regardless of how the transactions were made (such as by bartering or with cacao, as once speculated by Rene Millon [1955]), the Late Classic spatial organization of Caracol was oriented to the economic needs of its markets because these permanent locales were needed not only to provision the urban population of the site with a wide variety of items but also to serve the administrative and organization needs of the epicentral elite. Permitting the population access to a full array of items served as a successful management strategy at Caracol for over 200 years (A. Chase and Chase 2009).

Conclusion

The Maya market system that existed at Caracol, Belize, during the Late Classic period (C.E. 550–800) served to provide a wide array of goods and services to the site's ancient inhabitants. The markets were easily accessible and served as areas in which the site's inhabitants could exchange their locally produced handicrafts, including lithics, textiles (A. Chase et al. 2008), and other items made of bone, wood, and other perishable materials. They further served as spatial locations where Caracol's citizens

could obtain goods that were brought into the site through long-distance trade networks, as is reflected in the distribution patterns of such goods (A. Chase and Chase 2009; D. Chase and Chase 2014a). The exterior products that came into Caracol consisted of quotidian items, prestige items, and ritual items. Large amounts of redware pottery were certainly imported into the Caracol region from the Belize Valley, some 60 km away, and made available to the site's population (A. Chase and Chase 2012). Polychrome pottery from a variety of foreign producers was also widely distributed (A. Chase and Chase 2009), and specially made ritual pottery was also available to households throughout Caracol (A. Chase and Chase 2013; D. Chase and Chase 2001). Sea fish, some of them alive, were also delivered to Caracol and made their way into the households of the local population (Cunningham-Smith et al. 2014; Teeter and Chase 2004). Thus, a wide array of both local and foreign goods would have been available to Caracol's populations through the site's market system. While foodstuffs may have been marketed, as the phosphorus distribution indicates at the Conchita Plaza, this was not the primary use of Caracol's markets. Instead, non-food-related items were likely the primary goods exchanged in these venues.

The fact that Caracol's Late Classic markets were housed at permanent spatial locations also strongly suggests that they were administratively controlled by elites (A. Chase 1998; D. Chase and Chase 2014a:243; see also Hirth 2010:238). However, this does not mean that the elite controlled production; on the contrary, each Maya household was in control of its own production, and each household presumably produced a surplus of either foodstuffs or handcrafts for the purpose of engaging in exchange for items that that household needed (A. Chase and Chase 2014). What was controlled in Caracol's Late Classic economic system was the distribution of goods in the site's open market spaces. Trade would have been channeled to these locations, and the transactions that took place in these plazas were presumably monitored and taxed, producing revenue for the city. Thus, the Caracol market system was both highly complex and regulated.

Ancient societies are often contrasted with modern societies to show sociopolitical evolution. But, our modern understanding of past ways of dealing with complex issues like economies has been severely limited (e.g., Garraty and Stark 2010). Rather than simply establishing ideal dichotomies between non-commercial and commercial or between quotidian and prestige economies, it is perhaps more useful to examine the past archaeological record to understand what transpired in antiquity. What tends to be found is a great deal of variety that often resists attempts to categorize

it into simple concepts and terminology. On a broader level, what is also found is that neighboring populations sharing a broadly similar language but slightly different cultures, as occurred in the ancient Maya region, can often find very different ways to manage a similar problem, compounding the issues in making broader comparisons between ancient peoples and modern societies. Thus, even though broad similarities can be identified in modern and past economic systems related to the development and use of these markets, the differences are such that it will always be appropriate to note that the ancient Maya were “the same, but different,” meaning that, while the ancient Maya may have used markets broadly, the specific form that these markets took, their periodicity, and the kind of goods that were available in a given market were highly variable.

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