

Gray Whale (*Eschrichtius robustus*) Sightings in Eastern Beaufort Sea

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RÉSUMÉ. La Baleine grise (*Eschrichtius robustus*, Lilljeborg) émigre chaque printemps vers le nord aux lieux de pâturage dans les mers de Bering et de Chukchi. Régulièrement, quelques individus voyagent vers le nord-est jusqu'à Point Barrow, Alaska, et elles furent parfois aperçues le long de la côte alaskienne jusqu'à l'île Barter. Lors de l'été 1980, la Baleine grise fut aperçue en trois occasions dans les eaux canadiennes de la mer de Beaufort, bien à l'est de la limite géographique connue pour cette espèce. Ces baleines étaient en eau ouverte, bien au sud de la limite des banquises. Nous pouvons donc étendre le territoire de la Baleine grise d'environ 575 km vers l'est. De plus, si ces individus proviennent des concentrations hivernales de cet espèce dans la région de Baja en Californie, un voyage d'environ 20 400 km aller-retour est impliqué. Ceci représente une des plus grandes migrations connues pour n'importe quelle espèce de mammifère.

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Gray whales (*Eschrichtius robustus*, Lilljeborg) migrate north each spring to feeding grounds, mainly in the Bering and Chukchi Seas. Regularly a few individuals travel as far northeast as Point Barrow, Alaska, and a few records have been made of sightings along the Alaska Beaufort Sea coast as far east as Barter Island (Maher, 1960; Marquette and Braham, 1980). During summer 1980, three sightings of gray whales were made in the Canadian Beaufort Sea, well east of any previously recorded (Fig. 1; Table 1). All were in open water, well south of the pack ice front. The sightings were made by airborne observers engaged in studies of bowhead whales (*Balaena mysticetus*, Linnaeus), which frequent the southern Beaufort Sea during summer.

Each of the first two sightings was made when the attention of the observers was drawn to conspicuous clouds of mud suspended in the water (Fig. 2). In each instance, the whale was observed for several minutes in clear water from an altitude of 150-300 m, and there was no doubt about the identification. In each case, the whale

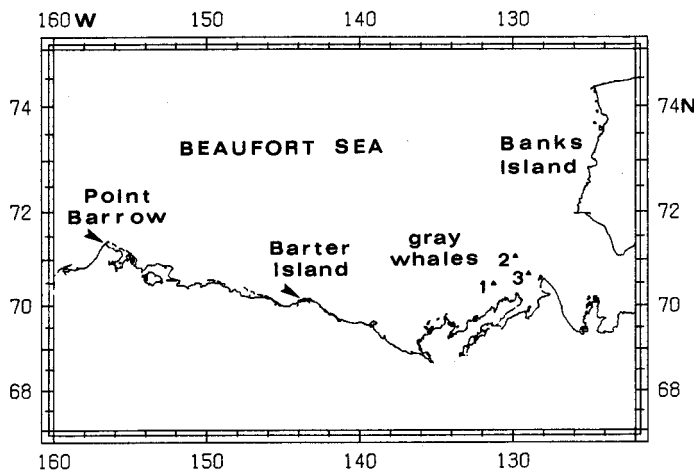


FIG. 1. Locations of gray whale sightings in the eastern Beaufort Sea during August 1980.

TABLE 1. Observations of gray whales in the eastern Beaufort Sea, August 1980

| Sighting number ¹ | Date time ² | Location ³ (lat. long.) | Water depth (m) | Remarks |
|------------------------------|--------------------------|---------------------------------------|-----------------|--|
| 1 | 21 August 80 2000 MDT | 70°29'N, 131°14'W | 35 | Apparently feeding; gulls nearby |
| 2 | 24 August 80 1700 MDT | 71°04'N, 129°50'W | 40 | Apparently feeding; Sabine's gulls nearby |
| 3 | 29 August 80 1229 MDT | 70°42'N, 128°58'W | 20 | Traveling west |

¹Sighting 1 by David Rugh, Mary Platter-Reiger, and Brent Stewart; Sighting 2 by Wayne Renaud and Mark Fraker; Sighting 3 by Bernd Würsig and Peter Thomas.

²Mountain Daylight Time.

