

## GRAY WHALE OBSERVED IN THE BERING SEA

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The gray whale is a moderate-sized whalebone whale about 40 feet long and now survives from its extermination only in the Pacific Ocean. There is not any information available on the gray whale alive elsewhere. The stock of the gray whale was protected from whaler by the international law in 1946, since then it has increased by and by. Gilmore (1955) stated "The California gray whale is back by the thousands again, twice almost exterminated by man". Sleptsov (1955) also described the number of the gray whale apparently increasing since 1946.

The gray whale has characteristics to enter inlets and lagoons in the breeding warm waters and even in the feeding cold waters. This peculiar behavior makes the observation easy. Many valuable informations on the life history of the gray whale have been given through the observation from the shore and from the air by plane and helicopter, especially in California.

The migration of the gray whale seems to be more regular in its course than other rorqual. One route of its migration is the west side and the other route is the east side in the Pacific Ocean. The west side whale, Korea gray whale, stays in the waters adjacent to Korea in winter and lives in the Okhotsk Sea in summer. It crosses the Japan Sea in transit of its journey. On the other hand, the east side whale, California gray whale, breeds calves in the waters near California in winter and feeds in the Bering Sea and the Polar Sea in summer. It crosses the North Pacific Ocean and the Bering Sea in transit of its migration. The migration of the Korea gray whale seems to be more simple in its course than that of the California gray whale, because the areas in transit are more narrow for the former than for the latter. In 1955, the migration routes of the gray whale were outlined in the Gilmore's map, in which the author separated the west population from the east one. Sleptsov also stated that two populations of gray whales might have mingled with each other long before the depletion of their stocks, but the sharp decrease in numbers of whale led each stock to isolation. Whereas, gray whales sometimes lived near the Kurile Islands and off the East Japan far from their normal migration routes, he stated. We have now no knowledge on the gray whale off the shore of Japan ourselves. According to Gilmore's map, the distribution of the gray whale in the Bering Sea is restricted within the waters near Siberia. In the same year when Gilmore drew the map, Sleptsov showed the distribution of the gray

whale near Siberia. According to Sleptsov, the gray whale lives farther northward in Olyutorskiy Gulf in the Bering Sea and it usually does not appear off Kamtchatka and near the Commander Islands. It arrives in the Russian waters in the Bering Sea late in May and early in June, usually staying in the Bering strait and along the coast of the Chukchi Sea in summer, however, in a very few cases it enters Olyutorskiy Gulf. The California gray whale sets forth the northward migration from the warm waters in the interval between March and April. After two or three months, the gray whale appears again in the summer feeding areas. Where does it live in transit of its journey? Here I would like to quote Zenkovich's description (Kleinenberg & Makarov 1955), in which Grebnitskii states that no gray whale is found near the Commander Islands, although we had chances to see it in the past. Inhabitants familiar with creatures near the Commander Islands have now nothing to tell about the gray whale themselves, but they remember their forefathers' memories that they saw gray whales in the waters near the Aleutian Islands in the past.

In the past six years, the Japanese boats began the scouting works from the middle of May soon before the whaling seasons were open. In the northern part of the North Pacific and in the Bering Sea, they took records on whales which contained not only the important species for the whaling industry, but also the rare species; the gray and black right whale under protection from whalers. We have little actual knowledge, in regard to the remainder of the gray whale south in the Bering Sea during the seasons above mentioned, except two evidences. One evidence is uncertain, that is, an animal something like a gray whale was discovered from the boat at the position of  $55^{\circ}01'N$ ,  $162^{\circ}28'E$  on August 17 in 1956. This whale was moving to SE in its course and did not give whalers the chance to approach it. In May every year, we could find other whales containing the blue, fin, humpback and sperm, off Kamtchatka and in the west side waters near the Aleutian Islands, where we had no chance to discover the gray whale early in summer. The gray whale may cross there earlier than other whales on its northward migration.

On the other hand, there was another evidence of the gray whale in the south of the Bering Sea on May 29 in 1957. When I was charged in the whale marking on board a catching boat, I found a gray whale north in the Unimak Pass. This whale was moving northwards, and I had never expected that the gray whale lived there, and so I set myself to observe it in details. It was about 35 feet long and was swimming alone without fright at the noisy tons of engine of our boat. I could see many barnacles and cyamids on its body, but find no difference from

the descriptions by other workers on its swimming behavior. It was wounded in the right back and bled from there whenever it came to the surface of water. Because of such injury, this whale might have remained south in the Bering Sea on its northward migration and appeared in the waters far from the Gilmore's route.

In the northern parts of the Bering Sea, Japan has several informations on the gray whale. West of St. Lawrence Island on August 2 in 1955, a Japanese catching boat discovered three herds of gray whales. Mr. Nasu, a member of the Whales Research Institute, took pictures of these herds, one of which is shown in figure 1 by his courtesy. The first herd consisted of two whales, 37 and 41 feet long, swimming at the position of  $63^{\circ}34'N$ ,  $172^{\circ}48'W$ . The second was composed of about 20



Fig. 1. Swimming gray whale (Photograph by Mr. Keiji Nasu.)

whales from 36 to 41 feet long, feeding at the position of  $63^{\circ}35'N$ ,  $172^{\circ}44'W$ . The third consisted of about 150 whales ranging from 35 to 40 feet long. The position discovered ranged from  $63^{\circ}59'N$ ,  $171^{\circ}24'W$  to  $63^{\circ}54'N$ ,  $170^{\circ}50'W$ . In the second and third cases, the herd was divided further into smaller groups including only one, two or three whales. Such compositions of herds were generally found in the humpback whale. These gray whales were swimming very gently to WSW or to SW in their courses. Moreover, another catching boat discovered a gray whale at the position of  $63^{\circ}25'N$ ,  $172^{\circ}33'W$  west of St. Lawrence Island on July 28 in 1957. Its migration course was not constant. As mentioned above, there are a few data available on the distribution of gray whale in the

Bering Sea, so it is not easy to draw its migration routes on the map.

