

Early tool making: An Asian connection

The oldest known stone tools produced by hominids, members of the evolutionary family that includes modern humans, date back nearly 2 million years and come from eastern and southern Africa. British investigators now report finding similar stone artifacts of a comparable age in northern Pakistan.

The discovery, says archaeologist Robin W. Dennell of the University of Sheffield, England, shows "early tool use has an Asian as well as African dimension." No hominid bones have been found at the Pakistan site, but Dennell says the geographic location of the flaked stones raises new implications about early human ancestors.

"The most obvious tool-maker at the site would have been *Homo habilis* [the first direct ancestor of modern humans], extending its range as far east as Pakistan," he explains. It is also possible the artifacts belonged to *H. erectus*, a species found in Asia as well as Africa and thought to have evolved from *H. habilis*. If *H. erectus* made the stone implements, says Dennell, it lived in Asia at the same time *H. habilis* lived in Africa. Or, the tools may be remnants of *Paranthropus*, a now-extinct line of hominids whose tool-making capabilities have recently been upgraded (SN: 5/28/88, p.344).

Regardless of which hominids made the stone tools, contends Dennell, "we're victims of modern geography in seeing Africa as one unit and Asia as another. Human origins lie in the savanna grassland environments of northern India and Pakistan as well as eastern and southern Africa."

Dennell first excavated the Pakistan site, known as Riwat, in 1983 with members of the British Archaeological Mission to Pakistan. They unearthed 23 potential hominid tools in an outcrop at the base of a gully. After heavy rains, the outcrop forms the head of a small waterfall, and gradual erosion had exposed the flaked surfaces of several artifacts.

Careful inspection of the stones now indicates five were made by hominids, report Dennell and his colleagues in the June CURRENT ANTHROPOLOGY. An additional hominid-altered stone has since been recovered at Riwat. Key features of these specimens include flaked surfaces running in two or more directions and ripple marks, cracks and protrusions clearly resulting from the impact required to detach flakes from stone.

At this point, notes Dennell, it is difficult to pinpoint the exact use the hominids made of the flaked stones.

Dating of the more than 200 feet of sediment overlying the Riwat outcrop was completed last year. Volcanic ash just above the artifact-bearing layer is about

1.6 million years old, and, according to Dennell, the accumulation of silt and sediment that encases the hominid finds adds at least 300,000 years to that date.

Dennell is now directing efforts to locate early hominid sites in northern Pakistan in an attempt to determine which hominid species manufactured the 2-million-year-old stone artifacts.

— B. Bower

Life change: What do women want?

Ask them. Two epidemiologists did just that in a study of healthy middle-aged women to determine how major life transitions affect the well-being of women between 45 and 60. Sonja M. McKinlay and John B. McKinlay of the New England Research Institute in Watertown, Mass., examined the role of menopause and other events, such as children leaving home and then returning, employment, becoming parental caretakers and a husband's illness or death. In an initial analysis of results, the McKinlays report that depression in menopausal women, long regarded as a fact of life, is due not to the physiological change but to other causes.

Data from the five-year study of more than 2,300 women show that only 3 percent expressed regret during or after menopause about their physical changes, including normal hot flashes, cold sweats and menstrual irregularities. Rather than lamenting the loss of reproductive ability, the majority were neutral or expressed relief from the concerns of pregnancy, contraception and menstruation.

A survey of more than 8,000 women born between 1926 and 1936, from rural and urban areas of Massachusetts, produced the pool of 2,353 initially premenopausal women whom the McKinlays interviewed six times between 1982 and 1987. Standard measures of social and psychological status were used.

"In fact, it's overwhelming," says Sonja McKinlay of the women's upbeat response, which she attributes in part to basing the survey on healthy women.

"A bit over 50 percent of the women we interviewed don't even see a physician once a year," she told SCIENCE NEWS, elaborating on findings initially reported at the recent Society of Behavioral Medicine meeting in Boston. "Physicians assume that they see most women, when actually they're seeing a very biased, unrepresentative group. The majority of women, we found, go through menopause without ever consulting a physician." McKinlay also suggests that because oral contraceptives were not available to this age group when they were younger, their feelings reflect relief from a great concern, but that "it may be different if we surveyed a younger group."

Analyzing the data for the relationship between menopause and depression, John McKinlay discovered that many women who reported menopausal symptoms to doctors were already depressed, and that depressed women reported symptoms at twice the rate the non-depressed did. Chief among the underlying causes of depression were children (41 percent), followed by parents (23 percent), relatives (22 percent) and husbands (11 percent), the McKinlays found.

The McKinlays call their study the largest prospective study yet on non-institutionalized women of this age. Most research into menopause has been in clinical populations, and, observes Robert Wallace of the Department of Preventive Medicine at the University of Iowa, "that makes it difficult to get a sense of what's going on in the community. What's new here is taking a population with a relatively low disease risk and asking a different set of scientific questions."

— C. Eron

Hard liver, soft results

Researchers last week reported dramatically positive results for an experimental therapy against liver cirrhosis—a leading cause of death in the United States and a major worldwide health problem for which no effective treatment exists. But enthusiasm for the findings was tempered by the possibility that random factors might have influenced results of the research, which is the largest, most thorough study of colchicine for cirrhosis.

Cirrhosis of the liver, usually the result of chronic viral infection (such as hepatitis) or alcoholism, involves the gradual fibrosis, or "hardening," of liver tissue. Researchers from four medical centers in Mexico City and Canada followed 100 cirrhosis patients for 14 years. About half the patients were treated with oral doses of colchicine, an anti-inflammatory drug used for gout; the rest received placebo.

As reported in the June 30 NEW ENGLAND JOURNAL OF MEDICINE, the median survival time after 14 years was 3.5 years in the placebo group and 11 years in the colchicine group. Deaths from liver failure were 24 percent and 15 percent respectively. But significant differences in pre-existing medical problems between the two groups, lack of nutritional data and a loss of 20 percent of the patients to follow-up—with no clue as to whether they were alive or dead at the end of the study—"weaken an endorsement of what is otherwise the most impressive outcome yet described for any treatment of patients with cirrhosis," say Yale physicians James L. Boyer and David F. Ransohoff in an accompanying editorial. □