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LONG RANGE MOVEMENTS OF A BLUE WHALE (*BALAENOPTERA MUSCULUS*) BETWEEN THE GULF OF ST. LAWRENCE AND WEST GREENLAND

Jonggård (1966) reviewed the distribution of the blue whale (*Balaenoptera musculus*) in the North Atlantic. In the western North Atlantic the species is known from West Greenland (Davis Strait), southwest Iceland (Denmark Strait) (Ingebrigtsen 1929, Jonggård 1955), and eastern Canada (Jonggård 1955, 1966). Little is known of the winter distribution but occasional sightings/strandings have been reported from as far south as the Caribbean (Harmer 1923) and the Gulf of Mexico (Baughman 1946, Lowery 1974).

Since 1980, Sears *et al.* (1990) have reported regular sightings of blue whales in the Gulf of St. Lawrence, while ice-related entrapments have occurred along the southern coast of Newfoundland during late winter–early spring (*e.g.*, Mitchell 1977, Desbrosse and Etcheberry 1987, Seton 1995). Blue whales enter the Gulf of St. Lawrence from southern Newfoundland (Cabot Strait) in March, as the ice breaks up (Mitchell 1977) and are sighted from April onward along the Quebec North Shore from the St. Lawrence Estuary to the Strait of Belle Isle (Sears *et al.* 1990). They are regularly seen in the Gulf until December, and some individuals remain until the third week of January (RS, unpublished data). Since 1992 one of the authors (RS) and observers working off

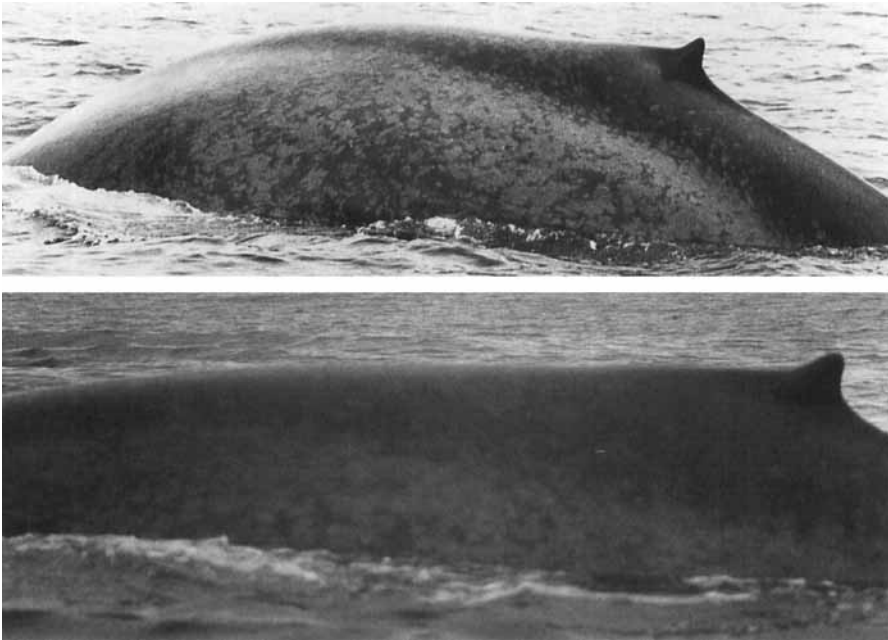


Figure 1. Photographic proof of ID for B156. Upper: Gulf of St. Lawrence; lower: Davis Strait.

the eastern tip of the Gaspé Peninsula have regularly sighted blue whales from May until the first week of January. Sutcliffe and Brodie (1977) reported that whalers regularly saw blue whales on the Scotian Shelf from June to November, although few have been reported since whaling ceased in 1972 (CETAP 1982). Sporadic sightings have been reported off Labrador (Sergeant 1966) and in the Gulf of Maine (Wenzel *et al.* 1988). Despite extensive annual summer surveys along the coast of West Greenland (south of about 72°N) since 1985, few blue whales have been seen (Larsen *et al.* 1989). Those that have been seen have all been between 62° and 66°N. Occasional sightings have been reported off Disko Island in October and southwestern Greenland in November (Kapel 1979). Blue whale sightings are also reported regularly off west and southwest Iceland (Sigurjónsson and Gunnlaugsson 1990) where they begin arriving in March, peaking in June to August.

