Architecture and Sociopolitical Transformation at Chau Hiix, Belize

Christopher R. Andres

Indiana University-Purdue University Fort Wayne
Fort Wayne, Indiana

Recent investigations at the Maya site of Chau Hiix, Belize have identified a previously undocumented long structure on the north side of the central precinct. This possible civic-ceremonial structure (Structure 150) represents part of a larger remodeling of the site center during a transitional period in the community's history. Structure 150 is significant in that it departs from contemporary construction at other Maya sites in northern Belize and anticipates Postclassic (A.D. 1000–1500) buildings documented in Yucatán, Petén, the Guatemalan highlands, and at other locations in northern Belize. This study discusses influences potentially at work at Chau Hiix during the Classic-to-Postclassic transition (A.D. 750–1050) and considers the sociopolitical implications of changing spatial configurations in the architecture of this and other pre-contact Maya communities. It is hypothesized that the site center architecture of southern lowland centers that persisted through the Terminal Classic (A.D. 800–1000) reflects corporate power-sharing strategies associated with Postclassic northern lowland Maya communities. The transitional qualities of the architecture at Chau Hiix suggest a blurring of the boundary between Classic and Postclassic traditions.

Introduction

The Prehispanic Maya community of Chau Hiix lies between the larger, well-documented centers of Lamanai and Altun Ha in north central Belize (FIG. 1) and is positioned on Western Lagoon near its outlet into Spanish Creek. Overland travel linked Chau Hiix to Altun Ha, 25 km to the east, and navigation of local waterways provided easy access to Lamanai, 15 km to the west, on the New River Lagoon. As we would expect from this location, the material culture of Chau Hiix indicates close ties with these communities, as well as evidence of interaction with centers in Petén (Pyburn 2003).

Chau Hiix is a medium-sized site distinguished by a long occupational sequence, although the presence of 25 major structures and four courtyards makes the community somewhat smaller than Altun Ha on Richard Adams and Richard Jones' (1981) scale of courtyard counts. The civic-ceremonial core at Chau Hiix has a strong E–W axis dominated by the main platform (FIG. 2) and deep test excavations in this 3–5 m high feature indicate that it is an entirely artificial chert-boulder construction (Pyburn 1991). The architecture supported by the main platform (FIG. 2) conforms to the "twin-group" layout noted for many Maya

sites in Belize (Ashmore 1981: 57; Hammond 1981: 185). While analysis of the patterns of activity specific to Groups A and B is ongoing, investigations since 1990 suggest that they reflect the civic-ceremonial/elite residential functional dualism proposed for comparable architectural configurations at other sites (Ashmore 1989: 274; Houk 2000: 155, 158). Earliest cultural activity at Chau Hiix has been traced to the early Middle Preclassic Swasey phase (ca. 1000–500 B.C.) when settlement was established in the site center and at seven outlying settlement nodes (see e.g., Cuddy 2000; Goldsmith 2005). Considerable amounts of Mamom ceramic material (ca. 700–300 B.C.) recovered deep within the main platform indicate intensive occupation by the late Middle Preclassic. Architectural development of the site center, including initial construction of the main platform, was clearly underway by the Late Preclassic (300 B.C.–A.D. 250) and initial construction of Structure 1, the community's dominant civic-ceremonial structure, also dates to this period (Andres 2005). The Early Classic (A.D. 250–600) period was probably associated with the greatest volume of construction at Chau Hiix and the Late Classic (A.D. 600–800) saw remodeling and expansion of many existing buildings.
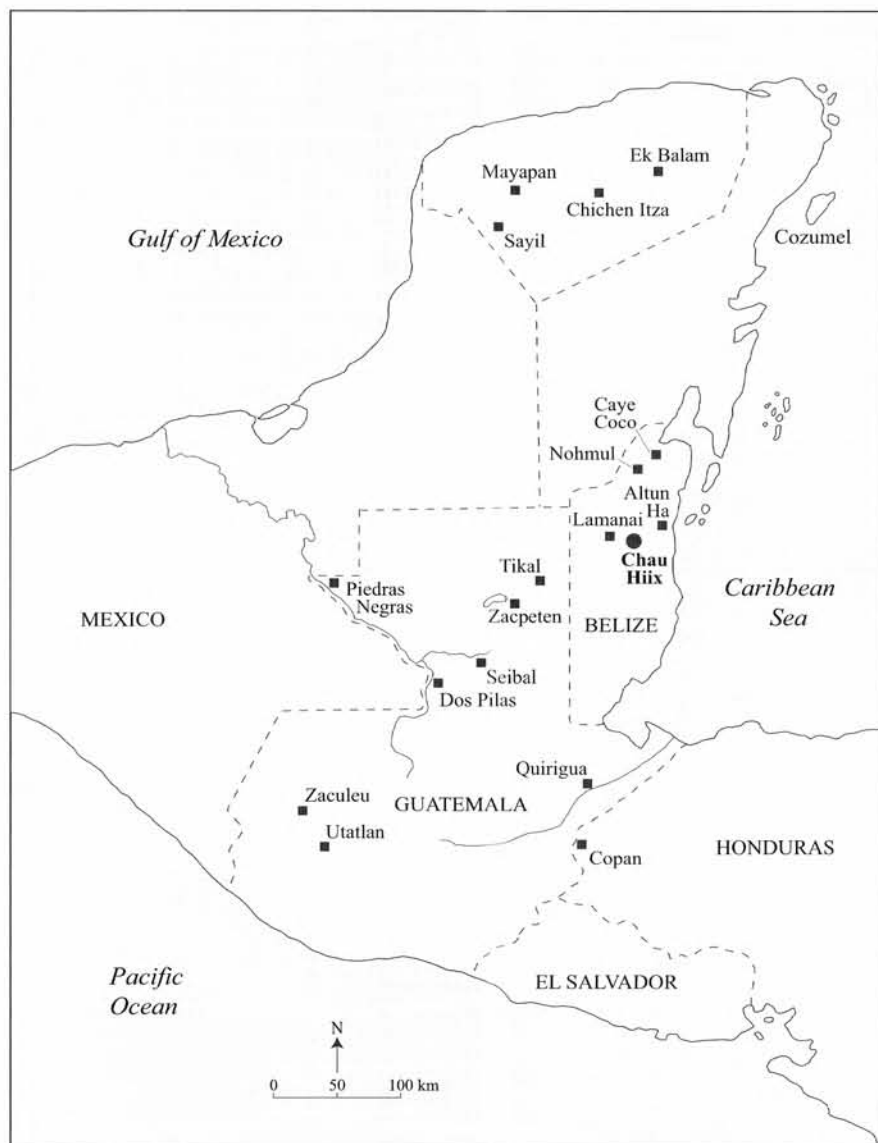
Figure 1. Map of the Maya lowlands showing locations of major sites discussed in the text.

Terminal Classic (A.D. 800–1000) and Postclassic period (A.D. 1000–1500) data from Chau Hiix indicate that the community saw continued occupation. The Terminal Classic and Early Postclassic periods (A.D. 800–1250) were marked by architectural renewal and substantial new construction at the site. In addition to yielding significant Terminal Classic and Early Postclassic ceramic assemblages (Wille 2007), several of Chau Hiix's Classic period ceremonial structures were the focus of Early Postclassic construction, offerings, and mortuary activity (see e.g., Andres 2000; Wrobel 2003). Although it is unclear if Chau Hiix was occupied into the early colonial period, ubiquitous

Late Postclassic (A.D. 1250–1500) material at the site suggests the community maintained a significant population in the years immediately preceding Spanish contact (Andres and Pyburn 2004).

A variety of factors, including tomb construction characteristics, offerings, ceramics, and architectural data indicate that Chau Hiix was linked with Altun Ha between A.D. 500 and 800 (Andres 2005). Following the abandonment of Altun Ha in the 9th century, architecture and ceramics exhibit a shift toward styles characteristic of Lamanai, suggesting that Chau Hiix was more closely aligned with this western center during the Terminal Classic (Pyburn 1998).

While it is difficult to characterize the types of political and economic relationships Chau Hiix may have had with Lamanai and Altun Ha, the network of dams, canals, and raised fields adjacent to the site, and the degree to which the architecture resembles that of Lamanai and Altun Ha, point to the intervention of these larger communities in activities at Chau Hiix (see e.g., Pyburn 1998: 277–280).

Late-to-Terminal Classic and Early Postclassic Period Construction at Chau Hiix

Architectural investigations at Chau Hiix concentrated on recovering chronological data and gaining an improved understanding of the construction sequence in the main group (Andres 2005; Meier 2002). Identification of a long structure, Structure 150 (Str. 150), on the north side of the main platform is important for more than one reason. First, by raising the possibility that increasingly corporate power-sharing strategies figured prominently in the survival of certain Maya communities, intercommunity architectural comparison provides insight into the unevenness of the Maya "collapse." Equally important is the capacity of the Chau Hiix data to advance our understanding of interregional architectural similarities. Examination of construction at Chau Hiix relative to that in other Maya communities suggests that Late-to-Terminal Classic long structures are more likely to reflect common functional demands than strong interregional or intercommunity relationships.

Structure 150 Excavation Results

STRUCTURE 150A

Investigations of Str. 150 revealed that the 43 m long hall-like structure was constructed in two phases, the first of which dates to the Late-to-Terminal Classic period (ca. A.D. 750–900). The building was subsequently modified during the Early Postclassic (A.D. 1000–1250) (Andres 2005). The initial building, Str. 150A, consisted of a low, 1–3 m wide masonry platform, which rested directly on the plaza surface (FIGS. 3A and 3C). This construction, which may also have served as a bench, incorporated three constricted segments punctuated by three outsets and had a crenellated appearance (FIG. 3B).

Good preservation of the platform face and its relatively high quality construction distinguish Str. 150A from other buildings at Chau Hiix. The platform's south face, which is composed of well-cut horizontally coursed soft limestone slabs (FIGS. 3C and 4), was finished with a thick coat of crimson plaster. Small fragments of facade sculpture with traces of red specular hematite, blue, and black pigments recovered from the plaza south of the platform may

indicate that the building's superstructure was decorated. Prior to the addition of a spur-like projection at the structure's west end, Str. 150A had strong bilateral symmetry (FIG. 3B).

Reconstructing the appearance of Str. 150A is complicated by the fact that its superstructure was demolished when the building was remodeled. The original building most likely combined a masonry rear wall with a perishable roof, and the platform upon which this structure rested was extended toward the northern edge of the main platform (Andres 2005). While no wall stubs were identified on the building platform, a wall from an earlier structure is the most likely source of the material incorporated into the Str. 150A expansion.

Our excavations suggest that Str. 150A incorporated components similar to those of Postclassic false-fronted buildings at Cozumel. As reported by Rathje and Sabloff (1975), these structures combined benches and single, free-standing masonry fronts with perishable rear and end walls. The front walls served as facades and provided partial support for perishable roofs. In the case of Str. 150A, these elements may have been rearranged with the masonry wall placed along the rear edge of the building platform/bench. Such a configuration would have oriented a false front toward the off-platform neighborhoods to the north and would have restricted visual access to the building and the Main Plaza (FIG. 5).

