

Summer Records of Bowhead Whales in the Northeastern Chukchi Sea

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ABSTRACT. The collation of 26 summer sighting records over years 1975-77, 1984 and 1987-91 suggest that bowhead whales may occupy the northeastern Chukchi Sea in late summer more regularly than commonly believed.

Key words: bowhead whale, *Balaena mysticetus*, Chukchi Sea, outer continental shelf

RÉSUMÉ. L'exploitation statistique de 26 observations faites au cours de l'été entre 1975 et 1977, en 1984 et entre 1987 et 1991 donne à penser que la baleine boréale pourrait occuper la partie septentrionale et orientale de la mer des Tchouktsches à la fin de l'été de façon plus régulière qu'on ne l'admet généralement.

Mots clés: baleine boréale, *Balaena mysticetus*, mer des Tchouktsches, plateau continental externe

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The Bering Sea stock of bowhead whales (*Balaena mysticetus*) annually migrates around western and northern Alaska between wintering areas in the northern Bering Sea and summering areas in the eastern Beaufort Sea (Braham *et al.*, 1984). During the seasonal migrations, bowheads pass near or through outer continental shelf (OCS) oil and gas planning/lease areas (Braham *et al.*, 1984; Moore and Clarke, 1990). Broad-scale bowhead whale distribution and abundance have been studied in conjunction with offshore exploration activities in the Beaufort Sea each fall since 1979 (Ljungblad *et al.*, 1986; Treacy, 1991) and in the Chukchi Sea since fall 1982 (Moore and Clarke, 1990). Because bowhead whales are thought to be largely absent from the Chukchi Sea from July through mid-September (Dahlheim *et al.*, 1980; Miller *et al.*, 1986), studies there usually do not begin until the latter half of September (Moore and Clarke, 1990). However, bowheads that appeared to be feeding were seen near Barrow, Alaska, from late July through mid-August 1989 (George and Carroll, 1989). This report prompted a search for additional summer records of bowheads in the northeastern Chukchi Sea, which are summarized here.

Bowhead whale sighting records (Table 1; Fig. 1) were obtained from U.S. National Marine Fisheries Service (NMFS) and the North Slope Borough (NSB). Summertime surveys for bowhead whales in the Chukchi Sea have not been conducted since 1978 (Dahlheim *et al.*, 1980), so all but the NMFS-coded sightings (see Table 1) were incidental to other research. The largest single bowhead group recorded was that of 74 whales seen northwest of Icy Cape in August 1975. Researchers believed this to be an aberrant occurrence caused by persistent heavy ice cover that year (Braham *et al.*, 1984). There were three reports in August 1976 — one confirmed sighting of 4 whales just north of Barrow and two "tentative" identifications southwest of Point Hope. Except for one "tentative" sighting near Point Hope in August 1977, there were no other reports until late August/early September 1984, when 19 bowheads were seen southwest of Barrow. Single whales were reported just west of Barrow in early July 1987 and 1988 and in mid-July 1990. Up to 4 bowheads were seen near the location of these July sightings in early September 1987; the 2 positively

TABLE 1. Sightings of bowhead whales in the northeastern Chukchi Sea from late July through early September¹

Source	Date	Location (°N/°W)	Count	Comment
NMFS	8/75	70°34.0', 161°00.0'	74	N.E. Icy Cape; heavy ice year
NMFS	8/19/76	71°30.0', 156°00.0'	4	In open water
POP	8/29/76	67°31.2', 167°56.4'	1	["T"]; NA
	8/29/76	67°30.6', 167°56.7'	1	["T"]; NA
POP	8/21/77	68°18.4', 166°28.0'	1	["T"]; NA
POP	8/31/84	71°02.9', 158°34.9'	4	NA
	8/31/84	71°03.3', 158°35.9'	5	NA
	8/31/84	71°03.9', 158°33.0'	6	NA
	9/1/84	70°36.4', 160°48.0'	1	NA
	9/5/84	70°39.7', 160°35.7'	3	NA
NSB	7/9/87	71°17.0', 156°50.0'	1	[L. Dalton]; NA
POP	9/2/87	71°14.3', 157°08.6'	1	Feeding
	9/2/87	71°14.8', 157°10.1'	2	["T"]; NA
	9/4/87	71°33.3', 160°37.1'	1	Feeding
NSB	7/6/88	71°19.0', 156°54.0'	1	[L. Kittick]; NA
NSB	7/23/89	71°20.0', 155°40.0'	3-4	Mile N. Cooper Is.
	8/12/89	71°35.0', 155°30.0'	10-15	Surface feeding, 60' depth
	8/14/89	71°15.0', 154°40.0'	5	(8) (Later in day)/18-20 nm N. Martin Is.
	8/15/89	71°12.8', 154°47.6'	3-4	8-10 nm N. C. Simpson
	8/15/89	71°13.6', 154°45.8'	5-7	50' depth
	8/15/89	71°14.6', 154°45.8'	1	53' depth; "wide-line" feeding
	8/15/89	71°13.1', 154°43.8'	2-4	North of above group
				53'; swim SW in "wide lines"
NSB	7/15/90	71°14.1', 157°14.4'	1	[C. Brower]; NA
EBASCO	8/24/91	71°33.5', 161°04.8'	1	NA
		71°17.9', 157°04.4'	1	NA
	8/26/91	71°08.4', 159°39.6'	1	NA

¹Data sources: NMFS = Braham *et al.*, 1984; POP = NMFS Platform of Opportunity Program (Boucher and Boaz, 1989) ["T"] indicates a "tentative" sighting; NSB = North Slope Borough (George and Carroll, 1989) [informant]; EBASCO = Brueggeman, 1992. NA = no additional information.

