



Chip Scheuer

UCSC scientists Brian Fadely and Burney LeBoeuf sit behind the bones.

UC researchers unearth prehistoric whale fossil

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A UC-Santa Cruz graduate student studying marine sciences who happened to notice an irregularity in a cliff off the west side of Ano Nuevo Island ended up unearthing fossils of a 12- to 14-million-year-old baleen whale.

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Brian Fadely, the graduate student, was working on a UCSC project at the time, studying elephant seal diving patterns with several other UCSC researchers.

On a closer examination of the cliff, Fadely and his colleagues found, resting in a depression in the surrounding sandstone, the whale fossils which included the whale skull, several vertebrae and a shoulder blade.

"When we first saw the skull sitting in the cliff, we all agreed it was most likely a cetacean of some sort," Fadely said. "But we didn't realize it was a fossil until

we took a closer look. Once we washed it off, we were astonished to find it didn't look like any modern cetacean because the ridges and shapes of the bones were so different."

Graduate student Lisa White, who is studying earth sciences, tentatively dated the fossils by examining the rock layer in which the fossils were found. She said the bones were embedded in the Monterey Formation, a layer of sandstone and limestone laid down between 12 and 14 million years ago.

A more detailed identification of the whale bones to better set the age may take several years to complete.

The fossils will stay on permanent display at the UCSC Long Marine Lab.

Scientists at Long Marine Lab said the fossils are a remarkable find.

"This specimen is remarkably well preserved, with

even its delicate ear bones still in place," said UCSC Natural History Professor Kenneth Norris, who is an expert on whales, dolphins and porpoises. "It's a beautiful specimen, one of the best I know of."

The fossils indicate that the whale was a 15-foot-long baleen whale. The discovery supports a theory that modern baleen whales are much bigger than their ancestors. The smallest modern baleen whale is the "pygmy right whale" of the Southern Hemisphere which is 20 feet long.

Of the nine other species of baleen whale known today, the next smallest is the minke at 35 feet. The blue whale, another baleen, is up to 100 feet long.

Whales are thought to have originated about 70 million years ago when they diverged from a group of land-dwelling, carnivorous mammals through an amphibious stage.