

Let There Be Light in the Dark Zone: Insights into Taíno Cave Paintings in the Eastern Dominican Republic

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Introduction

The Taíno culture area contains a wealth of rock including some of the most numerous Dark Zone paintings in North America – art that is associated with the realm of total darkness in caverns (Greer and Greer 1998:135). More than 450 sites containing petroglyphs, pictographs or both are presently documented for the Dominican Republic, although only a small fraction of the country has been systematically surveyed. Many of the pictographs are executed in the Dark Zone. Cuba has reported over 100 examples of Dark Zone imagery, but in spite of this large inventory, major questions remain about their origin, meaning and chronology.

This paper outlines characteristics of the Jose-Maria style pictographs from several major limestone cavern sites in eastern Hispaniola and presents five radiocarbon dates from pigments in the Dark Zone at two caverns in the East National Park. These are apparently the first published dates directly from rock art pigments in the whole Greater Antilles. Initial results imply the elaborate rock art style may have developed very early in Archaic times and continued into the late Saladoid or early ceramic period. Other dates are assigned to Ostionoid and even Classic Taíno times (Rouse 1992: Figure 14). While there is hope that future radiocarbon dates from painted pigments will lead to a greater understanding of how rock art relates to the chronology and cultural diversity of the Greater Antilles, some caution in use of radiocarbon dating is in order.

Painted Rock Art of the Jose Maria Style

Painted rock art in the Dominican Republic has recently been grouped into several “schools” or “styles” by its most prominent researchers – Gabriel Atilés Bidó and Adolfo López Belando. While they disagree slightly on the exact number of individual styles, they agree that a particularly distinctive grouping of painted rock art occurs in the eastern part of the country.

Jose-Maria rock art style is named for the type-site in East National Park. Over 1200 painted images have been recorded in this deep cavern, most of them being well into the Dark Zone. They are characterized by their vibrancy, bold placement and organization into assemblage sets. Numerical, calendrical and

cosmological themes have been interpreted (López Belando 2009:103; López Belando 2003:81). Five other pictograph sites can be assigned to this style including nearby East National Park caverns -- Cueva de Ramoncito and Cueva del Puente. Cueva de las Maravillas (Prov. San Pedro de Macoris), and the recently reported Cumayasa caverns (Cueva de Vidal and Cueva del Peñon) near La Romana, can also be grouped into this style (DuVall 2010).

Characteristics defining the Jose Maria style of painted rock art include:

1. An association with petroglyphs at the mouth of the cave – always in natural light and often on a prominent rock formation
2. Placement of pictographs in the Dark Zone of the main chamber
3. Lack of image superimposition
4. Apparent selection of image heights to keep the observer in ritual position
5. Use of natural rock relief to convey a sense of volume or space to the figures
6. Absence of perspective
7. Placement of images to facilitate detailed examination
8. A tendency towards panel compositions instead of single images disbursed throughout a cave system (modified from López Belando 2009:105).

Painted images of the Jose Maria style usually employ black or brown pigments. Very rarely red and white images have also been documented. Some figures find similar form in petroglyphs of the area; others seem to be unique painted designs. Many figures, but not all, tend to be large and seemingly placed for dramatic effect.

It should be noted that not all sites assigned to the Jose Maria style contain all the above characteristics, nor are elements from other defined styles completely absent, but there is a strong pattern of design execution among these caverns in the eastern Dominican Republic. López Belando argues that elements of the Jose Maria style extend to rock art on Mona Island and Cuba – making it key to understanding circum-Caribbean cultural history (2009:105).

The Dilemma of Dating Pigments from the Jose Maria Cave

Several panels of painted imagery within the Jose Maria cave have been interpreted as possible early Colonial iconography with a “caravel with full sail” and a “bearded face” (López Belando 2003:289). In an attempt to test for evidence these paintings were made during the contact period, pigment samples from the “caravel” and the “bearded face” were subjected to radiocarbon analysis. The following results were obtained from Lawrence Livermore:

Table 1. Initial Radiocarbon Dates from Jose Maria Cave

	CMAS 122461	CMAS 122462
Conventional Radiocarbon Age	4100 +/- 35 BP	2700 +/- 35 BP
	2 Sigma Calibrated 2498 to 2865 BC	2 Sigma Calibrated 802 to 909 BC
Intercept	2667 BC	852 BC



Accepting these results would require assigning the pictographs to Lithic and Archaic periods in Antillean prehistory – a time when egalitarian hunting and fishing bands occupied Hispaniola (Rouse 1992; 1989). Also, the 1800-year disparity between them is perhaps a cautionary sign. The contradiction between these radiocarbon results and presumed chronology has led us to a second attempt to test radiocarbon dating of pigments assigned to Jose Maria style rock art in a nearby cave.

Cueva del Puente (Prov. La Altagracia)

Cueva del Puente or Bridge Cave is located in the northwestern region of East National Park about 2km from the coast and 1.5km from the type-site. The natural setting is a high to medium canopy, large leaf, semi-humid forest. Tree cacti are common. The calcareous rock or limestone terrain is extremely rugged with sinkholes, fractures and exposed coral rubble. Almost no soil has developed over this hardscrabble landscape.

The cave itself is impressive. Its total length is 1218m with an elevation difference of 32m (López Belando: 2003:95). Cave formations include stalactites, stalagmites, columns, fractures, gours and cave pearls. What sets Cueva del Puente apart is a collapsed ceiling that allows fresh air and light into

the cave's inner reaches. A giant copay tree has taken root in the collapse opening and evidence of birds, insects, bats and owls is concentrated there. The cave's skylight actually consists of twin collapsed sections with a small connecting bridge – and hence the cave's name.