Two previous long-range matches were reported between the Gulf of St. Lawrence and the Scotian Shelf/Gulf of Maine area (Sears *et al.* 1990). One animal was photographed on the southern Scotian Shelf in August 1980, again in the St. Lawrence Estuary in August 1983 and in August 1985. The other animal was photographed in the Mingan Islands region, Gulf of St. Lawrence, in August of 1985 and 1986 and again in the Gulf of Maine in August 1987 (Wenzel *et al.* 1988).

This note reports the first documented long range match of a blue whale between the Gulf of St. Lawrence and West Greenland. The individual was

Table 1. Sighting records of blue whale B156.

Date	Region	Latitude/Longitude
21 August 1984	Mingan/Anticosti	50°11'N 64°29'W
14 August 1985	Mingan/Anticosti	50°05'N 64°17'W
4 August 1988	West Greenland	64°23'N 53°10'W
10 August 1989	West Greenland	65°28'N 53°29'W
29–30 July 1991	St. Lawrence Estuary	48°22'N 69°17'W
9 October 1992	Mingan/Anticosti	50°04'N 64°26'W
24 August 1994	St. Lawrence Estuary	48°22'N 69°18'W

identified from flank photographs (Fig. 1) of its mottled pigmentation pattern (Sears *et al.* 1990). A photographic catalog for the western North Atlantic compiled since 1979 (Sears *et al.* 1990) contains 344 individual blue whales. Most (322) have been photographed in only the Gulf of St. Lawrence, where the longest dedicated blue whale photo-identification studies have been carried out in the North Atlantic.

Blue whale B156 was first seen in August of 1984 and 1985 in the Mingan Islands region of the Gulf of St. Lawrence and resighted along the southwestern coast of Greenland in August of 1988 and 1989 (Table 1). It was sighted in the St. Lawrence Estuary in July of 1991, in the Gulf of St. Lawrence in October of 1992, and again back in St. Lawrence Estuary in August of 1994. B156 was seen alone except for the sighting on 4 August 1988 off West Greenland, where it was in the company of two other blue whales and a fin whale (*B. physalus*). Biopsy samples taken at the time revealed that B156 was a male and that one of the other blue whales was a female.¹

Nineteen of the 22 blue whales (6.4% of the catalog) photo-identified outside the Gulf of St. Lawrence have never been reported inside the Gulf. Three of these 19 were photo-identified opportunistically in the Gulf of Maine between 1986 and 1994, four were photographed off West Greenland between 1988 and 1991 during a dedicated study of humpback whales by one of the authors (FL), four were photo-identified off southern Newfoundland in 1992 as part of regular marine mammal sighting surveys carried out by Memorial University of Newfoundland's Whale Research Group (Seton 1995), four were photo-identified in the Gully off Nova Scotia in 1995 and 1996,² one was photo-identified off Browns Bank, Nova Scotia, in 1989,³ and one was photo-identified in the Bay of Fundy in 1996.⁴ The other two blue whales were

¹ Personal communication from Per Palsbøll, School of Biological Sciences, University of Wales-Bangor, Deiniol Road, Bangor, Gwynedd, Wales, LL57 2UW, UK.

² Personal communication from Hal Whitehead, Department of Biology, Dalhousie University, Halifax, NS B3H 4J1 Canada.

³ Personal communication from Scott Kraus, New England Aquarium, Central Wharf, Boston, MA 02110-3309, U.S.A.

⁴ Personal communication from Debbe Tobin, East Coast Ecosystems Inc., P.O. Box 36, Freeport, NS B0U 1B0 Canada.

photo-identified off Spain's Atlantic coast in 1982 and 1984 (Sanpera *et al.* 1984).

The Gulf of St. Lawrence-West Greenland match supports the view (Ingebrigtsen 1929, Jonsgård 1955) that blue whales seen in eastern Canadian waters and in Davis Strait could be part of the same population. This, plus the evidence from the two previous matches (Sears *et al.* 1990), suggests that western North Atlantic blue whales are more wide ranging in their use of summer feeding grounds, than the humpback whale (*Megaptera novaeangliae*) (Palsbøll *et al.* 1995). This more nomadic behavior of the blue whale is supported by the low resighting rate in the Gulf of St. Lawrence (Sears *et al.* 1990), as well as by the evidence of temporary emigration found by Hammond *et al.* (1990).

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