The piecing together of ancient Maya mythology and cosmology, whatever difficulties it may involve, is not the utterly impossible dream it once may have seemed. Specific details within a framework of vague outlines and broad generalizations which seemed unlikely to be subject to further refinement have, in recent years, shown a startling ability to unexpectedly spring into focus. Broad new insights often seem to manifest themselves almost overnight. In a field of inquiry to which only social anthropologists and ethnohistorians seemed capable of making much of a contribution, we find new insights being provided by iconographers, epigraphery, linguists, archaeoastronomers and even dirt archaeologists. In this paper we mean to bring together aspects of several of these fields, with the intention of shedding some new light on the still only dimly perceived underworld of the ancient Maya.

ETHNOHISTORIC SOURCES ON THE UNDERWORLD

Let us start by summarizing something of what we already know of the underworld. In Yucatan the underworld was known as Metnal and was one of the abodes of the dead. In other parts of the Maya lowlands, and in the Popol Vuh, it was called Xibalbá. Following Thompson (1970:30), this place, or land, occupied the lowest of five levels beneath the earth’s surface. He argues convincingly that the famous nine levels actually refer to the four steps or stages down to a fifth level where Xibalbá or Metnal was located, and four more coming up and out. The sun on its journey through the underworld after sunset followed these nine steps to the eastern horizon where it re-emerged at dawn. The dead also followed this path, at least the first part of it. The road into this land was lengthy and hazardous. The Chamula Tzotzil include in the graves of their dead a pair of new shoes that will stand up to the rigors of the journey. Dogs were believed to aid one in crossing a body of water. Food for the journey and magical defenses against perilous animals and birds were also placed with the deceased (Thompson 1970: 300-301).

What kind of place was this underworld? For the Quiché, Xibalbá was an underground region inhabited by the enemies of man (Recinos 1950:109). The Popol Vuh characterizes the lords of the underworld as tyrannical, hypocritical, envious and cruel. They were not immortal, however, and therefore they may not have even been deities in the usual sense of the word. Despite the fact that they lived beneath this world, their land was not unpleasant and dark; they had night and day; their land had trees and animals; they grew maize, ate, slept, made love and died seemingly as the mortals of this world do. Ethnohistoric sources apart from the Popol Vuh frequently characterize Xibalbá as a less desirable place. Landa tells us evildoers went to Metnal, where they were tormented, while the good went to a delightful heaven (Tozzer 1941: 131-132). Christian beliefs are most probably influencing Landa’s interpretation here, as well as many of those in other ethnohistoric sources which depict the underworld as a suspiciously hellish place, frequently opposed by an equally suspicious celestial paradise.

For those who see particular significance in the association of smoking and enemas with underworld contexts, it may be worth noting that one Lacandon informant has been recorded as saying that Cizin, as lord of the underworld, burns the soul of the dead first on the mouth and anus. When the soul complains, it is doused with cold water until it protests again, when it is given more mouth/anus treatment, and so forth, until the soul is gone. The soul, presumably in some way transformed, then goes on the Sucuncyum who spits on his hand and washes the soul, which is
finally free to go wherever it likes (Thompson 1970: 303). The whole process, though described as a punishment, sounds a lot more like ritual cleansing.

ARCHAEOLOGY OF CAVES
One of our intentions now is to establish a link between these conceptions of the underworld and the reality of caves which were known and experienced by the ancient Maya. Caves over the years have produced an abundance of evidence of Maya activities. In the mid-nineteenth century Stephens transported us into the caves of Yucatan where he found the Maya using them for drinking water. He also provides indications of the ritual importance of caves. Subsequent investigations of caves revealing both secular and ceremonial activities have been carried out in the valley of Copan in Honduras, in the Puuc Hills of Yucatan, and now in Belize. A portion of the recent and still largely unpublished work in the latter area will now be summarized in an attempt to provide a broad perspective on the complex subject of cave archaeology.

