

# The Prehistory of Belize

Norman Hammond

Rutgers University  
New Brunswick, New Jersey

*Belize, Central America, has been the location of many innovative research projects in Maya archaeology. Over the past generation several problem-oriented projects have contributed significantly to a new understanding of ancient Maya subsistence and settlement, and increased the known time span of Maya culture. An historical review of research in Belize is followed by a resumé of the current state of knowledge and an indication of future research potential.*

## Introduction

Belize, a small nation on the Caribbean coast of Central America, occupies part of the territory in which the Maya civilization flourished during the 1st millennium A.C., with an apogee in the Classic Period of 250–900 A.C. The political history of Belize over the past 200 years as a British colony (known until 1973 as British Honduras), and now as an independent nation, has engendered a history of archaeological research distinct from that in the Spanish-speaking countries that comprise the remainder of the Maya area (Mexico, Guatemala, Honduras, El Salvador). This circumstance, together with the work of several significant projects in Belize over the past generation, justifies an assessment of the prehistory of Belize as it is currently understood.

## Geography

Belize is ca. 290 km. from north to south and ca. 100 km. east-west, lying within the Tropic of Cancer at 16°–18°30'N and 88°–89°W (FIG. 1). On the east it is bordered by the Caribbean Sea, the mainland coast protected by lines of coral and mangrove islands called cays and by a barrier reef. The Rio Hondo, and Chetumal Bay into which it debouches, forms the frontier with Mexico on the north and NW, and surveyed alignments through the forest define the border with the Guatemalan Department of El Peten on the west. The Rio Sarstoon forms the southern frontier with Guatemala, where the latter country extends to the Caribbean shore.

The Belize River divides the country into contrasting halves (FIG. 2): the northern consists of low limestone ridges trending SSW–NNE, separated by synclinal folds<sup>1</sup>

in which flow the major perennial rivers, the Hondo and Nuevo, and the smaller Freshwater Creek. The Hondo is one of the principal rivers of the Maya lowland zone and has a basin draining northern Peten and part of southern Campeche, an area often dubbed the “Maya Heartland” and containing major sites such as Tikal; the river has throughout Maya prehistory acted as a corridor to the Caribbean. Several large lagoons interrupt the courses of the Nuevo and Freshwater Creek, and were foci of ancient Maya settlement. The coast of northern Belize is swampy, with mangrove stands building seawards, and the relationship between the shoreline and the ancient settlement pattern has demonstrably changed over the past millennium.

The southern half of Belize is dominated by the Paleozoic *horst* of the Maya Mountains, a massif comprised of granites, metamorphosed sandstones, and other acidic rocks.<sup>2</sup> The main divide is at ca. 1100 m. and the highest point, Victoria Peak in the isolated Cockscomb Range, has an elevation of 1132 m. Outwash sands from the massif cover large areas of the surrounding coastal lowlands to form an infertile soil supporting a pine savanna locally termed “Pine Ridge”. This is not suited to arable farming and has supported little ancient or modern settlement, although exploited for hunting by the ancient Maya and utilized also by preceramic occupants of the country. Rivers in southern Belize are short and markedly

---

ography of northern Belize,” in N. Hammond, ed., *Cuello Project 1978 Interim Report. Publications of the Archaeological Research Program, Rutgers University 1* (New Brunswick 1978) 79–87.

2. C. G. Dixon, *Geology of Southern British Honduras with Notes on Adjacent Areas* (Government Printer: Belize City 1955); idem, in A. C. S. Wright, D. H. Romney, R. H. Arbuckle and V. E. Vial, *Land in British Honduras* (Her Majesty's Stationery Office: London 1959) 23–24.

1. Roy Charles McDonald, “Preliminary report on the physical ge-

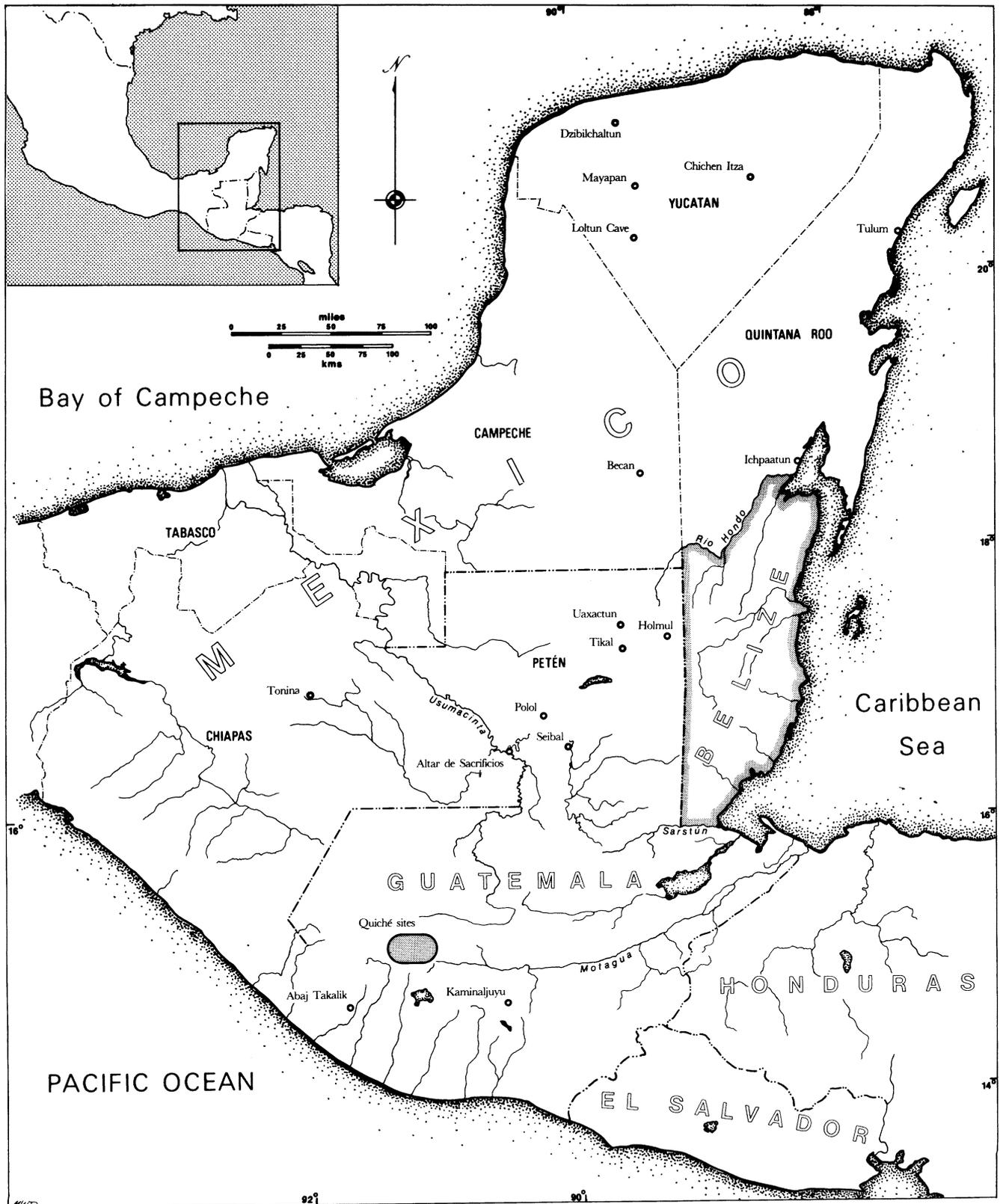


Figure 1. The Maya area, showing the location of Belize and important sites outside it.

