While blood sacrifice was one of the most sacred aspects of Maya religion and is evident in Maya art almost from its onset (cf. Schele and Miller 1986) as well as in the written ethnohistoric documents of the post-Conquest era (cf. Tozzer 1941), its archaeological definition has been limited because of the difficulties involved in finding such intangible behavioral practice in the archaeological record. Archaeological deposits from Santa Rita Corozal, Belize, however, recovered during the 1984 and 1985 seasons of the Corozal Postclassic Project, contain specific evidence of ancient bloodletting that is critical in refining our understanding of who bloodlets in Maya society and in what situations. This archaeological evidence, when combined with ethnohistory, provides interpretations somewhat different from those derived from studies of iconography that have emphasized massive public bloodletting episodes. Rather, the archaeological evidence shows human bloodletting to be in the purview of select members of society and an aspect of ritual employed only for limited and specified occasions. This analysis also underscores the basic and largely unchanging role that blood sacrifice maintained during both Classic and Postclassic times. Despite modifications in other aspects of Maya culture between the Classic and Postclassic periods, blood sacrifice appears to have served a similar function in both eras as part of ceremonies to mark the passage of time and to ensure continued order within the universe.

While blood sacrifice was extremely significant in Maya religion, blood was not the only offering. Descriptions of religious acts in the native Maya chronicles suggest the various items that might be offered including such things as incense, candles, flowers, food, and animals (Edmonson 1984:94). Beads must have been relatively common oblations since they were noted in early contact times (Landa in Tozzer 1941:146 n. 707, 148) and are found in numerous excavated deposits at Santa Rita Corozal and other sites (Coe 1965; D. Chase 1981:32). Well-preserved Postclassic offerings from the Cerén of Sacrifice at Chichén Itzá show that many of these kinds of items were combined into single integrated units (Coggins and Shane 1984:129–133). Archaeological examples of offerings go far beyond bloodletting; in fact, blood offerings are among the least well represented in the material record. Human burials contain numerous ritual items such as stone or pottery vessels, jadeite artifacts, and shell beads. Yet indications of blood sacrifice in burials are generally rare; when they are found, they consist primarily of indirect evidence such as a stingray spine, an obsidian lancet, or a vessel with bloodletting imagery. Caches, like burials, contain a variety of items, but these deposits more frequently have some kind of indication of blood sacrifice. Importantly, bloodletting tools themselves rarely exist in isolation, usually being part of burial or cache assemblages. Sometimes abstract representations of the bloodletting experience may be represented. In a tomb at Tikal, for example, a set of earlars with serpent iconography was found (Moholy-Nagy 1966:88); a similar set of earlars was also recovered in the tomb of a woman at Santa Rita Corozal (D. Chase and A. Chase 1986:10). Following Schele and Miller (1986:177–179), this iconography could be related to the vision serpent associated with bloodletting, as is graphically illustrated in Lintel 15 and 25 at Yaxchilán, Mexico. Thus, discussion of prehistoric ritual bloodletting must consider a wide range of archaeological contexts and patterns to get at the meaning behind the deposits and sacrifice.

We know from both ethnohistory and archaeology that the forms of blood sacrifice were many. Sometimes animals such as turkeys and dogs were acceptable for such sacrifice. These were prepared in various ways: for some ceremonies, just the hearts or heads were cut off, while in other situations the whole animal was offered; additionally, offerings of animals or parts of animals could be in either raw or cooked form (Landa in Tozzer 1941:114). At other times, however, the offerings of animals or objects were not considered to be sufficient and the sacrifice of human blood was necessary. As to who was involved in ritual blood sacrifice, Landa, in describing contact period Yucatán, noted that women did not let blood (in Tozzer 1941:114, 128); however, he at
least partially contradicted himself in a description of involuntary bloodletting (Tozzer 1941:18). That women could and did let blood is apparent from Classic Period iconography, where they are distinctly associated with the act of bloodletting. This is specifically seen at Yaxchilan (Schele and Miller 1986:178, 186–190) and at Tayasal (A. Chase 1985b). We know that human blood sacrifice could take many forms (Landa in Tozzer 1941: 113–114); members of the population were known to let blood by cutting their ears with knives or blades or by piercing their tongues and cheeks with thorns or straw; men additionally practiced penis perforation; women pierced their tongues with thorns. While bloodletting was in itself an important and serious undertaking, on occasion it was necessary to do more than simply take blood; when a human life was sacrificed, certain prescribed activities also took place (Tozzer 1941:114; Schele 1984a). In most cases, however, offerings of blood, whether originating from animals or humans, were placed on or in the open mouths of idols (Tozzer 1941:114, 118).

