



ILLiad TN: 68801

Borrower: COD

Lending String: *COX,COF,DVP,COV,WYU

Patron: Pierce, Karen

Journal Title: The sowing and the dawning ;
termination, dedication, and transformation in the
archaeological and ethnographic record of
Mesoamerica /

Volume: Issue:

Month/Year: 1998**Pages:** 55-63

Article Author: David M. Pendergast

Article Title: Intercessions with the Gods; Caches
and Their Significance at Altun Ha and Lamanai,
Belize

Imprint: Albuquerque ; University of New Mexico
P

ILL Number: 95635375



Call #: F1435.3.R56 S68 1998

Location: Main Collection
AVAILABLE

Courier
Charge
Maxcost: 50.00IFM

Shipping Address:
University of Colorado Libraries - ILL
1720 Pleasant St. 184 UCB
Boulder, CO 80309-0184
C200

Fax: 303 492- 2185
Ariel: 128.138.154.145
Odyssey: 128.138.154.194



Map 6.1. Belize, showing locations of Altun Ha and Lamanai.

CHAPTER SIX

Intercessions with the Gods

Caches and Their Significance at Altun Ha and Lamanai, Belize

David M. Pendergast
Royal Ontario Museum

EXCAVATIONS AT ALTUN HA BETWEEN 1964 AND 1970 (Pendergast 1979, 1982a, 1990a) and at Lamanai from 1974 through 1985 (Graham 1987; Pendergast 1981a, 1982b, 1986a, 1986b, 1990b, 1991) yielded a sample of caches of very substantial breadth in form and even more striking variety and richness in contents. The 119 artifact offerings from Altun Ha and the 126 from Lamanai illustrate forcefully the parallels and contrasts between two near-neighbor centers, while at the same time they provide evidence regarding conservatism and innovation in both material and nonmaterial culture over time. Of greatest importance, however, is the significant light that the data shed on the determinants and the motivations that encompassed offering activity at the two sites (map 6.1). In very large part, the understanding of cache deposition that emerges from the Altun Ha and Lamanai information can, I believe, be extended to the entirety of the southern Lowlands and very probably to the Maya area as a whole.

Part of the contrast between the sites is unquestionably a real reflection of different avenues pursued by neighboring but separate polities. At the same time, part of the contrast is the product of the considerable difference in occupation span. At Altun Ha the period represented by offerings extends from mid-Preclassic times to the early years of the Postclassic, while at Lamanai the

span is much greater, with a beginning date of c. 1500 B.C. and a terminal point sometime after A.D. 1641. It would be instructive to examine the particulars of change through time at each site, but such an effort is far beyond the scope of this essay, as is intersite comparison of the exceedingly plentiful cache contents. Instead, I propose to concentrate on the broad strokes in the picture of cache composition and deposition patterns at the two centers, in order to illustrate the general nature of the data base from which it may be possible to draw conclusions regarding the significance of offerings.

The caches at both sites can be separated into three categories on the basis of context. By far the largest class occurs in communally built structures that were dedicated to the public weal; as we shall see, caches in this context predictably are the most consistent across sites in location, if not in contents. The second group occurs in residential structures, where offerings presumably had the same function but usually or always with single-family focus, and with generally greater freedom both in position and in makeup. In each of these two categories there is a significant division on the basis of specific context (see below). The final category comprises monument-related offerings, which are absent from the Altun Ha sample and are comparatively few in number at Lamanai. Owing in part to context, this third group of caches

appears to differ materially from the other two, but in fact it is quite likely to have resembled other offerings in function.

THE HISTORY OF CACHE ACTIVITY AT ALTUN HA AND LAMANAI

The Preclassic

The earliest evidence at either site of what can surely be identified as offering activity occurs at Lamanai, but it includes no artifacts, and its context is somewhat obscure. The data are nevertheless significant because of their implications regarding evanescent offering activity—events highly unlikely to be discernible in the archaeological record except with the greatest of luck. In an apparent harbor near the north end of the site, a concentration of corn pollen far greater than normal for the site, with absolutely no indication of architectural or other cultural association, points to offering of whole young corn plants tossed into the waters from a boat, raft, or platform. The radiocarbon date of 1500 B.C. from wood stratigraphically associated with the pollen may indicate complex offering activity very early in the Preclassic, though not necessarily the deposition of caches as they are normally defined.