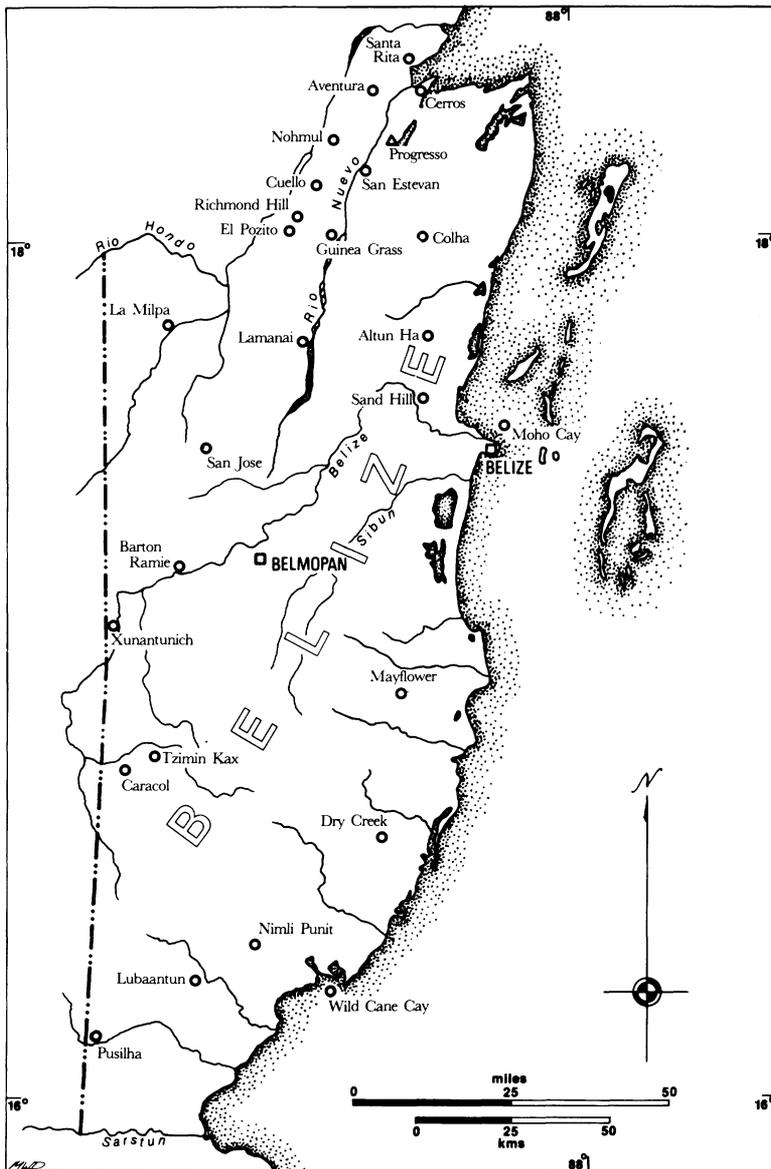


Figure 2. Topography and ancient Maya sites in Belize.

seasonal in flow; like those of the north, they debouch into the Caribbean, except for a few small tributaries of the Pasión in the extreme sw.

The natural vegetation of the limestone areas is a tropical broadleaf forest,<sup>3</sup> becoming more open in the uplands where the climate is subtropical and giving way to pine savanna on the mountain plateau and along the coastal plain. Several prominent plant associations within the forest, including "Cohune Ridge" dominated by *Orbigyna cohune* (Dahlgren) and the aptly-named "ruinal" found in the vicinity of Maya ruins, are probably the

result of human interference in the past and possess a high proportion of economically useful species.<sup>4</sup> In general, prehistoric settlements have been found most abundantly in areas of limestone geology, free-draining soils, and original broadleaf forest. The higher rainfall in the south (where the climate is of Koeppen's Afw' type; in the north it is Amw') during the May-to-December rainy season has led to the 25 m. contour being the baseline for most ancient habitation, while in the north it is com-

3. Wright et al., op. cit. (in note 2) 29-31.

4. J. D. H. Lambert and T. Arnason, "Distribution of vegetation on Maya ruins and its relationship to ancient land-use at Lamanai, Belize," *Turrialba* 28:1 (1978) 33-41.

mon down to the 10 m. contour and not infrequent at lower elevations.<sup>5</sup>

### Development of Archaeology in Belize

The history of Maya archaeology may be divided into five successive periods.<sup>6</sup> During the periods of the *Spanish Travelers* (1550–1759) and *Spanish Explorers* (1759–1840) Belize remained unnoted, and little attention was paid to the area during most of the following period of the *Major Scholars* (1840–1924), although by the end of the 19th century the ceremonial centers of Lubaantun (Rio Grande) and Xunantunich (Benque Viejo) had been reported, and the first important excavation in Belize was carried out in 1896 at Santa Rita by Thomas Gann.<sup>7</sup> From then until the mid-1920s Gann did most of the archaeological work in the colony, in the intervals of his career as chief medical officer; he continued to be active until 1936, and produced a series of reports which, although not detailed, are still useful.<sup>8</sup> He also sent back large collections of material from Nohmul, Santa Rita, and other sites to museums in Britain, and several other scholars made small collections from Belize in the years up to the Second World War.

Early in the *Institutional Period* (1924–1970), nearly half a century during which the dominant institution in Maya archaeology was the Carnegie Institution of Washington (C.I.W.) through its Division of Historical Research under Alfred V. Kidder and Sylvanus G. Morley, the British Museum mounted one of its rare American expeditions to the colony, exploring the southern sites of Lubaantun (1926–1927) and Pusilha (1928–1930) and removing stelae and ceramics to London.<sup>9</sup> Only preliminary reports were published.

One of the Lubaantun staff, J. Eric S. Thompson, returned to Belize in 1928–1929 for the Field Museum of Chicago, and began a series of innovative studies that influenced Maya archaeology widely. His excavations

around Tzimin Kax (Mountain Cow) in the western foothills of the Maya Mountains, which yielded information on settlement pattern as well as the small ceremonial precincts and their monuments,<sup>10</sup> were coupled with ethnographic work that detected pre-Columbian survivals in ritual and myth.<sup>11</sup> Thompson followed this project by one at the site of San Jose, north of the Belize River, where between 1930 and 1936 he examined what he explicitly hoped to have been an “average” ceremonial center, in contrast to the coeval major projects of the C.I.W. at Uaxactun and Chichén Itzá.<sup>12</sup> Thompson himself joined the C.I.W. staff in 1935 and remained a potent force in Maya studies until his death in 1975; during the early 1930s he promulgated the concept of the “ceremonial center” as an empty ritual precinct amid scattered rural settlement (in contrast to the “preindustrial city” model then implicitly accepted), and saw it become the controlling model in Maya settlement studies for a generation.<sup>13</sup>

During the second part of the Institutional period, after 1945, there were other innovative projects in Belize. Gordon R. Willey brought to Maya archaeology the settlement-pattern study techniques inspired by Julian H. Steward and pioneered by Willey in the Virú valley of north coastal Perú,<sup>14</sup> and used them to frame the first regional settlement study in the Maya area, the Belize Valley project of 1953–1956.<sup>15</sup> The focus of the project was the riparian residential zone of Barton Ramie, deliberately selected for its distance from any ceremonial center.

The Belize Valley project became the model for a quarter century of regional surveys and settlement studies that have resulted in much wider knowledge of the distribution and nature of lowland Maya culture outside the major sites. Several investigations contributing to this new orthodoxy took place in Belize, making it one of the

5. Wright et al., op. cit. (in note 2) 110–115; Norman Hammond, *Lubaantun: A Classic Maya Realm. MonoPM 2* (Cambridge 1975) 111.

6. Norman Hammond, *Ancient Maya Civilization* (Rutgers University Press: New Brunswick 1982) 33–66.

7. T. W. F. Gann, “On the Contents of some ancient mounds in Central America,” *Proceedings of the Society of Antiquaries of London* n.s. 16 (1897) 308; idem, “Mounds in Northern Honduras,” *Bureau of American Ethnology 19th Annual Report 1897–98* (1900) 655–692.

8. Idem, *The Maya Indians of Southern Yucatan and Northern British Honduras. BAE Bull 64* (1918); idem, and Mary Gann, *Archaeological Investigations in the Corozal District, British Honduras. BAE Bull 123* (1939) 1–57.

9. Norman Hammond, *The British Museum in British Honduras: Lubaantun 1926–1970* (British Museum: London 1972).

10. J. E. S. Thompson, *Archaeological Investigations in the Southern Cayo District, British Honduras. FieldMusAnthSer 17:3* (Chicago 1931).