Here, let us cast a glance over the distributions of other whales. Fin whales marked in 1957 bore two evidences on their northward migrations. According to Kawakami & Ichihara (1958) two fin whales marked in the Bering Sea early in July moved northwards along the contour line of 200 meters, ranging from the Unimak Pass to Cape Navarin in Siberia. With regard to the humpback whales marked, we have no evidence of their movements in the Bering Sea. Our knowledges on the distribution of this species are as follows: A great number of humpback whales usually fed

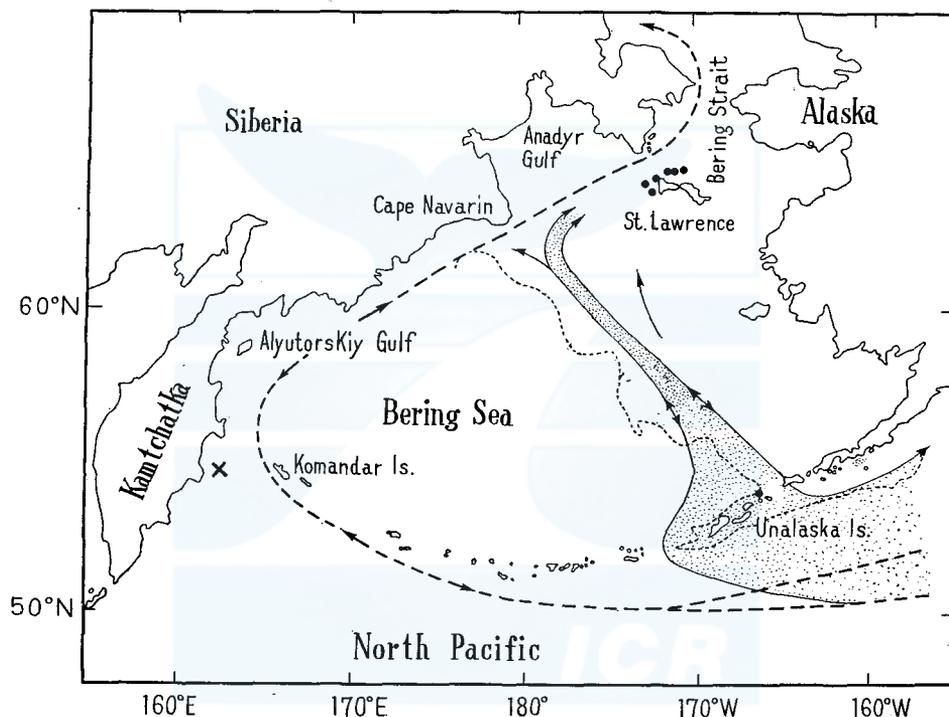


Fig. 2. Migration route of the gray whale in the Bering Sea

- |       |                            |   |                     |
|-------|----------------------------|---|---------------------|
| ..... | Contour line of 200 meters | ● | Position discovered |
| ←→    | Gilmore's route            | × | Uncertain record    |
| ⟨⟩    | My proposed route          |   |                     |

south of the east part of the Aleutian Islands in the interval between May and September. And in the past years they often appeared north of the Aleutian Islands. In the Bering Sea, 3 humpback whales were recorded to live near the contour line mentioned above, that is, 1 humpback whale swam at the position of  $54^{\circ}40'N$ ,  $171^{\circ}31'W$ , on July 27 in 1955, 2 whales at the position of  $55^{\circ}40'N$ ,  $174^{\circ}10'W$  and 1 whale at the position of  $56^{\circ}50'N$ ,  $175^{\circ}20'W$  on June 22 in 1957. Besides, we have the information that 12 humpback whales lived in Anadyr Gulf late in

August 1957. Sleptsov (1955) stated humpback whales often appeared in herds of hundreds in Anadyr Gulf, whereas they seldom appeared off Kamtchatka every season. Certainly, our records indicate humpback whales live in less numbers off Kamtchatka than in the east waters of the Aleutian Islands in summer. As regards the sei whale in the northern part of the Bering Sea, it is reported that an animal was swimming at the position 59°19'N, 177°56'W on July 30 in 1955. Even if the season of northward migration differs a little among whale species, can we not draw the migration route of the gray whale in the same manner as that of the fin or humpback whale? I here examine the migration route of the gray whale in the Bering Sea and show it with Gilmore's route in figure 2. My proposed route was already assumed by Kellogg in 1929.

With regard to the food of the gray whale, there are many descriptions reported in the past. Kellogg states 'In the Bering Sea, gray whales feed on several kinds of amphipods resembling sand fleas'. According to Gilmore, gray whale fattens on abundant large plankton, especially euphausiid shrimps in the polar waters off Kamtchatka and in the Bering Strait. Arseniev and Zenkovich (Kleinenberg & Makarov 1955) showed the food of the gray whale comparing with those of other whales, and according to their observations gray whales feed on bottom living amphipods in the Bering Strait and the Chukchi Sea. It is appreciated from their paper that in the northern part of the Bering Sea humpback whales resemble gray whale in their foods.

As far as we continue to protect gray whales from whalers in the future, we shall have many chances to observe them enjoy their lives, and we shall be able to draw their accurate migration routes on the map.

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