

degree of cultural activity well north of classic southern Mesopotamia. A Yale University operation in the Khabur River basin of Syria directed by Frank Hole with Peder Mortensen of Denmark, a salvage survey at the site of the flood pool of a projected dam, yielded important information on the phases of early villages and towns of the region.

There was considerable activity in Turkey, much of it focused on the era of early village-farming communities and linked to the salvage effort to test sites soon to be covered by flood pools behind new dams. Much of this interest was stimulated by the results of 15 seasons of work at Cayonu, near Diyarbakir (not a salvage area), by an international team. Other test excavations included an even earlier site, Hallan Cemi, also in southeastern Turkey, which yielded important evidence of the threshold of agriculture's beginnings. High above the Euphrates, north of Urfa at Nevali Cori, a Heidelberg (Germany) University team exposed the remains of a remarkable terrazzo paved building with a human-faced stela. Unfortunately, Nevali Cori would soon be covered by a flood pool.

The whole matter of what was going on in Anatolia some 10,000 or more years ago was of particular interest. There had been a marked increase in recent claims that the Indo-European languages spread out from Anatolia at the time of agricultural beginnings. The longtime excavations of sites of 3rd and 2nd millennium age, such as the ancient Hittite capital at Bogazkoy, were covered in Machteld Mellink's newsletter on Anatolia. The most fascinating news concerned renewed work at the site taken to be ancient Troy by Manfred Korfmann's international team of excavators. Deeper strata of occupation than Schliemann ever touched were reported, as well as the fortification wall of Troy III and an ever increasing number of radiocarbon age-assay samples.

Earlier Post-Pleistocene Europe. It was suggested that the recovery of the "mummified" man in the Austrian Tiroil might be due to melt back of Alpine glaciers caused by the greenhouse effect. The issue arose again in England, where excavations in a burial mound in the Lincolnshire Fens yielded traces of clothes worn in c. 1500 BC. Building operations along the Seine in Paris yielded three oak dugout boats, about 6,000 years old. Flint tools, pottery, and a wooden bow were also found. Excavators working in gravel pits in Cambridgeshire, England, discovered what appeared to be an astronomical computer, with traces of 24 wooden obelisks arranged to chart movements of the Sun and Moon. The astronomical alignments were almost 5,000 years old and were by far the most elaborate in Europe of that age. At Deal, near Dover, a remarkable Iron Age burial with a bronze shield and decorated brooches was recovered. A Phoenician pottery factory was exposed on the Portuguese coast, south of Lisbon. In Ukraine a clear example of tooth wear on a horse's lower jaw teeth of c. 3500 BC was taken as the earliest known evidence of the existence of bits and of horseback riding.

The Greco-Roman World. A University of California (Berkeley) expedition reported excavating in the "locker room" of the Nemea athletic complex, site of one of the four Panhellenic Games. Excavations continued at Pompeii, and eight more huddled bodies were recovered. There was continuing work by several expeditions at Carthage. At Leptis Minor, where olive oil was processed, the entire city area was being surveyed. On Hvar, one of the largest islands on the Dalmatian coast of Yugoslavia, the Royal Ontario Museum undertook a broad survey for both late prehistoric and Classical period sites. The remains of small Greek settlements and Roman villas were encountered. In Israel, work on the most remarkable site of the Classical

era, at the Roman harbour of Caesaria, near Haifa, continued. The remains of two long breakwaters were taken as evidence that Herod the Great ordered the work to draw Roman trade to Judea. In the Sea of Galilee, the remains of an 8-m (26-ft)-long wooden boat, dated to about 15 BC, was recovered. A joint Kazakh-U.S. research effort, at sites near Alma-Ata, Kazakhstan, recovered pre-Classical and some Classical-linked remains. Most of the materials came from burial mounds, called kurgans. The people, Iranian-speaking Saka nomads, were known to the Greeks, Persians, and Romans. They were hosts to caravans plying the great Silk Road between Rome and China.

