

## Return of the Stone Age 'antiques'

Good fortune led to the recovery of seven Venus figurines, carved between 18,000 and 25,000 years ago, that have been missing since 1914, two archaeologists announced early this month.

Venus figurines typically depict nude, pregnant women. Some investigators argue that prehistoric people used the statues in fertility rituals. Sites throughout Europe and Asia, dating from 12,000 to 25,000 years old, have yielded nearly 200 Venus figurines. Amateur archaeologist Louis Jullien found 15 such figurines at a European site in 1883; he sold seven of them to a Paris museum and later moved to Montreal, apparently with the remaining pieces. Harvard University acquired one of those figurines from a daughter of Jullien in the 1940s.

The rest could not be located until last year, when a Quebec artist brought five figurines — ranging in height from 1 inch to 6 inches — to Michael Bisson of McGill University in Montreal. The artist had bought the statues at an antique shop in 1990 and wanted to learn more about them from Bisson, who studies Stone Age material from Africa. A startled Bisson realized the potential significance of the artist's purchases. Randall White of New York University confirmed their authenticity as five of Jullien's missing carvings.

Bisson and White then tracked down the remaining two Venus statues with the help of the antique shop owner.

Two of the recovered pieces appear above. A pregnant female figurine carved out of green serpentine is shown in profile, left, and the ivory statuette, right, probably also depicts a pregnancy, according to Bisson and White.

## DNA dates for first Americans

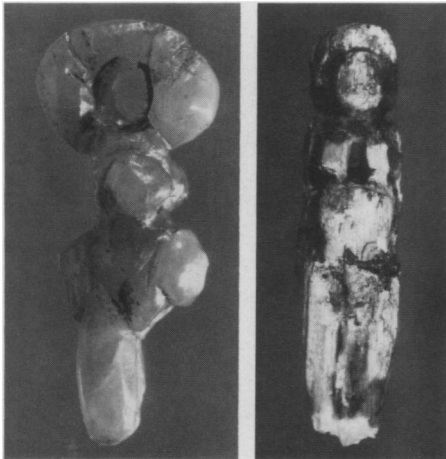
A new analysis of mitochondrial DNA indicates that the first settlers of the Americas crossed a land bridge from Asia at least 22,000 to 29,000 years ago.

Antonio Torroni, a geneticist at Emory University in Atlanta, and his colleagues identified the presence or absence of 14 mitochondrial DNA sequences among members of seven Central American Indian tribes that speak the same language. They next calculated the rate at which these random genetic variations occurred, based on estimates that the tribes diverged from a single group between 8,000 and 10,000 years ago. Torroni's group then applied this rate to mitochondrial DNA samples from 18 Indian tribes spread throughout the Americas.

The researchers, whose study appears in the Feb. 1 *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES*, classify these and other tribes as "Amerinds," descendants of the New World's initial occupants (SN: 6/9/90, p.360).

Still, opinions differ on the rate at which mitochondrial genes change. Another mitochondrial DNA study has dated the first Americans to 15,000 years ago at most.

Many archaeologists support the latter estimate and note that potential American settlers did not occupy Siberia until 35,000 years ago. But confirmation of a 500,000-year-old date for a human site under investigation in Siberia may offer crucial support to the Atlanta scientists (SN: 2/5/94, p.84).



White/New York University

## Meat's risk for cancer: Just bologna?

Many epidemiological studies have implicated red meat or animal fat as a risk factor in colon cancer — though not unequivocally. While a new Dutch study does not exonerate red meats, it does suggest that the accusatory finger should be pointed at processed meats, "mainly sausages."

R. Alexandra Goldbohm of the TNO-Toxicology and Nutrition Institute in Zeist, the Netherlands, and her colleagues mailed a detailed questionnaire on diet and other cancer risk factors to 120,852 Dutch men and women. After following these individuals — age 55 to 69 — for 3.3 years, the researchers then compared the recorded diet and other habits of the 312 individuals who developed colon cancer with those of 3,500 other members of the initial group.

In the Feb. 1 *CANCER RESEARCH*, Goldbohm's team reports finding no link between colon cancer and consumption of freshly cooked meats, animal fat, or animal protein. However, they did observe that eating processed meat appears "consistently and positively related to risk." Compared to adults who ate none, those who consumed more than 20 grams daily were 72 percent more likely to develop colon cancer.

## ... not when it's prostate cancer

A new study of 14,916 male physicians links eating red meat to prostate cancer. Data from the 120 prostate malignancies that developed in study participants during the first 6 years indicate that men eating red meat five or more times a week face 2.5 times the risk of developing this cancer as men who consumed red meat once a week or less. Researchers at Harvard Medical School in Boston report their finding in the Feb. 16 *JOURNAL OF THE NATIONAL CANCER INSTITUTE*.

Last October, some of the same authors reported on a similar large, long-term study. Its dietary-recall data linked meat and animal fat with fostering the spread of prostate cancer — but not with initiating the disease (SN: 10/9/93, p.228). The new study, based on blood samples taken prior to a diagnosis of cancer, does appear to link diet to cancer development. However, notes study leader Peter H. Gann, now at Northwestern Medical School in Chicago, there were more invasive cancers in the newer study. So its findings "are very consistent" with the other group's.

Like that earlier Harvard study, the new one also observed up to a tripling of colon cancer risk among men whose blood contained the most alpha-linolenic acid (a polyunsaturated fat obtained from meats, dairy foods, and some vegetable oils) compared to men whose blood bore undetectable levels of the fatty acid. Moreover, in both studies, alpha-linolenic's effect proved independent of red meat's risk.

A related editorial in the same journal says "compelling reasons" exist to suspect that male sex hormones, such as testosterone, "are also intimately involved in prostate cancer." Because high-fat, low-fiber diets may boost circulating levels of such hormones — even in pregnant women — a man's eventual predisposition to prostate cancer may begin in utero, argue Ronald K. Ross of the Norris Comprehensive Cancer Center at the University of Southern California and his coauthor.

## Is beta-carotene a radiation protectant?

Japanese researchers have just reported that diets high in beta-carotene, a vegetable pigment and antioxidant, significantly reduce chromosome damage known as micronuclei in blood irradiated with X rays. In the February *AMERICAN JOURNAL OF CLINICAL NUTRITION*, Keizo Umegaki of the National Institute of Health and Nutrition in Tokyo and his coworkers found that diets high in either vitamin C or E — two other antioxidants — offered the blood of their volunteers no similar protection from these deleterious radiation changes.