

WHITE-BEAKED DOLPHIN (*Lagenorhynchus albirostris*): Western North Atlantic Stock

STOCK DEFINITION AND GEOGRAPHIC RANGE

White-beaked dolphins are the more northerly of the two species of *Lagenorhynchus* in the Northwest Atlantic (Leatherwood et al. 1976). The species is found from southern New England, north to western and southern Greenland and Davis Straits (Leatherwood et al. 1976, CeTAP 1982). Stock structure is unknown.

In waters off the northeastern U.S. coast, white-beaked dolphin sightings have been concentrated in the western Gulf of Maine and around Cape Cod (CeTAP 1982). The limited distribution of this northern species in U.S. waters has been attributed to opportunistic feeding (CeTAP 1982); however, white-beaked dolphins may have been more common in the Gulf of Maine before the 1960s. It has been hypothesized to have exchanged habitat with white-sided dolphins, which were once more common offshore (Katona et al. 1993).

POPULATION SIZE

The total number of white-beaked dolphins in U.S. and Canadian Atlantic waters is unknown. Seasonal abundance estimates are available from an aerial line transect survey program conducted in the continental shelf and continental shelf edge waters between Cape Hatteras, North Carolina and Nova Scotia from 1978 to 1982 (CeTAP 1982). A population estimate of 573 white-beaked dolphins [coefficient of variation (CV) = 0.69] in waters off Cape Cod was based on CeTAP (1982) spring sightings. White-beaked dolphins were not encountered during an August-October 1991 aerial survey in the CeTAP study area, nor were white-beaked dolphins sighted during several fine-scale ship-based surveys conducted in August 1990, June-July 1991, August-September 1991, June-July 1993, August-September 1993, and August 1994, conducted in the Gulf of Maine and over U.S. Atlantic continental shelf edge and deeper oceanic waters (NMFS unpublished data).

A population estimate for Canadian waters of 5,500 white-beaked dolphins was based on a aerial survey off eastern Newfoundland and southeastern Labrador (Alling and Whitehead 1987). A ship-based survey of a small segment of the Labrador Shelf in August 1982 provided an estimate of 3,486 white-beaked dolphins [95% confidence interval (CI) = 2,001-4,971] (Alling and Whitehead 1987). A CV was not given, but, assuming a symmetric CI, it would be 0.22.

There are no abundance estimates for this species in waters between the Gulf of Maine and the Newfoundland/Labrador region.

Minimum Population Estimate

Present data are insufficient to calculate a minimum population estimate in U.S. Exclusive Economic Zone (EEZ) waters.

Current Population Trend

There are insufficient data to determine the population trends for this species.

CURRENT AND MAXIMUM NET PRODUCTIVITY RATES

Current and maximum net productivity rates are not known for this stock. The maximum net productivity rate was assumed to be 0.04 for purposes of this assessment. This value is based on theoretical calculations showing that cetacean populations may not generally grow at rates much greater than 4% given the constraints of their reproductive life history (Reilly and Barlow 1986).

POTENTIAL BIOLOGICAL REMOVAL

No PBR can be estimated for this species at this time, because the minimum population size cannot be determined.

ANNUAL HUMAN-CAUSED MORTALITY AND SERIOUS INJURY

White-beaked dolphins have been killed in the Canadian groundfish gillnet fisheries off Newfoundland and Labrador and in the Gulf of St. Lawrence (Alling and Whitehead 1987; Read, in press); however, the total number of animals killed is not known.

There are no documented reports of fishery-related mortality or serious injury to this stock in the U.S. EEZ; therefore, total fishery-related mortality and serious injury for this stock is considered insignificant and approaching zero mortality and serious injury rate. This determination cannot be made for specific fisheries until the implementing regulations for Section 118 of the MMPA have been reviewed by the public and finalized.

Fisheries Information

Because of the absence of observed fishery-related mortality and serious injury to this stock in the U.S. EEZ, no U.S. fishery information is provided.

The Canadian Atlantic groundfish gillnet fishery is important and widespread. Many fisherman hold groundfish gillnet licenses but the number of active fishermen is unknown. In 1989, approximately 6,800 licenses were issued to fishermen along the southern coast of Labrador, and northeast and southern coast of Newfoundland. About 3,900 licenses were issued in 1989 in the Gulf of St. Lawrence and 659 licenses were issued in the Bay of Fundy and southwestern Nova Scotia.

Other Mortality

White-beaked dolphins were, and still may be, hunted for food by residents in northern and southern Labrador (Alling and Whitehead 1987). These authors, based on interview data, estimated that 366 white-beaked dolphins were killed each year.

STATUS OF STOCK

The status of white-beaked dolphins, relative to OSP, in U.S. Atlantic coast waters is unknown. They are not listed as threatened or endangered under the Endangered Species Act. In Canada, the Cetacean Protection Regulations of 1982, promulgated under the Standing Fisheries Act, prohibit the catching or harassment of all cetacean species. There are insufficient data to determine the population trends for this species. This stock has a marginal occurrence in U.S. waters; therefore, this stock is not a strategic stock.

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