Since much of Str. 150A was perishable, the appearance of its superstructure must be inferred from the ground plan. An absence of masonry column drums suggests that roof supports consisted of perishable timbers like those of Terminal Classic and Postclassic "long house" type buildings in Yucatán and Petén (Pugh 2001: 547; Ringle and Bey 2001: 279–280). Such a roofing system is plausible since postholes recorded in association with earlier (6th century) Str. B-5 at Altun Ha, and later (12th century) Str. N10-2 at Lamanai, indicate that these buildings' superstructures were supported by wooden posts (FIGS. 6 and 7) (Pendergast 1981: 44, 1982: 34). While postholes equivalent to those at Lamanai and Altun Ha (Pendergast 1981: 46, fig. 17, 1982: 34) have not been identified at Chau Hiix, these features may lie south of the building in unexamined areas of the plaza. Daub recovered in our excavations suggests a perishable roof and/or pole and thatch frontal and end walls.

Investigations at Chau Hiix exposed final construction phases and few chronological data are consequently available from the core of Str. 150A. The one area of the building platform where fill was removed did not produce datable deposits. Nevertheless, ceramics recovered adjacent to Str. 150A atop Plaza Floor 2 (FIG. 3A) point to a Late-to-
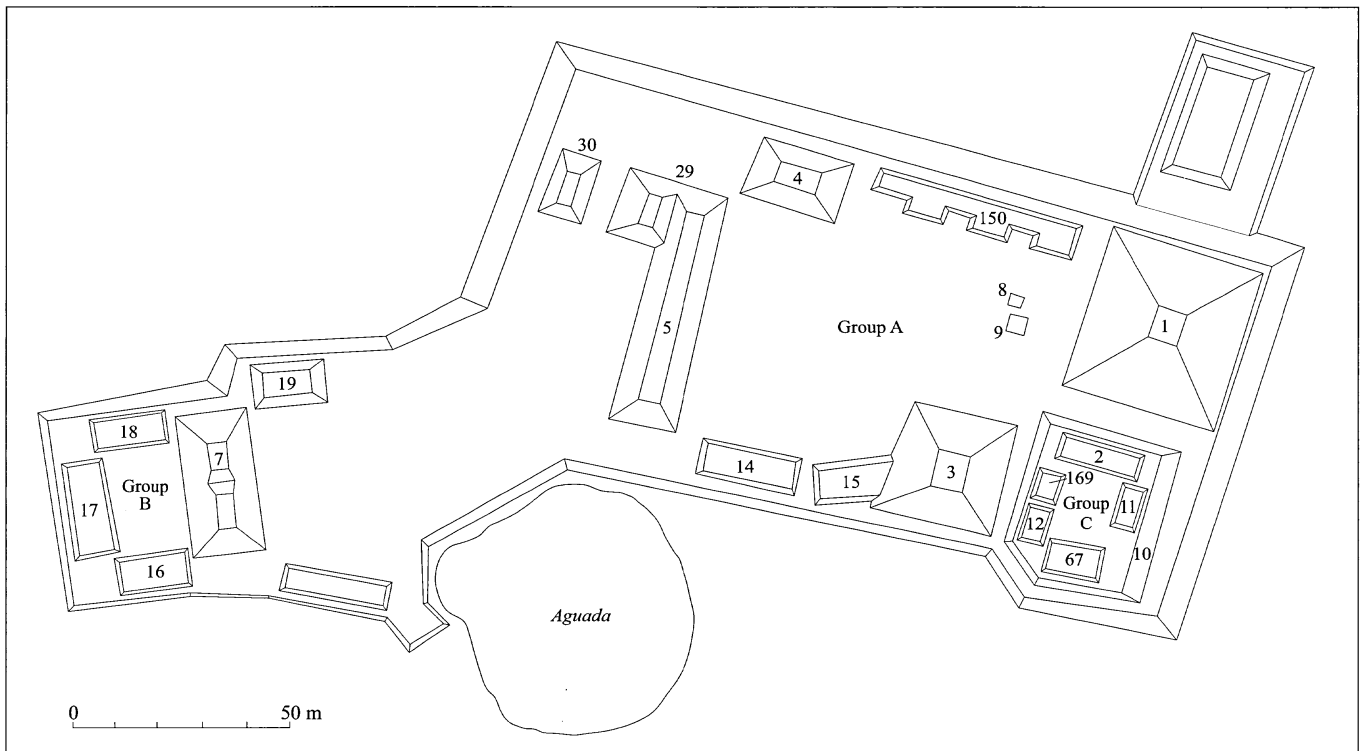
Figure 2. Maps of Chau Hiix, Belize. A) Plan of the main platform designating the principal structures discussed in the text; B) (facing page) The overall settlement at Chau Hiix, showing the relationship of the main platform (rectangle) to the remainder of the site. Original mapping by A. S. Goldsmith, T. Cuddy, W. Smith, M. Lane, and T. Sweely. Based upon maps by A. S. Goldsmith.

A

Terminal Classic construction date (Robert Fry, personal communication 2005). Fragments of a Daylight Orange: Darknight Variety basin, a Roaring Creek Red dish, a Cubeta Incised bowl, a probable Molino Black cylinder vase, and Fibby Pond Red and Alexander's Unslipped jars were found (FIG. 8A–D). While it is difficult to determine whether these materials reflect ceremonial deposits or fill used to elevate the surrounding plaza, they date the final use of the first phase of architecture between the 8th and 10th centuries.

Architectural characteristics also indicate that Str. 150A is transitional between Classic and Postclassic structures at the site. The poorly preserved Postclassic buildings at Chau Hiix were expediently constructed from a mixture of soft limestone and materials scavenged from earlier contexts, and make use of vertically set, veneer-like facing stones. In contrast, Str. 150A's platform incorporates large, well-cut, horizontally coursed limestone blocks and slabs (FIG. 4) in keeping with the site's Late Classic construction. At the same time, the low placement and hall-like format of Str. 150A are more consistent with Terminal Classic-to-Early Postclassic buildings at other locations (Bey, Hanson, and Ringle 1997; Tourtellot, Sabloff, and Carmean 1992).

STRUCTURE 150B

Structure 150 remained a focus of architectural activity during the Terminal Classic-to-Early Postclassic period (A.D. 900–1100). A second phase of the building, Str. 150B, extended the structure to the north (FIG. 3B), supporting a perishable superstructure or an open-air platform (FIG. 9). This remodeling corresponded with the raising of adjacent portions of the main platform by 30–40 cm, which effectively lowered the height of Str. 150B's platform/bench. These changes functioned to make the building more accessible. Terminal Classic and Early Postclassic ceramics sealed within this floor include small, poorly preserved fragments of a high pedestal base San José V-type redware basin, volcanic ash tempered slateware (Muna Slate or Ticul Thin Slate), a Waterwitch Stamped blackware vase fragment, and an eroded non-effigy scroll foot from an Augustine Red bowl or dish (FIG. 8E–G). Continued construction in the site center after the 9th century indicates that the community followed a trajectory like that of Lamanai (Graham 2004; Pendergast 1986), rather than Minanha, Xunantunich, or La Milpa. The latter were abandoned soon after the burial of their dominant elite residential/administrative complexes (Hammond and Tourtel-

Unsurveyed

Broken ridge

Western Lagoon

Unsurveyed

N

0   300 m
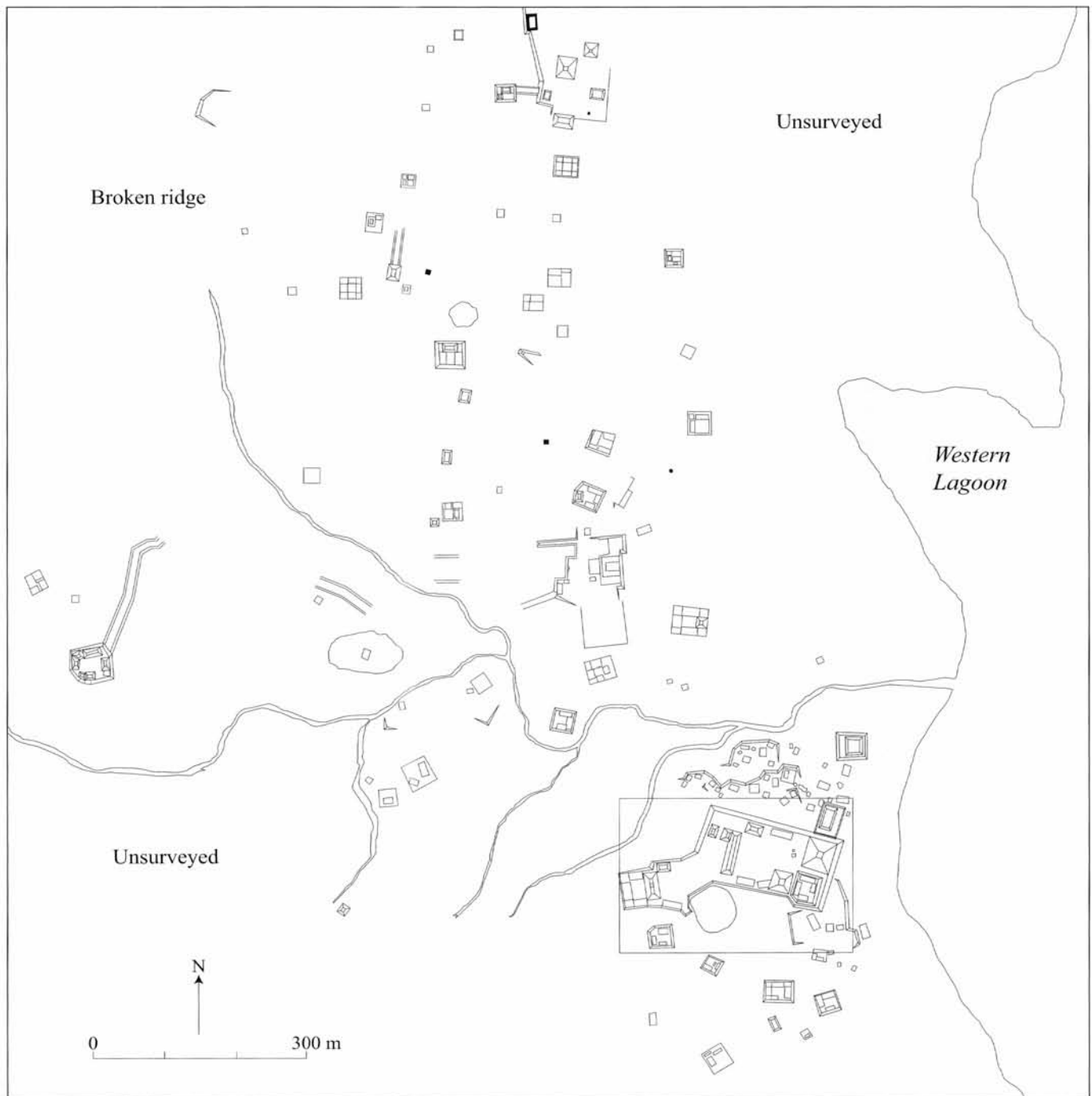
B

lot 2004: 293–294; Iannone 2005: 37; LeCount et al. 2002: 44).

