

## Scientists Find Remains of Extinct Tiny Human (27 Oct 2004, 20:16 UTC)

Scientists have discovered fossils of an ancient, tiny species of human in an isolated part of Indonesia. They are bones from what they say is a smaller version of the now extinct immediate ancestor to modern humans. Some observers call it a surprising twig on our family tree, one that co-existed with modern humans until relatively recently, long after their normal-sized archaic counterparts disappeared.

The remote eastern Indonesian Island of Flores is an exotic place, with large lizards known as Komodo dragons and remains of extinct dwarf elephants and miniature humans.

It is the discovery of the chimpanzee-sized humans that is causing excitement among scientists. Australian researchers report in the journal *Nature* that they found the bones of an adult female who stood just one meter tall with a head the size of a grapefruit. Since submitting the paper for publication, they found the remains of five or six more of these wee (small) people, who lived as recently as 12,000 years ago, just before the dawn of civilization.

"In evolutionary terms, 12,000 years is just yesterday," said Peter Brown, a University of New England researcher who admits to being flabbergasted when he realized these tiny archaic people had a brain one-fourth the size of modern humans.

"My colleagues reported that when I measured the size of the brain of this skeleton and they were observing, I went pale and my jaw dropped to my knees because people with this brain size were supposed to have become extinct more than three million years ago, but here we had a small-bodied human relative with a very small brain surviving until the relatively recent past, like we have only just missed them," he said.

Mr. Brown says the bones are not those of the three million-year-old pre-humans to which he referred. Rather, they belong to a small newer human thought to be our modern species most immediate ancestor, *Homo erectus*. But the size of the creature has earned it the right to be its own species. Mr. Brown's team calls it "Flores Man."

But *Homo erectus* was much larger, so how did Flores Man become small? The Australian team believes the full-sized *erectus* people arrived on Flores 840,000 years ago, perhaps from Java, after a million-year migration out of Africa. This view is based on the dating of stone tools found on Flores in an earlier excavation.

Mr. Brown believes that over time, the species shrank on the isolated island.

"It underwent similar selection processes that happen to many other mammals on islands," said Peter Brown. "In the absence of large predators() and with reduced calories and a heavy covering of rain forest, it became much smaller in body size."

Evidence gathered with Flores Man suggests the tiny species made its own tools and hunted, like *Homo erectus*. Remains of a dwarf elephant called *Stegodon* were near the human bones.

But unlike *Homo erectus*, which died out by at least 40,000 years ago and maybe earlier, Flores Man stayed around a lot longer. The Australians believe a volcano eruption finally killed them off 12,000 years ago, as modern humans were populating the Americas. This belief is based on the dating of ash layers with the bones.

Scientific reaction to the discovery has been enthusiastic. "Breathtaking" is the word used by University of Cambridge anthropologist Robert Foley. At the Natural History Museum in London, Christopher Stringer calls it remarkable, not only for the size and duration of Flores Man, but also because early humans managed to get to the remote island.

"This island is a lot further away than Java," said Christopher Stringer. "Humans could have gotten to the island of Java. At times of low sea level, Java was connected to the rest of southeast Asia. But the islands beyond Java, including Flores, are separated by deep water, so it was not thought that ancient humans could have got across that deep water."

That implies that *Homo erectus* had mastered the technology of boats. As for their diminutive descendants, Mr. Stringer says they are another example of the variety of humans that once existed.

"It shows us that human evolution, even in the recent past, was complex," he said. "There were many different species and nature was conducting its own evolutionary experiments with early humans."

The Australian researchers suggest other remote Indonesian islands could be hiding similar surprises and plan to dig on them to find out.