# CAVE OF THE WHALES: ROCK ART ON SAN NICOLAS ISLAND

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## ABSTRACT

The Cave of the Whales is a unique petroglyph and pictograph site located in an island sea cave. The dominant motifs are aquatic figures with some resembling whales or killer whales, hence the cave's popular name. The authors report the results of a recent recording and condition assessment of the surviving rock art. Although little is known of the Nicoleño, the rock art is discussed in relation to island archaeological evidence and probable interactions with coastal peoples. The location of the cave at the boundary of land and sea, the presence of magic stones valued by mainland peoples, and the iconic imagery linked to effigies found in mainland archaeological cemeteries and ceremonial caches provide a strong case for the interpretation of the Cave of the Whales as a San Nicolas Island sacred place.

**Keywords**: San Nicolas Island, rock art, archaeology.

## INTRODUCTION

The Cave of the Whales is a unique petroglyph and pictograph site located in an island sea cave. The dominant motifs are aquatic figures with some resembling whales or killer whales, hence the cave's popular name. The authors recently completed a documentation and condition assessment of the surviving rock art. The documentation was produced in the course of five trips made to the cave between 1988 and 1995 and involved photography, tracing, free hand drawings, and onsite correction to produce final drawings in the studio. The detailed results of our study are documented in a report to the U. S. Navy (Conti et al. 1999). In this paper, we summarize our conclusions as to the importance of the site in relation to what is known of the island archaeology and the Nicoleño people.

## REVIEW OF PREVIOUS SURVEYS

Phil C. Orr (1951) first reported CA-SNI-144, dubbed it the Cave of the Killer Whales, and attributed its discovery to Al Allanson. Bryan (1970:151, Footnote 13) reports that an unattributed newspaper clipping from October 31, 1897 mentions what is likely the Cave of the Whales and attributes its discovery to Stephen Bowers' son, De Moss Bowers. An anonymous report from 1857 states that the Lone Woman of San Nicolas lived in a cave where she kept crude records of passing ships and remarkable events on the walls (Heizer and Elsasser 1973:40). Robert M. Norris of the Department of Geology at the University of California Santa Barbara (UCSB) photographed portions of the cave in 1950, and field notes by Stuart Peck from May 28, 1951 also note a visit to the cave and mention the presence of killer whale petroglyphs. The cave is more commonly known today as the "Cave of the Whales."

Rozaire and Kritzman (1960) and Reinman and Townsend (1960:101-102) published the first detailed descriptions of the cave and basic data about the petroglyphs. Reinman and Townsend (1960) include a rough location map, sketches, one photograph, and a table of measurements. Rozaire and Kritzman (1960) provide the most detailed description of the cave and include a reference to the paintings in the cave as well as the petroglyphs. Their report is important since it documents the presence of a sand floor (now washed out) and it provides the first coherent set of drawings. Together with their original field notes and drawings (Rozaire and Kritzman 1959), their work provides the best data for reconstructing the art prior to the removal or destruction of many of the petroglyphs.

By 1962, the lower portion of the main petroglyph panel pictured in the three earlier publications separated from the wall and was presented to the Southwest Museum (Bryan 1962). It is not clear when the remaining section of the panel fell, but a field report for the Navy (Loos 1976) indicated it occurred prior to a July 1976 reconnaissance by Charles Rozaire. It was removed as Rozaire recommended and was stored at the Natural History Museum of Los Angeles County (Kritzman 1977). It was transferred to the Southwest Museum between 1988 and 1989.

