

SEA LION CAVE, OREGON, USA

- Kent Henderson

In September last year, on my way home from a trip to England, I called into Portland, Oregon, for a brief visit with friends. As well as visiting Ape Cave (see *ACKMA Journal* No 29, p.35-36), they also took me down the Oregon Coast to visit the Sea Lion Cave. The cave is located 11 miles north of Florence, Oregon, on U.S. Highway 101, about midpoint on the 400 mile Oregon coast. In this area, Highway 101 sits about 300 feet above sea level and provides access to the gift shop and office building through which the cave is reached.

The Cave

The cave system is at sea level and the ocean continually washes into the main cavern. The cavern has a floor area of about two acres and a vaulted rock dome about 125 feet high. Southward from the main chamber a low passage runs 1,000 feet to a sea level opening. This corridor is flooded at high tide and free of water at low tide. The western entrance is a short, high passage through which the ocean washes at all tide levels. From the north, a third entrance opens into the main cave, about fifty feet above the ocean. This entrance serves as an elevated observation area from which visitors can view the entire cave system and its wildlife. Lichens, algae, and mineral stains adorn the cave walls. The sea level portion of the cave and the sea cliff rocks just outside the cave have become, over the centuries, the only known American mainland breeding area and wintering home of the Steller sea lion and, to a lesser extent, the California sea lion.

Geology

The land mass which now underlies the American Pacific Coast emerged in the Devonian Period. In its birth, the Oregon coast may have risen and subsided a number of times before finally stabilizing about 25 million years ago in the Miocene Period of the Cenozoic Era. This was a time of intense volcanic activity in the Pacific Northwest, when vast lava eruptions flowed thousands of feet deep across the land and into the sea. The floating basalt formed towering headlands and steep coastal cliffs, and blanketed the underlying sedimentary sandstone and igneous granites of the area. During the Cenozoic Era the coastline was rising as it is presently, but the action was then considerably more rapid.

The flat crescent of sand dune beach south of Sea Lion Cave is believed to have emerged from the water at a later period than the land on either side. Ages may have intervened between lava flows during which time layers of ash and sediment formed on what was then the earth's surface. Often eruptions followed, covering sediment with more basalt. This layering effect can readily be viewed in the cave. As the heaving and growth of the earth subsided, the coast was subjected to eroding sea action, forming the cave. A combination of earth

faults and a stratum of soft rock lead to the eroding out of the cave.

History

Discovered in 1880, Sea Lion Cave is the largest sea cave in the USA. It was discovered in 1880 by a local seaman, Captain William Cox, who purchased the overlying land in 1887 from the State of Oregon. He and his heirs owned the property until 1926, when it was bought by R. E. Clanton, whose descendants still own and operate the cave.

In 1930, when it became probable that U. S. Highway 101 would be completed, Clanton took on two partners and built a safe access to the cave. A trail 1500 feet long was excavated by hand into the face of the cliff and at its lower termination a 135 stair-step wooden tower was extended down to the north entrance of the cave. Sea Lion Cave was opened to the public by this route in August 1932. Since the inception of the tourism in the early 1930's, the Cave has been frequently visited by students of geology, ornithology, marine biology and natural history. The sharpest rise in visitation was experienced in 1961, following the completion of an elevator into the cave.

Originally, the cave was entered by a trail and 250 stairs. In 1958, the cave's owners decided to install an elevator to enhance access. A ten by ten, 70 foot long tunnel was blasted in the cave wall, after which an eight by fifteen foot vertical shaft was excavated ascending 215 feet. The blasting necessary to drive these two intersecting shafts was confined to spring months when the sea lions were out of the cave. The engineers and construction workers used every possible precaution to insure that the wildlife would not be disturbed. The tunnel and elevator shaft could not be finished during the first year before the sea lions returned to the cave. The remaining excavation was therefore delayed and finished in the spring of 1959. After lining and lift installation, the elevator was opened in June 1961.

The Stellar Sea Lion, and Management

Two mammal species frequent the caves. The vast majority of inhabitants are the Northern, or Steller, sea lion (*Eumetopias jubatus*). The Steller sea lion is a member of the *Otariidae* family, or eared seal. It is characterized by an external ear which can be closed when entering water and by feet or flippers that point forward. In contrast, the *Phocidae*, or true seal, has no external ears and its rear flippers point backward. The California sea lion (*Zatophus californianus*), the second inhabiting species, it is seen all along the American Pacific Coast and is generally found at Sea Lion Cave only from late autumn to early spring.

Unlike the California sea lion, the Stellar sea lion is non-migratory as it exhibits no mass movement to

summer or winter grounds, although individuals or small groups may travel hundreds of miles in search of food. It is found from the central California coast, north to the Bering Sea and back south into northern Japanese waters. A recent U.S. Fish and Wildlife Survey indicates a total Stellar sea lion population of about 80,000, most of which live on offshore islands and rocks off British Columbia and Alaska. About 1000 reside in Oregon waters, and while the numbers using Sea Lion Cave varies seasonally and annually, the local average is about 200 animals.

In terms of management, the development of the infrastructure at Sea Lion Cave has been achieved with a total fixation on the protection and non-disturbance of sea lion colony. The public viewing

area is effectively an open natural window in the side of the cave wall, at a considerable distance from the *roosting rocks* of the animals. The underground interpretive area, hewn from natural cavities and partly excavated has been very well effected. The displays on the life cycle of the mammals, the local geology, and development history are excellent. The aim of the management to maintain the resource, keeping it as natural as possible, while still making it accessible, and in providing a first-rate public educative facility have, to my mind, all been admirably achieved. Indeed, historically, the State of Oregon paid a bounty on slaughtered sea lions. Thus, the early development of the Sea Lion Cave as a tourist facility quite probably assisted the survival of the species.