11. Idem, *Ethnology of the Mayas of Central and Southern British Honduras. FieldMusAnthSer 17:2* (Chicago 1930).

12. Idem, *Excavations at San Jose, British Honduras. CarnInstPub 506* (Washington D.C. 1939).

13. Marshall Joseph Becker, “Priests, Peasants and Ceremonial Centers: The Intellectual History of a Model,” in Norman Hammond and Gordon R. Willey, eds., *Maya Archaeology and Ethnohistory* (University of Texas Press: Austin 1979) 3–20.

14. Gordon R. Willey, *Prehistoric Settlement Patterns in the Viru Valley, Peru. BAE Bull 155* (1953).

15. Gordon R. Willey, William R. Bullard, Jr., John B. Glass, and James C. Gifford, *Prehistoric Maya Settlements in the Belize Valley. PapPeaMus 54* (1965).

better-explored parts of the Maya area, including David M. Pendergast's work at Altun Ha, which combined settlement study with intensive excavation of public buildings in a small ceremonial precinct.<sup>16</sup>

In the final and continuing *Problem-oriented* period (1970– ) lower budgets enforced by global economic conditions resulted in projects conceived on a modest scale with limited but explicit objectives. Among problems pursued in Belize in this period have been the origins of Classic period civilization,<sup>17</sup> the existence, distribution, date, and function of channeled and raised fields along river margins and in *bajo* swamp depressions,<sup>18</sup> Archaic pre-agricultural populations<sup>19</sup> and early agricultural settlement,<sup>20</sup> the nature of late Formative florescence in the period 400 B.C.–250 A.C.,<sup>21</sup> the relationship

of the ceremonial precinct as a regional capital to its hinterland,<sup>22</sup> and the role of the Postclassic period that succeeded Classic civilization after the noted "collapse" of the latter in the 9th century A.C.<sup>23</sup> See Table 1 for a summary of chronology and period designations.

Outside the mainstream of Maya archaeological activity were a series of cave excavations in the Maya Mountains, begun in the 1950s by A. H. Anderson, the country's Archaeological Commissioner, and continued by D. M. Pendergast and more recently by trained speleologists brought in by the Archaeology Department. To the Terminal Classic occupation of the limestone caves in the Vaca and Chiquibul areas west of the main divide (where Gregory Mason had already done some work in the 1920s) important evidence of ritual activities has been added by recent exploration, and along the Caves Branch of the Sibun River the use of caves as early as the Late Formative (400 B.C.–250 A.C.) has been detected. Maya penetration of deep caves well beyond daylight range has been noted in several cases, and an interpretation of cave use as reflecting entry to the Maya underworld of Xibalba has been suggested.<sup>24</sup>

Regional surveys continued to be made in several parts of Belize, particularly the northern and southern quarters of the country, and the major center of Lamanai was intensively excavated by a Royal Ontario Museum project under D. M. Pendergast,<sup>25</sup> as at Altun Ha, substantial attention was paid to the restoration of the site as a national monument and as a contribution to economic development as Belizean tourism burgeons.

Overall, the problem-oriented projects that have worked in Belize since 1970 have made a greater con-

16. David M. Pendergast, *Excavations at Altun Ha, Belize, 1964–1970, Volume 1* (Royal Ontario Museum: Toronto 1979); Norman Hammond, "Preclassic to Postclassic in northern Belize," *Antiquity* 48 (1974) 177–189; Elizabeth A. Graham, *Archaeology of the Stann Creek District, Belize* (Centre of Latin American Studies, Cambridge University: Cambridge, England 1975); Norman Hammond, "Settlement Patterns in Belize," in Wendy Ashmore, ed., *Lowland Maya Settlement Patterns* (University of New Mexico Press: Albuquerque 1981) 157–186.

17. Hammond, op. cit. 1974 (in note 16); idem, "Ex oriente lux: A view from Belize," in R. E. W. Adams, ed., *The Origins of Maya Civilization* (University of New Mexico Press: Albuquerque 1977) 45–76.

18. Alfred H. Siemens, ed., *The Rio Hondo Project* (Belize Institute for Social Research and Action: Belize City 1977); Dennis E. Puleston, "The Art and Archaeology of Hydraulic Agriculture in the Maya Lowlands," in Norman Hammond, ed., *Social Process in Maya Prehistory: Studies in Honour of Sir Eric Thompson* (Academic Press: London 1977) 449–467; R. E. W. Adams, "Swamps, canals and the locations of ancient Maya cities," *Antiquity* 54 (1980) 206–214; B. L. Turner II, P. D. Harrison, R. E. Fry, N. Ettlinger, J. P. Darch, W. C. Johnson, H. J. Shafer, A. Covich, F. M. Wiseman, and C. H. Miksicek, *Maya Raised-Field Agriculture and Settlement at Pulltrouser Swamp, Northern Belize*. Unpublished report to the National Science Foundation (1980); B. L. Turner II and P. D. Harrison, "Prehistoric Raised-Field Agriculture in the Maya Lowlands," *Science* 213 (1981) 399–405.

19. Richard S. MacNeish, S. Jeffrey K. Wilkerson, and Antoinette Nelken-Terner, *First Annual Report of the Belize Archaic Archaeological Reconnaissance* (Robert S. Peabody Foundation: Andover, Mass. 1980).

20. Hammond, op. cit. (in note 17); Norman Hammond, Duncan Pring, Richard Wilk, Sara Donaghey, Frank P. Saul, Elizabeth S. Wing, Arlene V. Miller, and Lawrence H. Feldman, "The Earliest Lowland Maya? Definition of the Swasey Phase," *AmAnt* 44 (1979) 92–110; Norman Hammond, "Early Maya ceremonial at Cuello, Belize," *Antiquity* 54 (1980) 176–190.

21. Hammond, 1980 op. cit. (in note 20); David A. Freidel, "Maritime Adaptation and the Rise of Maya Civilization: The View from Cerros, Belize," in B. Stark and B. Voorhies, eds., *Prehistoric Coastal Adaptations: The Ecology and Economy of Maritime Middle America* (Academic Press: New York 1978) 239–265; idem, "Culture

Areas and Interaction Spheres: Contrasting Approaches to the Emergence of Civilization in the Maya Lowlands," *AmAnt* 44 (1979) 36–54.

22. Hammond, op. cit. (in note 5) 97–117.

23. David M. Pendergast, "Lamanai, Belize: Summary of Excavation Results, 1974–1980," *JFA* 8 (1981) 29–53; Barbara L. Stark, "Current Research: Middle America," *AmAnt* 45 (1980) 627.

24. David M. Pendergast, *The Prehistory of Actun Balam, British Honduras. ROMPap* 16 (Toronto 1969); idem, A. H. Anderson's *Excavations at Rio Frio Cave E, British Honduras (Belize). ROMPap* 20 (Toronto 1970); idem, *Excavations at Eduardo Quiroz Cave, British Honduras (Belize). ROMPap* 21 (Toronto 1971); idem, *Excavations at Actun Polbilche, Belize. Royal Ontario Museum Archaeology Monograph* 1 (Toronto 1974); Elizabeth A. Graham, Logan McNatt, and Mark Gutchen, "Excavations in Footprint Cave, Caves Branch, Belize," *JFA* 7 (1980) 153–172; Barbara McLeod and Dennis E. Puleston, "Pathways into Darkness: The Search for the Road to Xibalba," in M. Greene Robertson, ed., *Tercera Mesa Redonda de Palenque IV* (Pre-Columbian Art Research Center: Palenque 1979) 71–77.

25. Pendergast, op. cit. (in note 23).

Table 1. The chronology of Maya archaeology.

Dates	Major Periods	Phases	Ceramic Complexes in northern Belize
1542	POST-CLASSIC	Colonial	Waterbank
1450		Late	
1250		Middle	
900	CLASSIC	Early	Santana
800		Terminal	
700		Late	Tepeu
400		Middle	Nuevo Tzakol
250		Early	
0	FORMATIVE	(Proto-Classic)	Freshwater Floral Park
A.C. B.C.		Late	Cocos Chicanel
			Sarstoon
400	Middle	Lopez Mamom	
1000		Bladen Xe	
	Early	Swasey	
2000			
3300	ARCHAIC		Progreso ?
4200			Melinda ?
			Belize ?
5500			Sand Hill ?
7500			Lowe-ha
9000			

tribution to the synthesis of the country's prehistory that follows below, and to the mainstream of Maya scholarship, than their relatively modest funding might otherwise suggest.