## METHODS

The current project (Conti et al. 1999) recorded eight panels of paintings and petroglyphs, one isolated petroglyph, and the two sandstone slabs now housed in the Southwest Museum. The location of these panels is documented in Figure 1. Drawings of motifs and panels were further analyzed

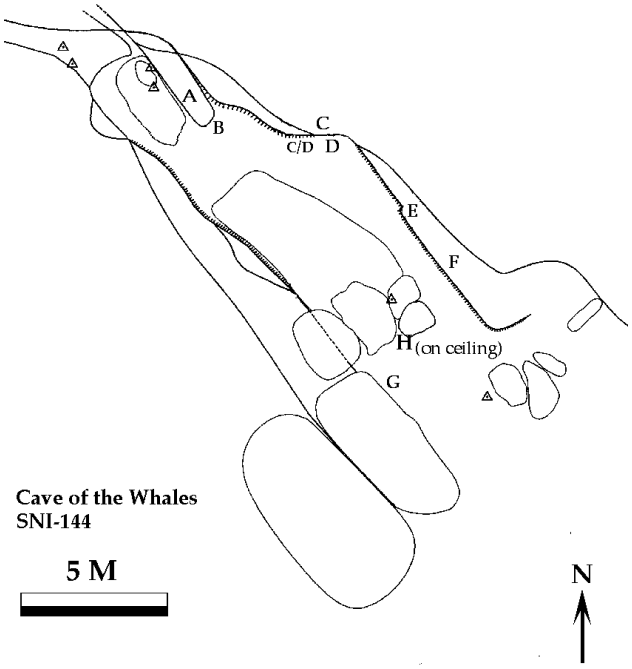


**Figure 1. Map of the main chamber of the Cave of the Whales (Conti et al. 1999). Bold letters indicate the position of the rock art panels. Surveyed by Christopher J. Doolittle, William A. Feld, and William Green, Statistical Research, Tucson. Adapted from a map drafted in AutoCAD by Jedediah Arthur Unrot and William A. Feld, Statistical Research, Tucson, January 26, 1998.**

in comparison with notes, drawings, and photographs from earlier expeditions including: a black and white photograph (Figure 2) made in 1950 by geologist Robert M. Norris depicting the central panels in situ, which are now at the Southwest Museum; the field drawings of George Kritzman from March 29, 1959 depicting elements from Panels B though Panel G; a photograph by Howard Maxwell published in *Odyssey of the California Islands* (Hall 1962); and drawings published by Charles E. Rozaire and George Kritzman in *The Maskerkey* in 1960. These earlier graphic depictions of the elements were helpful to discern details in areas of faint pigment, vandalism, and natural erosion. The current study did not attempt to reconstruct the panels as they earliest appeared and were recorded, rather it recorded exactly what is presently remaining on the cave wall surface.

Approximately one-third of the recorded elements are painted and the remainder are petroglyphs. Thirty-two of the identifiable elements are aquatic or fish motifs. Nine additional elements are best described as fins or "fin-like." The remaining elements include three double zig-zags, seven lines, and a variety of fragmentary figures that cannot be identified. Many of the aquatic figures include long dorsal fins, with one prominent figure featuring a straight, tall dorsal fin not unlike a killer whale or shark. Despite the prominent fins, none of the figures can be reliably identified as to species.

**Figure 2. Robert Norris photograph of the main panel in the Cave of the Whales, 1950.**

## STUDY LOCATION

San Nicolas Island lies approximately 98 km from the southern California coast and is best described as a 58 km$^2$ semidesert, Eocene sandstone plateau capped with Pleistocene sediments (Power 1980:3). Although San Nicolas is the most distant of the Channel Islands from the coast, several other islands (Anacapa, Santa Catalina, Santa Barbara, Santa Cruz, and Santa Rosa) and the mainland can be clearly seen from the northern beaches on clear days. The island supports few native land mammals and fewer exploitable floral resources. The local marine environment, on the other hand, is rich in exploitable resources including a wide variety of sea mammals, marine birds, shellfish, and fish. The presence of land snail shells in island middens suggests that some form of indigenous vegetation supported them and possibly included seed grasses (Meighan and Eberhart 1953). Orr (1968:37) reports observing live snails on San Nicolas Island, but their numbers are small enough to indicate that a major changes has occurred in the island environment.