What were the circumstances for ritual bloodletting? Much of our information from the Classic Period would suggest that it was appropriate and necessary during important times in the lives of specific individuals—most notably rulers, and particularly in association with accession and birth (A. Chase 1985:200; Schele and Miller 1986:178–180). It was suggested that blood sacrifice was key in maintaining the fertility of the natural world (see, for example, Joralemon 1974). Others (see, for example, Furst 1976 and Schele 1985b) pointed toward the role of blood loss in visions and further noted that bloodletting and vision serpents appear on stelae as part of Period-Ending rites. One popularized reconstruction of Maya ritual activity suggested that Maya bloodletting was undertaken not solely by rulers or even by a limited number of individuals, but rather by large numbers, if not most, of the population in the public plaza areas of Maya sites (Linda Schele in “Mystery of the Maya” on National Geographic Explorer; see also Schele and Miller 1986:178). In contrast, however, I see bloodletting as being a more private undertaking that involved a limited number of individuals and was restricted to specific occasions (see also A. Chase 1984). While ethnohistoric information is ambivalent as to the number of actual participants in any bloodletting ceremonies, these data do record that bloodletting may have fulfilled various roles—as offerings to idols (Tozzer 1941:118; Medel 1612 in Tozzer 1941:222), as sacrifices in times of misfortune or necessity (Tozzer 1941:116–118), and as parts of calendric ritual (Tozzer 1941:145, 146, 147).

Thus, while the import of blood sacrifice in Maya society is evident, there is substantial variation in its precise interpretations. While most interpretations pertaining to blood sacrifice have been derived from either iconography or ethnohistory, nontutural evidence from archaeological sites can also be utilized to answer such questions as: who lets blood? how? when? in what context? does this context remain unchanged throughout Maya prehistory? and how does human blood sacrifice relate to other ritual offerings? This paper attempts to answer some of these questions by using archaeologically derived examples from excavations at the site of Santa Rita Corozal in northern Belize.

**Bloodletting at Santa Rita Corozal, Belize**

The site of Santa Rita Corozal has been known since the end of the nineteenth century. Work there by Thomas Gann (1900, 1918) in the early twentieth century served to highlight the Late Postclassic occupation at the site. Excavations by the Corozal Postclassic Project began at Santa Rita Corozal in 1979 and were completed in the summer of 1985. While primarily initiated to answer certain questions concerning late Maya occupation at the site, the investigations at Santa Rita Corozal have ultimately yielded information on all eras of Maya prehistory from the Early Preclassic to Historic periods (D. Chase 1981, 1982; D. Chase and A. Chase 1986, 1988). Santa Rita Corozal is a singularly good site for discussion of archaeological evidence of ritual bloodletting due to the archaeological occurrence of explicit depictions of blood sacrifice in offerings recovered at the site.

Archaeological evidence for blood sacrifice is of necessity often indirect, blood itself being perishable. To interpret the act of blood sacrifice, we require either, at best, representations or remains of the event itself or, minimally, the recovery of implements associated with such an act.

