

First Record of the Great Barracuda, *Sphyraena barracuda* from Canada

DARLENE BALKWILL¹, BRIAN W. COAD¹, ISMAEL GALVEZ², and JOHN GILHEN³

¹Canadian Museum of Nature, P. O. Box 3443, Station D, Ottawa, Ontario K1P 6P4 Canada

²1219 Cromwell Road, Halifax, Nova Scotia B3H 4L1 Canada

³Nova Scotia Museum of Natural History, 1747 Summer Street, Halifax, Nova Scotia B3H 3A6 Canada

Balkwill, Darlene, Brian W. Coad, Ismael Galvez, and John Gilhen. 2006. First record of the Great Barracuda, *Sphyraena barracuda*, from Canada. *Canadian Field-Naturalist* 120(2): 241-242.

We report the collection, and provide a description, of the first Great Barracuda, *Sphyraena barracuda*, in Canadian waters based on a partial skeleton from Country Island, Nova Scotia.

Key Words: Great Barracuda, *Sphyraena barracuda*, new record, fish fauna, Nova Scotia, Canada.

The cranium, lower jaw and attached trunk vertebrae of a Great Barracuda, *Sphyraena barracuda* (Family Sphyraenidae), were found dried on a beach on Country Island, Guysborough County, Nova Scotia at 45°06'00"N, 61°32'37"W in May 1999 by Ismael Galvez. This is the first record for this species from Canada (Scott and Scott 1988; Coad et al. 1995). The specimen is catalogued in the Nova Scotia Museum of Natural History, Halifax, under NSM 85385.

Description

Three species of barracuda are reported from the western Atlantic Ocean north of Florida, *Sphyraena*

barracuda (Walbaum, 1792), *S. borealis* DeKay, 1842, and *S. guachancho* Cuvier in Cuvier and Valenciennes, 1829. Only *S. borealis* has been recorded from Canada, a single specimen from Halifax Harbour, Nova Scotia, caught on 5 October 1928 (Scott and Scott 1988). Carpenter (2002) records *S. barracuda* and *S. guachancho* from Massachusetts (rare) southwards.

Our specimen is neither *S. borealis* nor *S. guachancho* on the basis of length, these two species generally reach maximums of 46-50 cm, (commonly) 35 cm and 50-60 cm, respectively (De Sylva 1984; Robins and Ray 1986; Carpenter 2002). Murdy et al. (1997) give 1 m for the latter species. Our specimen is close in size to a disarticulated specimen of *S. barracuda* in the Royal Ontario Museum (ROM R6281; pur-



FIGURE 1. Photograph of skeletal remains of a Great Barracuda from Country Island, Guysborough County, Nova Scotia (NSM 85385)(bottom) with skull of ROM R6281 above.



FIGURE 2. Photograph of skeletal remains of a Great Barracuda from Country Island, Guysborough County, Nova Scotia (NSM 85385) flanked by the upper and lower jaws of ROM R6281.

chased from Kensington Fish Market, Toronto, and thought to be from the Caribbean area) that has a recorded total length of 86.0 cm. The length of the dorsal skull surface (from the anterior tip excluding the upper jaw to the origin of the supraoccipital crest) is 135.1 mm in NSM 85385 and 116.8 mm in ROM R6281. These measurements make the Nova Scotian specimen ca. 99.5 cm total length. NSM 85385 has a head length of ca. 181.7 mm (the opercular bone is somewhat curved) and FishBase (www.fishbase.org) states that head length is 17.7% total length, giving a total length for the Nova Scotian specimen of 1.03 m. These two forms of measurement agree, making the Nova Scotian specimen about 1 m long in life. This unequivocally eliminates *S. borealis* and probably *S. guachancho*.

Other, osteological, characters also strongly suggest the Nova Scotian specimen is a Great Barracuda. The specimen has the area between eyes flat (convex in *S. guachancho*), teeth are contiguous, vertically flattened and erect (conical and widely spaced in *S. borealis*, angled backwards in *S. guachancho*), and the tip of the maxilla reaches past the anterior orbit margin (not reaching the orbit in *S. borealis*) (De Sylva 1984; Murdy et al. 1997; Carpenter 2002; comparative material of *S. guachancho* ROM R1837 and R2706).

We consider it unlikely that this specimen came from a local fish market and was imported. One of us (JG) has not seen this species on sale locally. The shore of Country Island is remote from commercial sites. It probably represents a stray that died in Canadian waters and was washed ashore.

Acknowledgments

We are indebted to Kevin Seymour, Department of Palaeobiology, Royal Ontario Museum, Toronto, for the loan of comparative material. Photographs were taken by Alison Murray, Canadian Museum of Nature, Ottawa, who also provided osteological advice.

Literature Cited

- Carpenter, K. E.** 2002. The Living Marine Resources of the Western Central Atlantic. Volume 3. Bony fishes part 2 (Opistognathidae to Molidae), sea turtles and marine mammals. Food and Agriculture Organization, Rome. vi + 1375-2127.
- Coad, B. W.**, with **H. Waszczuk**, and **I. Labignan**. 1995. Encyclopedia of Canadian Fishes. Canadian Museum of Nature, Ottawa, and Canadian Sportfishing Productions, Waterdown, Ontario. viii + 928 pages, 128 colour plates.
- De Sylva, D. P.** 1984. Sphyranoidei: development and relationships. Pages 534-540 in *Ontogeny and Systematics of Fishes*. Special Publication Number 1, American Society of Ichthyologists and Herpetologists, Lawrence, Kansas. ix + 760 pages.
- Murdy, E. O.**, **R. S. Birdsong**, and **J. A. Musick**. 1997. Fishes of Chesapeake Bay. Smithsonian Institution Press, Washington. xi + 324 pages.
- Robins, C. R.**, and **G. C. Ray**. 1986. A Field Guide to the Atlantic Coast Fishes of North America. Houghton Mifflin Co., Boston. xi + 354 pages.
- Scott, W. B.**, and **M. G. Scott**. 1988. Atlantic Fishes of Canada. Canadian Bulletin of Fisheries and Aquatic Sciences 219: xxx + 731 pages.

Received 18 July 2005

Accepted 16 January 2007