The Cave of the Whales, the rock art site designated as CA-SNI-144, lies along the southwestern coast of the island. The cave mouth faces approximately southeast and opens into a small cove. Although it is protected from direct exposure to the ocean via the curvature of the rock shelf extending from the mouth of the cave, waves can and do break into the cave mouth. The paintings and petroglyphs discussed here are found primarily along the eastern wall of the cave. The surviving pictographs lie mostly towards the rear of the major chamber of the cave which is some 135 feet deep and are generally beyond the reach of direct wave action.

## CULTURAL SETTING

The people of San Nicolas Island were frequently assigned to the coastal Gabrielino based on four words collected in 1853 from the "Lone Woman of San Nicolas" (Bean and Smith 1978). Munro (1999, this volume) reanalyzed the four words and argues that they are indeed of the Takic branch

of the Uto-Aztecan language family, but that they are more likely related to the Cupan subgroup (Luiseño, Cupeño, Cahuilla) rather than Gabrielino subgroups. While it is unlikely that four words will ever resolve any doubts as to the cultural affiliation of the Nicoleño, archaeology can help us understand their material culture and subsistence strategies compared to the other peoples of the Channel Islands. For example, *Olivella* Grooved Rectangle beads dating to ca. 4,000 years ago are found on San Clemente, Santa Catalina, and San Nicolas Islands, as well as at sites along the Orange County coast. These distinctive beads and their limited distribution have been interpreted as evidence of a southern island interaction sphere (Raab et al. 1994:254). Schwartz and Martz (1992:66) speculate that the earliest San Nicolas inhabitants were likely Hokan-speaking people and were replaced at some point in prehistory by the historic Nicoleño.

The earliest archaeological collections were primarily ground stone artifacts gathered from surface sites by Paul Schumacher in 1875 for the Smithsonian and Peabody Museums (Meighan and Eberhart 1953). The earliest archaeological excavations on San Nicolas Island were conducted by Leon de Cessac in 1878 (Reichlen and Heizer 1964). While many of his notes, records, and some of his collections were lost, he did publish one paper on stone effigies collected on San Nicolas and he amassed the largest collection of stone effigies known from southern California during his digs on San Nicolas. Despite numerous surveys and digs over the years, the only book length publication on the archaeology of San Nicolas Island is Bryan's (1970) report of the Southwest Museum's 1926 expedition. Unfortunately, only the expedition's daily activities and finds are reported with little in the way of modern analysis.

Meighan and Eberhart (1953) published the most thorough, albeit dated, analysis of the San Nicolas archaeological work. They speculated that island populations could never have been very large. The purpose of the hundreds of mortars and pestles collected from an island that apparently lacked much in the way of vegetation was also questioned. Was the island environment different in the past or were grinding implements put to other uses? Early accounts of the Lone Woman note that she used a mortar and pestle to pound dried abalone meat (see Heizer and Elsasser 1973:40; Hudson and Blackburn 1981:103). In addition to assumed environmental limitations on island population, Meighan and Eberhart (1953:109) also note the virtual absence of Spanish trade goods and glass beads on San Nicolas. It is assumed these items would be present if a population of any significant size was living on the island at the time of contact.

The sheer number of archaeological sites on the island are problematic for estimating island populations. The large number of sites could be explained by either a small population inhabiting the island over a very long period of time or by a shorter period of high population. Meighan and Eberhart (1953:119) preferred the latter option and estimated a population of 600 to 1,200 based on the island environment. Radiocarbon dates have since demonstrated the antiquity of the human presence on the island and no doubt would have led Meighan and Eberhart to other conclusions. Researchers today place population estimates at 200 to 300 (S. Schwartz, pers. comm.). They speculated that about 20 people were living on the island in 1835 and note that Aleut sea otter hunters apparently had no difficulty in establishing camps on the island in the early nineteenth century.

