Five Pre-Clovis Sites That Won't Go Away

Bluefish Caves, Yukon: Flying in a helicopter in 1975, Canadian archeologists William Irving and Jacques Cinq-Mars discovered three caves in the remote limestone foothills of the Keele Range. Since then they have found thousands of animal bones there, including a mammoth scapula with cut marks and a collection of selected anatomical parts implying human presence, and a variety of flaked stone tools at upper levels of the site. Radiocarbon dates on the butchered mammoth range from 15,500 to 20,000 years ago; the stone tools yield dates between 10,000 and 13,000 years B.P. The main problem is that there are no hearths or other cultural features, and no unmistakable tools have yet been found in the older levels.

Meadowcroft Rockshelter, Pennsylvania: A sandstone rockshelter here is the most intensively studied of pre-Clovis sites. James Adovasio, now of Mercyhurst College, produced 52 radiocarbon dates on charcoal and a fragment of a burned basket, eight of which show human use of the campsite from 12,800 to 19,600 years ago. The researchers also have an outstanding collection of cultural artifacts, animal bones, shells, the fruits of many plant species and two human bones associated with charcoal from 12,000 to 14,000 years ago. Chief concern about the site is that the charcoal samples may have been contaminated by groundwater or other means, yielding dates that are too early.

Clovis, New Mexico

Taima-taima, Venezuela: At this waterhole Alan Bryan and Ruth Gruhn of the University of Alberta found butchered remains of a young mastodon with an embedded projectile point of the kind called El Jobo. Another stone artifact and rounded pebbles were found in sand at the edge of the waterhole. Fifteen radiocarbon dates on a range of materials—including wood twigs thought to be from the mammoth's stomach—place the kill at about 13,000 years ago. El Jobo points are also associated with mastodon remains at two nearby waterholes, one with even earlier dates. Some archeologists are concerned that the human artifacts were mixed with the mastodon bone by rising water or animals wallowing in the waterholes.

Pedra Furada Rockshelter, Brazil: A large, rockshelter with paintings inside was discovered here in 1973. French anthropologist Niede Guidon has mounted an ambitious French-Brazilian expedition, which found large circular hearths and stone flakings of quartz and quartzite that she says indicate continuous human occupation of the site from 32,000 to 6000 B.P. Guidon also found rocks bearing red markings, in association with the 32,000-year-old charcoal, which may be fragments of painted rock from the walls. Archeologists wonder whether the "hearths" and quartz flakings really are man-made. Further tests of the chemical content of the red markings are needed.

Monte Verde, Chile: Beginning in 1976, Tom Dillehay of the University of Illinois uncovered traces of a campsite well preserved under a peat bog here. He says the evidence includes what could be dwelling foundations; fragments of animal hide attached to poles; stone tools and wood artifacts; animal bones and a chunk of mastodon flesh; remains of economically important plants; even a human footprint. Eighteen radiocarbon dates on some of these materials place human occupation at about 13,000 years before the present (B.P.). Nearby are features such as a cluster of 26 stones and three clay-lined charcoal pits that may belong to an even older occupation of the site—perhaps 33,000 years B.P.—but even Dillehay is skeptical of such an early date. The chief concern is whether the artifacts are man-made and as old as the radiocarbon dates.

Present landmass

Landmass—18,000 years ago

Ice sheets

Julie Cherry (map based on illustration by Jack Unruh)