#### Archaic or Preceramic Period (prior to 2000 B.C.)

Until 1979 stratified preceramic sites were unknown in the Maya lowlands, although several possible sites had been reported, including in Belize that of Richmond Hill.<sup>26</sup> The excavation of a preceramic and ceramic sequence at Loltun Cave in the Puuc hill country of Yucatan in that year<sup>27</sup> was followed in 1980 by an extensive survey of coastal Belize that resulted in the location of more than 100 aceramic sites.<sup>28</sup> MacNeish, Wilkerson, and Nelken-Terner argue that these sites span five preceramic phases from 9000 to 2000 B.C. (radiocarbon years, as are all other dates quoted here prior to 250 A.C.) on the basis of stone-tool typology and comparison with the highland Mesoamerican sequence established by MacNeish at Tehuacan.<sup>29</sup>

In this scheme the Lowe-ha phase (9000–7500 B.C.) is marked by projectile points of fishtail and Plainview types, by snub-nosed and blade-end scrapers, and by blades and choppers. The users of these tools are seen as hunters, perhaps of horse and giant sloth, related to coeval groups known from South America; the fishtail points have explicit parallels there.

The Sand Hill phase (7500–5500 B.C.) is marked by chert macroblades with side and end retouch, possibly related to the early Aguas Verde complexes of the Caribbean islands (which have a slightly later assigned date range). Long end-scrapers, unifacially worked; choppers, adzes, and concave-based points related to the Pedernales type are also found. A single grinding stone suggests seed-collecting and processing for food. The adzes may have been used for canoe construction, since one coastal site of this period appears to have been an island.

In the Belize phase (5500–4200 B.C.) stone bowls and grinding tools, presumably for seed processing, are characteristic. The weight of these artifacts suggests longer occupation of sites, and MacNeish et al. propose a seasonal schedule, with inland hunting and collecting in the

26. Dennis E. Puleston, "Richmond Hill: A Probable Early Man Site in the Maya Lowlands," *Actas y Memorias del 41 Congreso Internacional de Americanistas, Mexico 1974*, 1 (1975) 522–533.

27. Ricardo Velázquez V., "Recent Discoveries in the Caves of Loltun, Yucatan, Mexico," *Mexicon* 2:4 (1980) 53–55.

28. MacNeish et al., op. cit (in note 19).

29. Richard S. MacNeish, Antoinette Nelken-Terner, and I. W. Johnson, *The Prehistory of the Tehuacan Valley, 2: Non-Ceramic Artifacts* (University of Texas Press: Austin 1967) 17.

wet season of May-December and exploitation of the rich protein resources of the coastal zone during the dry season.

This use of aquatic resources increased during the Melinda phase (4200–3300 B.C.) and net sinkers and scale scrapers indicate offshore fishing. Large coastal sites suggest that sedentism was by this time a way of life, although Shumla-like points indicate continued hunting and seed-processing equipment demonstrates the persisting importance of plant resources in the mixed economy.

Sedentary villages with agriculture are thought to appear in the final preceramic phase, Progreso (3300–2000 B.C.), which has chert tools and seed-grinding equipment typologically close to those of the earliest known pottery-using period, the Swasey phase of 2000–1000 B.C.

It must be emphasized that this preceramic sequence is a seriation, with no single site having more than two components in stratigraphic superposition, and most sites consisting only of surface material. The interpretation of the sites as preceramic (rather than merely aceramic sites of lithic production/use within the documented Formative through Postclassic sequence), and the dynamic model interrelating the sites, are, although plausible, based at present mainly on artifact morphology and interregional analogy. Nevertheless, the recent report of a fluted point (again a surface find) from Ladyville near Belize City does suggest an early human presence in Belize, and the numerous preceramic sites located in the Maya highland zone in El Quiché complement the Loltun stratigraphy and the Belize finds in suggesting a widespread postglacial and preagricultural occupation of the Maya area.<sup>30</sup> An indigenous adoption by the early Maya population of food production as an economic strategy is a likely future discovery.

### Formative Period (2000 B.C.–250 A.C.)

The Formative conventionally begins with the appearance of pottery-using sedentary farmers, and ends with the erection of the first carved and inscribed stone monuments bearing dates in the Classic Maya calendar called the Long Count. It is formally divided into Early (2000–1000 B.C.), Middle (1000–400 B.C.), and Late (400 B.C.–250 A.C.) phases, defined by radiocarbon dates.

The Maya lowland Formative was first defined at Uaxactun, Peten, Guatemala, in the 1930s, when it was ascribed an extent back to 500 B.C. for the beginning of the

Middle phase, characterized by Mamom complex pottery.<sup>31</sup> Willey's work at Barton Ramie in central Belize extended this back a further century or so,<sup>32</sup> and his subsequent Pasión Valley project at Altar de Sacrificios and Seibal in the western Peten demonstrated a wider occupation of the lowlands in the 7th and 8th centuries B.C., corroborated by discoveries at Tikal in NE Peten, Dzibilchaltun in Yucatan, and other sites.<sup>33</sup>

The absence of known earlier sites by the late 1960s left the initial Middle Formative and the entire Early Formative an evidential vacuum in the Maya lowland zone. The developed nature of Middle Formative material culture indicated prior origins, which were perforce sought in the Olmec area to the west or the highland zone to the south.<sup>34</sup>

This picture was modified by the excavation at Cuello in northern Belize of a stratified sequence of Early Formative through Late Classic deposits, with a suite of 20 radiocarbon dates for the Formative phases confirming the stratigraphic succession.<sup>35</sup> The Middle and Late Formative dates matched those from other Maya lowland sites, while those for the underlying Early Formative indicated a span of 2000–1000 B.C. (2500–1300 B.C. in calendar years if the bristlecone pine calibration curve is applied). The earliest date accepted is for occupation on the old land surface and is of 1950 ± 65 B.C. (Q-1571).

Flotation of carbonized plant remains demonstrated maize cultivation at Cuello from the earliest Formative levels upwards, with several strains of corn of gradually increasing cob size, and inferentially productivity.<sup>36</sup> Cotton has been identified in the Late Formative, and cacao may also be represented by two types of rind, recognized

31. Robert E. Smith, *Ceramic Sequence at Uaxactun, Guatemala*. Middle American Research Institute, Tulane University, Publication 20 (New Orleans 1955).

32. Willey et al., op. cit. (in note 15).

33. Gordon R. Willey, "The Rise of Classic Maya Civilization: A Pasión Valley Perspective," in Adams, ed., op. cit. (in note 17) 133–157; T. Patrick Culbert, "Early Maya Development at Tikal, Guatemala," in *ibid.*, 27–43; Joseph W. Ball, "The Rise of the Northern Maya Chiefdoms: A Socioprocessual Analysis," in *ibid.*, 101–132.

34. Adams, op. cit. (in note 33) 61, 135, 195, 385.

35. Norman Hammond, Duncan Pring, Rainer Berger, V. R. Switsur, and A. P. Ward, "Radiocarbon chronology for early Maya occupation at Cuello, Belize," *Nature* 260 (1976) 579–581; Norman Hammond, Sara Donaghey, Rainer Berger, Suzanne De Atley, V. R. Switsur, and A. P. Ward, "Maya Formative phase radiocarbon dates from Belize," *Nature* 267 (1977) 608–610.

36. Charles H. Miksicek, Robert McK. Bird, Barbara Pickersgill, Sara Donaghey, Juliette Cartwright, and Norman Hammond, "Pre-classic lowland maize from Cuello, Belize," *Nature* 289 (1981) 56–59; Norman Hammond and Charles H. Miksicek, "Ecology and Economy of a Formative Maya site at Cuello, Belize," *JFA* 8 (1981) 259–269.