Africa and Asia. An exhibition of West African brasses and bronzes in the British Museum was supplemented by an investigation in Nigeria of the sources of the ores from which the bronzes were produced. Sri Lankan archaeologists were clearing a monumental 1,500-year-old Buddhist site at Sigiriya. The effort was part of a Unesco-supported "Cultural Triangle Project" linked to three ancient royal capitals. Unesco was also concerned about how the great 12th-century Cambodian sites of Angkor could be restored. A French expert maintained that damage to the sites was due far more to art thieves and two decades of neglect than to recent wars. The Field Museum of Natural History in Chicago undertook excavations at two sites in southern Thailand. The sites, which lay on the Silk Road, contained exceptionally large quantities of objects from China, India, and the Middle East.

(ROBERT J. BRAIDWOOD)

Western Hemisphere. Developments in New World archaeology in 1991 were highlighted in North America by the continuing focus on issues concerning the sensitivity of both ancient and more modern burial sites and by the unexpected discovery of historic and prehistoric sites in deeply buried rural and urban contexts. From Mexico and Central America came announcements of significant revelations concerning the antiquity, origins, and demise of Maya culture, and from South America reports from ongoing investigations in the Amazon Basin brought to light what might represent the earliest pottery yet discovered in the New World, as well as new evidence supporting the presence of concentrated prehistoric settlements from the heart of the Brazilian lowlands.

North America. In the U.S. archaeologists announced the discovery of two significant finds of human burial sites. Both discoveries came about as a result of federally mandated cultural resource studies of localities threatened by development. In Arizona archaeologists under the direction of John W. Hohmann of Lewis Berger, Inc., East Orange, N.J., an environmental consulting firm working on a survey near Springerville, Ariz., announced the discovery of the first known example of Native American catacombs. They were associated with the 800-year-old aboveground masonry pueblo Casa Malpais, which had been built by the ancient Mogollon peoples. The subterranean archaeological survey led to the discovery of no less than 1.6 ha (4 ac) of underground catacombs, consisting of hidden entrances and crawl spaces following fissures in the natural rock formation. These led to a series of high rooms or chambers, some over 15 m (50 ft) high and 30 m (100 ft) long, within which the field team encountered hundreds of graves buried in the floors, in stone cairns, and in masonry wall tombs. Cited as the first discovery of its kind in North America, the elaborate catacomb of underground chambers and tunnels provided a radical new basis for characterizing the nature and level of sophistication of the ancient Mogollon inhabitants of the southwest between AD 1200 and 1400.

In another unexpected discovery, archaeologists working in lower Manhattan announced the discovery of a vast

An archaeologist examines a cavern in eastern Arizona, part of a complex of catacombs developed by the pre-Columbian Mogollon. The catacombs, associated with a group of ruins called Casa Malpais, were the first such burial caverns to be discovered north of Mexico.

GREG SCORBER



colonial cemetery that came to be recognized as the oldest surviving trace of the black community in 18th-century Manhattan, identified on a 1755 map as the "Negroes Burial Ground." An archaeological team under the direction of Edward Rutsch announced the initial exposure of 93 18th-century skeletons. Discovered as part of a federally mandated cultural resource investigation prior to construction of a new federal office complex on Broadway, the cemetery was found nearly undisturbed under some 3.5 m (12 ft) of more recent historic fill and 19th-century basement construction. All the colonial burials were found interred in coffins, facing west, and wrapped in cloth shrouds. The discovery highlighted the potential for finding unexpected and highly significant archaeological remains in deeply buried urban contexts within the U.S. As the earliest archaeological manifestation of black cultural patterns in the area, the discovery also underscored the relevance and emotional significance of such finds for the living descendants.