Archaeological investigations over the last eight years in the caves of the Caves Branch area in central Belize have yielded evidence that the Maya carried out a wide variety of activities at distances of up to three kilometers from daylight. From January through May of 1978 excavations were undertaken in two of these caves. Although very little stratigraphy has been encountered, preliminary examination of surface ceramics by Dorie Reents suggests a chronology extending from late Preclassic times into the Postclassic. One of the nearest known ancient population centers is that of Barton Ramie on the Belize River, which has a span of occupation greater than that of the caves. The cave ceramics, however, show unexpectedly strong ties to other more distant assemblages in Belize as well. Utility ware prevails over ceremonial ware, and is commonly associated with hearth activity both at the entrance and deep inside. Pots buried under flowstone in areas of active deposition strongly suggest that dripwater was collected for ritual purposes in ancient times. Occasional intact ceremonial vessels, usually with minor damage, have been found sequestered in cracks difficult of access. Halves of granite metates, occasionally accompanied by a mano, turn up in association with the paraphernalia of autosacrifice, though they are also found in chambers containing human skeletal remains. The skeletal material, placed in cracks or in ancient pools which have since evaporated, may well be the remains of sacrificial rites. Children about five years of age are common, though the bones of young adults are also occasionally found. These remains are unaccompanied by burial furniture, though caches are frequently found in the chambers in which they occur. Cached items include pyrite mosaic mirrors, large numbers of perforated and spire-lopped Oliva shells (some in groups of ten or seven), tusk shells, obsidian blades, snake skeletons, bone and shell beads, and pottery. Whole vessels are frequently “killed”, with perforations deliberately made near the bottom of the vessel. One of the sites has many petroglyphs, which include step-frets in series of seven, cloud symbols, and the Union Jack — a possible variant of the day sign Akbal. An alternative interpretation is that of a prophetic anticipation of future British dominion on the part of the Maya!

In one cave entrance, excavations this year have yielded large numbers of post holes in otherwise sterile deposits, suggesting the erection of temporary structures perhaps akin to that of the modern Yucatec ch’a-chaac, a ceremony in which the rain deities are offered maize, balche and sacrificed fowls. Nearby in the cave is a large crack at the base of the wall which has served as a repository for hundreds of broken vessels, including large quantities of ceremonial ware. This area was also littered with fragments of obsidian blades, suggesting the possibility of autosacrifice.

Contrasting with this predominantly ritual pattern are newly-discovered loci of clay mining in a cave which has also preserved hundreds of barefoot human tracks. Circumstantial evidence weighs heavily in favor of these being ancient. Tools occur at the quarry sites, and torch
fragments and even a piece of knotless fiber netting, possibly a carrying bag, have been found long distances from the entrance. A stone mortar on which an as yet unidentified white mineral was ground is also known. An unusual white mineral coats the surface of the red clay deposits and is suspected to be that on the mortar. A sculpted clay altar was found in the same cave, associated with pottery, hearths, and battered flattened river cobbles.

The possibility has arisen that underground clay sources were exploited for the manufacture of ceremonial vessels later destined for tombs, painted with underworld scenes or illustrating the mythology that gave rise to the Popol Vuh. The cave clays are not quantity sources, and they have been mined in a manner suggesting that secrecy was more a consideration than efficiency. Thus even this most practical of activities might be placed in a ritual light.