Glassow's (1980) review of Channel Island archaeology notes that differences in subsistence strategies distinguish Early and Late populations on San Nicolas, not unlike the pattern observed on other Channel Islands. The limitations of the local environment does impose some differences and San Nicolas sites yield a broader array of shellfish exploitation than on other islands, including mussel, abalone, black turban, and sea urchins. As on other islands, bone fishing gorges appear before 4,000 BP and circular hooks replace the bone gorges after not long after (Rosenthal and Jertberg 1998). A greater abundance of circular hooks on San Nicolas than on other islands may indicate a stronger emphasis on fishing (Glassow 1980:89). Sea mammals are abundant as well in all time periods, as are sharks. The extent to which the limitations of the local environment dictate the subsistence strategy may be one clue to interpreting the art of the Cave of the Whales.

Schwartz and Martz (1992) penned the most recent archaeological overview of San Nicolas, focusing on eleven scientifically tested and excavated sites. In most instances, these excavations are unpublished and the collections only partially analyzed. The work accomplished to date does support an initial Early Period occupation of the island, although settlement and subsistence patterns cannot be deduced, nor can one infer a continuous occupation of the island since initial settlement. Regional interaction and trade remains an unanswered question with important ramifications for the study of the island rock art. As we will propose later, the Nicoleño may have specialized in the creation or sanctification of religious artifacts such as effigies and magic stones.

Perhaps the most important archaeological evidence from San Nicolas Island that might relate to the rock art are the many effigies collected over the years (see Lee 1981 for a general discussion). French archaeologist Cessac published the first study of island fetishes (Cessac 1951). He was particularly taken with them as the most interesting of the artifacts collected in California. He naively interpreted the range of sculptures as a typological progression of the development of an effigy figure. He may have been correct, however, in his assumption that the simplest effigies were in fact stylized cetacean figures since some of them are similar to the "fin" motifs recorded in the Cave of the Whales. He briefly describes what must have been a truly remarkable find. "We actually came across, heaped up beside a male skeleton, twenty more or less well executed stone animals, and a medicinal or witchcraft pipe also of stone (Cessac 1951:2)." He identified the effigies as killer whales, gray whales, porpoise, fish, and sea birds. Many of the figurines featured drilled holes at the based and traces of asphaltum as if a support had been attached to set them upright (Hudson

and Blackburn 1986:175). One such figure includes the remains of what might be an iron nail used as a drill bit.

Effigies are relatively common in San Nicolas excavations and even surface surveys. Bryan (1970:81) reports several fish images and unidentified effigies from the Southwest Museum's 1926 expedition. A small boulder with a painted circle "from which the arms of a continuous cross emanated, conjoining with those emanating from a similar circle and cross on the opposite side" was discovered near a grave, although it was not collected (Bryan 1970:34-36). On a later trip, Arthur R. Sanger discovered a painted slab covering an infant burial (Bryan 1970:82-85). The primary slab contains five elements including a large spiral with two possible anthropomorphs and two abstract or possible "pelican" figures situated around the spiral. A second slab was inlaid with diagonally crossed lines, another with an anthropomorphic-like figure, and two with fish effigies.

None of the reported effigies have been found in a context with secure archaeological dates, either because they were found on the surface or the necessary archaeological evidence was not recorded. A recent attempt to date bone effigies was more successful (Koerper et al. 1995). A single Accelerated Mass Spectrometer (AMS) date from a marine mammal bone bird similar to the hooked "stone" effigies from San Nicolas Island was calibrated between 1882 BC and 1733 BC. The authors caution that a single early date could be the result of the artist's choice of old marine mammal bone. The date, however, is consistent with occupation dates for San Nicolas Island. It is consistent as well with the antiquity of effigies on the mainland (see Lee 1997 for a general discussion). And, it provides a tantalizing hint at the possible antiquity of the role of San Nicolas Island in effigy production.