Architectural Affinities

Examination of Terminal Classic and Early Postclassic buildings in other Maya communities suggests that archi-
tectural developments at Late-to-Terminal Classic Chau Hiix cannot be clearly attributed to any one source. Semi-perishable long structures (or halls) were well-established in the northern and southern Maya lowlands before the be-ginning of the Postclassic, and there are formal and spatial continuities between Classic and Postclassic long struc-
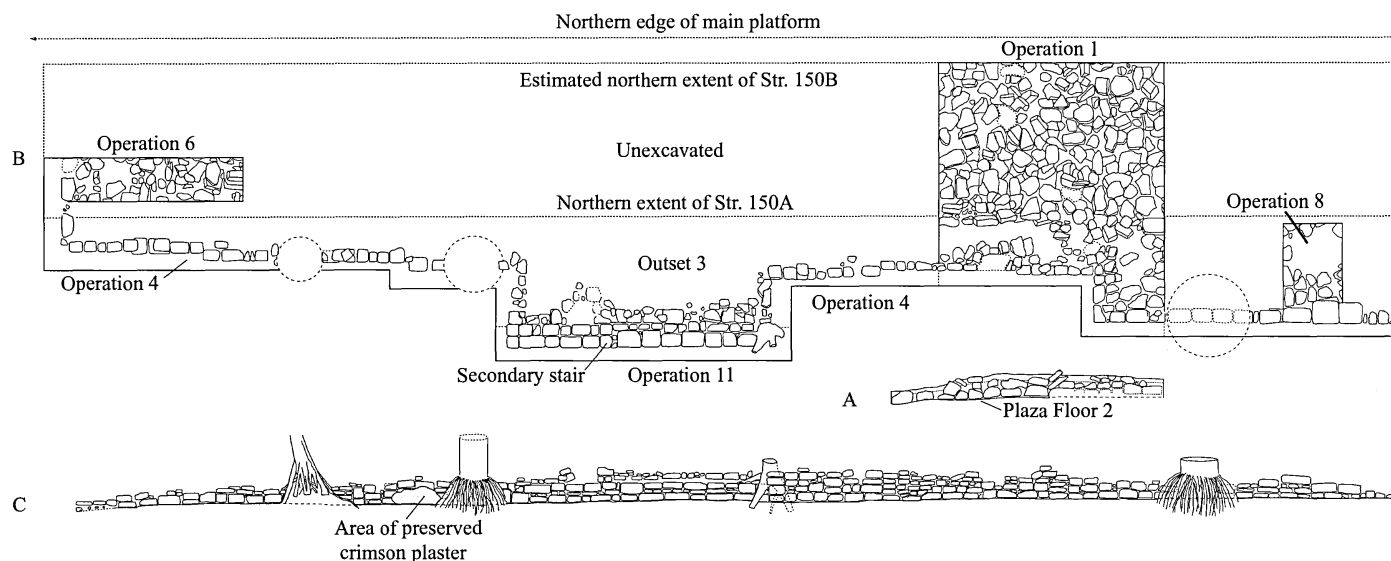
Figure 3. Plan and profile views of Strs. 150A and 150B, Chau Hiix, Belize. Drawings by author. Redrafted by Colin Graham.

tures. The functions of Postclassic halls provide a basis for interpreting the role of formally comparable earlier constructions at Chau Hiix.

Despite Lamanai's proximity to Chau Hiix, its political prominence during the Terminal Classic and Early Postclassic periods, and its parallel architectural patterns, it lacks structures comparable to Str. 150 (Pendergast 1981; Graham 2004). Several of Seibal's Late-to-Terminal Classic Class G and K C-shaped structures display elements that suggest formal parallels with Str. 150. Structure 24a, Str. 81d, and Str. C-1 were all sizable, semi-perishable, elongated structures (FIG. 10A–B); however, the inclusion of these buildings in residential groups, their considerably smaller size (13, 18.5, and 35 m in length, respectively), and their incorporation of C-shaped benches located atop substructural platforms (Tourtellot 1988: 200, 202, 206) indicate that they vary substantially from Str. 150. These comparisons suggest that Str. 150 more closely resembles buildings in Yucatán and the Guatemalan highlands.

The Terminal Classic Period

Similarities in architecture and ceramics from northern Belize and the Yucatán have been noted for the Terminal Classic period (D. Chase 1982: 553; Masson and Mock 2004: 394, 397; Masson and Rosenswig 2005: 361), and

possible Yucatecan architectural influence must be considered at Chau Hiix. While no reported northern lowland structures are identical to Str. 150, Terminal Classic communities at Ek Balam and Sayil both have buildings that display characteristics reminiscent of Str. 150.

Str. GS-12-1 at Ek Balam is a long structure with a C-shaped foundation occupying a 2.5 m-high platform (Bey, Hanson, and Ringle 1997: fig. 4) (FIGS. 10C and 11). Incorporating a 1.9 m wide interior bench that runs the length of its masonry rear wall, this building shows no evidence of internal partitioning, was sheltered beneath a pole-and-thatch superstructure, and is suspected to have served an administrative function (Bey, Hanson, and Ringle 1997: 243–245, 251). An unillustrated, but formally similar "open-fronted, [possibly] colonnaded long structure" has also been documented in central Sayil (Tourtellot, Sabloff, and Carmean 1992: 97). This structure is described as consisting of a linear, cobble-filled platform that supported a building with a low, narrow bench running along its masonry rear wall (Sabloff and Tourtellot 1991: 16). Neither of these buildings is identical to Str. 150A, but their contemporaneity with the architecture at Chau Hiix suggests that semi-perishable long structures were present in both the northern and southern Maya lowlands during the Terminal Classic.
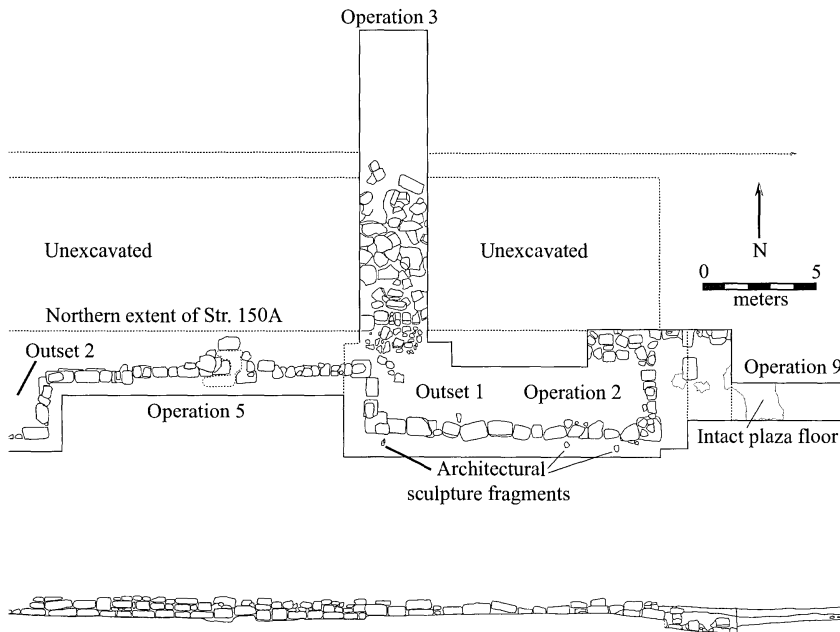
Terminal Classic-to-Early Postclassic Period

Terminal Classic-to-Early Postclassic gallery-patio structures at Chichén Itzá not only share certain features with Str. 150 (Tozzer 1957: 79), but are significant in view of their identification as antecedents of Late Postclassic halls (Kowalski 2003: 236). Aspects of the entryways of Strs. 3B-8 and 5C-11 at Chichén Itzá superficially resemble the building at Chau Hiix (compare FIG. 3B with FIG. 10F–G). The "porches" of gallery-patios incorporate long, low benches/platforms, perishable roofs, and architectural sculpture like Str. 150 (Tozzer 1957: 79). Str. 150 falls within the size range of these Yucatecan architectural features (FIG. 11). The buildings at the two locations also exhibit significant differences, however. While the benches of Chichén Itzá's gallery-patios are basically rectangular, that of Str. 150 is more complex. The threshold-like qualities of Chichén Itzá's galleries distinguish them from Str. 150; the Yucatecan structures are elements of larger complexes and serve as transitional spaces which define paths into contiguous inner courts. In contrast, Str. 150 neither functioned as an entryway nor was it part of a larger architecture complex. Despite Chichén Itzá's purported far-reaching influence (D. Chase and A. Chase 1982; Masson and Mock 2004: 374), the site's long structures are later than

Str. 150 and formal differences are sufficiently pronounced to suggest that the architecture at Chau Hiix is not Chichén-inspired.

The Late Postclassic Period

Late Postclassic (A.D. 1250–1500) long structures at Cozumel, in the Guatemalan highlands, and at Zacpetén, Mayapán, and Caye Coco resemble Str. 150. While Strs. C22-6-b and C22-90-a at Cozumel (FIG. 12B–C) by no means duplicate Str. 150 in scale or form, their open layout suggests parallels with the architecture at Chau Hiix. Hall-like Str. C18-1-b also recalls Str. 150 to the extent that it is long, narrow, and lacks partitions (FIG. 12A). Freidel and Sabloff's (1984) linking of formal types to functional categories via the ethnohistorical record makes this study particularly useful in identifying possible patterns of activity associated with the architecture at Chau Hiix.

Buildings in Late Postclassic highland Maya communities approach Str. 150 even more closely in scale and form. As one of the most distinctive building types composing K'ichean centers, "big houses" (or *nimja*) serve to define K'iché "ritual-council" complexes (Carmack 1981). These massive, rectilinear, single room structures at Utatlán and the Mam center of Zaculeu resemble Str. 150 in their positioning around the periphery of plazas and courtyards

Figure 4. Western outset and step accessing the south face of the Str. 150 platform, Chau Hiix, Belize. View to NW. Photograph by author.