ETHNOHISTORY OF CAVE ACTIVITIES AND RITUAL

Ethnohistoric sources provide us with some insights into the interpretation of these archaeological data and the significance of caves as dwelling places of deities and associated ritual activity. Among the Yucatec, Chacs were important inhabitants of caves, and when not making rain sheltered in caves, cenotes, and the forest (Villa Rojas 1945:103). Landa (1941: 44, 119-120) records the tradition of human sacrifice and the disposal of the bodies of sacrificial victims in caves and cenotes of Yucatan. Among the Tzotzil of Larrainzar, rain deities known as Chaucs, clearly analogous to the Yucatecan Chacs, lived in caves and controlled the rains and winds (Holland 1963: 93). The Tzotzil of San Pedro Chenalho “see a Chauc as the rain god, god of water, owner of the thunderbolt, lord and owner of the mountains, protector of milpas, giver of maize. He is lightning; he lives in the interior of a mountain, the doorway to his home being a cave guarded by a frog” (Thompson 1970: 268). Brian Stross (personal communication) has noted a Tzeltal belief that clouds originate in caves, a notion surely sustained by the commonplace occurrence of clouds of water vapor which can frequently be seen suspended in vertical cave entrances (Fig. 1). Among the Zinacantecos deified ancestors known as Totilme’iletic “fathers and
mothers” live in the sacred mountains that surround their towns (Vogt 1969: 298). Uotan, apparently an equivalent of the jaguar god of darkness and lord of the day Akbal among the Tzeltal, is said to have placed treasures in a sealed jar and mantles in a dark cave and was also known as “Lord of the Horizontal Wooden Drum” (Thompson: 1970: 326), a myth which recalls the discovery of a wooden drum fragment in Balankanche (Andrews 1970: 54). The Maya name for the Cave of Bolonchen visited by Stephens is Xtacunbixunan, “Hidden or Guarded Lady”, which Thompson (1970: 245) links to the moon goddess, a well known consort of the Lords of the Underworld. Records of human activities in cave contexts also contribute to our interpretive potential. Among the Kekchi continence and fasting precede participation in ceremonies carried out in the sacred caves of Pecmo (Thompson 1970:173). The discovery of clay mines possibly used for ritual potting is recalled in Elsie McDougall’s report to J. Eric Thompson of an old Kekchi woman who attributed skulls in a cave near Coban to people living before the creation of the sun. When the sun appeared they stayed in caves, for the light was too bright for them and they could not see. “By day they made pots; at night they came to the surface” (Thompson 1970: 344).

A well-known cave near the Arco de San Jose, in the Tojolabal region of southern Chiapas, is the focus of an important myth recorded by Mac Leod in 1974. A small river flowing directly into a cliff can be followed for a distance of some fifty meters before it rises to ceiling level and siphons. Modern cave ritual is attested to by the concentrations of pine needles, hearths, and smoke-blackening of the ceiling. According to the myth the river actually reaches another world, where the sun shines and many fruit trees grow. The abundant fruit of this land reportedly may be picked and eaten, but upon any attempt to bring it out it evaporates. The existence of this other world accessible only by means of an underworld is strongly reminiscent of the description of Zibalbá and its hazardous and terrifying mode of access as recorded in the Popol Vuh.

THE LOWLAND ORIGIN OF UNDERWORLD THEMES

Most recently Michael Coe has demonstrated an important link between the Popol Vuh story of the Hero Twins’ descent into the Underworld and much of the iconography of Classic Period pottery from the Maya lowlands. It is not surprising, then, to observe that the caves best suited for the original conceptions of Xibalbá are also those of the lowlands. The extensive river caves of the Alta Verapaz and the flanks of the Maya Mountains in Belize were accessible to the Maya — much more so than the very difficult vertical caves which are more typical of the highland limestone areas. Thus we may argue for a lowland origin of the underworld themes of the Popol Vuh.

In view of the obvious impact that caves had on Maya mythology and religion we might suspect that modern observations of subterranean environments in the Maya lowlands could lead us to specific insights relevant to the interpretation of ancient iconography. Assuredly they can help direct our inquiry. Apart from the obvious points touched on in the text already, we would like to summarize three somewhat more complex illustrations of this potential. The first of these pertains initially to the cave of Balankanche where the great column of the Group 1 chamber, in fact a tangle of conjoined stalactites and stalagmites, has an obvious resemblance to a huge ceiba tree.

Fig. 2 Acante’ from page 28c of the Dresden Codex which is suggested to be a representation of a stalagmite.
Similar tree-like formations can be observed in the caves of Belize. This dripstone column was perceived as a giant ceiba by the archaeologists who did the initial work on it almost from the time of its discovery (William J. Folan, personal communication). This identification was not limited to archaeologists. Maria Ibarra, a Yucatecan Maya woman from near Telchaquillo and a servant of George Stuart’s family, immediately upon seeing the column also remarked that it was a ceiba tree (Gene Stuart, personal communication).