## ETHNOGRAPHIC DATA

Very little ethnographic data was collected concerning San Nicolas Island although data from other coastal and island populations provide insights to San Nicolas Island. For example, Henshaw's (Heizer 1955) Mission Indian vocabularies list *Ha-la-ca't* as the coastal name for San Nicolas Island along with the notation that "magicians' stones from this island." This comment helped Howorth (1988) identify the source of *tosaut* stones, small iron concretions used as magic stones by coastal shamans (see Timbrook, 1999, this volume). Hudson and Blackburn (1986:166-170) note that these stones were used in weather ceremonies.

Fernando Librado, an elderly Chumash man of Santa Cruz Island descent, explained to J. P. Harrington that San Nicolas Island came to be known as *Xalasat*, because the name meant "laurel" or "victory" (Blackburn 1975:166). Librado's canoe stories tell briefly of a trip from Santa Cruz Island to San Nicolas in which three canoes left Santa Cruz and only one arrived at San Nicolas (Hudson et al. 1978:150). Hudson et al. (1978:150) speculate that the trip would have begun at night using stars for navigation. Course corrections could then be made in the morning when the island was in sight. The 42 mile trip would have been the most hazardous of any of the canoe journeys. The fact that people inhabited San Nicolas Island at least 4,000 years ago would indicate they mastered the sea well in advance of the famous Chumash tomol. Radiocarbon dates from Santa Barbara Island, a likely way-station for seafarers from the southern islands, complement the 4,000 year old San Nicolas dates (Erlandson et al. 1992).

## DISCUSSION

It is virtually impossible to place a single, unprecedented site into a cultural context in a situation such as that found on San Nicolas Island. Despite an earlier attempt to apply a structural analysis of the Luiseño language to the Cave of the Whales (Bleitz n.d.), there is little information to go on. It cannot be firmly stated that the cave dates to the Late Period (2,000 BP to 200 BP), so the possibility exists that it could date to an earlier (Hokan-speaking?) occupation. One cannot ignore the simple explanation that the many depictions of fish may represent the record of a catch or catches or even doodling. The archaeological and environmental context of the cave, however, provide a fairly firm base for a more speculative interpretation.

It may be no accident that the small iron concretions found on San Nicolas Island came to be magic stones used in various ceremonies on the coast. If Fernando Librado's (Hudson et al. 1978) stories of the hazards of ocean travel are correct, then one can surmise that successful trips were indicative of the canoe owner's personal power. To the extent that a successful trip represented a victory over the threat of death, items returned from the island were also likely to be imbued with power. For the canoeist, one could travel no further towards the horizon and survive to return to the mainland. San Nicolas Island lay at the intersection between what Renfrew and Bahn (1991:359-360) identify as a boundary between this world and the next, between the earth and sea. Locations such as these are typically incorporated into religious ritual (Renfrew 1994). It may be that San Nicolas Island occupied an important economic niche for its deposit of magic stones and assumed a role in providing or sanctifying the religious importance of effigies.

The cave itself lies on the boundary between land and ocean. The incessant sound of ocean waves against the rock fills the cave with a rhythmic pounding. Even though the environment of the cave has changed with the erosion of the sand floor that was present 20 years ago, the space still retains characteristics of a liminal zone where one might focus attention on cult activities. Natural formations in the cave, such as ledges and rock shelves, may have provided surfaces for setting items used in ceremony or ritual, or for sitting or lying down. In fact, the area of the cave best suited to ritual activity is exactly that portion of the cave bound by the carved and painted rock art panels. The opposite wall is lined with fallen and broken boulders, an uncomfortable place to sit or move about. The cave more than adequately

fits Renfrew's (1994) tests for recognizing the location of religious activity.