**Offerings of Animals**

While descriptions of the blood sacrifice of animals predominate in the ethnohistory and are easily visible in Maya codices, such sacrifice is difficult to establish archaeologically. Classic Period burials at many sites, including Santa Rita Corozal, contain animal bones; one burial of a male in Santa Rita Corozal Structure 7-3rd contained the remains of both turtles and birds (for information on the nonfaunal remains associated with this individual, see D. Chase and A. Chase 1988:33). But the actual function of these remains is always in question. Were these sacrifices for blood, food offerings for the next world, symbols of some other sort, or did they serve some combination of functions? Similarly, Classic Period vessels found in special deposits at Santa Rita Corozal and elsewhere contain depictions of animals such as birds, deer, jaguar, quash, and fish or other sea creatures (see fig. 1). These representations could conceivably take the place of or serve as reminders of animal sacrifice; alternatively, they could serve any other number of functions. In the Postclassic Period, we know that sacrifice of animals for blood was common, but the ar-
archaeological evidence for these acts is likewise problematic. At Santa Rita Corozal, there is one isolated example of a turtle carapace having been buried with an individual and another case of a multitude of animal bones in a cache vessel. Animal representations are also found at Santa Rita Corozal in the form of stone altar figures, much like those at Māyapan (Proskouriakoff 1962; see also Taube 1988). Most common during the Late Postclassic at Santa Rita, however, are ceramic figures representing a variety of animals: jaguars, birds, quash, monkeys, snakes, dogs, deer, and other creatures (see figs. 2 and 7). These figures occur in groupings that clearly are meant to function as offerings, but are they also intended to serve as blood sacrifices? Passages from Landa (Tozzer 1941:114, 162, 163) would suggest that this may have been the case. Importantly, certain of these representations at Santa Rita Corozal also co-occur with evidence for human blood sacrifice.

Human Offerings

Evidence for human blood sacrifice is most often found in the tools of bloodletting themselves; specifically, the stingray spine, the obsidian lancet, and the “sacrificial knife.” Of these three, the first two are intended as tools for self-sacrifice or personal bloodletting; the third item, the sacrificial knife, however, tends to indicate a more permanent sacrifice—the death of a sacrificial victim.

Stingray spines and obsidian lancets are found in both burials and caches at Santa Rita Corozal. A single stingray spine or obsidian blade sometimes rests in the pelvis of deceased males, but such paraphernalia are not present in most interments. In fact, only two burials at Santa Rita Corozal from among a sample of over 120 burials have stingray spines associated with them; in each case the primary individual—a male—has a single spine in the vicinity of his pelvis. Both men were important individuals at the site. Other sites show a similar pattern of only limited individuals with a spine or blade in the burial (A. Smith 1950: table 6; A. Chase 1983: table 37; Welsh 1986: appendix 1). The positioning of bloodletters in the pelvis suggests the practice of penis perforation. These may have been embedded in the penis at death; alternatively, it has been suggested that the spine's ar-

![Image](image1.jpg)

**Fig. 1** A two-part ceramic effigy of a quash from an Early Classic burial in Santa Rita Corozal Structure 7 (S.D. P2B-1); this effigy vessel may have taken the place of an animal offering; height = 17.3 cm (photo courtesy Corozal Postclassic Project, University of Central Florida).

![Image](image2.jpg)

**Fig. 2** Four ceramic jaguars forming part of an offering from a Late Postclassic cache in Santa Rita Corozal Structure 183; height = 9.5 cm (photo courtesy Corozal Postclassic Project, University of Central Florida).
chaeological positioning could result from simply having been placed in a pouch set in the pelvis at death or attached in some way to a belt (Schele and Miller 1986: 175). Similarly, the presence of a stingray spine in the pelvis at death may not indicate a death rite associated with burial, but rather simply an implement important to the individual during life and, therefore, perhaps afterward. Landa describes stingray spines as an insignia of priests (Tozer 1941:191). Their limited distribution in burials would favor an interpretation of these items as symbols and tools appropriate to only a designated few in Maya society. Importantly, these "limited few" included at least a few females (Welsh 1988: appendix 1), indicating that a precise one-to-one relationship did not exist between stingray spines and penis perforation.