The emotional and political volatility of issues surrounding the treatment and protection of ancestral remains for both contemporary Americans of European descent and Native Americans today was highlighted during the year by the announcement of Gov. Jim Edgar that Illinois would permanently close the exhibit of 234 Indian skeletons excavated at the Dickson Mound complex by amateur archaeologists in the 1920s. The announcement reflected both a general trend in North American museum policy and the growing awareness of the spiritual and religious sensitivity of Native American peoples, based on the deeply held belief that a person's soul cannot rest in peace while the bones are kept out of the ground on public display.

Mesoamerica. Archaeological developments in Middle America were highlighted by the announcement of significant new discoveries concerning the origins, antiquity, and subsequent demise of Mayan civilization. Archaeologists working in Belize announced the discovery of what appeared to be the oldest Mayan monument or stela. Working at the site Blackman Eddy, in south central Belize, archaeologists under James Garber and others from Southwest Texas State University announced the identification of an early carved stone stela inscribed with glyphs and Mayan numbers that could be dated to 146 BC. This identification, which represented the earliest dated monument in the Mayan lowlands, predated other similar finds in the Mayan area by 438 years and those from elsewhere in Mesoamerica by 110 years.

The discovery forced regional specialists to reevaluate the traditional view that writing and counting systems had been introduced into the Mayan lowlands from more northern highland regions. The early date of the Blackman Eddy stela suggested that instead of being a fringe area of Mayan cultural history, this lowland region may have represented the core of early Mayan development.

Although the agricultural and economic foundations of Mayan culture had often been attributed to the exploitation of swampy lowland habitats, with parallels to the "floating gardens" of the more northerly highland Aztecs, recent investigations in the vicinity of the ancient Mayan centre of Tikal brought to light the former existence of a massive system of carefully constructed earthen and stone municipal waterworks and water-management structures, overlooked until recently. A team of archaeologists combined the re-examination of old maps, air photos, and new field surveys to reveal the presence of an extensive network of reservoirs for the collection of rainwater in and around Tikal. Together, Vernon Scarborough of the University of Cincinnati (Ohio) and Gary Gallophen of the State University of New York at Buffalo were able to define six large drainage areas or districts in the vicinity of the ancient Mayan capital that collected and diverted rainfall into a dozen man-made reservoirs. The team realized that what had been characterized by earlier scientists as ceremonial highways now appeared to represent nothing less than a network of elaborately constructed berms or long, low dam structures, built to direct the rainwater into large reservoir-like catchment basins. Construction and maintenance of the system also appeared to have been centrally controlled and may have represented one of the primary management functions of the Mayan elite. Several scholars now began to speculate that failure to maintain the elaborate waterworks may have played a role in the collapse of Mayan culture.

Supporting a different line of argument for the demise of Mayan culture, an archaeological team working at the site Dos Pilas in Guatemala, 95 km (60 mi) from Tikal, announced the discovery of an ancient warrior's tomb that added credence to an alternate theory: that warfare, possibly combined with ecological disaster, may have constituted one of the primary forces behind the decline of ancient Mayan culture. Following explorations begun in 1989 and scheduled to continue until 1993, archaeologists under the direction of Arthur A. Demarest of Vanderbilt University, Nashville,

Tenn., announced the discovery of the 1,200-year-old tomb of a Mayan king who, they believed, was responsible for initiating an era of Classic Period militarism and territorial expansion. The king was found with a royal headdress of jade, conch, and pearl; well-made obsidian blades, which were probably used in bloodletting ceremonies; and pottery inscribed with hieroglyphics that, when translated, were expected to fix the identity of the king, presently referred to as Ruler No. 2. Archaeological evidence indicated that he reigned over a 5,180-sq km (2,000-sq mi) area in northern Guatemala between AD 698 and 725. The discovery of the tomb and the presence of moats, fortifications, and depictions of military activity suggest that this kingdom, long viewed as a peaceful cultural group, may have collapsed in the context of a massive dynastic struggle over a 50-year period between the 8th and 9th centuries AD.