Can we find iconographic referents for this powerful conception? In the Dresden Codex New Year Ceremonies, on the bottoms of pages 26 through 28 (Fig. 2), illustrations are presented of world directional trees. These trees have the symbol for wood on their trunks. However, there is also visible an element of the cauac glyph, the clustered grapes. This element in various other iconographic contexts has been taken reasonably to indicate the property of stoniness. In this case, however, it results in a tentative identification of ‘stone trees’ which have as their foundations tun glyphs, possibly indicating a combination of the conceptions of tun as stone and as the 360-day year. Thompson (1972: 91) has these as *acante* — pillars or trees set up at the entrance of villages. In view of our new insight on ‘stone trees’, it does not seem unreasonable to suggest, as an alternative to Thompson's hypothesis, that the indicated rituals were either to be carried out in caves before dripstone columns, or perhaps more conveniently before fragments of cave formations used above ground. The final locations of the numerous stalactites apparently broken from the ceiling of the Balankanche cave chamber have yet to be discovered, but we suggest there may be a link here to the stalagmite stela at Yaxchilan (Maler 1903: 158, Graham 1977, 3:10). Our second example comes from an immensely important discovery made in Petroglyph Cave in Belize, one of the caves already referred to above. Here, after a descent down a vertical wall to the floor of a huge sinkhole and entrance into a tremendous interior cavern containing much evidence of ritual activity including placement of a one-and-one-half meter high stalagmite “stela”, the visitor finds himself on a broad pathway or
road leading downwards around the side of the chamber to labyrinthine caverns and an underground river. This pathway connecting the outer world to the subterranean river is paved with literally millions of shells of freshwater and terrestrial snails (Fig. 3). Acknowledging the death symbolism of the snail, we may only conclude that this unique feature represents at least the beginning of the fabled road leading into the underworld.

This discovery brings into new focus an aspect of the iconography of the Panel of the Foliated Cross at Palenque. On the latter panel, Pacal is shown standing on a large snail shell bearing a hieroglyphic inscription which David Stuart (1978) has shown refers to the death of Pacal. The snail as a symbol of death contrasts with the living cauac monster, possibly also with cave referents, on which Chan-Bahlum stands. The existence of the shell pathway suggests that we have on the panel a metaphor for Pacal’s being, in this case, 132 days on the road to Xibalbá at the time of the event recorded and illustrated on the panel.

Our third example relates to the identification of the name glyph for God N, co-ruler of the Underworld with God L. His glyph, depicting a winged net placed as a superfix on either tun or cauac glyphs, is convincingly read as Pauatun by Michael Coe (1973:15). The tun and cauac in the name variant can be understood as ‘drum’ and ‘stone’, suggesting a common semantic origin, as in the conception of ‘stone drum’ for this form of the glyph for his name. The association of God N with musical drums is further indicated by the turtle shell drum logograph for his name (Fig. 4).

All this may find its meaning in the discovery of great ‘stone drums’ behind a flowstone pillar where the numerous post holes and broken pots possibly linked to rain ceremonies have been found. Formed of massive slabs of dripstone, the formations produce a sound of deep resonance when struck with the bare hands. That these great natural drums would not have been used by the Maya carrying out rituals in these caverns is difficult to imagine, and they may ultimately link God N to underworld water, rain and cauac monsters.

Of the various types of cave rituals for which evidence now exists, autosacrifice with its link to elite visionary experiences (Greene Robertson, in press) is suggested to have been an adjunct to sensory deprivation. The potential of conditions of total darkness and nearly total...
silence for triggering states of altered consciousness might lead us to suspect that the Maya sought visionary experiences in caves. Supporting this hypothesis has been the discovery, in areas remote from daylight, of the likely paraphernalia of bloodletting – sting ray spines, bone awls, eyed bone needles, and obsidian blades.