³Coordinates are from VLF/Omega navigation systems on the aircraft.

dove to the bottom and then surfaced with clouds of mud issuing from its mouth. Approximately 35 unidentified gulls were in the area where the first whale was seen, presumably feeding on items brought to the surface by the whale (Harrison, 1979). Approximately 12 Sabine's gulls (*Xema sabini*, Sabine) arrived at the second area while observations were being made; these alighted where the water had been muddied by the whale. Possibly the whales were feeding on benthic or epibenthic organisms, as is typical of gray whales. These whales were in water 35-40 m deep (Table 1). Wacasey (1975) found the greatest biomass of zoobenthos in the Canadian Beaufort Sea (50-74.9 g m⁻²) near the locations where we saw the feeding gray whales.

The third sighting was a gray whale that appeared to be traveling west. The whale was seen to blow three or four times, after which it dove and was not relocated even though the general area was searched for 15 minutes. No mud plumes were seen. The slender, gray, mottled appearance made the species identification unequivocal.

It is possible, but unlikely, that all three sightings were

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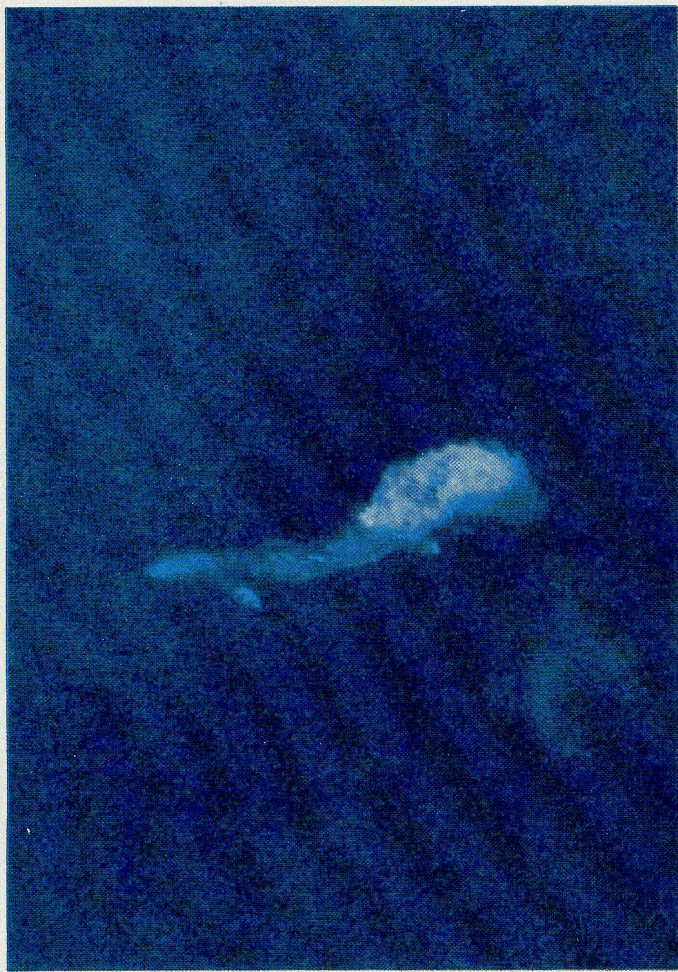


FIG. 2. Gray whale sighted on 21 August 1980 in the eastern Beaufort Sea. The plumes of mud were expelled as the whale, a benthic feeder, approached the water surface to breathe. (Rugh)

of the same individual. Sufficient time separated the sightings for a single whale to have traveled the intervening distances. The required rates of travel would be 1.2 km h^{-1} between the first and second sightings, and 0.5 km h^{-1} between the second and third sightings — well within the 4.3 km h^{-1} estimated for migrating gray whales (Rugh and Braham, 1979). However, the probability of sighting the same individual three times in such a large area is small, and no markings were recognizably the same in projected photographs of the first two sightings.

These sightings constitute an eastward extension of the known range of the gray whale by 575 km. They occurred during a year when an unusually large effort was devoted

to aerial observation of whales in the southeastern Beaufort Sea. Whether a small number of gray whales regularly occurs in this region during summer is unknown. However, no specific records of gray whales are known from logbooks of whaleships that operated in this region from 1890 to about 1910 (J.R. Bockstoce, Old Dartmouth Historical Society, pers. comm.). If these individuals migrated north along the coast from Baja California, Mexico, where the largest winter concentrations occur (Rice *et al.*, 1980), they swam a remarkable 10 200 km between February and August. If they returned successfully to that wintering area, they swam a round-trip distance of 20 400 km in 9.5 to 11 months. This would be one of the longest known migrations of any mammal species.

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