Some nine petroglyphs are found at the cave entrance and in the sunlit area of the collapse at Cueva del Puente. This follows a widespread pattern of their geographic placement in the realm of shadows – where sunlight is visible. Anthropomorphic, zoomorphic and abstract petroglyphs are recorded (López-Belando 2003:91). A particularly dramatic set of petroglyphs is executed on a prominent boulder facing the sunlight. They have been interpreted as a bat design or perhaps an owl with its owlet (López Belando 2003:95; Jiménez Lambertus 1987).

Pictographs in the Dark Zone

A narrow “cathole” leads from the collapse section into the Dark Zone where approximately 60 pictographs have been documented within an impressive solution chamber. Cueva del Puente paintings are anthropomorphic and geometric in form. They are concentrated on opposing walls in a narrow chamber only 12m wide. Some designs are also placed on columns or speleotherm formations. Whether they are organized into panels is a matter of interpretation. Unlike the nearby Jose-Maria cave, these are executed on irregular wall surfaces with active calcium carbonate deposition – making it difficult to determine their association or grouping. Some may have been covered by deposition.




As with other examples of this style, images made from brown and black pigments can be seen. In Cueva del Puente the brown images tend to be wider with some lines measuring 4cm or more. These images seem to be formed of a brown paste. They appear to be applied by fingers, although other methods may have been employed. The black pigments are narrower, with lines usually 1cm or so. In this cave, the anthropomorphic designs are black; geometric designs are brown and occasionally black.

Radiocarbon Dates from Cueva del Puente Pigments

With permission from the Museum of the Dominican Man, three very carefully selected pigment samples were collected for radiocarbon assay. The samples were taken from three distinct figures along the western cavern wall across a distance of just over one meter. Great care was taken to collect very small samples (.6 to 1.5g) from the margins of the image so as to not affect its overall appearance or accelerate exfoliation of pigments. This very small sample size

proved adequate for AMS dates. The following results were obtained from Beta Analytic:

Table 2. Initial Radiocarbon Dates from Cueva del Puente

	Beta 281909	Beta 281910	Beta 281911
Sample Size	0.9 g	0.6 g	1.5 g
Conventional Radiocarbon Age	1660 +/- 40 BP	1560 +/- 40 BP	890 +/- 40 BP
	2 Sigma Calibrated AD 260 to 520	2 Sigma Calibrated AD 410 to 590	2 Sigma Calibrated AD 1030 to 1230
Intercept	AD 400	AD 540	AD 1160
			

These dates, if accepted, would fit more comfortably within the established chronology. Results for the trisected rectangle (281909) and face (281910) overlap at the 2 Sigma level. They would be assigned to the Early Ceramic or Saladoid people – farmers who lived in settled villages and left little evidence of marked socio-political stratification (Hayward et.al. 2008:9). The divided square (281911), while resembling the other geometric design in form, color and execution, is assigned a date seven centuries more recent. It would mark the emergence of Classic Taíno cultural traditions in eastern Hispaniola. Overall, these results seem more compatible with the established chronology even though they do show a greater than expected time depth.

Discussion

There are no direct radiocarbon dates on Dominican rock art pigments, and very few other dates to give context to these results. From a nearby cavern within East National Park – Cueva de Berna – Veloz Maggiolo et.al documented a preceramic occupation in the cave entrance at 1890 to 1255 BC (1977:22). The cave is adorned with petroglyphs and pictographs, but of a different style than the Jose Maria designs. The archaeological deposits directly adjacent to the painted figures revealed the occupants specialized in hunting and the harvest of shellfish

while developing a specialized tool kit of “polished stone, flint and shell artifacts” over the course of six centuries (Veloz Maggiolo 1977: 22).

Roe (2008) presents a tentative chronology for rock art in the Greater Antilles in which pictographs are as old as the Archaic. Some 90% of Cuban pictographs are assigned to the Archaic with their simple forms mirroring small-scale egalitarian society. With the advent of ceramic-producing cultures across the Greater Antilles, petroglyphs begin to appear along with more elaborate regional painted designs. In Dominican and Puerto Rican sites the broad pattern of “guardian” petroglyphs in dimly lit semi-public cave entrances contrasts with sacred pictographs in Dark Zone chambers restricted to elite access (2008:222). This mirrors a more stratified cultural setting with a greater emphasis on formal shamanistic behavior.

The five radiocarbon dates presented herein are troubling. They are derived from pigments of a single Jose Maria painted style in the eastern Dominican Republic, and yet span a time period of 2667 BC to 1160AD – some 38 centuries. The Jose Maria samples would have to be earlier than the Cueva de Berna occupation, and yet stylistically they fit comfortably with similar Taíno painted designs on Hispaniola and Puerto Rico. Clearly, there is a need to provide more radiocarbon dates of rock art pigments and archaeological deposits in association with such sites. Without them, the time-space matrix for Greater Antilles prehistory cannot be extended to its rich and varied rock art inventory with any degree of certainty.

But we need caution in radiocarbon analysis. One potential problem is that equivalent to “old wood.” If the Jose Maria style designs were made by applying a mixture of charcoal and other organic binders (bat guano, for example) to the wall, then the results could be much older than the painting event. As Marvin Rowe (2009) reminds us, radiocarbon dating of rock art pigments only began in 1987 and is still considered experimental in many ways. In order to have confidence in the results, dividing the pigment into its organic components and separately dating them may provide a more accurate chronological picture.

It’s a worthwhile effort. Confidently assigning painted images to a particular time period and, thus, a prehistoric culture, allows us to gain new insights into the artistic, cultural, technical and religious aspects of a vanished people – and bring light to the Dark Zone.

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