The natural geological formation of the cave interior may be viewed as similar to that of a whale. The large central portion of the space tapers towards the rear (or tail) and widens at the entrance (or mouth). If one expands the observation of the cave environment to include its visual and auditory scope, it is a kinetic and changing space. It appears to be "alive" as witnessed in a variety of lighting and moisture conditions which affect the illumination and coloring of the walls. The varying sounds of the surf, reflecting tidal and weather conditions with waves crashing onto the entrance or just outside on adjacent rocks make for constantly changing sounds inside the cave. Depending on the surf conditions, the space acts as a natural amphitheater, magnifying the sounds. At various times of the day, the sun reflects light which plays across the walls and ceiling of the cave. When these factors are combined with the sounds, one could imagine being inside a wave or perhaps the belly of a whale. One's auditory experience often includes the sounds of marine mammals on nearby beaches as well as the sounds of shore birds including gulls and cormorants.

The natural world of the Nicoleño reinforces the experience of the cave. While we do not know when the paintings were done, we do know that the marine life of the island was not unlike that of today. For example, some 50,000 pinnipeds visit San Nicolas Island each year and they provide excellent prey for killer whales. The Nicoleño would have seen any number of marine mammal species including dolphins and whales. Their view would have been similar to ours-breaching, feeding, spyhopping, carcasses washed ashore and more. They also would have seen the prominent fin of the male killer whale skimming along the water. Whales were the largest, most dominant mammals of the Nicoleño world.

Bleitz (n.d.) performed a structural analysis of the ethnotaxonomic philosophy of the Luiseños and suggested a similar structure applied to the Nicoleño as well. She addresses the question as to why marine mammals and bird figures predominate as effigies when these animals were not primary dietary resources. It is no surprise that marine mammals and birds should form the primary subjects for artistic endeavors on an island such as San Nicolas. Although we question some of the initial assumptions of Bleitz, her basic identification of the effigies, and by analogy the rock art, as power figures is most likely correct. It is the repetition of the marine imagery that identifies the figures as ritually important. If they are indeed whales and porpoises (Figure 3), their importance is enhanced as these mammals themselves span the boundary of sea and air see Hudson and Conti 1981 for a dsicussion of the aquatic motif in Chumash rock art). In one area of the cave, grooved petroglyphs of aquatic motifs occur on a rock surface that has natural striations enhanced by white seepage. The striations form curvilinear areas that may be visually associated with ocean waves or currents. The visual effect of marine mammals "swimming" on the rock surface may be another indication of crossing the boundary between water and land (Figure 4).

The ethnographic identification of effigies as ritually important is readily available. Lorenzo Yates reported that effigies were used in ceremonies to bring rain, cause the death of enemies, and for other purposes (Hudson and