During the Early Classic Period at Santa Rita Corozal, a particularly important man was buried in Structure 7 (fig. 3). He was clearly a ruler, as indicated by the symbols of authority within his tomb: a chert ceremonial bar, a complete Spondylus shell with other inlaid cut shells, three jadeite tinklers, a full-size mosaic jadeite mask (Chase, Chase, and Topsey 1988: fig. 1), a composite jadeite figure, eight ceramic vessels (D. Chase and A. Chase 1988: fig. 14) and numerous other artifacts. Along his right hip were three cinnabar-tipped spear points, undoubtedly suggesting his role as a great warrior. Resting in his pelvis was a single stingray spine.

During the Late Postclassic Period another important man was buried in Structure 216 (fig. 4). He was seated upright below an altar. He was also most likely a ruler, especially given the gold and turquoise earflares he wore in addition to a jadeite and Spondylus shell necklace and Spondylus shell bracelet (cf. D. Chase and A. Chase 1988: fig. 30). There was a single stingray spine in his pelvis. Next to him, however, a secondary individual was buried with no items of personal adornment, but ac-

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Fig. 3 View of an Early Classic tomb in Santa Rita Corozal Structure 7. Three flint spearpoints are visible in the pelvis area of the individual; these directly covered a single stingray spine (photo courtesy Corozal Postclassic Project, University of Central Florida).

Fig. 4 A flexed Late Postclassic burial from Santa Rita Corozal Structure 216 containing a high-status individual and a sacrificial victim; a single stingray spine accompanied the primary interment, while over a dozen spines viddled the body of the secondary person (photo courtesy Corozal Postclassic Project, University of Central Florida).
companied by numerous implements of blood sacrifice. Over a dozen stingray spines and a copper needle had once perforated the body of this individual, most likely a sacrificial victim.

The burials at Santa Rita Corozal and elsewhere in the Maya area suggest that not everyone can or does bleedlet, at least with stingray spines. It would appear to have been a limited practice in both the Classic and Postclassic periods, restricted to rulers and certain elite or selected individuals for specific ceremonies.

Other evidence for ritual bloodletting occurs in the caches of Santa Rita Corozal in the form of stingray spines, during both the Classic and Postclassic periods. One simple Late Postclassic cache consisted of a diving figure affixed to the front of a small ceramic cup found associated with Structure 37 (D. Chase and A. Chase 1986: fig. 17b). A single stingray spine was found with this vessel and the cup itself would have been a suitable container for blood. This Postclassic cache probably represents a diving god descending to receive a blood sacrifice, perhaps as described for the unlucky days of the Uayeb in Kan years by Landa (see below) and, as such, may be a good indication of the relationship between blood sacrifice and calendric rites (see D. Chase 1985a). However, this cache varies from the majority of Late Postclassic caches encountered in recent excavations at the site in not having been placed within two larger vessels as well as in its direct association with a stingray spine; thus, it may have served a slightly altered function compared to other Postclassic caches from Santa Rita Corozal. Isolated stingray spines were also recovered in association with Postclassic Structures 189 and 218 at Santa Rita Corozal, but in no clear relationship with any ceremonial deposit.

In the Early Classic Period, six paired ceramic vessels were cached in the core of Structure 7–3rd above the tomb of the man described previously. On the lid of each of the three sets of vessels was a single hieroglyph (D. Chase and A. Chase 1986:12). Inside each set were various items including natural shells, finely painted portraits on shell or jadeite, and stingray spines—at least three spines in each of the sets of vessels. All of the spines had been burned before placement in the cache. The precise significance of this cache is not completely clear, although bloodletting may be implied. The date “7 Imix” on one of the vessel lids suggests that such a bloodletting episode would have been related either to an important event or to a specific calendar date. In both the Classic and Postclassic caches, the deposition of the spines suggests that, once used, they had to be ceremonially or ritually disposed of—in the two Santa Rita Corozal cases by their burial (and perhaps burning). The use of such bloodletters on only a single occasion has been previously noted (A. Chase 1985b:200, following Duran 1971:119–120).