A series of replication experiments was undertaken by Mac Leod during 1972 and 1973 in which all of the conditions, ritual bloodletting excepted, were self-imposed by the investigators. Sites were chosen for extended stays in total darkness. On the first occasion no lights were present at all; these had been taken by the companions who had accompanied the participants to this spot deep within the cave. Neither were attempts made to keep track of time; the goal was maximum isolation from time cues and normal perception for forty-eight hours. Although apprehension prevailed at the outset, within a few hours it was dissolving into wonderment at the rapid perceptual changes brought about by these particular conditions of sensory deprivation, in a natural environment rather than in a laboratory. Many-hued geometric patterns, mixed with a salad of memories from years ago, were being triggered by occasional sounds — a distant dripping stalactite, or the scrape of a foot on rock. This synesthesia gave way in time to states which are akin to meditation, but for a certain phase of the stay, the mind was strongly inclined to invent light to replace that sphere on which man so heavily depends. Other senses — hearing, touch, even taste — were very quickly sharpened. Within less than a day a disposition developed toward supernatural interpretation of any unexplained phenomenon, be it sound or mood. This continued irregularly but was ameliorated by thoughts of the impact of re-emergence, for which event the investigators felt unprepared. Though the flight of bats and body rhythms provided time cues, there was a prevailing feeling of discontinuity, such that no speculation could be taken seriously, even though guesses later proved correct. When their companions did return, a period of readjustment to conversation and to light was required before it was possible to set out for the entrance. The investigators emerged convinced that the Maya could not have overlooked this resource. Although subsequent experiments were not as spectacular as the first, all produced synesthesia and feelings of detachment in the various participants. Given a cosmology buttressed by social consensus, and the added advantages conferred by string ray spines and Nicotiana rustica, the Maya could certainly have orchestrated profound experiences in this setting.

The utilization of cave environments for the production of visionary experiences of the type described above has at least one modern ethnographic parallel, and therefore the suggestion that such experiences were sought by the ancient Maya may be based on more than empty speculation. In the enactment of a cave ceremony at Balankanche in 1959, the h-men, Romualdo Hoil of Xcalakooop, ordered one of his retinue to remain seated on a rock facing offerings in total darkness while all other participants in the ceremony moved to a different part of the cave. Alfredo Barrera-Vasquez (1970: 75) records that later when they returned they found the assistant seated in the same spot where he had been left. “The h-men questioned him to find out what he had heard. He responded that he had felt cold, and that four times there were noises from the water, as if something were moving on its surface. The h-men commented, you were listening to the Balames.’”

The only other analog to this subject occurs in the Popol Vuh itself, in the trials of the Hero Twins and their father and uncle in the House of Darkness. That such trials may have been part of actual rites administered to elite youth who were taken through rituals duplicating specific portions of the great legend from which the Popol Vuh was derived is thus suggested. Xibalbá then, beyond being just a myth, was a part of the Maya cosmology which was actually experienced. What is more, its awesome reality can be experienced even today, surviving perhaps less altered by time than any other aspect of the ancient Maya environment. In this way, with the aid of ethnohistory, archaeology, and iconography caves can help bring us that much closer to an accurate view of the ancient Maya world.
NOTE:
Shortly before his death at Chichen Itza, Dennis had expressed to friends some insights concerning the large number of musical cones found on the structure now called the Platform of Venus, and which now reside all but unnoticed behind the ticket office. He felt that these cones were modeled after stalactite or stalagmite prototypes — the “stone drums” discussed above. These could have been arranged so as to form a huge “chthonic orchestra” — played perhaps to summon the Chaacs. He had himself tapped on a few of these cones before turning to climb the Castillo.

The deliberate removal of cave formations by the Maya is attested to in many caves in Belize, as well as in that of Balankanche, near Chichén-Itzá. Once broken from their birthplace, however, cave formations soon dry out and separate by deposition layers. Even “dead” cave formations in situ lose their clear resonance. For the Maya, a practical solution to this problem would have been that proposed above: the modeling of stalactite-like forms from solid limestone.
The Jjaro predicted that Wrkncacnter may be present in Earth’s solar system. They knew of one individual that was on Earth, and it was buried under the rock of the planet in the year 1993. Jjaro had explored the destroyed site of the pyramid years later, and gathered evidence that another was on Earth. 20 years later, a lone soldier is sent to Peru in a silent attempt to neutralize the being before it awakens other Wrkncacnter.