

WHALE REMAINS FROM PUFFIN GROTTO, A RAISED SEA CAVE ON NOYES ISLAND, SOUTHEAST ALASKA

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ABSTRACT

Puffin Grotto is a sea cave located on southern Noyes Island near Cape Addington, Southeast Alaska. The main entrance is 30 m wide and 15 m high, and several smaller entrances are connected by a series of archways. The cave is carved in marble and was formed primarily by wave action and secondarily by dissolution. The entrance is a spectacular site that can be seen by boat from several km away, and puffins frequently nest there.

Puffin Grotto extends back 75 m, and the back of the cave, called Jonah's Room, is 15 m above modern mean sea level (Allred 1994). The extent of driftwood indicates that modern waves only reach about half way back into the cave. The upper, back portion of the cave has been dry for millennia. Giant rounded cobbles of granite in Jonah's Room indicate that powerful waves once reached this area, but they are coated with calcite from years of quiet dripping action. Among these cobbles cavers discovered a whale vertebra that was also abraded by wave action. It is the atlas/axis complex of a great whale (baleen whale or sperm whale), and it was radiocarbon dated to 5,115±100 years B.P. (AA-21563). Since this bone would have been destroyed by long-term wave action, it must have been deposited during the final episode of waves reaching the back of Puffin Grotto.

Many sea caves in Southeast Alaska are inactive because they are above sea level out of the reach of modern waves. Sea level rose at the end of the Ice Age as glaciers melted, but most of coastal Alaska was depressed under the weight of the ice and took several thousand years to rebound once the ice was removed. Consequently sea level rose to at least 10 m above its modern level, peaking about 9,000 years B.P., then gradually fell to its present level. Some raised sea caves contain archaeological remains (Dixon et al. 1997). Puffin Grotto is the only cave in Southeast Alaska from which whale remains have been recovered (see Heaton and Grady 2002).

REFERENCES CITED

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