30. Thomas R. Hester, *A Fluted Projectile Point from Belize* (Center for Archaeological Research, UTSA: San Antonio 1981); Kenneth L. Brown, "A Brief Report on Paleoindian-Archaic Occupation in the Quiche Basin, Guatemala," *AmAnt* 45 (1980) 313–324; R. S. MacNeish, *Second Annual Report of the Belize Archaic Archaeological Reconnaissance* (Robert S. Peabody Foundation: Andover, Mass. 1981).

but not identified, from the beginning of the Early Formative onwards. Squash is found from the later Early Formative on, but beans (*Phaseolus vulgaris*), a staple Mesoamerican crop, have not yet been recovered. Root crops are known from the Late Formative but are so far unidentified as to species.

Buildings at Cuello consisted initially of post-framed structures standing on the old land surface, with post holes penetrating the limestone bedrock; possibly coeval are the earliest plaster floors, which were laid down perhaps as early as 1800 B.C. Low plastered platforms set around a patio or courtyard, itself plaster-surfaced, are known from about 1600 B.C. Post holes in the platforms indicate similar perishable superstructures with palm-thatched roofs, and some design details suggest public and ceremonial rather than domestic use.<sup>37</sup>

The pottery of the Early Formative Swasey complex is stratigraphically and typologically antecedent to that of the Middle Formative Bladen Xe and Lopez Mamom complexes and the succeeding Cocos Chicanel complex of the Late Formative; this last complex develops into the early Classic period pottery of the region in the 3rd and 4th centuries A.C.<sup>38</sup> Swasey pottery is known from several other sites in northern Belize, including Santa Rita and Nohmul, and its stratigraphic priority below the Middle Formative was confirmed in 1980 at Colha, 27 km. SE of Cuello.<sup>39</sup> The 1980 excavations at Cuello itself showed that two Swasey ceramic types (Consejo Red and Tower Hill Red-on-cream) continued to be made and used into the Middle Formative, so that the presence of only these two types is insufficient to confirm Early Formative occupation at any site.

Colha has yielded abundant Middle Formative material, with indications of links to the Xe complex of the Pasión basin<sup>40</sup> as well as a Mamom ceramic complex

more closely related to Peten than to other north Belizean sites. Middle Formative sites are so far sparse in Belize, although the Belize Valley and the central coastal region were occupied; the regional survey of northern Belize<sup>41</sup> and the detailed sampling in 1980 of the Cuello settlement area both indicate a population density close to that of the Early Formative or slightly greater. Masking of Middle and Early Formative occupations by the large and numerous Late Formative settlements seems likely, and forms an urgent research problem.

The Late Formative has been a major focus of research and discovery in Belize in the past decade, especially in the north of the country. The Corozal Project in 1972–1974 was an explicit regional study of the factors underlying the emergence of Classic civilization, and documented a massive population increase in the Late Formative at several sites and in the region overall, associated with the emergence of major concentrations of public buildings in ceremonial precincts.<sup>42</sup> At Cerros the entire precinct and surrounding settlement were shown to be Late Formative in date and to include dense habitation and elaborate architectural sculpture,<sup>43</sup> while at Lamanai another important center included a temple-pyramid 33 m. high,<sup>44</sup> an enterprise emulated at this date only at Tikal and El Mirador in Peten.

The economic infrastructure supporting this growth was itself technologically innovative, including the construction and exploitation of channeled and raised fields, possibly in the Hondo and Nuevo valleys and probably in non-riverine *bajo* depressions in the limestone ridges, such as Pulltrouser Swamp.<sup>45</sup> Initial discovery of the riverine fields by aerial photography was followed by ground survey around Albion Island on the Hondo by Alfred H. Siemens and Dennis E. Puleston, and *bajo* drained fields, first detected north of Belize in Quintana Roo, Mexico, were excavated in the Orange Walk District at Pulltrouser Swamp in 1979 and 1981 by B. L. Turner II and Peter D. Harrison.

Widespread and large-scale construction of such fields and their interstitial canals (which could be used for pisciculture as well as drainage and transport<sup>46</sup>) has been

37. Hammond et al., *op. cit.* (in note 20); Hammond *op. cit.* (in note 20).

38. Duncan C. Pring, "The Preclassic Ceramics of Northern Belize," unpublished Ph.D. dissertation, University of London (London 1977), available through University Microfilms, Ann Arbor, Mich. Recent unpublished work by L. Kosakowsky and F. Valdez, Jr., suggests that a new ceramic complex, the Bladen, should be defined for the period 1200/1100–800 B.C., embracing the Xe pottery from Cuello and the innovations at present placed in the last century or two of the Swasey phase. At Colha the equivalent complex is the Bolay.

39. R. E. W. Adams and Fred Valdez, Jr., "First (1979) Season's Report on the Ceramics of Colha, Belize," *Belizean Studies* 8:3 (1980a) 12–18; *idem*, "The Ceramic Sequence of Colha, Belize: 1979 and 1980 Season," in T. R. Hester, J. D. Eaton, and H. J. Shafer, eds., *The Colha Project: Second Season, 1980 Interim Report* (Center for Archaeological Research, UTSA: San Antonio 1980b) 15–40; personal communications from Adams and Valdez, 1980.

40. Adams and Valdez, 1980b *op. cit.* (in note 39) 15–17.

41. Hammond, *op. cit.* (in note 17) 51–57, 64–66.

42. *Ibid.* 64.

43. Freidel, 1979 *op. cit.* (in note 21) 45–47.

44. Pendergast, *op. cit.* (in note 23) 41–42.

45. Turner et al., *op. cit.* (in note 18); Turner and Harrison, *op. cit.* (in note 18) 403.

46. J. E. S. Thompson, "'Canals' of the Rio Candelaria basin, Campeche, Mexico," in N. Hammond, ed., *Mesoamerican Archaeology: New Approaches* (Duckworth: London 1974) 297–302.

detected using synthetic-aperture side-looking airborne radar (SLAR) in a cooperative venture between Maya archaeologists and the Jet Propulsion Laboratory of NASA.<sup>47</sup> Ground confirmation of the SLAR data has been achieved in several areas of northern Belize and also in Peten, but the overall time-span of field and canal construction for these new discoveries has not been ascertained.

The several projects involved have revealed a new economic landscape as background to the rise of Maya civilization, since at least some of the field-canal systems are firmly dated to the Late Formative, thereby raising the question of how organized Maya society at the time was in terms of chiefdom or state structure.

Canal and field construction utilized chert biface choppers (found in situ but not firmly dated at Pulltrouser Swamp<sup>48</sup>), and a major Late Formative production center for such tools has been investigated at Colha,<sup>49</sup> where several square kilometers of chert tool workshops form the largest factory site known in the Maya lowlands. Similar organization of Late Formative society may be detected in the foothills of the Maya Mountains in the Cayo District of central Belize, where large areas of hillside terracing, creating artificial fields with silt-traps and erosion-control features, have been mapped and found to date from the Late Formative through Terminal Classic periods,<sup>50</sup> with the bulk of the ceramic sherds recovered being of Early Classic date (250–600 A.C.).

The elaboration of subsistence technology, public architecture, and settlement in the Late Formative is matched by craft development, particularly in ceramics, jade-working and architectural sculpture, and by the development of long-distance exchange networks that remained active through the Classic period. As Sir Eric Thompson recognized in 1966, “the division between Formative and Classic has become meaningless,”<sup>51</sup> and Late Formative society in at least some parts of the lowlands, including northern Belize, may well merit the sobriquet “civilized”.

47. R. E. W. Adams, op. cit. (in note 18); idem, W. E. Brown Jr., and T. Patrick Culbert, “Radar Mapping, Archaeology and Ancient Maya Land Use,” *Science* 213 (1981) 1457–1463.

48. Turner and Harrison, op. cit. (in note 18) 402.

49. T. R. Hester, ed., *The Colha Project, 1979: A Collection of Interim Papers* (Center for Archaeological Research, UTSA: San Antonio 1979); T. R. Hester et al., op. cit. (in note 39).

50. Paul F. Healy, Catrien Van Waarden and Thomas J. Anderson, “Nueva Evidencia de Antiguas Terrazas Mayas en Belice,” *América Indígena* 40 (1980) 773–796.

