

The images above (re-drawn below for clarity) are from a stone incense burner used about 3300 BC in ancient Nubia in Africa.

is. These would be the earliest evidence of horse domestication.

The usual large number of reports of Greek and Roman finds came from throughout the Mediterranean region, in western Europe, and in Asia. A 7th-century BC sanctuary to Demeter and Persephone was exposed at Cyrene in Libya with a rich yield of luxury items showing strong connections with the Levantine coast. The remains of a fine Roman villa were cleared near Siena in Italy, and the site of the Roman fortress and city of Viroconium in Shropshire, England, was being cleared.

The year's most spectacular find, that of the royal tombs at Shibarghan in northern Afghanistan, was made by a joint Afghan-Soviet expedition directed by Viktor Sarianidi. Six royal tombs, dating to between 100 BC and AD 100, yielded hoards of jewelry, including golden objects weighing up to one kilogram (about two pounds). The finds were said to rival the treasure in the tomb of King Tutankhamen in richness. Further, the artifacts involved indicate the blend of cultural influences in ancient Bactria, through which the silk and spice routes passed from east to west and where the Hellenizing influences that arrived with Alexander the Great blended with the traditions of Asia.

**AFRICA AND ASIA.** The journal *Science* (March 23, 1979) contained the report of an important investigation of the datings and contexts of south African rock art. This heretofore poorly dated and understood late prehistoric artistic repertoire may have begun earlier than 4,000 years ago but seems to have had major flourishes coincident with the wetter, warmer climates of about 3,000 years and again about 2,000 years before the present.

A joint Trent University-Royal Ontario Museum expedition in eastern Botswana began work on a large Iron-Age settlement that dated to around AD 900 to 1400. Another research team was

making a combined ethnological and archaeological effort to study the complex iron-smelting procedures of the Haya people of northwestern Tanzania. Their highly advanced iron-smelting technology began perhaps 2,000 years ago and still persists.

A 2,400-year-old porcelain glazing kiln was reported to have been found near Hangchow, China. The oldest evidence of porcelain so far found, the kiln remains also included many fragments with bluish-gray celadon glaze.

(ROBERT J. BRAIDWOOD)

**Western Hemisphere.** Within the United States trends in archaeological research had to a large degree been determined by recent changes in the nature of federal legislative funding and planning programs. Since the passage in 1974 of the Moss-Bennett bill, U.S. government funding for archaeological research had increased from \$15 million to \$150 million per year. As a consequence U.S. archaeologists were putting nearly all their efforts into conservation and related planning programs. Over the same period National Science Foundation-supported work in the U.S. dropped from 18% of all archaeological grants in 1974 to less than 3% in 1979.

While these shifts in orientation and funding precipitated a wide range of new approaches in method and theory as well as vast increases in data, they also caused field archaeologists to jump difficult hurdles in fiscal and logistical management. The sheer volume of new cultural materials and information brought to the surface the serious limitations in the discipline's ability to process and disseminate these materials. It also pinpointed a nearly nationwide crisis in museum facilities in which the new materials could be properly conserved.

The 1979 record of the U.S. Congress was one of

mixed results for archaeology in general. On the negative side, after seven years of debate both houses of Congress again failed to reach agreement on and pass legislation to implement the UNESCO Convention on Cultural Property, designed to limit the illicit importation of plundered artifacts, for which the U.S. provides 50% of the market. In a more positive vein, in October Congress passed the Archaeological Resources Protection Act, which would alleviate one of the major causes of unregulated site destruction within the U.S. by making looting of sites a felony punishable by fines of up to \$20,000 and/or two years in prison.

**NORTH AMERICA.** Under the direction of Carol Rector, archaeologists from the University of California at Riverside reported the discovery in the Mojave Desert of what may be the oldest human footprints in North America. While conducting a salvage excavation of a late prehistoric Serrano Indian village scheduled for destruction by a proposed sewage treatment plant, the team of 40 archaeologists found the preserved impressions of at least five individuals and at least eight animals sealed beneath three feet of silt and clay dating to 5,000 years before the present.