(Carmack 1981; Woodbury and Trik 1953). These buildings were relatively open constructions, sheltered by thatch and timber roofs, and their superstructures were probably supported by rows of wooden posts (FIG. 12D) (Carmack 1981: 287; Macario Cálgua 2007: 6). The narrow (approximately 3 m wide) interiors of nimja were dominated by long, C-shaped benches placed against their rear walls and the buildings were set back on their platforms to create open, "porch-like" activity areas in front (Wallace 1977: 31). Although these structures vary in scale within and between highland Maya communities, many at Utatlán approximate Str. 150 in size (FIG. 11). Nimja also resemble Str. 150 in that their placement on low platforms contributes to their modest elevation—only about one meter above plaza level (Carmack 1981: 287). There is often a close relationship between buildings' spatial characteristics, architectural function, and perception (Hillier and Hansen 1984; Moore 1996; Shimada 1994), and nimjas' open construction and pairing with patios suggests relatively un-

restricted access. These spatial characteristics support their interpretation as public or semi-public facilities.

Colonnaded halls are important components of the two primary civic-ceremonial architectural groupings at Mayapán, occurring in both Temple Assemblages (with temples, shrines, and oratories) and in Basic Ceremonial Groups (with raised shrines and oratories) (Proskouriakoff 1962: 90–91). Mayapán's halls are reminiscent of Str. 150, but are not identical. Essentially, the "gallery" of gallery-patios minus the "patio," Mayapán's colonnaded halls (e.g., Str. Q-151) have elongated ground plans like Str. 150 (FIG. 12E). While Str. 150 is larger than many of Mayapán's long structures, it does fall within the range of variation at Mayapán, closely resembling Str. 212, the largest of the community's halls, in size (FIG. 11). Mayapán's halls combined timber and masonry elements (Proskouriakoff 1962: 94), whereas the roof of Str. 150 was entirely perishable, and none of these buildings was vaulted. Both Str. 150 and the halls of Mayapán are low-set, although the halls were
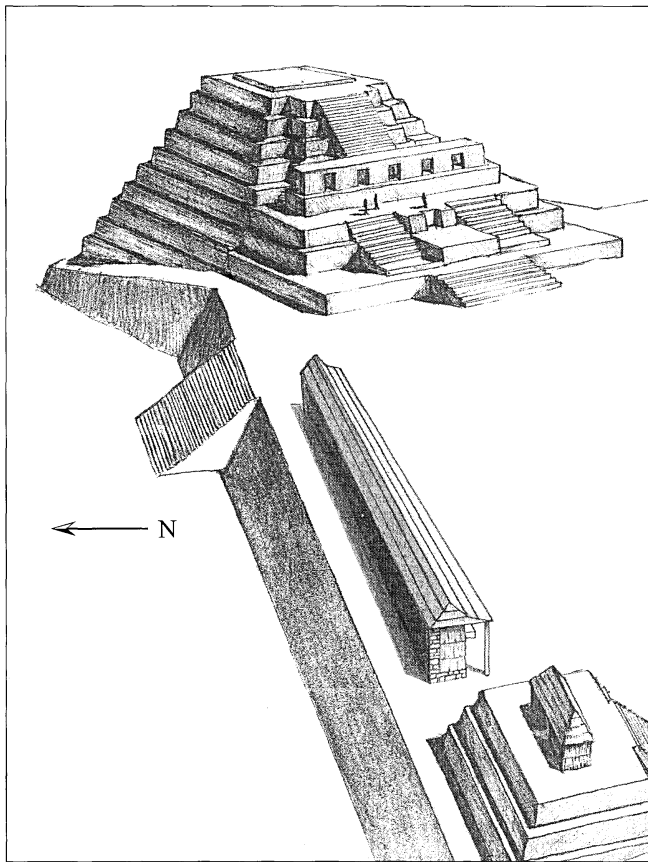
Figure 5. Reconstruction of Str. 150A with thatch and masonry superstructure. Note Str. 1 with vaulted gallery (or Lamanai Building Type structure) in background. Drawing by Sarah L. Oldenberg and Christopher R. Andres.
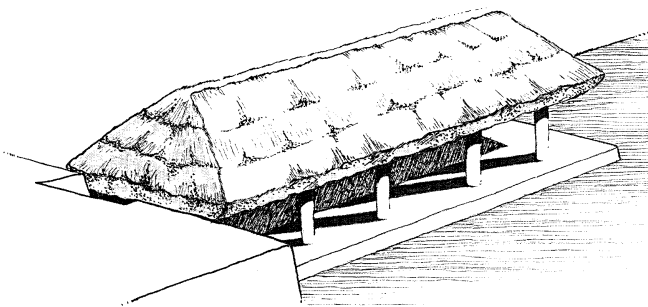

Figure 6. Reconstruction of Str. B-5, Altun Ha, Belize during the 6th century A.D. Drawing by H. Stanley Loten (Pendergast 1982: fig. 18). Redrafted by Norma Endersby.

constructed on distinct secondary platforms as opposed to resting on the plaza. Furthermore, long structures at Mayapán incorporate distinct, C-shaped benches (FIG. 12E). Despite these formal variations, halls at Mayapán and Chau Hiix relate to their ambient spaces in similar ways: buildings at both locations are centrally located and share low, open layouts that would have rendered them easily accessible. In contrast to many Early and Late Classic period structures whose elevation on platforms may reflect status differences and privacy concerns, the halls' plaza-level orientations probably allowed direct visual access to their interiors.

Several Mayapán-style temple assemblages have been identified at Zacpetén together with at least three colonnaded or open halls (D. Rice, P. Rice, and Pugh 1998: figs. 7 and 8). Architectural similarities between Late Postclassic Zacpetén and Mayapán are in fact so striking that Zacpetén's built environment seems to confirm Kowoj claims of migration from the Yucatecan city (Pugh 2003). Open halls are present in two sizes at Zacpetén and the structures resemble Str. 150 in their low profile, perishable roofs, and open facades (FIGS. 11 and 12F–G) (Pugh 2001: 257–258). Roof support at Zacpetén was provided by wooden posts (arranged in colonnades), which supported wooden lintels (Pugh 2001: 547). While these buildings share multiple characteristics with Str. 150, the relationship of Str. 150 to surrounding structures is different from that of halls at Mayapán and Zacpetén. The central precinct at Chau Hiix was the site of Late Postclassic architectural activity (Andres and Pyburn 2004), but there is little indication that the group was remodeled to reproduce the Mayapán ceremonial template. Thus, while Str. 150 could reflect indirect northern influences, Chau Hiix lacks the distinctive Yucatecan imprint evident in some southern Late Postclassic communities (Pugh 2001, 2003).

Finally, Str. 1 at Caye Coco is the only widely reported example of a Late Postclassic hall at a Maya center in Belize (Masson 2002: 338). This sizable (FIG. 11) rectangular long structure occupied a masonry platform and most likely had a pole-and-thatch superstructure. The placement of Str. 1 on a natural elevation made it the highest building on the island, although its basal platform measured less than 2 m in height. At Caye Coco, Str. 1 has been interpreted as a council house or meeting hall on the basis of size, shape, prominent position, and construction on top of an earlier ceremonial structure (Rosenswig and Masson 2002: 221, 224).

Functional Possibilities for Structure 150

Architectural functions are difficult to assess in the Maya area (see e.g., Webster 2001: 163), and Str. 150 is no ex-
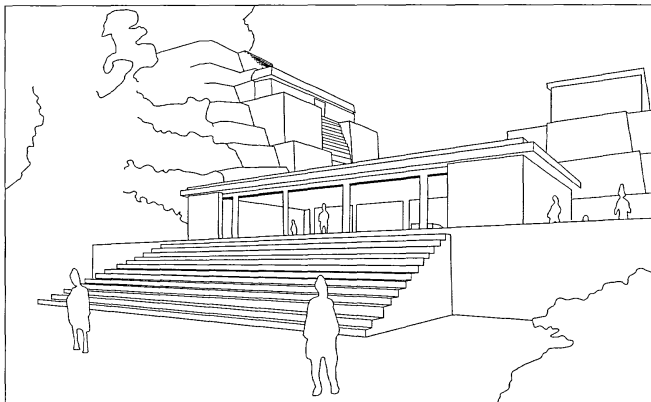
Figure 7. Reconstruction of Str. N10-2, Lamanai, Belize during the 12th century A.D. Drawing by H. Stanley Loten (Pendergast 1981: 17).

ception. Functional interpretations of pre-contact buildings are based on historical and ethnohistorical sources, Classic period texts, and archaeological evidence. As with ethnohistorical analogy (Marcus 1995: 29–30), reconstructions of architectural function are most reliable when the temporal and geographic distances separating the historical evidence and the archaeological problem are minimal (Freidel and Sabloff 1984). While a statement of a building's function made by those who built it is the best source of such information (Stuart 1998: 380–381), this is rarely available. Usually, patterns of use are inferred from a building's form, location, spatial characteristics, and associated artifacts (Rosenswig and Masson 2002: 220), and Str. 150 could be attributed to a variety of functions ranging from defense to residential expansion.

Defensive Considerations

A defensive function for Str. 150 is plausible in view of the turbulence implied by the appearance of fortifications in some parts of the lowlands during the Late-to-Terminal Classic period. Although little unambiguous architectural evidence of warfare has been identified in Belize, Late Classic conflict in the Petexbatun and Yucatán raises the possibility that violent intercommunity rivalry was on the rise in other parts of the Maya area (Demarest 2004; Suhler et al. 2004).

As investigations at Dos Pilas and Aguateca demonstrate, defensive walls were placed in civic-ceremonial contexts to secure the epicenters of communities in the late 8th and early 9th centuries (Demarest et al. 1997: figs. 1 and 7; Inomata 1997: 342). Similar constructions appear around A.D. 900 at northern locations including Yaxuná and Xkanhá (Suhler et al. 2004: 471–473). While the timing of the appearance of Str. 150 at Chau Hiix and its lo-

cation are consistent with such a function, other factors discourage its interpretation as a fortification. At well under one meter in height, the basal platform is considerably lower than palisade base walls at Dos Pilas (1.5–3.5 m on average) and does not approach the more substantial (3–5 m and 8 m high) defenses documented at Xkanhá and Punta de Chimino (Demarest et al. 1997: 231; Suhler et al. 2004: 472). Due to its modest height, the platform/bench is unlikely to have had sufficient mass to anchor a timber palisade and it is doubtful it would have been viewed as an obstacle by anyone intent upon entering the main group. The quality of construction and finishing of the platform/bench are also inconsistent with the expedient, rapidly built, and roughly constructed nature of defensive features reported at other locations (Demarest 1997: fig. 2; Suhler et al. 2004: 472). Finally, the absence of other secondary architectural units in interstructural spaces bordering the main plaza at Chau Hiix suggests that Str. 150 was a free-standing building as opposed to an element of a larger defensive system.

Domestic Use

Most southern lowland Maya centers peaked in size during the Late Classic period (D. Rice and Culbert 1990: 21). While this growth is evident across the socioeconomic spectrum (Culbert et al. 1990: tables 5.1–5.3; Turner 1990: tables 15.4–15.6), particular emphasis has been placed on the expansion of the Maya elite class and elite residences (McAnany 1993: 73, 82; Sanders 1989). Infilling of interstructural spaces with impressive plaza-oriented buildings at Altun Ha has, for example, been interpreted as evidence of an increasing demand for elite residential space in the epicenters of Late Classic Maya communities (Pendergast 1982: 143).