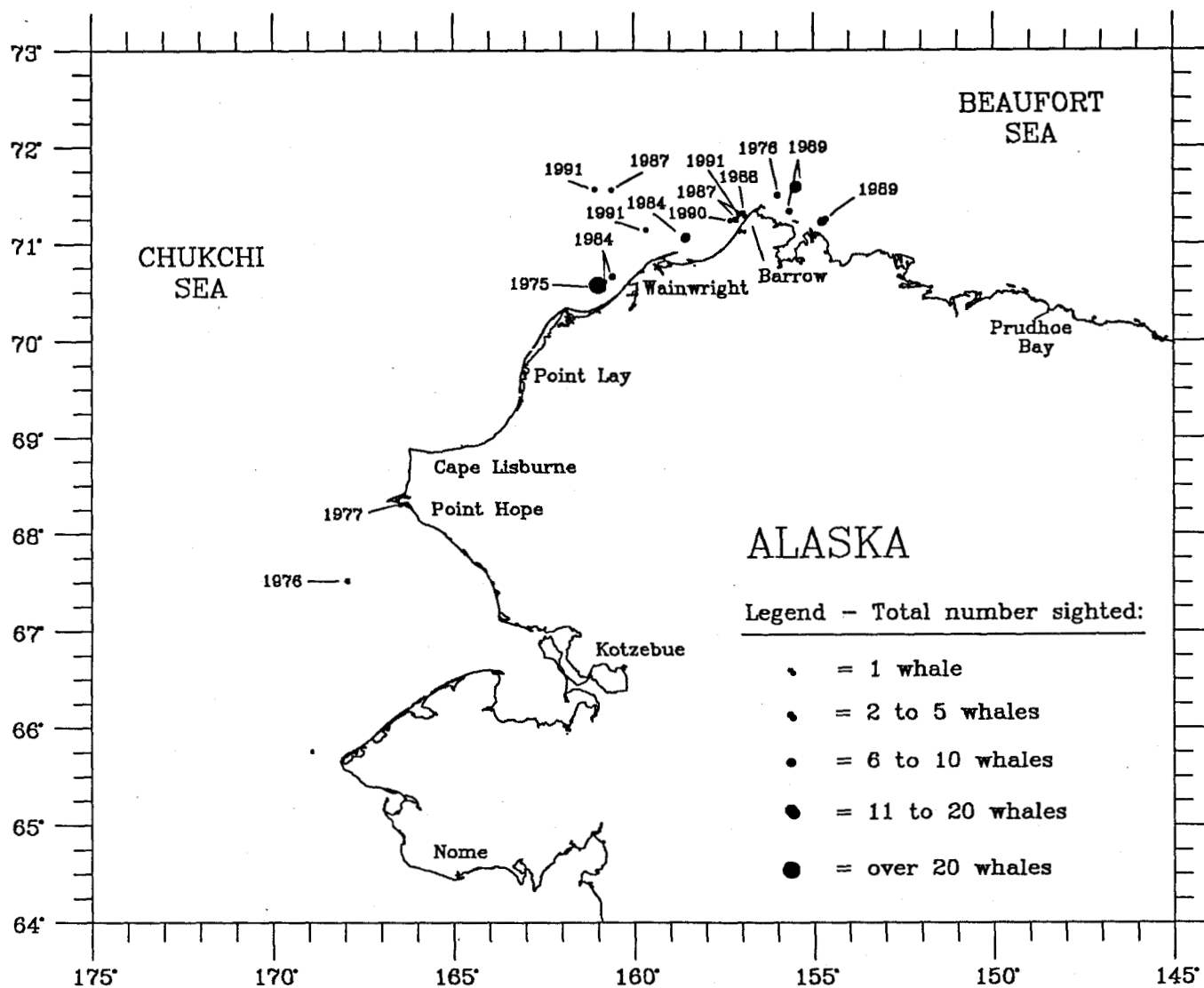


FIG. 1. Locations of summer bowhead whale sightings in the northeastern Chukchi Sea, as listed in Table 1.

identified whales seemed to be feeding. Similarly, several of the bowheads seen northeast of Barrow in late July through mid-August 1989 appeared to be feeding at the surface in "wide lines," analogous to the echelon swimming pattern described by Würsig *et al.* (1989) for bowheads feeding in the eastern Beaufort Sea. Finally, 3 bowheads were seen in late August 1991 by biologists surveying waters near exploratory drilling sites in the northeastern Chukchi Sea.

Although few in number, the incidental sightings summarized here suggest that bowhead whales may occupy the northeastern Chukchi Sea in late summer more regularly than commonly believed. These whales may be "early" fall migrants from the eastern Beaufort Sea (Moore and Clarke, 1991; Moore *et al.*, 1989; Braham *et al.*, 1984) or may be a remnant of a bowhead population that summered in the Chukchi Sea prior to commercial whaling (Dahlheim *et al.*, 1980). Offshore oil and gas exploratory drilling activities began in the Chukchi Sea in 1989 and will likely continue at least through the mid-1990s (MMS, 1991). If additional summer sightings are reported during site-specific monitoring studies associated with offshore exploration (e.g., Brueggeman, 1990, 1992), a

broad-scale study to investigate bowhead summer occurrence and behavior in the northeastern Chukchi Sea seems warranted.

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