

Archaeology and DNA Evidence for Pre-Clovis Occupation of the Paisley 5 Mile Point Caves in the Northern Great Basin

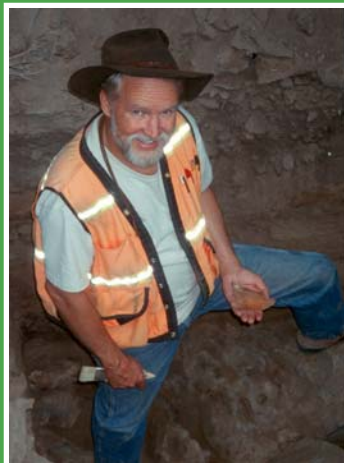


Dennis Jenkins, a senior archaeologist with the University of Oregon's Museum of Natural and Cultural History, recently garnered international headlines for finding the New World's oldest human DNA (dating back 14,300 years) in coprolites—dried human feces—in caves near Paisley, in Central Oregon. The find predates the now-accepted emergence of Clovis culture in the New World by about 1,200 years.

The Paisley 5 Mile Point caves are wave-cut grottos carved into a west-facing basalt ridge by Pleistocene Lake Chewaucan in south-central Oregon. Luther Cressman conducted excavations in these caves in 1938, 1939, and 1940, discovering that they contained cultural remains mixed with Pleistocene megafauna bones (camelid, horse, and bison). Despite early questions about the purported association of cultural and megafaunal remains, recent excavations, DNA, protein residues, and human hair analyses of radiocarbon dated human feces have demonstrated that the site was occupied by at least 14,300 years ago (12,300 radiocarbon years). Obsidian hydration supports the radiocarbon dating of Pleistocene coprolites, closely matching the carbon based dates. Pollen, phytolith, macrobotanical, and Fourier Transform infra-red spectrum (FTIR) chemical signature analysis indicate people were probably eating biscuit roots or yampah, grass seeds, berries, rose hips, cactus, and various other plants. Hair, bone, feathers, and protein residues indicate horse, bison, mountain sheep, rat, squirrel, dog or wolf, fox and grouse composed portions of the diet.

Analysis of fibers, sewing threads, and cordage recovered from the oldest deposits indicates that sewing with very fine thread was an important industry at the site during the late Pleistocene. Archaeological assemblages indicate that while the site was periodically occupied from at least 14,300 years ago it generally served only as a short term stop-over site campsite and storage facility. People stayed no more than a few days, left some excess equipment behind while they travelled on, and never lived at the site for very long.

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Dr. Dennis Jenkins

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- Ph.D. University of Oregon
- *DNA from Pre-Clovis Human Coprolites in Oregon, North America* (Science Express Reports, 2008)

~COLLOQUIUM~

Friday, May 30, 2008

3:00 p.m. in Boyle 155, COCC Campus

Presented by **Dr. Dennis Jenkins**

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