It is logical to consider Str. 150 as a potential elite residence therefore, yet a number of factors discourage such an interpretation. Among these is its inconsistency with the multi-structure, *plazuela* (small, residential plaza)-oriented layout of Maya domestic compounds. The building's lack of elevation and placement on the margin of the heavily trafficked main plaza are also at odds with the private qualities of elite residences elsewhere in the community and at other sites. Finally, the building's very large and shallow single room distinguishes it from the deeper, multi-room layout of many Late Classic Maya palace structures (see e.g., Kurjack 2003: 275; Pendergast 1982: 18).

Trenches were placed in adjacent, off-platform locations in an effort to identify deposits associated with Str. 150 (FIG. 3B, Operation 3), however, no middens characteristic of contemporary upper class residences at neighboring sites (Pendergast 1992: 69) were encountered. The few, poor-
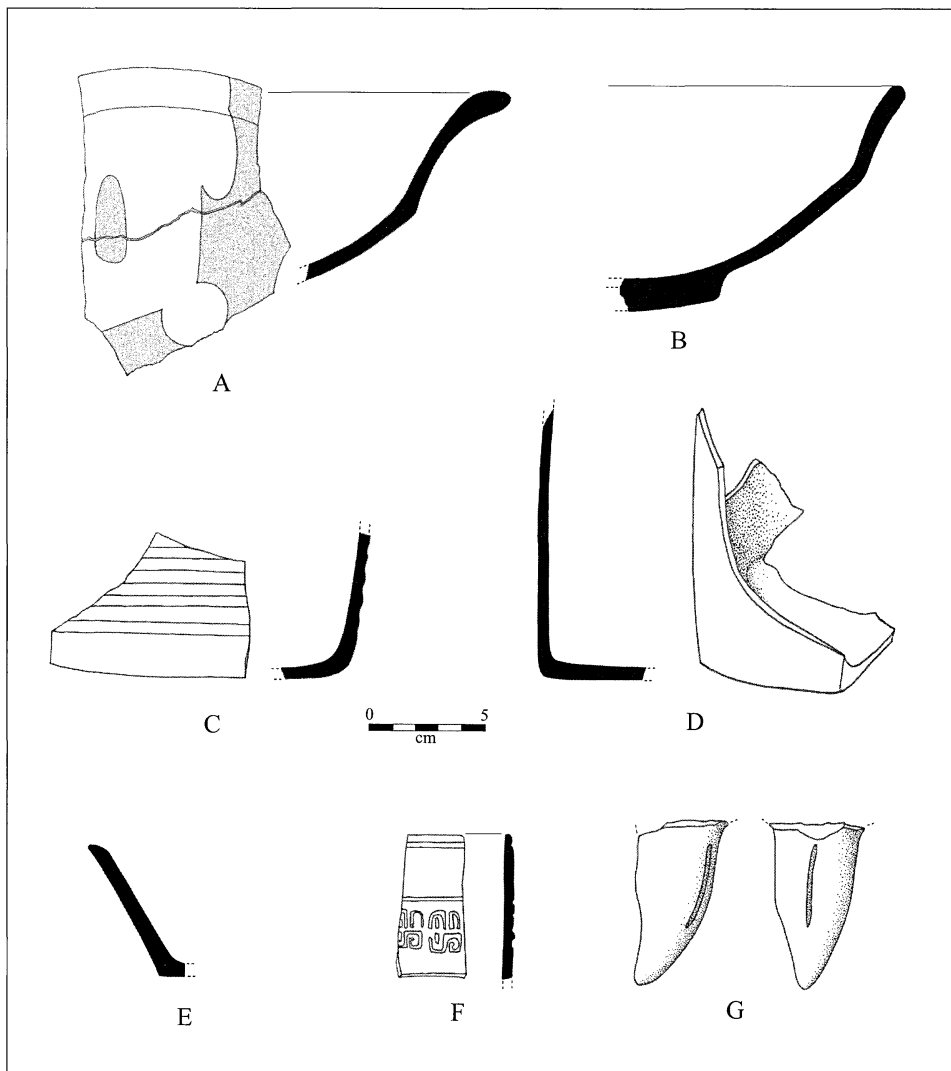
Figure 8. Diagnostic ceramics from Str. 150. A) Daylight Orange: Darknight Variety basin; B) Roaring Creek Red: Roaring Creek Variety dish; C) Cubeta Incised: Variety Unspecified blackware bowl fragment; D) probable Molina Black: Variety Unspecified cylinder vase; E) Muna Slate flaring dish; F) Waterwitch Stamped vase fragment; G) scroll foot from Augustine Red: Augustine Variety bowl or dish. Drawings by author.

ly-preserved sherds recovered from the Str. 150A excavations (above) were scattered along the platform face on Plaza Floor 2, on the stair at the building's west end, and on the plaza floor at the structure's east end. Despite the prevalence of chert and groundstone objects in household contexts at Chau Hiix, such artifacts were conspicuously absent from the Str. 150 assemblage. Instead, a variety of less clearly domestic objects, including a significant number (n = 22) of obsidian blades, an obsidian prismatic blade core, a possible ceramic whistle fragment, and a piece of carved conch shell were encountered along the platform face (Andres 2002).

Administrative Use

LATE-TO-TERMINAL CLASSIC PERIOD

The low elevation of Str. 150 at Chau Hiix and its open layout and prominent location link it with buildings for which elite and administrative functions have been proposed at other sites. There was movement from regal-centric forms of political organization to systems incorporating substantial power-sharing arrangements during the Late-to-Terminal Classic period (Carmean, Dunning, and Kowalski 2004: 437, 443; Demarest, P. Rice, and D. Rice
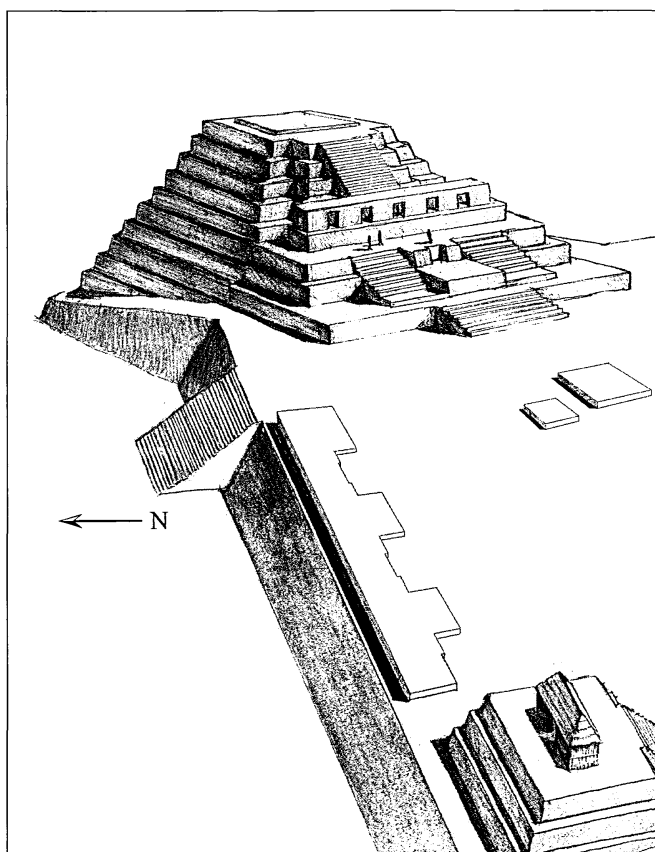
Figure 9. Reconstruction drawing of the northeast corner of the main platform at Chau Hiix showing Strs. 1, 8, 9, and 150B during the Early Postclassic period. Drawing by Sarah L. Oldenberg and Christopher R. Andres.

2004: 560, 572). A key quality common to structures identified as such is their accessible character.

Str. 10L-22A at Copán is among the earlier and better known examples of a group of administrative structures called "council houses" (FIG. 10D). Fash and her colleagues (1992) suggest that leaders of Copán experimented with conciliar administration in response to 8th-century political turmoil following the capture and sacrifice of the Copanec ruler Waxaklajuun Ub'aah K'awiil (or 18 Rabbit) by K'ahk' Tiliw Chan Yopaat (or Cauac Sky) of Quiriguá. The key features of Str. 10L-22A include the building's relatively open facade; its location adjacent to an expansive, undeveloped masonry platform; and a sculptural program incorporating references to multiple social factions. Scholars at Copán interpret the building's form as conducive to meetings and feasting activities; the platform as appropriate for dances ostensibly associated with council houses; and the iconography as emphasizing political power-sharing (Cheek 2003; Fash et al. 1992: 434, 437).

At Lamanai, Str. N10-28 may have served a similar administrative function (FIG. 10E). Based on levels of architectural decoration typical of earlier ceremonial structures, this range structure seems to reflect community reorganization at Lamanai (Graham 2004: 232, 234; Pendergast 1985: 93–94). While initial interpretations focused on the building's religious significance (Pendergast 1986: 231), recent discussions emphasize its political importance (Graham 2004: 224). Significantly, analysis of the building's facade sculpture revealed marked similarities with Str. 10L-22A at Copán; both buildings' decoration incorporated large, centrally placed individuals flanked by secondary figures (interpreted as subsidiary elites) (Graham 2004: 224; Shelby 2000). Based on its iconography, Shelby (2000) proposes that the Lamanai building functioned as a council facility.

Structures that may have been functionally similar to the buildings at Copán and Lamanai have also been identified in the northern lowlands. Suhler (1996) argues for identification of Yaxuná Str. 6F-68 as a group administrative structure, pointing to mat-weave lattice designs in the building's basal molding as evidence that it was a *popol nah* (or council house). Ambrosino (2003: 270) has recently demonstrated how deposits associated with Str. 6F-68 and defacing of the architecture are consistent with Suhler's (1996) earlier interpretation of the building's function. Buildings at Dzibilchaltún (Str. 44) and Uxmal (House of the Governor) with their accessible locations and open layouts, are consistent with group administrative functions (Kowalski 2003).

The aforementioned buildings are vaulted range structures, yet their functions appear similar to those of constructions which bear a closer formal resemblance to Str. 150 at Chau Hiix. Yucatecan Terminal Classic halls, for example, seem to occupy a similar functional category. To this extent, the open, long house form of Str. GS-12-1 at Ek Balam may indicate that novel Terminal Classic architectural forms reflect efforts of corporate groups to administer Maya polities in the face of the "collapse of traditional Classic Maya authority" (Bey, Hanson, and Ringle 1997: 251). The appearance of a building with similar spatial qualities at Chau Hiix may indicate that parallel institutions became increasingly important in Belize during the Late-to-Terminal Classic transition.