Not until the Late Preclassic, probably 400 B.C. or later, are there data from both sites on offerings in architectural context, which at this stage means structures that are communal and ceremonial in nature. Unfortunately, the source of Preclassic caches at Altun Ha is a round platform (Pendergast 1982a:86–89, fig. 98), which offers much less in the way of architectural definition than do buildings of other forms, though certain features identify its front. At issue is the relationship of the cache to the primary axis of the structure—one of two factors critical to assessment of prescriptions and proscriptions that structured offering activity. Although the primary axis can only be loosely defined for the Altun Ha platform, it is fairly clear that in the Preclassic—in contrast with later times at the site—this structural lifeline did not serve as the determinant of cache location. Although the inclusion of jade objects had become a significant part of Altun Ha offering practice by about 450–300 B.C., the stipulations regarding position that marked subsequent events evidently were not yet in force.

At Lamanai a northern suburb structure yielded a two-vessel cache with marine shells and obsidian that

exemplifies the pattern of primary-axis placement, the typical occurrence of caches without surrounding cribbing or other protection, and the use of pottery in caches that remained the rule at the site until at least Early Postclassic times. Elsewhere at the site during the Preclassic, ceramic caches occur both on and well away from the primary axis. In addition, some are accompanied by a feature common at Lamanai from Preclassic through Terminal Classic times: the empty pit, often on or very near the primary axis, with every indication that use as a cache container was either contemplated or actually carried out. Such pits, which we came to know as "Lamanai Holes," were maddeningly common. The frequency of their occurrence suggests that they were not incorrectly placed offering pits for which correction was subsequently made, a phenomenon that may be in evidence at Altun Ha (Pendergast 1990a:252). Pits of this character also occur without associated caches nearby; this observation, together with the occasional presence of a thin basal stratum of organic decay product or evidence of burning, suggests their use for offerings that were composed entirely of perishable objects, either artifacts or natural materials.

Late in the Preclassic it is possible to discern in Structure N10-43 the beginnings of a perdurable approach to offerings in major Central Precinct structures that sharply distinguishes Lamanai from Altun Ha. Although it is very risky to attempt to assess cache significance on the basis of contents, the Lamanai evidence suggests that logical determinants of cache placement were not operative in the community. Neither architectural size and complexity nor the degree of change wrought by modifications was necessarily reflected in primary-axis offerings of an appropriately sumptuous nature, or even in the presence of an offering in any form.

Put simply, the approach to offerings in major communal structures at Lamanai seems exceedingly parsimonious when compared with that at Altun Ha. Witness the Late Preclassic structure in the N9-56 sequence: Though it was obviously an undertaking of very considerable significance, and was embellished with highly important staired outlet masks, it boasted no offerings, as far as we could discover from our extensive excavations along the primary axis and deeply into the core of the platform. The first two major modifications to the primary structure of N10-43, also of Late Preclassic date, likewise appear to have gone unaccompanied by cache deposition or other dedicatory activity.

Only at the beginning of the third reconfiguration of Structure N10-43, which resulted in a new stair and significant changes in the main lower landing area, was work on the structure dedicated in proper fashion with an offering placed in a pit cut into the plaza floor at the base of the original stair. Situated on the primary axis, the cache was unquestionably a dedicatory effort in advance of the new construction. Still, it scarcely raised the wealth level represented by its earlier counterpart. It did, however, commence a subtheme within the pattern of ceramics in Lamanai caches that persisted through much of the Classic: the use of paired dishes as lid and container for small objects of various sorts.

