Archaeology

The dead and the plastered

Excavations at 'Ain Ghazal—a site in present-day Jordan that dates back to Neolithic, or New Stone Age, times—have yielded what investigators say is a "rare symbol of early ceremonial treatment of the dead"—a plastered human skull.

This nearly 9,000-year-old skull of an adult male demonstrates the sophistication of artisans who lived in the prehistoric village, report Alan H. Simmons of the University of Nevada-Reno and his colleagues in the spring JOURNAL OF FIELD ARCHAEOLOGY.

Although its forehead and lower jaw are missing, the skull's eyes, nose, right cheek and an ear opening are coated with plaster carefully molded to form facial features. A tooth socket is filled with a plaster plug. The specimen contains none of the painted decorations observed on plastered skulls previously found at a few other Middle Eastern Neolithic sites. Four cut marks at the back of the cranium suggest the skull was stripped of its flesh after death, say Simmons and his co-workers.

The skull turned up in 1988 in a pit beneath a house, reflecting a common burial practice in the intensively studied village (SN: 3/3/90, p.142). Its wide-open plaster eyes and large, slightly upturned nose with long, thin nostrils are stylistically similar to the faces of plaster statues previously unearthed beneath houses at the Jordanian site, the scientists note.

The symbolic meaning of the statues and the plastered skull remains unknown. Endowing a skull with human features molded from plaster may have been a way to pay homage to the deceased, particularly to revered members of the community, Simmons and his colleagues suggest.

Whatever its significance to the prehistoric inhabitants of 'Ain Ghazal, "the skull stands as silent testimony to the power of ritual at a time when humankind was still in the experimental stages of settled village life," the researchers conclude.

Leaving the pits behind

The Anasazi Indians, who lived from about A.D. 450 to 1300 in what is now the southwestern United States, were a mobile people who occupied distinctive pit dwellings for as few as 10 or 15 years before moving on. Some researchers have suggested the inhabitants abandoned and sometimes burned these "pit structures" as a result of disease, natural disasters or warfare. But the Anasazi may often have moved because of deterioration and insect infestation in their sunken quarters, or as a ritual response to a pit inhabitant's death, asserts Catherine M. Cameron of the University of Arizona in Tucson.

Cameron studied 88 pit structures at 35 Anasazi village sites dating to between A.D. 500 and 900. In their prime, the structures generally consisted of a pit up to 7 feet deep and 17 feet across, with four wooden posts supporting an elevated roof made of smaller wooden beams. The roof was filled in with brush or grass and covered with earth.

Half of the pit structures she examined had been burned, probably intentionally, Cameron reports in the spring JOURNAL OF FIELD ARCHAEOLOGY. The burned dwellings were not located in villages that experienced wholesale abandonment as a result of war or natural disaster, she says. Cameron suggests they may have been burned after the death of the occupant—a practice reported among some modern southwestern Indian groups.

Insects may well have infested the roof coverings of Anasazi pit structures, leading to the burning practice, although Cameron says this is difficult to document.

In contrast, at unburned structures the Anasazi removed most household items and often took apart roofs so that beams could be reused for new dwellings, which were probably erected nearby, Cameron says. Some unburned structures are strewn with Anasazi-era refuse, suggesting villagers sometimes tossed their garbage into abandoned pits.

Biomedicine

Nettlesome weed causes asthma for some

Kaufman

P. officinalis

A woman sought help from allergist Herbert S. Kaufman of San Francisco, complaining of asthma that flared when she walked into her backyard. Conventional allergy skin testing failed to identify the cause of her symptoms. Kaufman was stumped until the woman handed him a bag full of weeds plucked from her yard.

Kaufman gave her a test that measures breathing ability, then repeated the test after she had inhaled from the bag of freshly harvested plants. Immediately, the wheezing symptoms of asthma returned. Fifteen minutes later, Kaufman found the patient's breathing ability had dropped by 25 percent.

What was in the bag? A perennial weed called *Parietaria judaica*, which belongs to the nettle family and flourishes in many parts of Europe. A few months earlier, Kaufman had encountered *P. judaica* by chance during a visit to Florence, where an allergist had identified it as a weed whose pollen causes much misery in Italy, Greece, Portugal, Spain and France, making it the European equivalent of ragweed. Kaufman says there are no previous scientific reports of *Parietaria*-linked respiratory allergy among U.S. patients.

That initial case led the private practitioner to study 100 people aged 16 to 63 who suffer seasonal respiratory allergy. Kaufman pricked their skin with extracts of two nearly identical species known to cause respiratory allergy in Europe, *P. judaica* and *P. officinalis*, and found that eight people reacted to the pollen. His study, reported in the March ANNALS OF ALLERGY, turned up *Parietaria*-sensitive patients from Fresno to Pebble Beach, Calif.

"It's in Golden Gate Park. It's in my backyard in San Francisco," Kaufman told SCIENCE NEWS. "I'm not saying that this is the predominant cause of respiratory allergy in California; I'm saying it's a contributor, and in some cases it can be a major contributor."

The finding raises a question about whether *P. judaica, P. officinalis* and related species cause allergic reactions in other parts of the United States. *A Geographical Atlas of World Weeds* (Holm et al., 1979, John Wiley & Sons) lists only two *Parietaria* species in the United States—*P. floridana* and *P. pensylvanica*—but a weed hunt by Kaufman revealed *P. judaica* and *P. officinalis* thriving in San Francisco. He says a total of five *Parietaria* species may grow in the United States, primarily in warm, coastal regions. Allergists don't yet know the clinical significance of *P. floridana* and *P. pensylvanica*, Kaufman says.

Other researchers must verify this small study indicating that some *Parietaria* pollens have caused allergic reactions in the United States, cautions Lawrence J. Prograis at the National Institute of Allergy and Infectious Diseases in Bethesda, Md.

"The question," Prograis says, "is how significant is this going to be?" He notes that many allergens cause the familiar symptoms of wheezing and sneezing in only a small number of people.

Kaufman admits his study does not address the larger question of whether the weed is a major cause of respiratory allergy in the United States as a whole. But for now, he believes California physicians should be alerted to the possibility of *Parietaria*-caused wheezing from October through December, when the suspect allergen blooms.