POSTCLASSIC PERIOD

Implicit in the previous Late-to-Terminal Classic period examples is the relationship between accessibility and hypothesized use of the buildings. Patterns of visual accessibility are even more pronounced in Late Postclassic Maya halls identified as having served administrative functions at
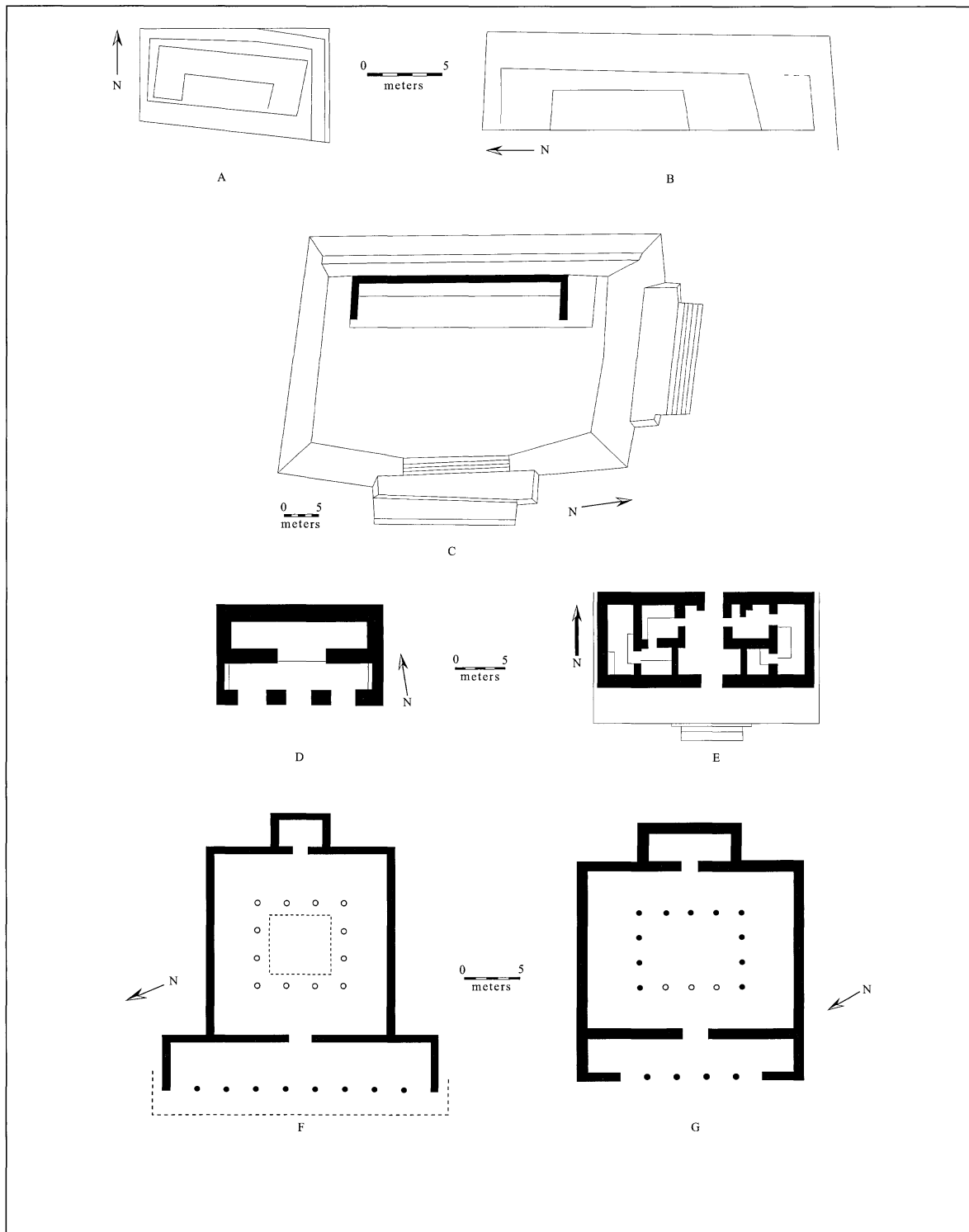
Figure 10. Plans of Late Classic, Terminal Classic, and Early Postclassic period structures discussed in the text. A) Str. 24a, Class K, Seibal (Tourtellot 1988: fig. 13); B) Str. 81d, Class G, Seibal; (Tourtellot 1988: fig. 161); C) Str. GS-12-1, Ek Balam (Bey, Hanson, and Ringle 1997: fig. 4); D) Str. 10L-22A, Copán, Honduras (Fash et al. 1992: fig. 11); E) Str. N10-28, Lamanai (Graham 2004: fig. 3); F) Str. 3B-8, gallery-patio, Chichén Itzá; G) Str. 5C-11, gallery-patio, Chichén Itzá, (Ruppert 1952: figs. 22 and 92). All figures redrawn by author and redrafted by Colin Graham.
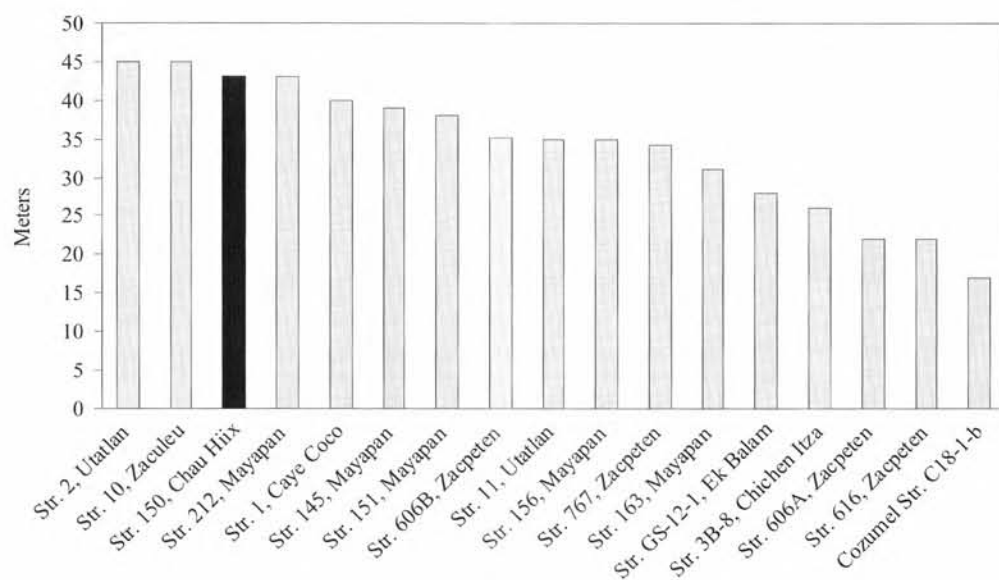
Figure 11. Lengths of Terminal Classic and Postclassic period Maya long structures (data compiled from Bey, Hanson, and Ringle 1997: 242–243; Freidel and Sabloff 1984: fig. 9b; Proskouriakoff 1957; Pugh 2001: 257–258; Rosenswig and Masson 2002: 227; Ruppert 1952: fig. 22; Wallace 1977: figs. 4 and 5; Woodbury and Trik 1953: 52).

Mayapán, Zacpetén, in the Guatemalan highlands, and at other locations. Don Rice (1988: 240) conceives of open halls as associated with corporate group administrative functions. Pugh (2001: 601) describes them as the "architectural symbol of a corporate group" and Ringle and Bey (2001: 276) suggest they were "almost certainly popol nas." These perspectives are based largely on the correspondence between long structures and buildings for which patterns of use are discussed in ethnohistorical accounts. Spanish descriptions of group administrative structures and public meeting places at the Itzá capital of Nojpetén (Jones 1998: 71), for example, describe halls like those investigated by the Proyecto Maya-Colonial at Zacpetén (D. Rice, P. Rice, and Pugh 1998).

Formally similar Late Postclassic K'ichean *nimja* (council houses) almost certainly served the same functions. These multipurpose corporate-group structures are reputed to have been sites of ceremonial lecturing, bride-price giving, interlineage wedding feasts, judicial chambers, and locations where landholding groups resolved their affairs (Carmack 1981; Macario Cálgua 2007). Key spatial qualities of nimja—their generous proportions and open layout—apparently complemented their function by facilitating "visual and physical access to all those sitting in council" (Carmack 1981: 288).

Similar arguments have been made for Late Postclassic buildings at Cozumel. Based on readings of Landa (Tozzer

1941) and other ethnohistorical accounts, Freidel and Sabloff (1984: 13, 28, 37) suggest a direct relationship between long structures and public functions, considering the generous proportions, central locations, and semi-perishable construction of these buildings which are consistent with those mentioned in contact period documents. They also emphasize the importance of benches in large, one-room buildings at Cozumel as facilitating the "ranging of people along the walls" for public ritual and/or council meetings. Like many of the above buildings, the largely perishable construction of Str. 150 suggests it was more open and cooler than masonry buildings. Thus, parallels between Str. 150 and archaeologically and ethnohistorically identified structures suggest that Str. 150 may also have possessed an administrative function.