Although the evidence that bears on Preclassic offering practice is severely limited, it shows quite clearly that the focus in the early centuries of Lamanai's occupation was on pottery vessels (fig. 6.1) as the principal, and often the only, element in caches. With the exception of a single jade bead and a jade bib-helmet figural pendant from N10-43 (fig. 6.2), no material imported from any great distance seems to have played a part in cache assemblages. One could deduce from the evidence that Lamanai's trade connections were limited in the Preclassic, but the shaky foundation for such a deduction is readily apparent. It is equally likely that the seemingly parsimonious approach adopted for Preclassic offerings was simply a matter of preference, and in fact much of the later record appears to bear out this interpretation of the earliest cache data.

The Classic

During the opening years of the Classic, both sites saw a considerable amount of building renewal and probably some building starts. As in earlier times, and indeed throughout the history of Lamanai, there was clearly no hard and fast rule regarding placement of offerings along the primary axis of new construction, or in any other context. A building renewal might contain an offering although its predecessor had none, and the presence of such an offering certainly did not dictate similar deposition in succeeding modifications. If we were to use Altun Ha as the yardstick, we would judge that the builders of Lamanai disregarded far more than half the opportunities for cache placement. Furthermore, if we were to adopt Altun Ha cache contents (fig. 6.3) as the standard—a serious error, beyond question—we would be forced to conclude that the inhabitants of Lamanai rarely if ever attained the lofty heights of cache wealth that were commonplace among their coastal neighbors.



Fig. 6.1. Blackware cylindrical vessel container (height 20.2 cm), Lamanai Cache N10-43/6; 100 B.C.–A.D. 100.

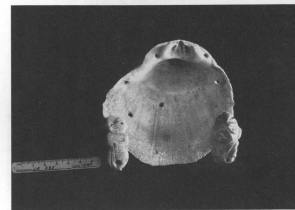


Fig. 6.2. Contents of Lamanai Cache N10-43/6. Height of jade bib-helmet pendant is 4.7 cm.

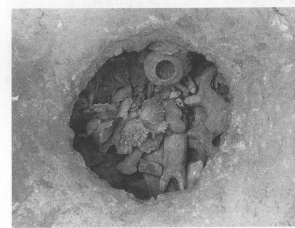


Fig. 6.3. Altun Ha Cache F-1/A, probably c. A.D. 600. Pit diameter is 40 cm.



Fig. 6.4. Lamanai Cache N9-53/1, c. A.D. 500–550 (?): left, with lid vessel in place; right, with contents exposed. Diameter of lid vessel is 29.3 cm.

Lamanai's Classic offerings resemble those of Altun Ha in one respect: they conformed to no pattern whatsoever, except during a brief period in the Middle Classic, and then probably only in two neighboring structures. The absence of patterning in cache contents, combined with the seemingly erratic distribution of offerings, leads all too easily to the assessment of cache characteristics as a reflection of the relative importance of various construction efforts: A building modification with a cache must have been more important than one without, and a large offering must have reflected greater importance than a small one. In fact, we have no knowledge of the rationale that determined cache size, or of the basis for choice of one piece of construction as an offering site and rejection of another. The variety in both of these matters is so great that it might as easily be laid to caprice as to conscious choice in ritual practice. Whether caprice or choice, however, there is no question that the determinants were adhered to with far greater frequency at Altun Ha than at Lamanai.

Examination of the full panoply of Altun Ha's Classic offerings and the more limited but equally intriguing range at Lamanai would require at least an entire volume. However, it is worth noting here that while the Classic period at Altun Ha shows evidence of single, highly varied offerings in association with structural

modifications, the Classic at Lamanai was marked by a brief period of near uniformity in cache containers, among which was a group of five pairs in a single stair modification. In middle to late Early Classic times, Lamanai's builders introduced paired, unslipped, large round-side bowls as container and lid, which were unquestionably made specifically for cache use (fig. 6.4). It is curious in the extreme that the development of some standardization in containers was accompanied by one of only two deviations from the pattern of single structure-associated caches encountered at the site.

