

Homo floresiensis nicknamed "hobbit" essay

[Law](#), [Evidence](#)



Introduction

Homo floresiensis nicknamed “Hobbit”. The fossil was found by Indonesian and Asian researchers on the Flores Island, the Island is located between Asian and Australia. The fossil was excavated from one of the caves in the island and is believed to have lived between 95, 000 and 18, 000 years ago. The Flores was in the early days separated from other continents, researchers believe that this is an area that was occupied by very few mammals. Few mammals and reptile species typically occupied the island during the Pleistocene period. The common reptiles that were found in the area included lizards, giant tortoise, rats and stegodon species. It is a region that had captured the attention of many researchers, after Father Theodor Verhoven who was a Dutch priest published reports about the archeological sites. He carried many excavations on the region and discovered various stone tools that were being used by the early man. The priest also found the remains of the Stegodon and this caught the attention of many researchers. However, there was no significant focus on carrying out any excavation by the paleoanthropologists who discredited the findings. Verhoven had also identified the Liang Bua caves where the fossils of Homo floresiensis were found. The name Homo is the genus name, which is a Latin word for human while floresiensis is the species name. The species name is connected to the island of Flores where the fossil was found.

After thirty years of Verhoven findings, another team of Dutch researchers was able to get further evidence of Verhoven’s findings after finding more evidence on the Soa Basin. Unlike Verhoven who was not able to date the tools, the team used paleo magnetism to date the tools and found out they

could have been 700, 000 years old. This captured the attention of many researchers especially after zircon fission analysis was used to date other sediment found on the region. They were able to come up with a conclusion that some human species might have crossed the Wallace line and moved to Flores.

It was not until 2001 that a group of Australian and Indonesian researchers, led by Professor Rajen Soejeno began excavation work on one of the limestone caves in west Central of Flores. The Liang Bua cave was the same cave that was found by Father Verhoeven in the year 1965. The professor has earlier carried excavation work on the caves, but this only explored the soil deposits that were found on the first three meters from the floor of the cave. The deposits were acting as a guide to the archeologists since they contained both fauna and archeological evidence. The earlier researchers were able to prove that there was enough evidence showing the existence of human beings in the caves. There were also skeletal remains of human beings in the caves.

The excavation that started in 2001 focused on carrying out deep excavation on the caves. The only way to prove whether the inhabitants of the caves were modern or pre-modern human beings was to excavate the stratigraphy of the cave. The excavation went on until September 6, 2003 when they found the answers. During excavation of sector four of the caves led by Wahyu Saptomo, the team found a was able to find a skull. Benjamin Tarus found this as he was excavating the cave. The skull found six meters deep from the surface of the cave. After they identified that the fossil did not belong to a child, some thought that it might have been a modern human

being who had been deformed by disease; however, this was also disapproved.

After removing the skull, Rokus Due a fauna expert inspected the skull's portion and explained that it must have belonged to a hominid. The scientist identified that it must have belonged to a small child since the brain case was small. After several days of excavation; other parts of the fossil were found. The cranium and mandible were excavated, and this proved Rokus's conclusion to be wrong. All the teeth found were permanent meaning that the fossil was that of a grown-up. Other parts were also found. The skeleton was named Liang Bua 1(LB1). The parts of the fossil that were found include hand and feet bones, limb bones, partial pelvis and the skull. Radio carbon dating technique was used to date the fossil with the soil samples being sent for lab analysis. The technique analysis showed that the fossils were around 18, 000 years old.

Analysis and Issues arising from the Fossil

Michael Morwood and other scientists who found the fossil together with Peter Brown argued that floresiensis was a descendant of Homo erectus the difference being the body size. The scientific name Homo floresiensis was from the hominid species. This species is represented by the excavated skeletal material that was found on the Pleistocene sediment found in Liang Bua. The research team was able to find other remains of the species, which were analysed. In its findings, the team found out that the adults belonging to this species had a small brain that was around 400 cm³. The height of the species was estimated to be 1 meter tall and weighed approximately 30 kilograms. From these findings, the research team concluded that the

species was similar to the hominids, which had earlier been found.