Discussion

Structure 150

The presence of a possible administrative facility at Chau Hiix does not imply the center was politically autonomous, nor that it was functionally equivalent to larger Maya communities. The hypothesized movement away from regal-centric political organization may point to functions associated with corporate institutions that became increasingly important in defining relationships between paramount centers, such as Lamanai, and lower-level ad-
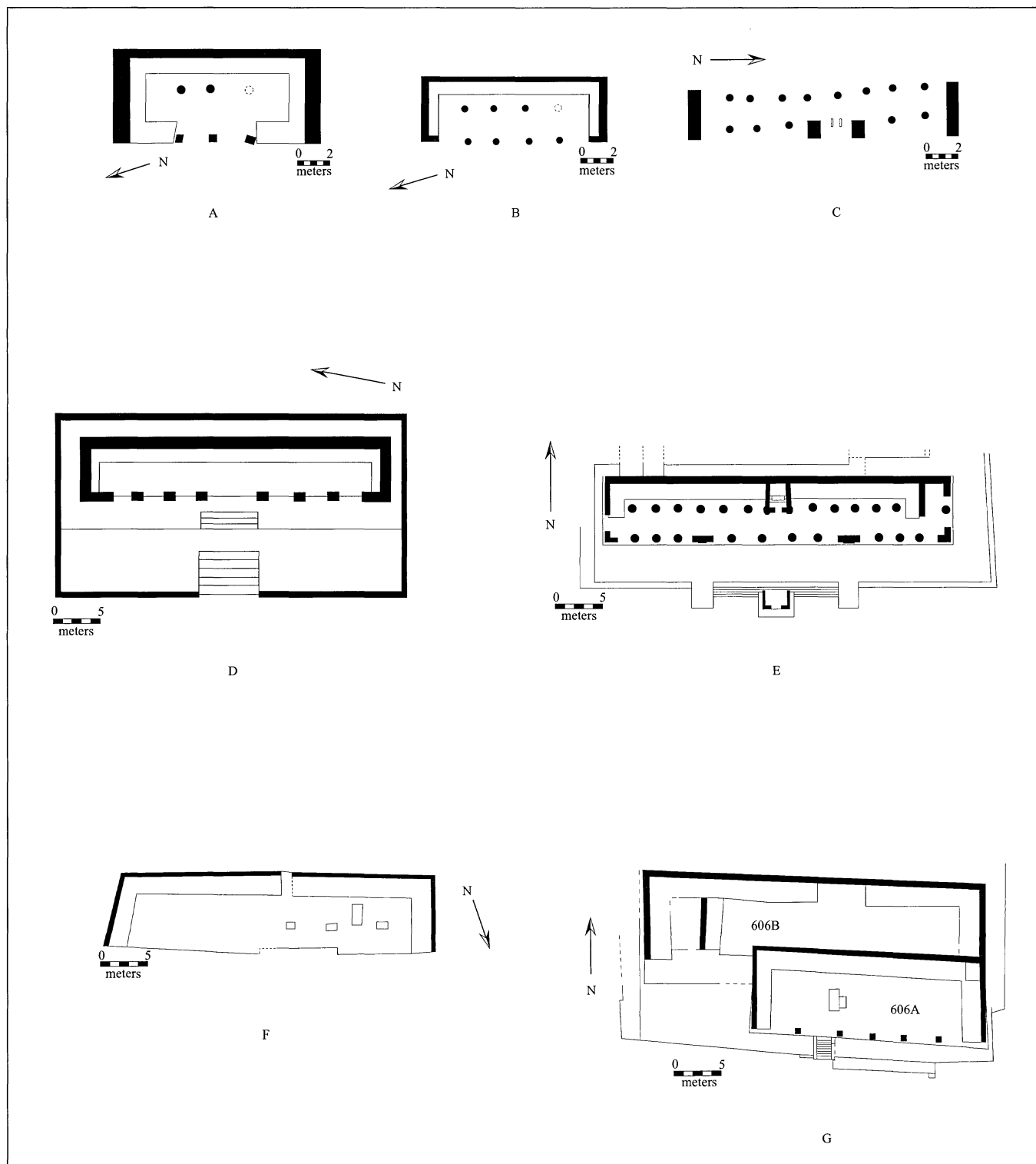
Figure 12. Plans of Late Postclassic period structures discussed in the text. A) Str. C18-1-b, Cozumel (Freidel and Sabloff 1984: 30, fig. 9b); B) Str. C22-90-a, Cozumel (Freidel and Sabloff 1984: 30, fig. 9b); C) Str. C22-6-b, Cozumel (Freidel and Sabloff 1984: 25, fig. 7a); D) K'iché long structure or nimja, Utatlán, Guatemala (Wallace 1977: fig. 4); E) Str. Q-151, colonnaded hall, Mayapán, Mexico (Prosk-ouriakoff 1957); F) Str. 767, open hall, Zacpetén (Pugh 2003: fig. 9); G) Strs. 606A and 606B, open halls, Zacpetén (Pugh 2003: fig. 10). All figures redrawn by author and redrafted by Colin Graham.

Figure 13. Ceramic-filled depression chopped into the floor of Room A, Str. 7, Chau Hiix, Belize. View to east. Photograph by author.

ministrative centers like Chau Hiix during the Late-to-Terminal Classic. If this hypothesis characterizes the situation in northern Belize, it would mirror developments in Yucatán (Grube 1994; Schele and Freidel 1990: 361).

Structure 150 assumes further significance when one considers that its construction roughly coincides with the 9th-century depopulation of Altun Ha, as mentioned above (Pendergast 1982). While architecture and ceramics indicate that Chau Hiix was closely linked with Altun Ha during the Early and Late Classic periods, Chau Hiix's organizational disengagement from its neighbor was enough to keep it from suffering Altun Ha's Petén-like pattern of depopulation (Fry 1990: 295; Pyburn 1997). Ceramic and architectural data indicate that Chau Hiix may have subsequently fallen under the sway of Lamanai (Pyburn 1998), a community where architectural evidence of group administrative activities is also present (Graham 2004; Shelby 2000). The appearance of Str. 150 at a time of probable inter- and intra-community reorganization suggests the building was associated with an institution that was redefined during this period.

Other Structures at Chau Hiix

In order to fully appreciate changes taking place at Chau Hiix during the Classic-to-Postclassic transition, we must consider Str. 150 within the context of other architectural developments in the community. It is the only "new" building to appear at the site center during the Late-to-Terminal Classic, but Str. 1 also underwent alterations at this time. The addition of a vaulted gallery—similar to those present at Lamanai (Pendergast 1981:35)—to the facade of Str. 1 in the Late-to-Terminal Classic substantially altered access to the building's summit (Andres 2005) (FIG. 5).

Structure 7 at Chau Hiix was also the focus of 9th-century modifications. As the only vaulted range structure in Group B (FIG. 2), this building is the most likely candidate for a Late Classic period paramount elite residence in the community. It is telling that the treatment of Str. 7 shifted during the Late-to-Terminal Classic when a series of pits were chopped into the building's floors (FIG. 13). These features were filled with ceramics and organic material (recovered as carbonized residue). Ceramics, shell, faunal material, groundstone fragments, obsidian blades, and jade ornaments were also strewn across the floor. High pedestal base Roaring Creek Red flaring dishes, Vaca Falls Red vessels, Achote Black and Kaway Impressed bowls, Fibby Pond Red jars, and ceramics that resemble slatewares were recovered from these deposits. Burning and floor-chopping activities follow patterns documented at other Maya sites (Graham 2004: 236; Suhler et al. 2004: 464–465) and seem to reflect ritual desecration and termination of the building.

Rather than being abandoned, Str. 7 shows evidence of methodical architectural modification similar to that documented at Lamanai and Minanha (Graham 2004; Iannone 2005). Following the activities discussed above, the vaults of Str. 7 were chopped at the spring line and its rooms were packed with clean, densely consolidated fill. Subsequent to this demolition, the sunken courtyard west of Str. 7 was filled with chert boulders to a height of 1.5 m and a plaster floor was constructed on this surface (Andres 2006). Investigations of Str. 7 are ongoing and the architecture has yet to be fully cleared; however, recent excavations indicate that the west face of its vaulted superstructure was also buried with boulders. These events may reflect the builders' intent to stabilize the Late Classic structure prior to further construction, but no evidence of a finished building has been identified atop Str. 7. While the architectural evidence could reflect a building project abandoned prior to completion, the volume of construction and continued use of other buildings in the group suggest that the interment of Str. 7 represented a symbolic termi-

nation of the Late Classic period elite-focused institutions with which the building may have been associated (Andres 2005; see Iannone 2005: 41 for a parallel discussion). This possibility is supported by subsequent Early Postclassic architectural activities in other parts of the community.

Early Postclassic Period Developments

As discussed above, Early Postclassic modification of Str. 150 increased the building's visual and physical openness. These changes reflect spatial transformation of the architectural environment at Chau Hiix. The Early Postclassic expansion of Str. 150 and elevation of the surrounding plaza coincided with renewal of the lower stair of Str. 1 and with construction of two shrine structures west of the dominant pyramidal structure (FIGS. 2 and 9) (Andres and Pyburn 2004). A similar emphasis on plaza-level contexts is evident at Lamanai, where small, open-air platforms (Strs. N9-59, N9-60, N10-1, and N10-10) were constructed during the Postclassic (Pendergast 1981: 51, 1985: 98–100, 1986: 236, 241–242). The extent to which these developments parallel changes in spatial organization noted elsewhere in the lowlands (Fry 1985: 132, 134; Liendo Stuardo 2003: 194) suggests that they are part of a widespread pattern defining the Classic-to-Postclassic transition.

The impression given by the construction histories of Strs. 7 and 150 is that site center architecture at Chau Hiix became increasingly accessible after A.D. 1000. Architectural forms suggest that more open and perishable building types replaced cramped masonry structures and that the element of exclusivity implied by the emphasis on verticality in the community's architecture between A.D. 300 and 800 was significantly reduced. Ultimately, these changes may indicate a shift from events focused on large buildings commissioned by Early and Late Classic period leaders to more integrative Postclassic sociopolitical activities centered on the ritually charged nature of plazas and courtyards (Low 2000: 31–37; Ringle and Bey 2001: 278–279).

The scale of Early Postclassic modifications of Str. 150 implies that it continued to serve as a public building; its function after its renovation is unclear. A few gouge-incised, orange red vessel fragments—equivalent to Buk phase chalices and dishes from Lamanai (Pendergast 1981; Graham 1987, 2004: figure 4)—and Zakpah Orange Red vessels from Cerros and Caye Coco (Masson and Boteler Mock 2004: 394; Walker 1990) reflect Early Postclassic activities focused on the building (FIG. 14D). Chen Mul Modeled effigy incensario fragments recovered from the surface of the structure also indicate use during the Late Postclassic (FIG. 14E). Lithic debitage, several chert bifaces,

net weights, metate fragments, spindle whorls, *Pomacea* (Apple snail) shells, faunal material, several projectile points, turtle shell, and utilitarian sherds were deposited at the building at this time (FIG. 14A–C). This assemblage suggests that Str. 150 lost its administrative function during the Late Postclassic and became the focus of intermittent domestic and ceremonial activities.

Conclusions

Preliminary investigation of Str. 150 at Chau Hiix underlines the complexity and diversity of events taking place in the southern Maya lowlands during the Late-to-Terminal Classic period (Demarest, P. Rice, and D. Rice 2004). In certain instances, origins of non-local architectural influences can be traced with a degree of certainty (Pugh 2003). More often, such influences are ambiguous. Late-to-Terminal Classic period northern Belize is a case in point. While non-local architectural features have been reported in prehispanic contexts, identifying their origins, let alone the social, political, and economic factors leading to their appearance is difficult (D. Chase and A. Chase 1982; Mason and Rosenswig 2005; Pendergast 1986). Thus, the architectural data from Chau Hiix are important.

The form, placement, and spatial characteristics of Str. 150 relative to contemporary and later constructions at other sites suggest an administrative function. The prominence of this building in the site center makes a case for sociopolitical reorganization of the Late-to-Terminal Classic community. Significant changes were clearly taking place at Chau Hiix; however, multiple factors indicate they were not catastrophic for most of the community's residents. While Str. 150 is not enormous, its generous scale, quality of construction, and design characteristics suggest continuity in the community's organization. In contrast to incongruously placed Terminal Classic buildings at other locations in northern Belize (Hammond et al. 1998: 833), integration of Str. 150 into the site plan signals continued concern for the larger architectural environment at Chau Hiix. In short, the appearance of Str. 150 is more consistent with institutional transformation than with architectural change resulting from intrusive social elements (Bey, Hanson, and Ringle 1997: 251).