51. J. E. S. Thompson, *The Rise and Fall of Maya Civilization*, 2nd edn. (University of Oklahoma Press: Norman 1967) 57.

### Protoclassic Period (50 B.C.–250 A.C.)

Convention often separates this period or some fraction of it from the Late Formative (which also formally persists until 250 A.C.), using the term “Protoclassic” to denote the appearance of certain precocious features characteristic of the Classic period.<sup>52</sup> Although elaboration in sculpture and architecture have been adumbrated as marking the Protoclassic manifestation, in general it has only been recognized where ceramics of the Floral Park sphere also appear. The distribution of these, first defined at Barton Ramie,<sup>53</sup> is concentrated in the east-central Maya lowlands,<sup>54</sup> and three of the principal sites from which the pottery is known, Barton Ramie, Nohmul, and Tzimin Kax, lie in Belize (the fourth, Holmul, is in Peten, less than 15 km. west of the frontier). A dispute over the postulated intrusive character of Floral Park pottery and its makers into the lowland is unresolved,<sup>55</sup> although the evidence for an essentially indigenous lowland evolution drawing in external stimuli through established Late Formative exchange networks has become much stronger with recent work in Belize. The importance of the innovative Floral Park pottery and whatever social reality it reflects, however, are undisputed, and a fruitful field for research.

### Classic Period (250–900 A.C.)

Originally defined by the appearance of polychrome pottery, vaulted stone buildings and dated stone monuments in the lowlands, and placed at 300–900 A.C. on the basis of J. E. S. Thompson’s correlation of Maya and Christian calendars, the Classic period has been the traditional focus of Maya archaeology since serious exploration of the lowland sites began in the mid-19th century (several decades before any date could be given to them). Almost all the impressive temple-pyramids, palaces, ball courts, and other buildings reported by travelers and ex-

52. Gordon R. Willey, in Adams, ed., op. cit. (in note 33) 391.

53. Willey et al., op. cit. (in note 15) 342–343; Gordon R. Willey and James C. Gifford, “Pottery of the Holmul I Style from Barton Ramie, British Honduras,” in S. K. Lothrop et al., eds., *Essays in Pre-Columbian Art and Archaeology* (Harvard University Press: Cambridge 1961) 152–170.

54. Duncan C. Pring, “Influence or Intrusion? The ‘Protoclassic’ in the Maya Lowlands,” in Hammond, ed., op. cit. (in note 18) 135–165.

55. Ibid; Robert J. Sharer and James C. Gifford, “Preclassic Ceramics from Chalchuapa, El Salvador, and Their Relationships with the Maya Lowlands,” *AmAnt* 35 (1970) 441–462; Payson D. Sheets, “An Ancient Natural Disaster,” *Expedition* 14:1 (1971) 24–31; Willey and Gifford, op. cit. (in note 53); R. E. W. Adams, *The Ceramics of Altar de Sacrificios. PapPeaMus* 63 No.1 (1971); Payson D. Sheets, ed., *Ilopango Volcano and the Maya Protoclassic* (University of Southern Illinois Museum of Anthropology: Carbondale 1976).

peditions over the past century and a half date to this period, which saw the florescence and then the decline of Maya civilization.

Neither the beginning nor the end of the Classic, however, is as clear-cut temporally or culturally as they once seemed. Monuments earlier than 300 A.C. have been found in the lowlands, perhaps substantially earlier in the case of Polol Altar 1,<sup>56</sup> and a Maya monumental art established in the Guatemalan highland zone from at least the 1st century B.C. indicates the probable origin of the glyptic tradition. At the end of the Classic period the cessation of monument carving and the abandonment of major centers through the 9th and early 10th centuries was a lingering rather than sudden cultural death.

In Belize the practice of erecting stelae as dynastic monuments bearing carved images and dated inscriptions is not known for some two centuries after the raising of Tikal Stela 29 in 292 A.C., even though the earliest stelae in the country are at Caracol only 75 km. SE of Tikal. A plain stela was, however, erected at Cuello ca. 100 A.C.<sup>57</sup>

The contrast between Late Formative florescence and Early Classic decline found at Peten centers such as Seibal is found in Belize at Cerros, Colha, and Nohmul, but where the two latter sites parallel Seibal in a subsequent Late Classic recovery, Cerros is apparently largely abandoned.<sup>58</sup> Contrasting with this pattern, a number of Belizean sites follow Tikal in having a major period of growth and prosperity during the Early Classic: Santa Rita, Aventura, and San Estevan in the north, Lamanai and Altun Ha in the center, Moho Cay at the mouth of the Belize River, and Barton Ramie upstream all flourish, and the significance of this differential development is no more explicable on the Belizean evidence than it is to the west in Peten.

The influence of Teotihuacan, the great Mesoamerican metropolis in the Valley of Mexico, which exerted widespread influence between 100 and 700 A.C., has been detected at several Belizean sites, the easternmost areas reached by Teotihuacan goods.

An early burial at Altun Ha was accompanied by an offering of Central Mexican green obsidian, deposited in Teotihuacan ceremonial format, and was accompanied by locally-made Teotihuacan-style pottery vessels. Pendergast, the excavator, assigned the burial a date in the 3rd century A.C. that coincided with the emergence of Classic period culture and thus suggested Teotihuacan

influence at this crucial time. This dating was challenged by Pring because of the presence of a late Tzakol basal-flanged bowl in the assemblage. The most recent revision of the Teotihuacan ceramic sequence itself by Rattray would put the analogous vessels at Altun Ha into the period 300–350 A.C.<sup>59</sup>

Other evidence of contact is less striking, though it includes slab-footed cylinder vases at Santa Rita, Cuello, and Moho Cay and a few scraps of green obsidian from sites in northern Belize. Overall, Teotihuacan influence, whether transmitted directly or via Kaminaljuyu in the Guatemalan highlands, is less palpable in Belize than in more westerly sites such as Tikal and Becan, where both military intrusion and dynastic alliance have been suggested as explanations for the presence of Teotihuacan material.

Detailed knowledge of Early Classic (250–600 A.C.) architecture has been elucidated at Lamanai with the major excavation of Structures N 10–9 and N 9–56.<sup>60</sup> An unusual building practice, with a structure athwart the main stair of the pyramid rather than on top of it, was found to exist in Structure N 10–9 as well as at Altun Ha where it had been first noted; in N 9–56 the same idea may be of Late Classic date. This latter structure had a well-preserved primary building dated to ca. 500 A.C. by a unique tomb in which the body was covered by a wooden framework draped with plaster bandages to form a cocoon. The exterior of the building was decorated with large masks with some Olmecoid features; the lower mask had a reptilian headdress, one of many examples of such iconography at Lamanai. The site name is one of the few prehispanic Maya place-names to survive, and it has been suggested that it should have been recorded as *Lama'anayin*, “submerged crocodile”, reflecting both the presence of such creatures in the adjacent lagoon and the Maya preoccupation with them in decorative arts; if correct, this identification indicates an origin on archaeological evidence for the name of the site more than fifteen centuries ago.

A site closely related to Lamanai in architecture is Altun Ha, 35 km. to the east across the swampy coastal plain; excavations by D. M. Pendergast in the 1960s showed that the two public plazas had been constructed mainly in the Early Classic, with buildings containing tombs with a wealth of jade objects, thereby belying the

56. Gary Pahl and John A. Graham, personal communications, 1980.

57. Norman Hammond, “A Late Formative Period Stela in the Maya Lowlands,” *AmAnt* 47 (1982) 396–403.

58. Freidel, op. cit. (in note 21).

59. David M. Pendergast, “Evidence of Early Teotihuacan-Lowland Maya Contact at Altun Ha,” *AmAnt* 36 (1971) 455–460; Duncan C. Pring, “The Dating of Teotihuacan Contact at Altun Ha: The New Evidence,” *AmAnt* 42 (1977) 626–628; Evelyn C. Rattray, personal communication 1980.

