Prehistoric Paleontologists of the Mimbres Valley, New Mexico

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The Harris Site

The Harris Archaeological Site is a Late Pithouse period (550-1000 CE) Mimbres Mogollon occupation located in the Mimbres Valley of southwestern New Mexico. Recent excavations at the Harris Site conducted by the University of Nevada, Las Vegas have recovered a number of fossil specimens from cultural contexts. These include individual fossils as well as pieces of fossiliferous limestone, which were used as a raw material for tool manufacture. Recovery of these items from specific archaeological contexts, combined with the presence of cultural modification and inferences from ethnographic analogy, suggest that fossils held symbolic value for the prehistoric inhabitants of the Harris Site and were purposely collected (Falvey 2012). The question remains: Where did the people at Harris go to collect these fossils?

Assemblage

Twenty-five fossil specimens were recovered from current excavations of pithouse structures at the Harris Site. Additionally, ten artifacts made from limestone containing numerous visible fossils have been identified in the chipped and ground stone assemblage from the site. Of the nineteen pithouse structures excavated as of 2012, fourteen contained fossils or limestone artifacts.

Mogollon culture region showing location of the Mimbres Valley.

Floors of superimposed pithouses at Harris

Archaeological Context

Fossil specimens were found in the roof fall/wall fall of five pithouses. Items such as quartz crystals, shell, turquoise, and chrysocolla recovered from roof fall/wall fall contexts at Mimbres sites have been interpreted by Roth and Schriever (2012) as being related to household ritual. These items, as well as fossils, may have been placed as dedicatory offerings within the architecture of the house during construction.

The majority of the items recovered were found in cultural fill or trash deposits that accumulated in the pithouse depressions once the houses were abandoned. This trash fill also contained quartz crystals and other dedicatory items. It has been suggested that these may have been offerings left by later inhabitants. The fossils recovered from trash fill at the site may similarly have been left as offerings.

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Bryozoans

Harris Bryozoans: 1, pendant made from a bryozoa fragment; **2-3b,** examples of typical bryozoans found at Harris: unidentified species.

Brachiopods

Harris Brachiopods: 1-3b, *Ptychomalotoechia sobrina*, Percha Formation; **4,** *Porosticia perchaensis*, Percha Formation; **5,** *Marginata sp.*, Lake Valley Formation; **6-7,** *Spirifer rowleyi*, Lake Valley Formation.

Harris Fossils

Taxa represented in the Harris assemblage include brachiopods, bryozoans, corals, and crinoid column segments. Where possible, species-level identifications were tentatively assigned. Based on the taxa represented, the inhabitants of Harris likely collected fossils from outcrops of the Late Devonian (385 – 359 ma) Percha Formation and the Mississippian (359 – 318 ma) Lake Valley Formation.

Phylum	Class	Order	Family	Genus	Species	Formation	Count
Brachiopoda	Articulata	Rhynchonellida	Yunnanellidae	*Porosticia*	*perchaensis*	Percha	1
		Rhynchonellida	Trigonirhynchiidae	*Ptychomalotoechia*	*sobrina*	Percha	3
		Strophomenata	Buxtoniidae	*Marginatia*	*sp.*	Lake Valley	1
		Spiriferida	Spiriferidae	*Spirifer*	*rowleyi*	Lake Valley	2
Bryozoa	Gymnolaemata	Trepostomata	–	–	–	Lake Valley?	6
Cnidaria	Anthozoa	Stauriida	Caniniina	*Caninia*	*arcuata*	Lake Valley	2
		–	Campophyllidae	*Campophyllum*	*ursinum*	Percha	1
Echinodermata	Crinoidea	–	–	–	–	Lake Valley?	6

Corals

Harris Corals: 1, *Campophyllum ursinum?*, Percha Formation; **2-3b,** *Caninia arcuata*, Lake Valley Formation

Crinoids

Harris Crinoid Column Segments

Percha Formation

The Percha Formation consists of two members. A lower succession of black, fissile shale is the Ready Pay Member which is overlain by the late Famennian Box Member. The Box Member contains calcareous shale and interbedded nodular limestone. West of the Harris Site the member thickens to ~50 m and contains a diverse assemblage of crinoids, brachiopods, and corals.