Multiple offerings also occurred in Structure N10-9, but in a form that differed in almost every respect from all other offerings at the site. In the core of the upper part of the stair, the builders placed two separate mosaic objects, of which one, a large mask, survives nearly intact. Unfortunately, the other object, which was of smaller total volume and was probably not a mask, consists largely of patternless fragments.

Late Classic offerings at Lamanai were marked by departure from earlier patterns and also by greater opulence. Such offerings often retained paired vessels but replaced vessel contents either with groups of large ceremonial flints (fig. 6.5) or with obsidian in quantities as large as 15.6 kg. For perhaps as much as two and a half centuries, offerings at Lamanai appear to have made as

forceful a statement regarding the site's prominence as did those at Altun Ha, though with materials generally a bit further down the scale of ceremonial value than many from caches at Altun Ha.

The Postclassic

Near the artificial separation between the Late Classic and the Early Postclassic at Lamanai came a variety of dedicatory activity that, together with what may have been the largest single construction effort ever mounted at the site (Pendergast 1986a:231–32), bespeaks very considerable community vigor. The construction work was set in motion to the accompaniment of one of the largest offerings known at Lamanai, which involved massive amounts of burning as well as numerous specialized vessels (Pendergast 1981b:4). Slightly earlier, the deposition of a much smaller but highly important offering of vessels and mercury beneath the marker disk of a small ball court (Pendergast 1982c) testified eloquently to Lamanai's socioeconomic strength in a time of chaos in many other southern Lowlands centers.

The middle and later years of the Postclassic, a time of reshaping and concentration of the community in the southern portion of the Central Precinct, were marked by a shift away from use of quantities of artifacts in dedicatory offerings. The focus from the thirteenth century onward was, instead, frequently but not uniformly on single vessels (fig. 6.6) or other objects, which were deposited both in units under construction and in or on ruined buildings. The change may have been partly a reflection of decreasing size of the Lamanai polity, but evidence of continuing internal and external economic vitality suggests that reduced cache size resulted from a shift in values rather than a decline in means. Part of this evidence consists of offering contents from the early and middle parts of the time span.

From the thirteenth to the early fifteenth century, the inhabitants of Lamanai deposited some fairly opulent smash-and-scatter offerings on the surfaces of buildings either long abandoned or in their final days of use (Pendergast 1981a:44, 51). Here the prodigal disposal of high-value objects in termination rituals attained a level equal to that of earlier times, especially in the case of thirty or more locally made and imported Mayapan-related figurine censers spread over and around Structure N9-56 (Pendergast 1981a:51, fig. 27). The contrast between such termination deposits and many of the dedicatory caches suggests that the importance of dedication offering had



Fig. 6.5. Lamanai Cache N10-9/8, probably ninth century. Note vessel at left.



Fig. 6.6. Vessel from Lamanai Cache N10-43/1. Vessel (diameter 19.0 cm) was deposited with a single jade bead in collapse debris at the base of the structure.



Fig. 6.7. Lamanai single-object offerings from immediate pre-Conquest and post-Conquest contexts. Height of left figure is 9.2 cm.

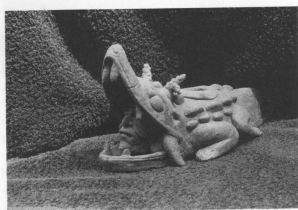


Fig. 6.8. Lamanai Cache N11-4/1, one of several Contact Period representations of a mythical crocodile, here with God N in its mouth, probably post-1641. Length is 22.7 cm.

diminished by at least the Middle Postclassic. There is, however, no solid reason to assume that smaller amounts of material indicate reduced ritual importance of the activity, or that the value of the objects offered was not entirely commensurate with the importance of the construction or other endeavors involved. The truth is that in this respect as in others, the Postclassic was a time of change that must be understood in its own terms rather than by comparison with earlier patterns (Pendergast 1990b).