Features of Str. 150 recall those of buildings in the Terminal Classic and Early Postclassic northern lowlands, yet formal similarities do not indicate the direct influence of any one non-local community or ethnic group. Rather than pointing to the presence of Itzá or other Yucatecan groups suggested elsewhere in northern Belize (see e.g., D. Chase and A. Chase 1982; Hester and Shafer 1991: 155), construction of a building of northern appearance at Chau Hiix most likely reflects a combination of factors.
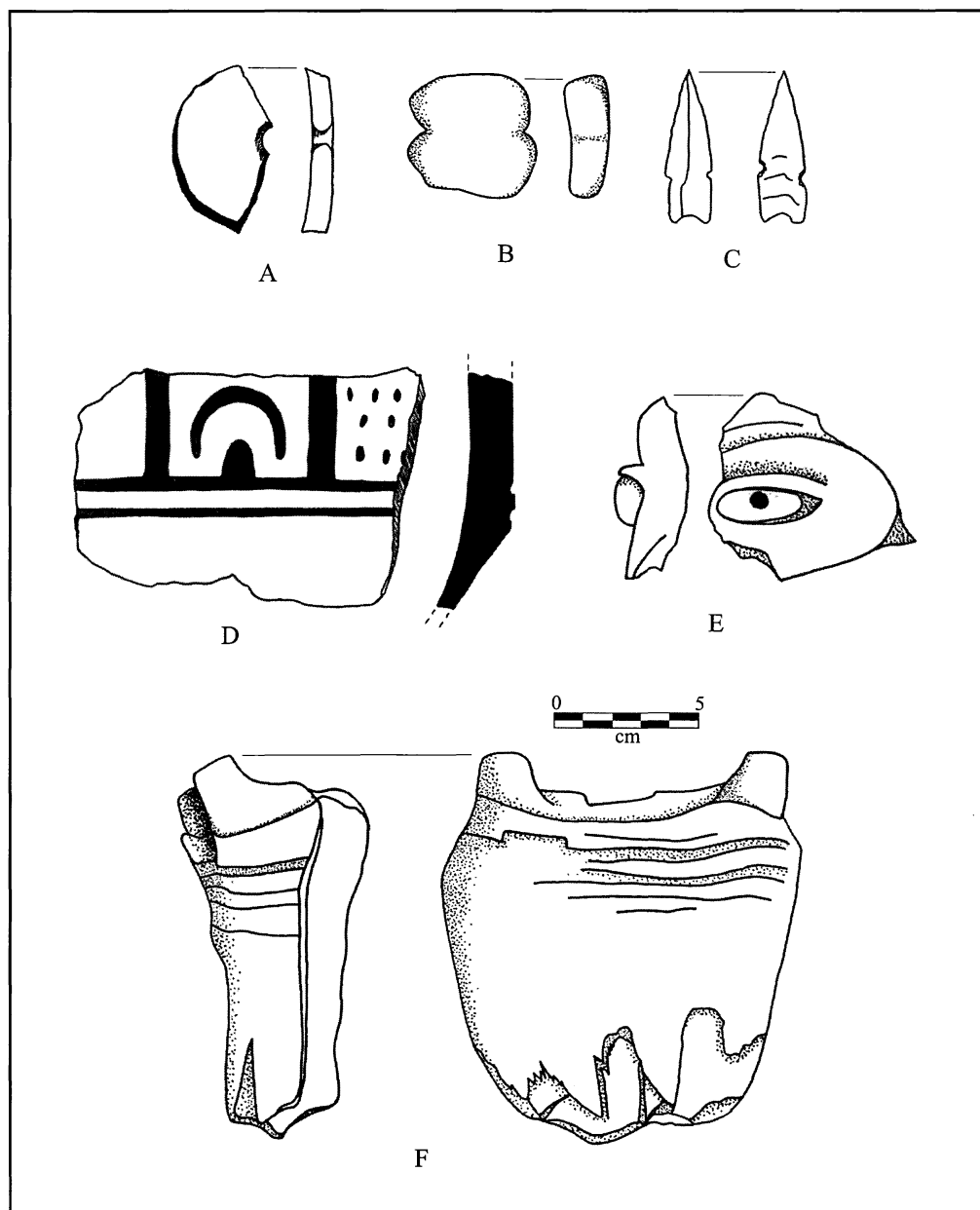
Figure 14. Artifacts from Strs. 150A and 150B. A) Ceramic spindle whorl; B) Ceramic net weight; C) Late Postclassic chert projectile point; D) Early Postclassic (A.D. 1000–1250) gouge-incised redware bowl fragment; E) Late Postclassic Chen Mul Modeled effigy incensario fragment; F) Worked conch shell. Drawings by author.

As research at Lamanai and Altun Ha demonstrates (Pendergast 1981: 44, 1982: 34–35, fig. 18), roofing systems similar to that inferred for Str. 150 were in use at adjacent sites during earlier and later periods. Even if Str. 150 incorporated columns instead of posts, the widespread distribution of such technology suggests it can be explained by local development (Driver 2002) rather than by Mexican influence. With exceptions, it is likely that the occur-

rence of long structures in the Guatemalan highlands, Yucatán, and the southern lowlands between the Terminal Classic and Early Postclassic periods reflects similar architectural responses to common functional demands as opposed to strong interregional relationships.

The early hall at Chau Hiix is important because it provides further architectural evidence for the blurring of the boundary between the Classic and Postclassic periods (Bey,

Hanson, and Ringle 1997: 251). It may also reflect sociopolitical changes associated with the transition from Classic to Postclassic political systems. Identification of administrative buildings at sites that retained populations after the Terminal Classic is significant because it suggests that the institutions with which such buildings were associated contributed to community persistence. While willingness to experiment with novel political institutions was important, sites like Copán illustrate that this alone provided no assurance of continued prosperity. Instead, it was necessary for residents of Maya centers to be open to alternative forms of administration, and to be able to accommodate them. The uneven ability of centers to make this transition suggests differences in the organization of Maya communities (Pyburn 1997: 167). Dissolution of the institution of divine kingship appears to have had variable consequences for Maya centers in Belize depending upon their size, position in political hierarchies, and site-specific factors such as access to trade networks and agricultural resources (Masson 2000; Pyburn 2003). The evidence from Chau Hiix suggests it may also have been the communities most able to adapt or turn away from divine kingship that were best positioned to remain viable during the Terminal Classic and Early Postclassic periods.

Our investigations indicate that Str. 150 reflects movement toward a more corporate form of administration defined by principles similar to those at Terminal Classic Chichén Itzá and later at Mayapán and Nojpetén (see e.g., Jones 1998: 105; Ringle 1990: 239–240). Although the *mul tepal* (joint rule) system proposed for Yucatán implies a greater degree of political centralization (Ringle and Bey 2001: 273–275) than was probably present in northern Belize, some of its most salient characteristics, including an increasingly diffuse power structure and integration of different levels of the settlement hierarchy via conciliar organization (Kepecs and Masson 2003: 40, 43) may explain architectural changes evident at Chau Hiix. The appearance of Str. 150 at the same time that this form of administration was emerging in Yucatán is unlikely to be a coincidence. Patterns complementing movement toward a less hierarchical and more locally based political power structure are also reflected in non-architectural data at Chau Hiix. For example, increasingly equitable treatment of the community's dead may signal a corresponding reduction in social stratification and renewed emphasis on corporate group membership (Wrobel 2003).

Scholars have long noted stylistic convergences in the material culture of the southern and northern lowlands beginning in the Early Postclassic period. Prudence Rice (1989) discussed this pattern relative to ceramics in central Petén and Pendergast (1981) and Graham (1987) commented on correlations with northern Belize. Pendergast (1981: 49) emphasized that the appearance of Mayapán-style effigy censers and Tulum-related ceramics at Lamanai was evidence of interregional relationships. While these observations raise challenging questions about directional influences in Early and Late Postclassic material culture, these influences were most likely multi-directional and took various forms (Pendergast 1981: 53). Limited population movements may have resulted in the flow of ideas from southern communities to Yucatán during the Late Classic period (Jones 1998: 3, 9–10; Schele and Mathews 1998: 203). Elite migrations, conversely, resulted in N–S influences from perhaps as early as the Terminal Classic through the Late Postclassic (Hammond 1989: 515; Jones 1998: 8). In a few outstanding cases, there is evidence that demographic movements had direct architectural consequences (D. Chase and A. Chase 1982; Pugh 2003). Generally speaking, however, similarities in the architectural complexes, such as those linking Str. 150 and buildings in Yucatán, are more likely to reflect similar forms of sociopolitical organization than direct contact situations (Masson and Boteler Mock 2004: 391). Thus, long structures probably demonstrate formal coherence over a wide geographic area due to common functional requirements and increased interregional contact resulting from growth in trade along the coast of Yucatán (Andrews 1990: 161).

With regard to Mayapán-style effigy incensarios (Pendergast 1981: 49) and C-shaped structures (Bey, Hanson, and Ringle 1997: 250; Arthur Demarest, personal communication 2008), earlier dates for these distinctive ceramic and architectural types in the southern lowlands than in Yucatán call into question traditional assumptions regarding the unidirectional N–S flow of ideas. The fact that the architecture at Chau Hiix reflects this same chronological pattern identifies a need to approach southern Maya communities as sources of influence in Early and Late Postclassic material culture. Similarities between Str. 150 and Yucatecan halls indicate that architectural influences may have flowed back-and-forth between Belize and Yucatán.

Assuming that these hypotheses concerning the link between the form and function of Maya long structures are confirmed, they point to considerable interregional interaction (following Wobst 1977), and suggest that organizational principles similar to those evident in Terminal Classic and Postclassic northern Maya communities were basic to the administration of the southern lowland centers that successfully negotiated the Classic-to-Postclassic transition. Ultimately, the survival of certain Belize Maya centers reflects a variety of organizational and locational factors. Architectural evidence from communities such as Copán may indicate that Chau Hiix and Lamanai were not alone in

their movement away from the institution of divine Maya kingship. The persistence of these Maya centers in Belize suggests that access to emergent coastal trade networks (Graham 2004; Masson 2000: 40) and sufficient disengagement from larger, more powerful western polities (Fry 1990: 295; Pyburn 1997, 2008) *combined* with organizational flexibility contributed to their viability when communities in central Petén and the Pasión River Valley were experiencing widespread abandonment.

Acknowledgments

Christopher R. Andres (Ph.D. 2005, Indiana University at Bloomington) currently holds the position of Assistant Professor of Anthropology in the Department of Anthropology at Indiana University-Purdue University Fort Wayne. He has been conducting archaeological research in Belize since 1996 and has a variety of research interests including urbanism in New World contexts, spatial analysis, Maya monumental architecture, and the role of built environments in sociopolitical transformations in complex societies. Mailing address: Department of Anthropology, 2101 E. Coliseum Blvd., Kettler Hall G11A, Indiana University-Purdue University Fort Wayne, Fort Wayne, Indiana 46805. E-mail: andresc@ipfw.edu

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