Allergies Bad? Have a Worm

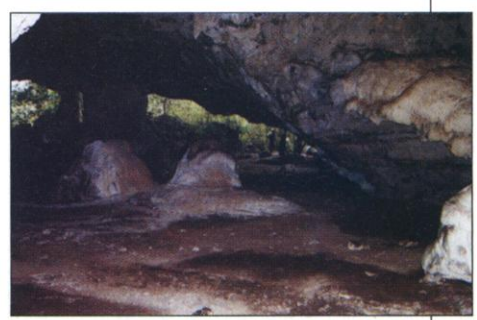
Fujita and co-dependent.

Troubled by asthma? Hay fever? Obesity? Koichiro Fujita has a cure: Swallow a tapeworm. Off and on over the past 5 years, Fujita, a professor of environmental parasitology at Tokyo Medical and Dental University, has hosted tapeworms in his gut. He believes they not only have helped keep him slim but have cleared up his hay fever. He currently houses three. "Hosting the worms has been very beneficial," he says.

Fujita says parasites, particularly roundworms, were endemic among the Japanese until the government's postwar eradication programs. But just as parasites declined, asthma and other allergic conditions proportionally increased. Up to 40% of Japanese children now suffer from atopic dermatitis, a chronic skin condition unknown a generation ago. Fujita suspects that the Japanese fetish with cleanliness, which has led to heavy use of household disinfectants and antibacterial soaps, may be aggravating the problem by giving immune systems so few challenges that they overreact to allergens. Tapeworm secretions and excretions can spur the production of antibodies that block such responses, Fujita believes. He claims that a substance his team isolated from tapeworm secretions cleared up atopic dermatitis in mice (the study hasn't been published). Fujita says he has convinced his wife and a few postdocs to join him in hosting tapeworms, even though colleagues look down on the research and the university has forbidden human experiments.

Naohiro Watanabe, an immunologist and parasitologist at Jikei University School of Medicine, Tokyo, won't comment on Fujita's exercise. He says studies of patients with roundworms indicated they had heightened allergic responses. But for tapeworms, he admits, "we just don't have any scientific data."

Ancient Stepping-Stones to Australia



Cave yields unexpected treasure.

Archaeologists have found the oldest-yet evidence for human occupation in East Timor—artifacts that they believe may help establish Timor, which lies between Indonesia and Papua New Guinea, as a likely stepping-stone for the earliest migrants to Australia.

In the last few years, improved dating methods have established Australia as home to modern humans dating back to 40,000 years and possibly even 60,000 years ago. But how did they get there? Scientists have long believed that Timor would be a good place to look for evidence of early migration, as trade winds would send boats straight to Australia's northwestern shores. But access to important sites was difficult during the 26 years of Indonesian rule that ended in 1999.

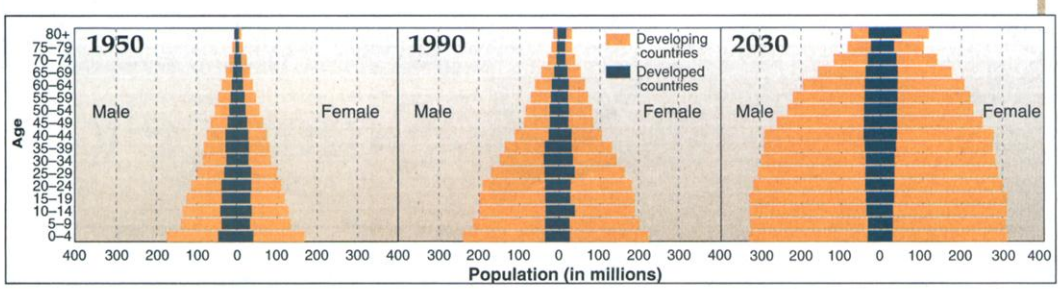
Last September, Matthew Spriggs and Sue O'Connor from Australian National University, Canberra, became the first Australian archaeologists allowed into the country since independence. Digging a pit in the Lene Hara cave in East Timor, they pulled out more than 400 pieces of chert, stone blades, and shell beads. They expected to find the material a few thousand years old—an unremarkable age. But when they sent material off for radiocarbon dating, they got a big surprise: The artifacts, they reported last week, yielded a minimum age of 35,000 years.

That's almost three times the age of the oldest known site in the country. "These dates are right at the limit of carbon dating; they may well be much older," says O'Connor. They mean "we are hot on the trail of the earliest human inhabitants of East Timor, who may well have been the ancestors of the earliest Australians," says Spriggs. The team plans to return to Timor this summer to look for more ancient sites, and ultimately to use other dating techniques, such as optically stimulated luminescence. If older sites are found, "this will change the way we think about colonization," says O'Connor.

Rutgers University geologist Carl Swisher says the finds at Timor are not surprising, given the evidence that humans had already made it to Australia as well as surrounding islands by then. Still, he says, "it's always exciting to have a new finding on a different island in the region to help us look at the stepping-stones to Australia."

The Bulging Pyramid

While developed countries now host most of the world's oldest people, the distribution will be shifting drastically over the next generation, as shown by these charts from a report issued last month by the National Academy of Sciences. "Data Needs for an Aging World," written by a panel led by F. Thomas Juster of the Institute for Social Research at the University of Michigan, Ann Arbor, notes that we ought to be able to prepare for aging because future numbers of old people are one of demography's more predictable phenomena. But where will it all end? Says the report: "There is no empirical or theoretical basis for assuming that life expectancy will peak at some numerical limit in the future."



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