Wilke and Fiscus 1961

GRAY WHALE OBSERVATIONS

Along the Pacific coast of California, Oregon and Washington where it often migrates close to shore and enters very shallow water in bays and lagoons, the gray whale, *Eschrichtius glaucus,* recently believed to be nearly extinct, is now familiar to more people than any other large whale. At La Jolla, California, viewing gray whales from excursion vessels has become a popular tourist attraction. However, the migratory route of the gray whale in northern waters and its distribution in summer is little known. Observations of gray whales made by employees of the Bureau of Commercial Fisheries' Marine Mammal Research office, from research vessels, are made available here to assist in filling in the incomplete parts of the distribution pattern.

Observations off Washington.—Gray whales in northward migration were sighted off the Washington coast, 24 and 25 April 1959, by the U. S. Fish and Wildlife Service charter vessel M/V "Tacoma."

On 24 April, a few gray whales were seen off Cape Johnson (47° 58′ N; 124° 41′ W). One of the lookouts aboard the vessel reported an object breaking and partially clearing the water about 7 miles west of Cape Johnson. Upon investigation, the object proved to be a dead gray whale. The whale was in a bloated condition, the penis and penis sheath had been extruded, and the intestines had been forced from the body and were floating separately about 50 feet distant from it.

During the afternoon of 24 April, over 200 gray whales were seen between Destruction Island (47° 40′ N; 124° 29′ W) and James Island (47° 54′ N; 124° 39′ W), a distance of 15 miles. The whales were in water 20–50 fathoms in depth and were about 5–15 miles offshore. They were observed in singles, pairs and groups of 3–4. The general movement was northerly although, when observed, some were resting and others were feeding and playing. One whale was observed near a 2 × 12 in. plank. The whale came up near the plank several times and either hit or held it with its flipper.

On 25 April, the vessel ran directly offshore from the anchorage at James Island. Gray whales were seen to the north and south of the course and were numerous from the buoy at a depth of 20 fathoms out to about 9 miles offshore at a depth of 50 fathoms.

Observations off Alaska.—Ichihara (Sci. Repts. Whales Res. Inst., 13: 201–205, 1958), in reporting three groups of gray whales consisting of 2, about 20, and about 150 individuals seen west and north of St. Lawrence Island in August 1955, proposed a migration route for the gray whale which entered the eastern Aleutian passes and crossed the central Bering Sea. This was considerably east of the route proposed by Gilmore (Sci. Amer., 192: 62–67, 1955).

On 11 May 1957, eight gray whales in scattered pairs were seen moving toward Narrow Cape between Kodiak and Ugak Islands. The whales were in very close to the kelp beds along Kodiak Islands. The location of these whales suggests that their migration route might lead past the islands off the Alaska Peninsula and follow the route into the Bering Sea proposed by Ichihara (*op. cit.*).

From the Exploratory Fisheries vessel "John N. Cobb," engaged in biological investigations, on 10 August 1959, at 67° 10′ N and 166° 43′ W in the Chukchi Sea, an estimated 100 gray whales were seen feeding over several square miles of ocean. The water depth was about 24 fathoms. The whales made a large muddy blotch in the water as they came to the surface to blow. It seems apparent that in feeding along the bottom the whales gathered mud along with food and were expelling it through their baleen as they rose to the surface. The sticky, clay mud making up the bottom of much of the eastern Chukchi Sea is difficult to wash out. Although the short, coarsely fringed baleen of the gray whale is well adapted for sifting mud from food items, it would be of interest to know if the gray whale swallows some mud along with its food. According to Arseniev and Zenkovich (*in* Kleinenberg and Makarov, Trans. USSR Inst. Fish. & Oceanog., Moscow, 1955) gray whales feed on bottom-living amphipods in the Chukchi Sea. No direction of movement

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was evident in this group of whales; they were headed in various directions as they rose to the surface.

On 16 August, observers on the University of Washington oceanographic vessel "Brown Bear" observed about 100 gray whales at 67° 25′ N and 167° 06′ W, feeding in the same manner as described above.

On 19 August, two gray whales were seen from the "John N. Cobb" feeding near 67° 40′ N and 167° 12′ W; and on 20 August, three others, also feeding, were seen at 67° 57′ N and 168° 02′ W. On 29 August, about 20 gray whales, widely scattered and traveling generally southward, were observed at 67° 18′ N and 166° 30′ W. Some of the whales in this group were moving in pairs. None of the muddy water areas associated with feeding was noticed.

Surface-water temperatures ranged from 46.2 to 49°F where whales were observed feeding. Bottom temperatures were 37 to 38°F.

Northern phalaropes (*Lobipes lobatus*), kittiwakes (*Rissa tridactyla*) and arctic terns (*Sterna paradisaea*) followed the feeding whales, settling into the muddy spots where the whales had come to the surface. Whales observed on 19 and 20 August were accompanied by slender-billed shearwaters (*Puffinus tenuirostris*) as well as the birds listed above.

A gray whale, 43 feet in length, had drifted ashore at Cape Thompson in early August. Two others were reported on the beach in the vicinity. On 29 August, a dead gray whale was found drifting about 50 miles west of Kivalina village. It was not greatly bloated. The cause of death of these whales is unknown.—Ford Wilke and Clifford H. Fiscus, *Bureau of Commercial Fisheries, Fish and Wildlife Service, Seattle 15, Washington.* *Received 8 December 1959.*

PECULIAR ACTIONS OF COYOTE AND KIT FOX

Ray Goe, Deputy Sheriff of Inyo County, California, told me of a strange happening at the scene of an auto accident in Death Valley on the night of 10 January 1960. After the victims were removed by ambulance, on the Daylight Pass road at about 1,000 feet elvation, Goe waited in his own car with the lights on the wreckage. At about 2 AM, three kit foxes, *Vulpes macrotis*, approached the scene and inspected the upturned auto. They entered the auto and began to lick blood from the frame. This continued for about 15 minutes. Suddenly, all three animals turned and ran from the scene. No sooner had they left than a coyote, *Canis latrans*, approached; it too entered the auto and licked blood. The coyote was frightened away soon afterward.

There seemed to be a real desire, on the part of both animals, to obtain fresh blood. Although rare in the United States today, the kit fox is relatively common in Death Valley. It is an inquisitive mammal and its curiosity often brings it into campgrounds, where it is fed by the equally curious campers. The coyote, on the other hand, is normally very shy and cautious. The fact that he ventured into a fully lighted auto, only minutes after it had been occupied, seems of interest.—Roland H. Wauer, *Death Valley National Monument, Death Valley, California.* *Received 14 March 1960.*

THE LENS AS AN INDICATOR OF AGE IN THE GRAY FOX

The use of the lens to determine the age of cottontail rabbits, *Sylvilagus floridanus*, has been described by Lord (J. Wildl. Mgt., 23: 358–360, 1959). This same technique has been applied to the gray fox, *Urocyon cinereoargenteus floridanus*. Briefly, it is based on the constant growth of the lens of the eye throughout life. The eye of each animal is removed whole and preserved in 10 per cent formalin to harden the lens. The lens is then removed and dried in an oven. The weight of the dried lens is indicative of the age of the animal. Individual variation in the growth rate of the lens within a species is usually slight.

During the summer and fall of 1955, 112 gray foxes were trapped and killed on three

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