Australopithecus afarensis was identified as one of the earlier species related to this one. When the proportions between the upper leg and upper arm were made, it was observed that it was more similar to that in Homo habilis and rather than that of modern human beings (Argue and Morwood et al., 2009).

Other researchers such as Dr. Susan Larson were also involved in the analysis. She analyzed the functional morphology of the skeleton and concluded that the species was more similar to that of Homo erectus. Dr. Jungers who worked together with Dr. Susan was able to identify and analyze some of the anatomical features of the fossil. The anatomical features of the foot were similar to those of Australopithecus afarensis, which was a member of the early hominins. It also resembled the features of the African ape. The brain of the “ hobbit” was also analyzed by Dr. Falk who was able to find that despite the small brain size, there were features that showed neural recognition in the brain.

The archeologists were able to agree that the fossil was not that of modern human who was suffering from microcephaly. However as much as they agreed that it belonged to extinct human fossil, there is no clear consensus on which human fossil it is related to this particular fossil. Some paleoanthropologists believe that the fossil does not belong to a dwarf species. They argue that the fossil belongs to ancestors of the pygmies who are still inhabiting the island. This cannot be proved true since the pygmies have large brains regardless of their small bodies. There were also no deformations on the brain of the found fossil and this rules out the possibility

of microcephaly. The fact that the brain of Homo floresiensis was small does not imply that it was suffering from any deformity. Other scientists were of a different opinion that the species suffered from low iodine during its pre-natal and post-natal development stage. A small brain size cannot rule such a conclusion to be true. For such a condition to occur there has to be other indicators such as short stature. A brachycephalic condition has to exist to confirm this condition.

Researchers and scientists have been debating on the island rule as the answer to this complex puzzle of the hobbit. Island dwarfism occurs on animal species that live on islands due to the limited resources in the area. Researchers have not come into an agreement on this rule since it leaves many questions unanswered. Many argue that if the island rule is to be used, an explanation as to what happened to the large species has to be identified. If any other fossil can be found in the island or on the mainland of Southeast Asia, it would help in identifying whether Homo floresiensis was an earlier species before the Homo erectus. If such a fossil is found near this region, it would be easier to identify it however, the hominine fossil that was found before the Homo erectus was found in Africa. It is not possible for the species to have migrated from Africa to Asia (Bower, 2010).

Conclusion

The discovery of Homo floresiensis adds to the complexity of human evolution. More questions arise on the evolution story. Paleoanthropologists and other researchers now have to ascertain whether there are known species whose descendants were dwarfs. With the species being identified to have lived a few years ago compared to other species, it emerges as the

latest to be surviving after the Homo sapiens. With other archeological evidence such as fire being found in the caves hunting activities, there shows a connection between this species and others that have been there before. This shows that human evolution is a complex process that involves many theories in order to reach into a conclusion. Analysis and research has to be carried out to fully explain the evolution process. With more fossils being discovered, there is a possibility that the evolution story might keep in changing in the coming years.

References

- Tocheri, M., Orr, C., Larson, S., Sutikna, T., Saptomo, E., Due, R., Djubiantono, T., Morwood, M., Jungers, W. and Others (2007). The primitive wrist of Homo floresiensis and its implications for hominin evolution. *Science*, 317 (5845), pp. 1743--1745.
- Argue, D., Morwood, M., Sutikna, T., Jatmiko., & Saptomo, E. (2009). Homo Floresiensis: A Cladistic Analysis. *Journal of Human Evolution*, 57(5), 623-639.
- Bower, B. (2010). Humans: Hobbit fuss goes out on some limbs: Debate over pint-sized fossils turns to arm and leg bones. *Science News*, 177 (10), pp. 14--14.