South America. In a controversial announcement, based on fieldwork begun in 1987 at Santarém along the banks of the Amazon, halfway between the city of Manaus and the Atlantic Ocean, Anna Roosevelt, currently of the Field Museum of Natural History in Chicago, reported in the December issue of *Science* the discovery and radiocarbon-based dating of what appeared to represent the earliest New World pottery yet discovered. The pottery, dating to between 7,000 and 8,000 years before present, was found in association with riverbank shell mounds, apparently the remains of fishing settlements. Besides pushing back the antiquity of New World pottery making by at least a thousand years, the discovery, together with indications of dense early settlement within the Amazon Basin, added credence to the emerging idea that instead of being resource poor and low in prehistoric population density, the Amazon Basin was a place of early and relatively concentrated human development. (JOEL W. GROSSMAN)

See also Anthropology.

Architecture

It was the year of Robert Venturi in architecture. The U.S. architect's Sainsbury Wing—an addition to London's National Gallery of Art, on a prominent site in Trafalgar Square—opened in July and instantly became the most controversial and widely discussed new building of 1991. Earlier, in May, Venturi received world architecture's highest honour, the Pritzker Prize, regarded as the architectural equivalent of a Nobel.

Venturi practiced in Philadelphia with his partner and wife, Denise Scott Brown. Their firm won the commission for the Sainsbury Wing when an earlier design, proposed by a British firm, was attacked by Prince Charles in a 1984 speech to the Royal Institute of British Architects (RIBA), a speech that launched the prince on a career as a prominent critic of modernist architecture (see BIOGRAPHIES). Venturi and Scott Brown's Sainsbury Wing was postmodern in style, employing many motifs drawn from the history of architecture. Its exterior loosely imitated the classical colonnade of the old National Gallery of 1838 next door, to which the new wing was connected by a bridge. Indoors, a huge stairway rose three floors to skylit galleries in which were displayed Renaissance paintings.

Some critics found the architecture of the Sainsbury Wing to be jokey and contrived. Others, however, thought it struck a balance between a respect for history and a more contemporary delight in "complexity and contradiction in architecture"—the title of Venturi's celebrated book of 1966, which was often credited with kicking off the postmodern era. Venturi's Seattle Art Museum opened in December.



Designed by the U.S. architect Robert Venturi, who won the 1991 Pritzker Prize, the Sainsbury Wing (left) was an addition to the National Gallery of Art in London. The addition, designed in the postmodern style, proved highly controversial.

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Awards. Venturi's Pritzker Architecture Prize was the sixth for an American among the 14 winners of the \$100,000 award, established in 1979. Wrote the prize jury of Venturi: "He has expanded and redefined the limits of the art of architecture in this century, as perhaps no other has, through his theories and built works."

Charles Moore, another architect often associated with the postmodern movement, won the 1991 Gold Medal of the American Institute of Architects (AIA). Moore was known for witty and original buildings, usually designed in collaboration with one of the seven firms that he cofounded, over the years, in various parts of the U.S. In 1991 Moore was teaching at the University of Texas at Austin.

In an unprecedented double honour, Moore's Sea Ranch Condominiums also won the AIA's 25-Year Award for a building of lasting significance. Designed by Moore and three partners in the 1960s, Sea Ranch was a cluster of barn-like buildings on the northern California coast that looked as indigenous as weathered boulders from the outside but contained surprising high, dramatic, brightly coloured spaces indoors.

The AIA also named 19 works of architecture as winners of its annual Honor Awards. Among the more prominent was the Myerson Symphony Center in Dallas, Texas, by Pei Cobb Freed & Partners (formerly I. M. Pei & Partners), a typical example of the work of this prominent firm, deriving a sculptural power from its large abstract geometric shapes. The Koizumu Sangyo Building in Tokyo, by U.S. architect Peter Eisenman, was an example of a more recent trend in architecture called deconstruction. Deconstructionist buildings looked as if they had been exploded and awkwardly reassembled, with their parts at crazy angles. The movement was derived in part from the theories of the French philosopher and literary critic Jacques Derrida (see LITERATURE: *Sidebar*) and in part from the works of Soviet