Lake Valley Formation

The Lake Valley Limestone disconformably overlies the Percha Formation and is Early Mississippian in age. It is up to 148 m thick and has been subdivided into several members, consisting of intervals of cherty limestone with zones of crinoidal limestone and calcareous siltstone. Four members of the Lake Valley formation are present west of the Rio Grande: Andrecito, Alamogordo, Nunn, and Tierra Blanca (Kues 1986). The Nunn Member (42 m thick) contains brachiopods, corals, and abundant crinoids.

Local Outcrops

Georgetown

The closest outcrops of the Lake Valley and Percha formations to Harris are found near the historic town of Georgetown, New Mexico. These sources are located approximately 4 km west of the Harris site and represent the most likely procurement location for the fossils recovered. Rhynchonellid brachiopods, including *Porosticia perchaensis* and *Ptychomalotoechia sobrina*, have been identified in Devonian deposits around Georgetown (Cooper and Dutro 1982). Other fossils reported in this area include corals and crinoid fragments.

Bear Mountain

Outcrops of these two formations are also found on Bear Mountain, located northwest of Silver City, NM. In this area, the Lake Valley Andrecito Member (3 m thick) rests unconformably on the Percha shale and is overlain by the scarp-forming Alamogordo Member (Laudon and Bowsher 1949). Lake Valley outcrops encountered contained abundant crinoids stem segments and bryozoans. Rare brachiopods including *Spirifer rowleyi* are also reported from this area.

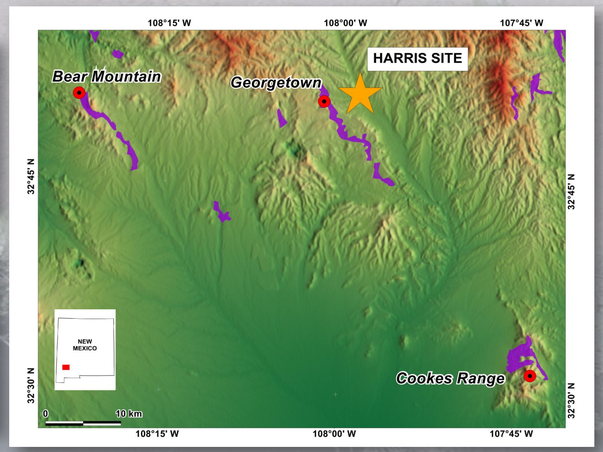
Cookes Range

Located approximately 43 km southeast of the Harris Site, the Cookes Range is the third potential source for fossil procurement. Mimbres researchers in the past have postulated that the Cookes Range held ideological significance to the prehistoric inhabitants of the region. Cooke's Peak is a distinctive and highly visible feature of the landscape. Residential and ceremonial structures throughout the Mimbres Valley are often oriented with their entryways facing Cooke's Peak (Ruzicka 2010). Petroglyph sites at the base of Cooke's Peak suggest that ceremonial activities took place in the area. If the inhabitants of Harris traveled to Cooke's Peak to take part in these activities, it is conceivable that fossils from the Cookes Range could have been collected during these excursions.

In the Cookes Range, the Box Member of the Percha Shale is disconformably overlain by the Lake Valley Formation. Lake Valley deposits are present throughout the range and include outcrops of Andrecito, Alamogordo, Nunn, and Tierra Blanca Members. Fossils reported include Spirifer and Productoid brachiopods, fenestelloid bryozoans, and crinoid fragments (Laudon and Bowsher 1949).

Bear Mountain

Lake Valley Formation



The Harris Site and the approximate locations of carbonate rocks containing outcrops of the Percha Formation and Lake Valley Limestone Formation.

Georgetown

Left: Lake Valley Formation. Below: Percha Formation

Cookes Range

View of Cooke's Peak from the Harris Site

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