

THE BLUNTNOSE SIXGILL SHARK HEXANCHUS GRISEUS (BONNATERRE, 1788), NEW TO THE FISH FAUNA OF ATLANTIC CANADA

A young female specimen (NMC 90-0032) of *Hexanchus griseus* about 70.3 cm long (extreme tail tip damaged) was caught in a gill net set for pollock (*Pollachus virens* (Linnaeus)) at a depth of 155 m on 19/8/1990 at 44° 01' N, 63° 05' W. A second male specimen (NSM 10001, Fig. 1) was similarly caught at 183 m on 22/10/1989 in Emerald Basin (44° 22' N, 62° 42' W). These two specimens are the first and second records of this species from Atlantic Canada and extend its range northward from North Carolina. The following is a description of the specimens with additional information from Bigelow & Schroeder (1948) and Compagno (1984).

Description Body stout anteriorly, tapering posteriorly and compressed posterior to pelvic fins. Head bluntly rounded and short. Caudal peduncle short and stout with dorsal fin base length entering 1.2-1.4 times in length from dorsal fin insertion to upper caudal fin origin. The ventral caudal peduncle length enters 1.8-1.9 times in the dorsal caudal peduncle length. No precaudal pits. Eye large and oval, horizontal diameter 4.9-5.2 times in head length. Mouth large and crescentic, length 0.6 times in width. Mouth width 0.4 times in preoral length. Upper lip covering rear part of lower jaw. Spiracle small, slightly above level of upper eye margin and slightly behind mouth corner level. Gill openings long, extending from a level with top of eye onto the ventral throat surface obliquely. The first gill opening is the longest and subsequent ones are progressively smaller. The gill arches are finely denticulate. Skin denticles have 3 horizontal crests terminating in points. On each side of the lower jaw there are 6 large teeth plus a median tooth with 4 central cusps in two pairs, each pair recurved laterally. The 6 large teeth are twice as wide as high and have 5-6 laterally-directed cusps. The cusps decrease in size laterally. Remaining lower jaw teeth are progressively smaller. In the upper jaw, the first 2 teeth have a single cusp and are slightly curved laterally. Subsequent teeth are larger, although they progressively decrease in size towards the mouth corner, have a stronger lateral curve, a broad base, a rounded basal cusp for 4 teeth which then becomes a pointed basal cusp for 3 teeth. Remaining upper jaw teeth are low and rounded with cusps weak to absent. The dorsal fin has a rounded tip, a weakly convex posterior margin and the rear tip is about half as long as the fin base and is triangular. The dorsal fin origin is just behind the cloaca level. The anal fin base is about equal to the dorsal fin base (anal base 0.9-1.3 times in dorsal base with the male having the larger dorsal fin base), the rear margin is almost straight and the rear tip is short. The anal fin origin lies under the middle of the dorsal fin base. The caudal fin is long, 2.8-2.9 times in total length. There is an obvious subterminal notch with a well-developed ventral lobe. The upper margin of the caudal fin is convex anteriorly and concave posteriorly. The posterior upper margin has larger denticles than the rest of the body. These denticles are smooth and oval and form a prominent edge to the fin. The lower margin is strongly concave posterior to the lower lobe. The pelvic fins have rounded tips and rounded margins. In the male the pelvic fin has an extended tip. Claspers lie in a dorsal groove of the pelvic fin and are black-tipped. The inner pelvic fin margins are attached anteriorly just posterior to the cloaca in the female. The pectoral fin is 1.7 times longer than broad, with a rounded tip, concave distal margin and an inner margin straight and 2.2-2.3 times in the anterior margin.

Preserved specimens have the back and upper sides grey, lower sides and abdomen white. A white lateral streak, up to 3.5 mm wide, runs from the head to near the end of the caudal fin on mid-flank. The streak dips sharply on the caudal fin base. The fins are grey.

Only two shark species have 6 gill openings. The bluntnose sixgill is distinguished from the bigeyed sixgill shark by having a short, broad blunt snout, six rather than five, rows of large, comb-like teeth on each side of the lower jaw, and the dorsal fin base length is about equal to or slightly longer than the distance from the dorsal fin insertion to the caudal fin origin.

The species is distributed world-wide in tropical and temperate seas. It is known in British Columbia but is rare on the Atlantic coast of North America, with a record from North Carolina in 1886, and records for Florida and the Gulf of Mexico.