**Figure 3. Panel A as drawn by Kathleen Conti, 1998. All figures are painted in black.**

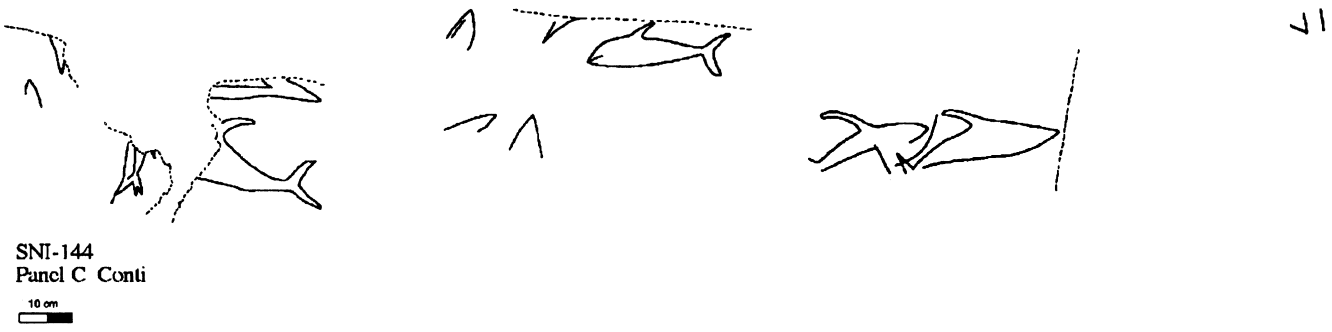


**Figure 4. Panel C as drawn by Kathleen Conti, 1998. All figures are petroglyphs.**

Blackburn 1986:171). Harrington (1978:137-138) mentioned the presence of idols in ceremonial enclosures on Santa Catalina Island and the burial of mortars and other stones following ceremonies along the coast. The *tosaut* stone is linked to shamanism and the creation of the world (Boscana 1978:31; Harrington 1978:145-146) and, as we cited earlier, has since been linked to San Nicolas Island. The creation story reported by Boscana tells of Nocuma, the world maker, securing the world by placement of a *tocaut* stone at its center. According to the story, a large fish or whale brought the *tocaut* stone to Nocuma. One large iron concretion, a *tocaut* stone, is found embedded in the sandstone matrix below Panel B (Figure 5).

Several archaeological effigy caches have been recovered over the years in addition to that found on San Nicolas. An isolated cache of sea mammal effigies was found on a Palos Verde hillside well removed from archaeological camps or villages (Wallace and Wallace 1974). Wallace (1987) reported a larger and more varied cache of effigies from two pits on a cliff in Pacific Palisades. Again, the caches were located away from identified camps or villages. Meighan (1976) documented a 1,000-year-old burial cache from Malibu with multiple fish effigies, while Rogers (1929:418) reported finding an intact shrine with two sets of ten charmstones in sunburst patterns about circular stones placed in small cup-shaped boulder. Within the precinct of the shrine were numerous effigies and burials with effigies (Rogers 1929:218). The site excavated by Rogers dates to the early Middle Period of the Santa Barbara Coast (King 1990).

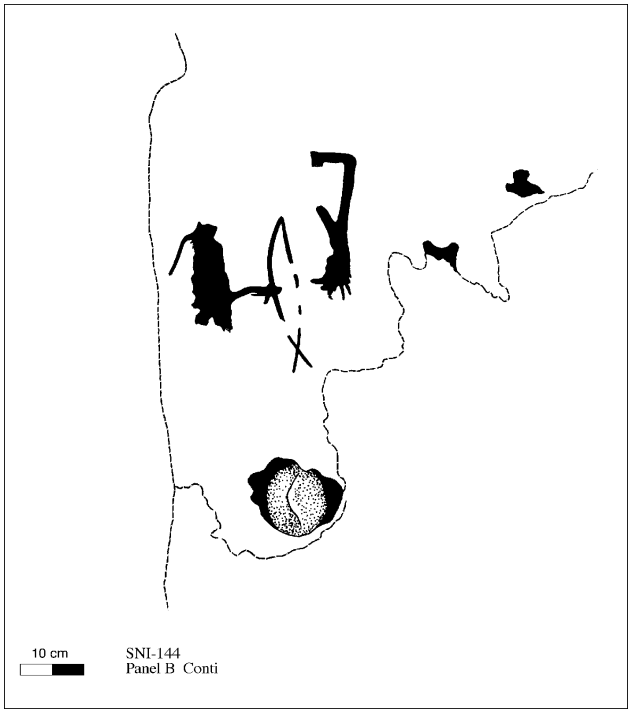


**Figure 5. Panel B as drawn by Kathleen Conti, 1998. All figures are paintings. Note the iron concretion near the bottom of the panel indicated by the stippled circular area.**

It seems reasonable to assume the effigies are closely linked with shamanic and other religious practices (Lee 1997). The large number of whale and fish effigies would seemingly lend credence to a religious interpretation of the Cave of the Whales. A large iron concretion near the base of one rock art panel may further link the rock art with the concepts embodied in the *tosaut* stones. Although this concretion may have been buried at times when sand filled the cave floor, it is likely that the sand level fluxuates with shifting environmental conditions and wave action. Thus the boundary context of the cave, the presence of magic stones, and the iconic imagery linked to effigies provide a strong case for the interpretation of the Cave of the Whales as a San Nicolas Island sacred place.

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