Caches of chert knives or points are also found in Classic and Postclassic contexts. These are often disposed of in isolation, but frequently in important loca-

_**Bloodletting and Calendric Ritual**_

The ritual bloodletting occurring in the Santa Rita Corozal caches clearly forms part of a much broader spectrum of activities. I have shown previously that close similarities exist between certain Late Postclassic caches from Santa Rita and the ethnohistoric description of rituals surrounding the five unlucky days of the Uayeb, as well as the equivalent pages in the Madrid Codex (see Lee 1985); since these original papers (D. Chase 1985a, 1985b) were presented, further support for these correlations has been garnered from two additional seasons of excavation at the site. Briefly, and following Landa (Torzer 1941:136–149), blood sacrifice is mentioned as an important part of the ritual associated with New Year's ceremonies. The activities of the Uayeb were undertaken to assure good fortune and to avoid calamity in the coming year. General blood sacrifice undertaken at this time included the sacrifice of turkeys and the offering of human blood from the ears. In certain other passages blood sacrifice is mentioned, but no specific details are given. In both the Kan and Muluc years' rites,
associated activities and offerings are strikingly similar to the contents of archaeological caches.

During the Kan years, additional activities to ensure prosperity could include the sacrifice of a human being or a dog. The offering of the heart of the victim was placed between two plates and accepted by an angel that descended to receive it. Diving figure caches from Santa Rita Corozal appear to fit closely the description of this angel (D. Chase 1985b:121–122). Given the general association between maize and blood (see Taube 1985), it may be significant to note that a maize god headdress occurs on one of the diving cache figures (fig. 6). Interestingly, however, these Postclassic Santa Rita figure caches tend not to contain anything resembling a sacrificial knife.

Muluc New Year rites were associated with war dances, pledges of bolts of cloth, and the offerings of dogs and/or squirrels. Evidence related to offerings and activities ascribed to Muluc years’ rites are found in a number of Late Postclassic caches at Santa Rita Corozal. Two of them, mentioned above, contained figurines of men performing penis perforation. An additional Late Postclassic figurine cache that may be associated with Muluc years is seen in figure 7 and came from Santa Rita Corozal Structure 183. While Landa mentioned blood sacrifice during Muluc years, the archaeological evidence suggests that the prescribed kind of blood sacrifice was penis perforation. This association of penis perforation and Muluc year rites would appear to be confirmed in page 36 of the Madrid Codex (Lee 1985:102), the only Uayeab page on which stingray spines are illustrated (see fig. 8 and Taube 1985: fig. 8).

The penis perforators from the Structure 213 cache are particularly significant (fig. 9). That these were not mortal men is indicated by their facial features and by
the superhuman act they are undertaking—bloodletting while on the back of a moving sea turtle. The four figures are most likely the Bacabs that figure prominently in each of the Uayeb rites, especially given the frequent association of Bacabs with snail and/or turtle shells (Thompson 1970). The symbolism of this cache is similar to that of a cache at Tikal containing etched obsidians, again possibly representing the Bacabs (Kidder 1947: fig. 72; Carlson 1986); both these Tikal obsidians and the hieroglyphic heads on the four sides of Río Azul Tomb 12 (Graham 1986:456) may likewise represent turtles associated with the world directions. In the case of the Santa Rita figurines, it would appear that the Bacabs are holding up the sky from the surface of the underworld by standing on the backs of turtles. This posture is in many ways similar to Classic Period imagery, and, in fact, might imply that at least certain of the Classic Period portrayal of Earth Monsters or Caucac Monsters could be turtles (see, for example, the Structure 10L-18 southeast jambs at Copán, illustrated in Baudet and Dowd 1983:454–457). This also would accord well with Kurbjerg’s (1985) notion that turtles and snails, when used as bases or seats, “by definition ... represent an image of the central, vertical axis of the world.” The standing figure on a turtle is evidently common in other portions of the Maya area during the Postclassic Period, particularly in the Palenque region (Rands, Bishop, and Harbottle 1979). The blood sacrifice by the four figures in this Santa Rita Corozal Structure 213 cache implies that on certain occasions the blood of the gods was required in addition to that of human beings and animals.
Conclusions