Young are often closer inshore than adults which are found benthically below 91 m down to 1875 m. Adults of this species may rest on the sea bed during the day and rise to feed at night. Thus the small size of the specimens reported suggest that adults may be present in Nova Scotia waters. Generally regarded as sluggish, food nevertheless includes marlin, swordfish, sharks (including their own species), crustaceans, squids, seals and carrion. This species is ovoviviparous with 22-108 young.

Acknowledgements

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References

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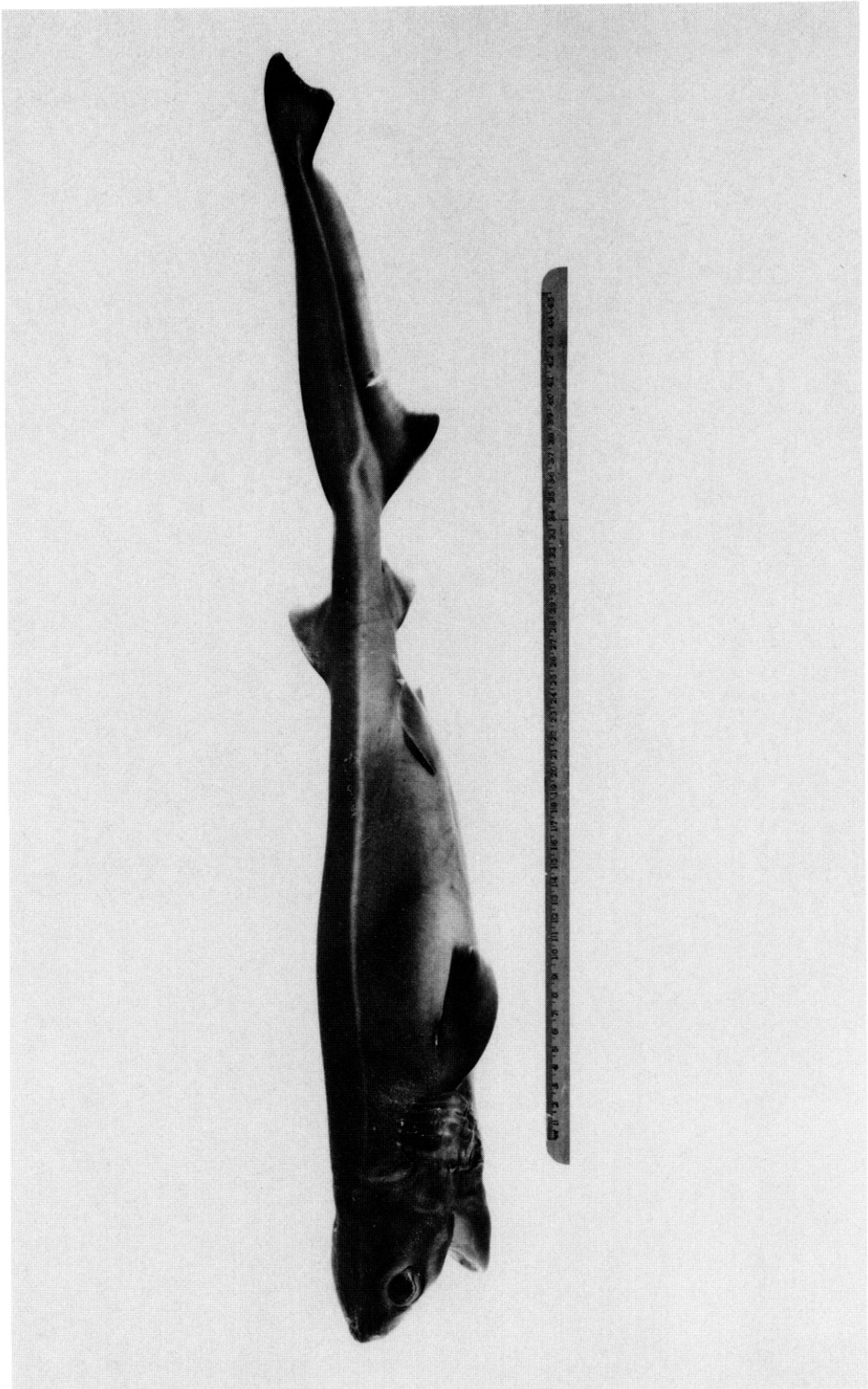


Fig 1 *Hexanchus griseus*, NSM 10001, from Emerald Basin, Nova Scotia.