The Contact Period

The Historic period was marked by the first significant disruption of offering practices whose fundamental principles had remained constant since the Preclassic. The disruption was occasioned by the intrusion of Europeans into the Maya world, which began in Belize about 1544 (Graham et al. 1989:1256). From the outset until the Spanish hold on Lamanai was permanently shaken loose in 1641 (López de Cogolludo 1971:book 11, chap. 13), it appeared that Christian precepts had largely swept aside indigenous beliefs and practices. Superposition of the first Christian temple atop the ruins of a native one, however, was accompanied by deposition of one pre-Columbian-style offering (Pendergast 1991:343), and the persistence of related activity is documented by numerous references to idolatry in the ethnohistorical record. Lamanai served as a center for reduction of the surrounding territory and hence had a varied and only partly stable population. As a result it very probably experienced more resistance to Christianity and recurrence of pre-Columbian practice than existed in some other Spanish-period communities.

Part of the evidence that pre-Contact values and techniques remained generally powerful as part of a joint Maya/Spanish accommodation (Graham et al. 1989:1257; Pendergast 1993) consists of continuity in offering practice. Once freed of Spanish presence, the Maya reasserted earlier attitudes (figs. 6.7, 6.8), but in contexts that in some instances were determined at least in part by Christian considerations (Graham et al. 1989:1257; Pendergast 1991:346–347, 1993). The strongest expression of the resurgence of pre-Columbian practice in a partly syncretic form was the placement of a stela with accompanying substela cache in the ruined nave of the second church. The cache contents were of classes that would have been chosen before European contact, but the sacred space in which the activity took place was now defined by Christian belief.

Similar conjoining of Christian sacred space and pre-Columbian cache practice is reflected in at least three of the other six caches placed within the nave and at the face of the masonry chancel of the church. The remaining three offerings comprised one group of miniature animal figurines and two ceramic mythical crocodilian creatures, surely a restatement of the crocodile association reflected in the name of the community (Pendergast 1981a:31–32). The close resemblance of the figurines to ones deposited elsewhere in the community more than a century earlier is direct physical evidence of the maintenance of the pre-Columbian tradition alongside Christian belief.

In contrast with the profusion of church offerings, axial and other caches are nearly absent in what is very likely to be either a Spanish-period or a post-1641 settlement zone at the south end of the site (Pendergast 1985:2). The scarcity of offerings may indicate diminished concern with dedicatory matters in residential context, but it is equally likely that it reflects an overall reduction in resources or the closing off of trade in some classes of material. Full consideration of such complex issues goes well beyond the bounds of the present discussion. There is no question, however, that offering practice in the Historic period bespeaks a Maya dedicatory tradition that was durable enough to withstand and accommodate the onslaughts of a new belief system, and to survive into the post-European period with most or all of its essential elements intact.

CACHE PLACEMENT AND CACHE MEANING

The data from Altun Ha and Lamanai clearly present a solidly documented opportunity to move beyond description to a characterization of the modal aspects of dedicatory activity at the two sites. Although neither center is fully representative of southern Maya Lowlands prehistory—and indeed in the Maya context it would be foolish to seek a holotype—I suggest that the general statements that follow are very likely to be widely applicable in the Maya world.

The Role of the Primary Axis

It is abundantly clear from the record at both sites that the primary axis was the principal determinant of cache position in communally built structures. Evidence suggests that the Maya established this vital structure lifeline

by visual identification rather than precise measurement. As a result, offering position might deviate slightly from a true measured axis, and the deviation was likely to be greater in upper portions of a structure than at the base, presumably because those depositing an offering there found fewer visual keys to axis position.

One of the aims in placement of a cache on the primary axis can surely be understood as support for or enhancement of the function of the axis itself, which appears to have been dual. The primary axis was, first, an identifier of the structure, distinctive of that building and maintained as an entity that, though invisible, was perceptible as physically separate from the axes of any facing structures. This concern accounts for the offsetting of facing buildings in the otherwise symmetrical configurations that usually border plazas and other platform surface areas. In its relationship to the axis as structural identifier, a cache can be seen as purely dedicatory, especially if it lies beneath or at a low level within new construction. It is readily apparent that continuing focus on the primary axis should have led to rededication with every significant remodeling of the structure, but the histories of both Altun Ha and Lamanai show that this seemingly logical approach did not obtain in either community. The actual significance of a given construction effort, as opposed to the archaeologist's assessment of it, may be at issue here. Significance was surely a ceremonial matter for the Maya, while our judgment is with rare exceptions rooted in engineering and traffic-flow concerns because there are no readable clues to ceremonial impact.

