

Egyptian fossils illuminate primate roots

New fossil finds in Egypt provide an unusually clear glimpse of a creature that now ranks as the earliest firmly established simian species, an evolutionary forerunner of monkeys, apes, and humans. The tiny primate, which weighed only a few ounces, lived approximately 36 million years ago.

"Egypt was once an important center of primate evolution," asserts excavation director Elwyn L. Simons, an anthropologist at Duke University in Durham, N.C. "The best evidence is that the earliest primates came from Africa around 40 million

years ago."

The new discoveries, described by Simons in the June 30 *SCIENCE*, follow on the controversial claim by another paleontological team that 45-million-year-old Chinese fossils belonged to a simian species (SN: 4/16/94, p.245). Scientists have extensive skull and tooth remains of the Egyptian primate, *Catopithecus browni*, but only two jaw pieces and four teeth of the Chinese *Eosimias sinensis*.

Simons conducted excavations at a site in Egypt's Fayum Desert, about 60 miles southwest of Cairo. He reported his first

Blood pressure lower for working women

When women began to make inroads into the managerial and professional ranks in the mid-1960s, conventional wisdom held that career success would bring with it a host of work-related health problems. Job stress, it maintained, would leave women as ravaged by high blood pressure and heart attacks as men.

A new finding appears to put such concerns to rest. North Carolina researchers have found no overall increase in women's blood pressure to go along with their increased presence in the workplace. In fact, professional women enjoy lower blood pressure than women who stay at home.

"Basically, the theory that job stress will make women as susceptible to cardiovascular disease as men doesn't bear out," says study author Kathryn Rose of the University of North Carolina at Chapel Hill School of Public Health.

Rose and her colleagues used data from the National Health Examination Survey of 1960 and the National Health and Nutrition Examination Survey of 1976 to 1980. In the 1960 study, 64 percent of the 2,500 women surveyed listed their occupation as homemaker. Working white women filled predominantly sales and clerical positions. Black women, who reported higher employment rates, had largely domestic jobs.

Sixteen years later, 54 percent of the 3,800 women surveyed worked, about one-quarter of them as managers and professionals. This dramatic difference in employment patterns led Rose's team to compare blood pressure readings for the two sets of women.

In the 1960 survey, the researchers saw only a very small trend toward higher blood pressure in working women. In comparison, women in the later survey had lower overall blood pressure, regardless of employment status. However, as Rose reported at the annual meeting of the Society for Epidemiologic Research in

Women in the workplace experience lower blood pressure.

Snowbird, Utah, last week, the decrease was more pronounced, at 23 percent, among working women than nonworking women, who experienced a 4 percent decrease.

"Overall, the working women had lower blood pressures than those who were not employed," says Rose. Seventeen percent fewer working women suffered high blood pressure than women who stayed at home.

Rose separated the women into two age groups, 25 to 44 and 45 to 64. Among the older group, working and nonworking women in the later survey registered lower blood pressure than women in the earlier one. Looking at the younger groups, the prevalence of hypertension had increased for stay-at-home women in the second survey, she found: High blood pressure increased by 15.3 percent among young, nonworking black women and by 1.7 percent among young, nonworking white women.

However, Stephen Havas of the University of Maryland School of Medicine in Baltimore questions any link between hypertension and employment. He says the condition is far more closely related to weight, high-sodium diets, and alcohol. Other studies show that workers are healthier than nonworkers.

Rose agrees that higher blood pressure among the stay-at-home women may result in part from the healthy worker effect—that is, health problems may keep these women out of the workplace.

—L. Seachrist



Chris Hillen

Simons peruses skull and jaw fossils of Catopithecus.

Catopithecus find, a single, badly crushed skull, in 1990. The latest discoveries, from 1992 and 1993, include four partial skulls. One specimen retains its lower jaw, a rare occurrence for such old and delicate fossils. Examples of all teeth from the front half of the mouth also turned up.

Catopithecus bears several anatomical traits that place it squarely in the simian realm, Simons maintains. Its front teeth extend vertically and have a spoonlike shape, rather than jutting forward and displaying the conical shape typical of prosimians. Also, in typical simian fashion, the two top front incisors are larger than the pair just behind them, the reverse of the pattern in bottom incisors.

Moreover, *Catopithecus* has enclosed eye sockets and a fused forehead bone. In prosimians, such as the modern lemur, the eye sockets consist of open rings of bone, and the forehead has two distinct halves.

The new fossils also shed light on whether lemurlike adapids or tarsierlike omomyids living between 55 million and 36 million years ago qualify as simian ancestors. The relative size, shape, and orientation of teeth in *Catopithecus* bear a closer resemblance to the dental features of adapids, Simons argues.

Greg Gunnell, an anthropologist at the University of Michigan in Ann Arbor, agrees that Simons' finds establish *Catopithecus* as the earliest known simian. *Eosimias*, the Chinese animal, remains an evolutionary enigma, based on the fragmentary remains uncovered so far, Gunnell adds.

Mary R. Dawson of the Carnegie Museum of Natural History in Pittsburgh, who helped excavate the Chinese finds, says more *Eosimias* fossils were recovered in fieldwork last May. She and her colleagues will describe the new specimens at a scientific meeting in November. —B. Bower