60. Pendergast, op. cit. (in note 23) 35–40.

site's small size and apparent insignificance. Publication of the final report has begun.<sup>61</sup>

The Late Classic (600–900 A.C.) saw the growth of both sites and populations in Belize to an extent paralleled only in the Late Formative. Lamanai and Altun Ha continued to flourish into this period, and major expansions are documented at Nohmul<sup>62</sup> and Colha<sup>63</sup> in the north. In southern Belize a new center was established at Lubaantun<sup>64</sup> ca. 700 A.C. in a region strikingly lacking in earlier sites, while to the sw at Pusilha on the Peten border a series of dated stelae was erected between 574 and 731 A.C. Northeast of Lubaantun the small site of Nim li punit has several recently-discovered stelae erected between 721 and 790 A.C.,<sup>65</sup> while Lubaantun itself had three ballcourt markers dated stylistically to 780–790 A.C.<sup>66</sup> but lacked stelae entirely. The relationship between the two sites has been suggested as that of a political capital and a dynastic cult center; Nim li punit is unusual in its small size (a single plaza) and in the 24 monuments packed into it, of which 6 were carved and the rest apparently plain. One of the carved monuments, Stela 14, has a Long Count date of 9.18.10.0.0. in the Maya calendar (790 A.C.), but the Calendar Round position for 9.18.0.0.0. (780 A.C.); it was probably never erected, but at 9.5 m. (31 feet) it is among the tallest Maya stelae known, suggesting a link with Quirigua to the south.

North of the Maya Mountains stelae were erected in the Late Classic at La Milpa and Lamanai, and several were dedicated at Xunantunich in 849 A.C. The earliest site with inscribed stelae in Belize, Caracol, has also the longest span of dates, terminating in 889 A.C., and its monuments include a number of altars carved with giant Ahau glyphs as an expression of their calendar dates. Little is known at present of the architecture or ceramics of Caracol, but the work of the Late Linton Satterthwaite, Jr., continued by Carl P. Beetz, has led to the identification of three rulers at the end of the Early Classic and to the recognition of strong ties with the center of Naranjo

in Peten, 45 km. to the NNW.<sup>67</sup> In general, Caracol fits into the NE Peten pattern of long stela sequences, while the rest of Belize has only sporadic and short-term occurrences of the practice of erecting monuments.

Apart from the excavations at Lamanai and Altun Ha, major buildings of the Classic period have been examined only at Xunantunich, where the Belize Department of Archaeology has concentrated on the exposure and conservation of the largest structure, A-6. Work in other Classic ceremonial precincts, including Baking Pot, Nohmul, Lubaantun, El Pozito, and Colha, has been mainly on small structures, including chert and obsidian workshops at the two latter sites.

Most recent work on the Classic period in Belize has taken the form of surveys, test excavations, and studies of subsistence and settlement. The shift away from major architectural investigation is a result in part of economic factors, and a reaction to the previous concentration of effort in this field throughout the Maya lowlands, which it was widely felt had led to sufficient quantities of data, and a lack of balance at the same time in other aspects of Maya studies.

#### Postclassic Period (900–1550 A.C.)

The formal beginning of the Postclassic coincides approximately with the cessation of stela erection. The latest Initial Series currently known, from Tonina, Chiapas, is of 10.4.0.0.0. (909 A.C.), and few stelae are later than 10.3.0.0.0. (889 A.C.), which is also the latest date for any monument in Belize.

The system collapse that resulted in not only this cessation but also the abandonment of most of the major centers in Belize, Peten, and adjacent areas of Mexico, Honduras, and Salvador has been exhaustively analyzed over the past decade.<sup>68</sup> Recent work in Belize, however, has suggested that some sites continued to be occupied through the collapse period, albeit at a reduced level of population size and social complexity. The most detailed

61. David M. Pendergast, *Excavations at Altun Ha, Belize, 1964–1970* (Royal Ontario Museum: Toronto 1979).

62. Norman Hammond, ed., *Archaeology in northern Belize: British Museum-Cambridge University Corozal Project 1974–75 Interim Report* (Centre of Latin American Studies, Cambridge University: Cambridge 1975) 73–108.

63. Hester, op. cit. (in note 49); idem et al., eds., op. cit. (in note 39).

64. Hammond, op. cit. (in note 5).

65. Norman Hammond, "A New Maya Ceremonial Centre in Belize," *ILN Archaeology Section* 2919 (1976) 49–50.

66. Hammond, op. cit. (in note 5) 376.

67. Carl P. Beetz, "Caracol Revisited," *Expedition* 22:3 (1980) 4–11.

68. T. Patrick Culbert, ed., *The Classic Maya Collapse* (University of New Mexico Press: Albuquerque 1973); idem, "Maya Development and Collapse: An Economic Perspective," in Hammond, ed., op. cit. (in note 18) 509–530; Robert J. Sharer, "The Maya Collapse Revisited: Internal and External Perspectives," in *ibid.* 531–552; Dorothy Hosler, Jeremy A. Sabloff, and Dale Runge, "Simulation Model Development: A Case Study of the Classic Maya Collapse," in *ibid.* 553–590; Robert L. Hamblin and Brian L. Pitcher, "The Classic Maya Collapse: Testing Class Conflict Hypotheses," *AmAnt* 45 (1980) 246–267.

evidence so far has come from Lamanai<sup>69</sup> and Nohmul,<sup>70</sup> while research at Colha has produced evidence of continued utilization of the chert outcrops to manufacture a new range of tools including triangular adzes and lozenge-shaped bifaces; ceramic evidence shows a small community at Colha in the region of the Classic ceremonial precinct.<sup>71</sup> Similar continuity into the Early Postclassic is demonstrated at Barton Ramie, where the level of occupancy in the New Town phase is almost as high as the Late Classic maximum.<sup>72</sup>

At Lamanai the early occurrence (on the basis of radiocarbon dates) of ceramic motifs found later at Mayapan has led Pendergast<sup>73</sup> to argue for a south-to-north movement of culture traits, but at Nohmul the evidence indicates that the reverse occurred: the architecture of Phase Z of Structures 139 and 141, excavated in 1973–1974; the “patio-quad” plan of Structure 20 and its intrusive nature in the ceremonial precinct layout; and the circular plan of Structure 9 adjacent to Structure 20, resembling the “Caracol” buildings of Chichén Itzá and Mayapan, all indicate southward movement of Yucatecan ideas and probably people, as postulated by Joseph W. Ball.<sup>74</sup> On the basis of the Nohmul architectural evidence, cultural and ethnic occupation of northern Belize by southward migration of Yucatec Maya seems as valid an interpretation as does one of cultural continuity.

The later part of the Postclassic, after 1250 A.C., coeval with the florescence of Mayapan and the subsequent political fragmentation of the still-populous northern Yucatan Peninsula, is also best-known from work in northern Belize: only sparse material is known from south of Lamanai, although historical evidence exists for occupation.<sup>75</sup> Two archaeological exceptions are the Mayflower group of sites south of Stann Creek, where Elizabeth Graham excavated a plain granite stela with an

associated Middle Postclassic cache<sup>76</sup>—arguably the latest Maya stela yet known—and the small offshore island of Wild Cane Cay. On this site<sup>77</sup> Postclassic pottery from both northern Yucatan and the Pacific piedmont of Guatemala has been found, as well as jade, obsidian, and metal objects attesting to its position on the long-distance sea trade route around the Yucatan Peninsula.

In northern Belize several dozen sites have yielded effigy incense burner fragments of Chen Mul Modeled type and provincial Mayapan iconography, mainly from superficial deposits on and around abandoned Classic period structures. Most of the sites lack Postclassic domestic pottery and other evidence of habitation in the immediate vicinity of the ritual deposits, and were apparently visited during local pilgrimage ceremonies, although the construction of small stone-walled platforms atop some Classic structures suggests habitual visits; these may be local versions of the “pilgrimage fairs” hypothesized by D. A. Freidel as explanatory of Maya regional settlement patterns.<sup>78</sup> No buildings as ambitious as those reported for the coeval Lobil phase in Quintana Roo to the north are known,<sup>79</sup> although Gann’s Santa Rita excavation report suggests one such construction over the mural-decorated structure there.<sup>80</sup>

Resetting of Classic period stelae at this time is known from several sites in northern Belize, including Lamanai, where it accompanies massive incensario offerings around Structure N 9–56, and the small site of Chan Chen, where the stela does not appear from its material to be of local origin.<sup>81</sup> The practice is known also from Tikal, Seibal, and sites in Quintana Roo, but lacks precise dating beyond the general Postclassic context.<sup>82</sup>

69. Pendergast, op. cit. (in note 23) 43–52.

70. Hammond, op. cit. (in note 17) 57–58; Arlen F. Chase and Diane Z. Chase, “Archaeological Investigations at Nohmul and Santa Rita, Belize, 1979–1980,” *Mexicon* 3:3 (1981) 42–44; Diane Z. Chase and Norman Hammond, “Excavation of Nohmul Structure 20,” *Mexicon* 4:1 (1982) 7–12.