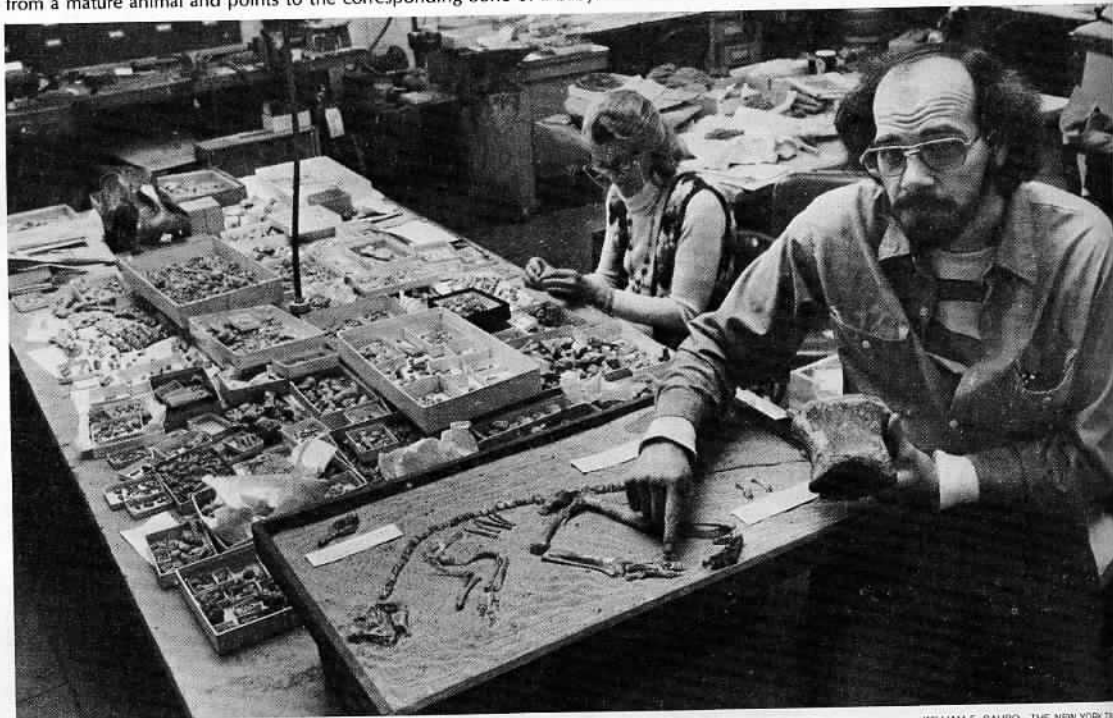
Under very different conditions of preservation, 300 early and pre-Eskimo archaeological sites along the coast of Labrador were identified by a joint team from the Smithsonian Institution (William Fitzhugh, Steven Cox, and Chris Nagle) and Bryn Mawr College (Richard Jordan). Excavation in several of the frozen sites yielded a well-preserved assortment of previously unknown wooden tools, carved soapstone figurines with details of prehistoric clothing, and frozen mummified human remains dating to more than 7,000 years before the present.

From 20 years of underwater explorations in the deep vertical underwater cavern of Little Salt Spring, Florida, C. J. Clausen and colleagues reported the discovery of unique wood artifacts dating to the Paleo-Indian period, between 12000 and 9000 BC. Some of the more extraordinary finds included the carcass of an extinct giant land turtle preserved with a wooden spear still in place, as well as the first reported New World occurrence of a nonreturning wooden boomerang capable of killing a deer at 50 yd.

Finally, the undisputed identification of a Norse coin dating to between 1065 and 1080 rekindled the debate over Viking visits to the New World. The coin was found in 1961 in Maine by an amateur archaeologist while collecting at an Indian village site. Thought to be of British make, it lay dormant for 20 years until a survey of private collections by staff of the Maine State Museum brought it to light. The curator of numismatics at the University of Oslo in Norway positively identified it. The coin was pierced to be worn as an ornament and thus could have come to the as-yet-undated prehistoric site through a variety of contacts, both direct and indirect.

**MESOAMERICA.** Within Mexico City general development programs and the continued monitoring of ongoing subway construction yielded an impressive series of new discoveries from the buried Aztec capital. Excavations on new subway lines provided new information on the boundaries of the Aztec city as well as general information on pre-Hispanic and colonial residential areas. During the last weeks of 1979, after excavating 40 ceremonial offering deposits, archaeologist Carlos González announced to the press the sensational find of a 0.9 by 1.2 m (3 by 4 ft) carved stone box,

Skeletons of baby dinosaurs were found in Montana. Princeton University scientist John Horner holds the bone from a mature animal and points to the corresponding bone of a baby.



found six feet below the surface and under water. It was decorated on five sides with relief sculptures showing influence from the region of Guerrero. Inside the box were four large conch shells, offerings to the god of rain, Tlaloc, and two large carved heads of semiprecious stone.

