

Giant Underwater Worms Discovered in Maui Caves

By Harry Whitten
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"An underwater kipuka" is how Mike Severns, of Kihei, Maui, describes the three underwater caves he discovered earlier this year on the south Maui coast.

The caves contained specimens of a giant worm that may be a new genus and species, live mollusks known previously from Pleistocene age fossils, big turtle bones, and unusual crustaceans.

Severns, a dive tour operator, has a bachelor's degree in biology and for years has pursued a hobby of exploring for biological treasures, such as land snails. In May 1982 he discovered a lava tube with large numbers of fossilized bones that attracted the interest of Storrs Olson and Helen James, Smithsonian Institution scientists, who spent weeks working at the Haleakala south rift zone site and whose research has been the subject of several articles.

The giant worm that Severns found in the underwater cave belongs to a group known as acorn worms, because the creature's front looks like an acorn.

Ann Fielding, marine biologist and research associate at Bishop Museum, visited the cave after Severns found it and collected two of the worms which she sent

to Michael G. Hadfield, a professor of zoology at the University of Hawaii. The specimens, however, were fragile and were not in the best condition when Hadfield received them.

HADFIELD said he has not been able to find anything in literature about this kind of acorn worm but cannot be absolutely certain at present that the worm is unknown to science. He has made inquiries of the Smithsonian.

He said the worm is really big, about an inch in diameter and that a photo indicates it's about 18 inches in length, but he cannot verify the length. Severns, on initial investigation, estimated the worms were three to four feet in length.

Hadfield said this acorn worm lives on top of sand, swallows sand, digests organic material in the sand, thus processing a lot of sand and leaving behind it a long trail of feces, clear in the photo.

Other acorn worms bury themselves in the sand, he said. Most acorn worms have a conspicuous proboscis, but the cave worm's snout is small, he said. There is a common acorn worm in Hawaii, but the cave worm is obviously different, he said.

"The caves are a fascinating find," he said. "But we will have to get better specimens and then

decide on putting a name on the worm." There are about 20 to 30 worms per cave.

FIELDING plans to get better specimens for study but at present regards the worms as "a significant find." In her dives, she also saw in the caves crustaceans that interested her, especially a lobster not heretofore recorded from Hawaii and a candycane shrimp.

"The caves need to be properly surveyed," she said. "But it's just speculation until we can get good biologists there to study them. They are significant."

Severns said, "This is the largest cave system I've ever seen under water, and I've dived for 20 years in the Islands."

He said the caves are 30 feet high. His initial impression was that the number of lobsters was phenomenal but the lack of fish unusual. He identified some large bones as turtle bones. His theory was that large turtles, weighing 300 to 400 pounds, strayed into the caves during storms, couldn't find their way out, ran out of air and drowned.

He found living mollusks that he said were known previously only from fossils from the Pleistocene age, which ended 10,000 years ago. He also found a rare big mollusk, *Mitra nubila*.