The second aspect of the primary axis is its function as the main avenue of communication with a deity. In this respect, the midline is very likely to have been understood as extending not only beyond the foot of the stair and across the plaza but also beyond the summit into the heavens, presumably for an unimaginable distance in both directions. Although this would appear to have offered the opportunity for axial caches well beyond the limits of a structure—in one direction, at least—the evidence indicates that the building was perceived as the proper vessel for all axial offerings. The power of the axis was no doubt understood to be self-generating, but it was surely reified by the presence of one or more offerings along the vital line. A basal or preconstruction cache might well have served both to dedicate the structure and to amplify the axial communication system; caches at higher points in the building seem more likely to have been focused on the latter function.

It is far more difficult to identify primary-axis caches in residential structures, largely because domestic structures often had more than one major access and sometimes were laid out in a way that thwarts efforts to identify the midline. Still, there are numerous instances of unquestionable or probable primary-axis caches in residential structures at both Altun Ha and Lamanai, and it is likely that the dedicatory purpose in this context was generally similar to that in communal structures. It is often true, however, that dedicatory activity in residential structures had more of a top-down quality than is standard for public structures: Domestic offerings frequently occur immediately beneath room floors or walls, rather than at stair bases or elsewhere in the platform core. This suggests that the particulars of domestic axial offerings may have differed from those at a community level, a conclusion that is scarcely surprising.

Subsidiary Axes

In both public and domestic contexts, there are also offerings that are away from the primary axis. Caches of this class may fall on apparent transverse axes, which are usually more easily identified in communal than in residential structures. The basis for identification in either setting is often a matter of exclusion: If the offering is not associated with a feature of the antecedent or the new construction, we may assume a link with an otherwise unidentifiable subsidiary line. Vertical location may indicate whether dedication or amplification was the primary motive of the cache, but unfortunately, there is still considerable room for speculation.

Feature-linked Caches

The final subcategory of caches in both residential and community contexts comprises offerings clearly related to an architectural feature and therefore not linked to any axis of the structure. Though far more likely to occur in elite residences and in communal structures, feature-linked caches are also found in less elaborate domestic buildings. In all instances the purpose of the cache is very likely to have been recognition of the importance of the feature to which it is linked. In communal buildings the importance was surely ceremonial, while in residences it may have been established either by ceremony or by sentiment. It is very probably significant that in cases where no ceremonial aspect can be discerned in the feature honored, caches contain great varieties of low-value objects—just what one might expect in a purely household endeavor without ties to a deity.

Monument-associated Caches

Monument-associated caches at Lamanai may well have had both the functions ascribed to primary-axis caches in communal structures. Uncertainty regarding this point arises from our limited knowledge of the intended functions of the monuments themselves. If they were seen solely as statements on the part of rulers, associated caches are most likely to have had a purely dedicatory intent. If, on the other hand, either the power of the ruler or the power of a deity to whom the ruler was linked also resided in the monument, then something of the amplification purpose may also have been served by a cache.

The Aims of Dedicatory Activity

With very limited exceptions, all the hopes and intentions that I have thus far suggested as embodied within caches were focused on the maintenance of the future. A few, to be sure, looked backward by focusing on an element of a structure about to be concealed beneath a new building, but even so the offering may have been making a statement about the structure to come. Offerings that lay on a primary axis maintained over many reconfigurations of a building surely also embraced a consciousness of the past, but their main focus was forward rather than backward. To ensure the success, and perhaps even the durability, of a building itself by an appropriate offering within its core was to relinquish wealth in an effort to ensure the years ahead. To give physical expression to the pipeline between humans and their gods by placing offerings along that line was to express both the need to have a deity's ear and the hope that what the deity heard would be continually pleasing.