The archaeological associations of bloodletting from Santa Rita Corozal suggest parallels and additions to what has been previously stated about ritual sacrifice and also offer insight into the relationships between the Classic and Postclassic Maya. The limited distribution of stingray spines in both Classic and Postclassic Period burials suggests most strongly that not everyone could bloodlet and that certain bloodletting paraphernalia were insignia affirming the status of certain high-ranking individuals during both eras. Virtually all male burials interpreted to be those of either Classic or Postclassic Period rulers contain a stingray spine in the pelvis. That the stingray itself comes from an underworld creature reinforces the importance of blood sacrifice and the role that such offerings played in allowing the elite to link themselves to the underworld. That blood sacrifice was necessary to celebrate certain events in an important individual’s life is also seen during both times. In the Classic Period at Santa Rita Corozal, a cache, presumably naming the ruler and probably deposited sometime after his death, contains numerous stingray spines; a Late Postclassic burial contains a secondary individual who presumably bled and then died to be buried next to his ruler.

While stingray spines are evident in Classic contexts, it is Postclassic caches that confirm the importance of bloodletting in wider ceremonies beyond those of personal life. The Uayeb rites are particularly significant in this interpretation, for their whole intent is the assurance of order in the days to come. While agreeing with Schele (1985b) and others that blood sacrifices played a major role among the Maya elite, the Santa Rita Corozal examples would indicate that bloodletting was but one part of a series of activities important in binding Maya society. The clear correlations between Uayeb descriptions in Landa, pictorial accounts in the codices, and Santa Rita cache patterns establish the significance of blood ritual in the wider context of cycles of time and fertility ceremonies during the Late Postclassic Period. That this preoccupation with periods is not limited to the late Maya is clear from the associations of blood sacrifice and Period-Ending stela during the Classic Period and is also suggested in Bricker’s (1981) associations of Classic Period stelae with Uayeb rites. It may be further argued that certain Classic Period caches fill a similar role as ritual markers of the passage of time. It has been argued elsewhere (D. Chase 1988) that there is substantial continuity in Classic and Postclassic caching practices, but that the abstract symbolism of offerings during the Classic Period was replaced during the Postclassic Period by more easily recognizable representations of offerings. While certain caches at Santa Rita Corozal appear to correlate very well with one or another of the Uayeb years described by Landa and indicated in the Madrid Codex, it is possible that these events also coincided with the completion of larger cycles of time (cf. A. Chase, this volume; Edmonson 1985).

Together with ethnohistory, pictorial manuscripts, and material remains from other Maya sites, the Santa Rita Corozal archaeological data confirm the significance of blood sacrifice in Maya cosmology. Archaeological contexts, however, additionally point toward a very organized system of rituals that included bloodletting in its repertoire, rather than random, spontaneous, or managed ceremonial involving mass bloodletting episodes. Certain types of blood sacrifice were clearly appropriate for specific occasions and not for others. Penis perforation must also literally not have been taken lightly; while evidently associated with Muluc years, it probably was not undertaken unless circumstances and prophecy suggested a particularly auspicious year, since certain of the otherwise clearly Muluc-associated caches from Santa Rita Corozal do not contain bloodletting imagery.

Perhaps most importantly, however, the Santa Rita Corozal materials underscore certain basic similarities, rather than discontinuities, between Classic and Postclassic Maya ritual beliefs and activities. Thus, while art forms and architecture changed drastically between Classic and Postclassic times, the more basic aspects of Maya belief and the role of blood sacrifice in assuring the fertility and continuity of the world are shown to remain little changed through time. Blood sacrifice in both eras remained a lifeline to the gods.

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