Preconstruction survey projects in other regions of Mexico were also revealing significant new information in previously little-understood culture areas of Mexico. In the Gulf Coast lowland states the archaeological survey of a proposed 12,000-km (7,500-mi) gas pipeline revealed a staggering 650 new archaeological sites.

Recent excavations at the lakeshore site of Zohapilco in the Valley of Mexico by Christine Weidenberger of the National Institute of Anthropology and History at last filled a long-standing chronological gap for human occupation there between 6000 and 2000 BC. At the same time these data altered radically the understanding of the shift to permanent village life in Mexico. The analysis of often microscopic plant and animal remains demonstrated that even without the use of irrigation agriculture, indigenous lakeshore residents were able to maintain a year-round permanent village existence in the Valley of Mexico as early as 6000 BC. Rather than irrigation, as was previously believed, the permanence was due to the abundance of plants, fish, turtles, and migratory birds.

Excavation at the site of San José de Mogote in Oaxaca by Kent Flannery and Joyce Marcus of the University of Michigan helped to alter the long-held assumption that this valley held little in the way of complex society prior to the Zapotec culture. Deeply stratified remains dating to 650-500 BC, immediately prior to the establishment of Monte Alban, yielded a complex of early superimposed tombs, houses, and public buildings.

Recent work at Pre-Classic Maya sites in the Maya lowlands of coastal Belize continued to yield new data on Maya origins. It also cast doubt on the traditional assumption that Classic Maya culture developed first in the interior Petén jungles of Guatemala. Working on the coast of Belize, David Freidl of Southern Methodist University at the Pre-Classic site of Cerros found well-preserved and very early Maya plaster masks on the sides of a platform mound as well as a possible 40-m (131-ft) docking facility for trade on the inland rivers.

**SOUTH AMERICA.** Declines in U.S. funds for overseas research, combined with a tightening (as of 1978 and 1979) of many Latin-American national fiscal and regulatory policies, significantly limited the nature and extent of archaeological activity in South America by research teams from other regions. By 1978 these changes had placed an increasing responsibility for prehistoric cultural research programs on Latin-American scholars and institutions. Within the last two years preconstruction archaeological planning and survey projects had been accompanying large-scale development programs in the interiors of Brazil, Argentina, and Uruguay. These were beginning to shed new light on understudied areas and cultures.

In Peru one such excavation program at the pre-Chavin and Early Horizon highland site of Huaricoto uncovered the remains of a large

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ceremonial centre containing white plaster floors, a multilevel stone canal system, and air-vented subterranean burnt offering pits. Dated at about 1000 BC, this centre contrasts with better-known coastal sites of the same period in that, instead of being organized in the typical Chavin pattern of U-shaped galleries and buildings around a central plaza, it appears to have been divided into elliptical precincts separated by large stone walls.

From the previously little-known interior of Uruguay a multinational team, sponsored by UNESCO and the Ministry of Culture and Education, reported a wealth of new prehistoric survey and excavation data. Salvage work prior to the construction of the Salto Grande Dam led to the identification of more than 100 new archaeological sites, together with the reconstruction of a 9,000-year sequence of prehistoric cultures. Results yielded evidence of a large population, large pre-European-contact villages, and data on climatic, riverine, and vegetation changes in conjunction with the archaeologically datable remains.

(JOEL W. GROSSMAN)

See also Anthropology.  
[723.G.8c; 10/41.B.2.a.ii]

## Architecture

The importance of design quality was again highlighted in 1979 as the bedrock upon which architecture rests. Despite various problems facing architects, they were enjoined to concentrate efforts on creating quality design and workmanship as being the only way in which they could play an effective public role in changing and improving the built environment. Speaking at a series of "grass roots" meetings in the U.S., the American Institute of Architects' (AIA's) president, Ehrman Mitchell, hailed 1979 as a year of "Celebration of Architecture," challenging architects to make the public more aware of their profession's role in the contemporary world. He

The battered skull of a man believed killed in an Indian attack nearly 360 years ago was found in a dig near Williamsburg, Virginia.

**Archery:**  
see Target Sports