In all such endeavors there was a very large measure of reciprocity, either actual or anticipated. As the gods had given, so offerings in their temples and in residences gave back to them; as it was hoped the gods would continue to give, so the offerings would help to convert hope into reality. In whatever form and whatever context, caches were for the Maya a physical means of staving off the descent of the great Mouty Python-esque foot that could obliterate the best of human efforts in one final, awful instant.

ACKNOWLEDGMENTS

Excavations at Altun Ha were supported by the Canada Council, the Wenner-Gren Foundation, the *Globe and Mail* of Toronto, and research funds of the Royal Ontario Mu-

seum. The Lamanai work also received support from the Canada Council (later the Social Sciences and Humanities Research Council of Canada) and Royal Ontario Museum research funds, with capital equipment grants from the Richard M. Ivey Foundation of London, Ontario.

REFERENCES CITED

- Graham, E.
1987 "Terminal Classic to Early Historic Period Vessel Forms from Belize." In *Maya Ceramics: Papers from the 1985 Maya Ceramic Conference*, edited by P. M. Rice and R. J. Sharer, 73-98. BAR International Series 345(1). Oxford, England: BAR.
- Graham, E., D. M. Pendergast, and G. D. Jones
1989 "On the Fringes of Conquest: Maya-Spanish Contact in Colonial Belize." *Science* 246:1254-59.
- López de Cogolludo, D.
1971 *Los tres siglos de la dominación española en Yucatán, o sea Historia de esta provincia*. Facsimile of 2nd ed., Mérida-Campeche 1842-1845. Graz, Austria: Akademische Druck und Verlagsanstalt.
- Pendergast, D. M.
1979 *Excavations at Altun Ha, Belize, 1964-1970*. Vol. 1. Toronto: Royal Ontario Museum.
1981a "Lamanai, Belize: Summary of Excavation Results, 1974-1980." *Journal of Field Archaeology* 8:229-53.
1981b "Lamanai 1981 (II): Buds, Sweat and Gears." *Royal Ontario Museum Archaeological Newsletter*, n.s. 139.
- 1982a *Excavations at Altun Ha, Belize, 1964-1970*. Vol. 2. Toronto: Royal Ontario Museum.
1982b "Lamanai, Belize, durante el Post-Clásico." *Estudios de Cultura Maya* 14:29-58.
1982c "Ancient Maya Mercury." *Science* 217:533-35.
1985 "Lamanai 1985: Stop Me Before I Dig Again." *Royal Ontario Museum Archaeological Newsletter*, ser. 2, 11.
1986a "Stability through Change: Lamanai, Belize, from the Ninth to the Seventeenth Century." In *Late Lowland Maya Civilization: Classic to Postclassic*, edited by T. A. Sabloff and E. W. Andrews V, pp. 223-49. Albuquerque: University of New Mexico Press.
1986b "Under Spanish Rule: The Final Chapter in Lamanai's Maya History." *Belizean Journal of Belizean Affairs* 3(1-2):1-7.
1990a *Excavations at Altun Ha, Belize, 1964-1970*. Vol. 3. Toronto: Royal Ontario Museum.
1990b "Up from the Dust: The Central Lowlands Postclassic as Seen from Lamanai and Marco Gonzalez, Belize." In *Vision and Revision in Maya Studies*, edited by F. S. Clancy and P. D. Harrison, 169-77. Albuquerque: University of New Mexico Press.
1991 "The Southern Maya Lowlands Contact Experience: The View from Lamanai, Belize." In *Colombian Consequences*, edited by D. H. Thomas, 3 vols., 5356-54. Washington, D.C.: Smithsonian Institution Press.
1993 "Worlds in Collision: The Maya/Spanish Encounter in Sixteenth and Seventeenth Century Belize." In *The Meeting of Two Worlds: Europe and the Americas, 1492-1650*, edited by W. Bray, 105-43. London: British Academy.