71. Norman Hammond, ed., *British Museum-Cambridge University Corozal Project 1973 Interim Report* (Centre of Latin American Studies, Cambridge University: Cambridge 1973) 57; idem, op. cit. (in note 62) 13–72; Adams and Valdez, 1980b op. cit. (in note 39) 27.

72. Willey et al., op. cit. (in note 15) 384.

73. David M. Pendergast, “Lamanai (Indian Church): Cross-Section of Belize’s Past,” *Belizean Studies* 8:3 (1980) 28.

74. Joseph W. Ball, “A Coordinate Approach to Northern Maya Prehistory, A.D. 700–1200,” *AmAnt* 39 (1974) 85–93.

75. J. E. S. Thompson, *The Maya of Belize: Historical Chapters Since Columbus* (Benex Press: Belize City 1974).

76. Graham, op. cit. (in note 16); idem, “Archaeological Investigations in the Stann Creek District,” *Belizean Studies* 6:4 (1978) 16–26.

77. Hammond, op. cit. (in note 5) 277.

78. David A. Freidel, “The Political Economics of Residential Dispersion Among the Lowland Maya,” in Ashmore, op. cit. (in note 16) 371–382.

79. Peter D. Harrison, “The Lobil Postclassic Phase in the Southern Interior of the Yucatan Peninsula,” in N. Hammond and G. R. Willey, eds., *Maya Archaeology and Ethnohistory* (University of Texas Press: Austin 1979) 189–207.

80. Gann, 1900 op. cit. (in note 7) 663–665.

81. Pendergast, op. cit. (in note 23) 51; personal observation, on a visit to Chan Chen in 1974 by courtesy of R. V. Sidrys.

82. Linton Satterthwaite, Jr., *The Problem of Abnormal Stela Placements at Tikal and Elsewhere*, *Tikal Report* 3, in *Tikal Reports* Nos. 1–4 (University Museum: Philadelphia 1958) 61–83; Gordon R. Willey, *Excavations at Seibal, Department of Peten, Guatemala: Introduction: The Site and Its Setting*, *MemPM* 13 No. 1 (Cambridge 1975) 30.

Although this ritual activity presumably resulted from the devotions and social interaction of the local population in each case, only two substantial Late Postclassic settlements are so far known in northern Belize, at Lamanai and Santa Rita. At Lamanai occupation continued beyond the formal end of the Postclassic, since a *visita* church was founded for the benefit of its population ca. 1570 and remained in use until abandonment of the region by the Spanish friars in the 1640s, with post-Christian burials being made around it until the 1670s. The ceramics in these later burials, typologically identical with those of a century earlier, demonstrate that European penetration does not necessarily lead to detectable change at the level of craft production.<sup>83</sup>

Santa Rita, probably the eponymous provincial capital of protohistoric Chetumal, has a large Postclassic occupation centered on public buildings, at least one of which was decorated with murals of Mixteca-Puebla inspiration derived from southern Mexico and related to codex art, in what Donald Robertson has termed "the International Style of the Late Postclassic".<sup>84</sup> The murals can be seen as a product of the same coast-oriented settlement and trading pattern represented by the fortified towns of Tulum (with similar murals) and Ichpaatun in Quintana Roo and by Wild Cane Cay in southern Belize, tied to the major circum-peninsular canoe route between Xicalango on the Gulf of Mexico and Nito and Naco on rivers flowing into the Gulf of Honduras at the eastern margin of the Maya lands. Thus the polity of Chetumal, which probably reached south to the vicinity of Lamanai, remained linked to the mainstream of Mesoamerican culture through the 16th century.

### Future Directions

Belizean archaeology in the 1980s is advancing in the two fields of problem-oriented research and of a developing national policy for cultural resource management.<sup>85</sup> The north of the country, with projects working on field/canal systems at several locations and in important sites at Lamanai, Colha, Cerros, Santa Rita, Nohmul, and Cuello, is one of the most densely populated areas of research in the Maya area, while the study of caves

around the Maya Mountains is beginning to link with surveys of hill-terraces and renewed interest in such ceremonial centers as Caracol and Tzimin Kax to form another substantial focus of activity. Problems under explicit scrutiny by these projects include the initial occupation of the humid tropical lowlands, the establishment of settled farming communities there, the emergence of complex society and the *floruit* and dissolution of that society during the 1st millennium A.C., and the interplay of Maya and Spanish colonial societies in the contact period.

Cross-cutting these studies of crucial transformations in the trajectory of Maya prehistory are other projects (or sections of those mentioned) investigating the diachronic exploitation of chert as a basic industrial resource, and the development of a complex agricultural base for Maya civilization by the construction of artificial econiches on the hillsides and in the wetlands.

Potential exists in Belize for the study of other little-understood episodes in the Maya cultural sequence, such as the nature of the Middle Formative period, the role of the Protoclassic manifestation in the emergence of Classic civilization, the eclipse of some major sites in the Early Classic, and the equally enigmatic persistence of occupation at others during the collapse of Classic society in the 9th and 10th centuries A.C. The environmental diversity of Belize, with ancient metamorphic highlands merging into limestone foothills and undulating ridges within a few kilometers' distance, and these low ridges in turn descending to *bajos* and coastal savannas and swamps, makes Belize a microcosm of the Maya area within which the changing relationship of people to their landscape can fruitfully be studied.

Archaeological research in Belize is governed by the Department of Archaeology, headed by the Archaeological Commissioner (the current incumbent being a graduate in Archaeological Sciences) and administratively within the Ministry of Trade, Industry, Cooperatives and Consumer Protection. The antiquities legislation of 1924 was updated in 1971 to produce one of the most comprehensive statutes governing the protection of cultural resources of any nation in the Americas. Guidelines for the management of these resources have now been introduced, including an obligation on the part of a project to devote 15% of its budget to conservation and restoration of structures disturbed by excavation, or to other mutually agreed contributions to the development of Belizean archaeology.<sup>86</sup>

The number of qualified staff in the Archaeology Department is being increased by a joint program with Trent

83. Pendergast, op. cit. (in note 23) 52.

84. Gann, op. cit. (in note 7); Donald Robertson, "The Tulum Murals: The International Style of the Late Postclassic" in *Verhandlungen des XXXVIII Amerikanistenkongresses, Stuttgart-München 1968* 2 (1970) 77-88.

85. Harriot W. Topsey, "New Developments in the Cultural Resource Management of Belize," paper presented at the IV Mesa Redonda de Palenque, June 1980, and on file at the Department of Archaeology, Belmopan.

86. Ibid.

University, Ontario, and the Royal Ontario Museum, in which both formal academic training in archaeology and practical experience in museology and conservation are provided for; the program is scheduled to run for six years from the fall of 1979.

Looting and illegal export of archaeological material remain a major problem, as in the other countries of the Maya area, exacerbated by the connivance of dealers, museum directors, and private collectors in the United States and to a lesser degree in West Germany, Japan, and Switzerland;<sup>87</sup> joint action with neighboring countries and with U.S. Customs has begun. The planned construction of a national museum in the capital, Belmopan, will make Belize's Maya treasures available to public view and will help to develop a cultural consciousness and pride in the past in the country's multi-ethnic society. As formal independence from colonial rule becomes established, Belize is finding itself a nation with a past as well as a future.

87. Ibid.

---

*Norman Hammond is Director of the Archaeology Program at Rutgers University, New Brunswick, New Jersey.*