

Tracking Neanderthal hunters

Preliminary excavations conducted in 1988 and 1989 inside a cave on Italy's west coast, as well as evidence from four nearby cave sites, suggest that sometime between 55,000 and 40,000 years ago, Neanderthals in the region shifted from periodic scavenging of animal carcasses to consistent ambush hunting—a tactic often associated only with anatomically modern humans. In fact, Neanderthal artifacts from that period closely resemble those of modern *Homo sapiens* inhabiting western Italy around 30,000 years ago, reports anthropologist Steven L. Kuhn of the University of New Mexico in Albuquerque.

His conclusion, reported in the Summer ANTHROQUEST, contrasts with the traditional view of Neanderthals as foragers who used the same simple tools from around 150,000 to 40,000 years ago. Future excavations at the cave, known as Grotta Breuil, will evaluate possible evolutionary links between Neanderthals and modern humans in Italy, Kuhn says.

Many anthropologists now claim that modern humans originated in Africa around 250,000 years ago and spread throughout the world as Neanderthals became extinct. Others vehemently argue that modern humans arose in several regions nearly 1 million years ago, and interbred to some degree with Neanderthals.

In the Italian cave, Kuhn and New Mexico colleague Mary Stiner excavated artifact-bearing layers of earth dating to between 34,000 and 40,000 years ago. Sharpened stone blades, flakes and points unearthed by the researchers resemble the relatively simple stone tools found at other Neanderthal sites. But unlike the other sites, stone remnants in the coastal cave lie among the bones of numerous animals killed in their prime. Since nearly all parts of the animals' skeletons appear, the cave's residents probably practiced ambush hunting rather than scavenging of carcass remains, Kuhn maintains.

Evidence for Neanderthal hunters also emerged from an analysis completed this year by Kuhn and Stiner of animal bones and stone artifacts found at four other Italian caves by separate groups of investigators. Those remains fall into two general groups, Kuhn asserts. One group, dating to between 120,000 and 55,000 years ago, contains heavily used and resharpened tools. The few animal bones found with these tools mainly consist of cranial fragments from relatively old creatures, probably obtained through scavenging.

The second group, placed at between 55,000 and 40,000 years ago, contains stone tools that often were not resharpened or reused. The large and diverse array of animal bones in this group suggests hunters carried entire carcasses to the caves and consumed them there, Kuhn says.

New look at an ancient Maya site

The first systematic excavations of the Maya site of Pacbitun, conducted in 1986 and 1987, have yielded evidence of a surprisingly prosperous civic-ceremonial center located at the edge of usable farmlands in central Belize, says project director Paul F. Healy of Trent University in Peterborough, Ontario. Radiocarbon dates and ceramic styles indicate Pacbitun was first settled about 900 B.C. and expanded into a medium-sized center that flourished from A.D. 550 to A.D. 900.

Excavations uncovered a central acropolis, five plazas, 20 burials, 19 ceremonial caches and 41 major structures, Healy reports in the Fall JOURNAL OF FIELD ARCHAEOLOGY. Structures include residential buildings, temple pyramids, a ballcourt and a pair of lengthy paved causeways. Nineteen stone monuments constructed during the site's prime were also located.

Pacbitun's ruling elites apparently traded for jade and other items from hundreds of miles away, while directing the use of hill-slope terraces for maize cultivation, Healy says. Pacbitun was abandoned shortly after A.D. 900, he adds.

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Sounding out lefties in the womb

Should we buy blue or pink? Routine fetal ultrasound scanning has taken some of the anxiety out of this gender guessing for many prospective parents. Now, for the first time, researchers are using the same sonographic techniques to uncover the earliest hints of a baby's handedness.

Scanning 224 fetuses with ultrasound, psychologist Peter G. Hepper and colleagues at the Queen's University in Belfast, Ireland, discovered that 94.6 percent preferred sucking their right thumb. Just 12 fetuses, or 5.4 percent, favored the left thumb, the team reports in the Oct. 4 NATURE.

"We have clear evidence of handedness in the womb," Hepper told SCIENCE NEWS. These results underscore the theory that most lefties inherit their left-handed tendency rather than pick up the preference by watching mom and dad, he says.

Lefties identified in the womb were also more likely to turn their head to the left after birth, one very early sign of left handedness, Hepper notes. The researchers suspect these newborn southpaws will go on to favor their left hand later in life and plan to test this theory by monitoring these same babies as they develop motor skills that will allow them to grasp toys and other objects with either hand.

Asthma death rates continue to climb

Asthma mortality among children and young adults rose dramatically in the United States during much of the last decade, continuing a trend that began in the late 1970s, a new study finds.

Between 1979 and 1987, asthma death rates almost doubled among 5- to 34-year-olds, rising from 2.2 deaths per million people to 4.2 deaths per million—an average jump of 6.2 percent each year, say Kevin B. Weiss of George Washington University in Washington, D.C., and Diane K. Wagener of the National Center for Health Statistics (NCHS) in Hyattsville, Md. The increase was largest among children aged 5 to 14—rising 10.1 percent annually, they report in the Oct. 3 JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. Mortality rates among non-whites also exceeded those for whites throughout the entire period, they found.

"The big question is why this is happening," Weiss says. "Is it because there are more asthmatic children, or because the children out there are sicker?" Perhaps asthmatic children don't visit physicians enough, don't get appropriate treatment, or are breathing more polluted air, the researchers speculate. But the fact that childhood asthma-death rates rose fastest indicates the problem stems from a recent change, Weiss adds.

Earlier studies noted a rise in U.S. asthma mortality rates, but some researchers at the time suggested a 1979 change in disease classification methods accounted for the increase (SN: 1/4/86, p.11). Wagener and Weiss, however, say their study reflects a real increase, not a statistical artifact.

"This pattern is not just a one-time quirk in the data," Wagener says. The death rate "is increasing persistently, and the problem must be addressed." A change in classification or better recognition of asthma as the cause of death might have produced a sudden jump in the mortality statistics, she says, but not the steady increase found in the new study.

The number of children hospitalized for asthma also rose in the early 1980s, mainly among those under age 4, Weiss and Peter Gergen of NCHS report in a separate study, published in the same issue. Since 1979, asthma-hospitalization rates have grown 5 percent a year among newborns to 4-year-olds. Weiss suspects this trend is related to the higher death rates.

Parents should pay closer attention to the warning signs of asthma in their children, Weiss says. These include chronic wheezing, chronic coughing during the night, and refusal to play sports because of difficulty breathing.

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