

New Species Revealed: Tiny Cousins of Humans

By NICHOLAS WADE, *The New York Times*

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Once upon a time, but not so long ago, on a tropical island midway between Asia and Australia, there lived a race of little people, whose adults stood just three and a half feet high. Despite their stature, they were mighty hunters. They made stone tools with which they speared giant rats, clubbed sleeping dragons and hunted the packs of pygmy elephants that roamed their lost world.

Strangest of all, this is no fable. Skeletons of these miniature people have been excavated from a limestone cave on Flores, an island 370 miles east of Bali, by a team of Australian and Indonesian archaeologists. Reporting their find in today's issue of *Nature*, they assign the people to a new human species, *Homo floresiensis*.

The new finding is "among the most outstanding discoveries in paleoanthropology for half a century," say two anthropologists not associated with the study, Dr. Marta Mirazon Lahr and Dr. Robert Foley of the University of Cambridge, in a written commentary in the same issue.

The little Floresians lived on the island until at least 13,000 years ago, and possibly to historic times. But they were not a pygmy form of modern humans. They were a downsized version of *Homo erectus*, the eastern cousin of the Neanderthals of Europe, who disappeared 33,000 years ago. Their discovery means that archaic humans, who left Africa 1.5 million years earlier than modern people, survived far longer into recent times than was previously supposed.

The Indonesian island of Flores is very isolated and, before modern times, was inhabited only by a select group of animals that managed to reach it. These then became subject to unusual evolutionary forces that propelled some toward gigantism and reduced the size of others.

The carnivorous lizards that reached Flores, perhaps on natural rafts, became giant-size and still survive, though now they are confined mostly to the nearby island of Komodo; they are called Komodo dragons. Elephants, because of their buoyancy, are surprisingly good swimmers; those that reached Flores evolved to a dwarf form the size of an ox.

Previous excavations by Dr. Michael J. Morwood, a member of the team that found the little Floresians, showed that *Homo erectus* had arrived on Flores by 840,000 years ago, to judge from the evidence of crude stone tools. Presumably the descendants of these *Homo erectus* became subject to the same evolutionary forces that reduced the size of the elephants. The first little Floresian, an adult female, was found in September last year, buried under 20 feet of silt that coats the floor of the Liang Bua cave in Flores. A team of paleoanthropologists headed by Dr. Peter Brown, of the University of New England in Armidale, Australia, identified the skeleton, which is not fossilized, as a very small but otherwise normal individual, similar to *Homo erectus*. Because the downsizing is so extreme, smaller than that in modern human pygmies, they assign it to a new species.

In a companion report Dr. Morwood, an archaeologist who is also at the University of New England, estimates that the skeleton is 18,000 years old. He has since found the remains of six more individuals in the cave, with dates ranging from 95,000 to 13,000 years ago, he said in an interview.

Also buried in the cave are a number of objects that illustrate how the little Floresians lived. There are bones of Komodo dragons, beasts 10 feet in length, and of an even larger lizard. The dragons can eat animals the size of deer, but being cold-blooded, they are sluggish at low temperatures and not so hard to kill. There are bones of the pygmy elephant, giant rat, fish and birds.

There is evidence that the Floresians knew the use of fire. And there is a suite of stone tools, considerably more sophisticated than any yet known to have been made by *Homo erectus*. The tools include small blades that might have been mounted on wooden shafts.

If the stone tools were made by the little Floresians, as Dr. Morwood believes, that is striking evidence of their cognitive abilities. Dr. Morwood says they must have hunted cooperatively to bring down the pygmy elephants. To conduct such hunts, and to fabricate such complex stone tools, they almost certainly had some form of language, he said.