

SIXGILL STINGRAYS

Family Hexatrygonidae

B. Séret & M.R. de Carvalho

Sixgill stingrays are large rays (reaching ~1.7 m TL) with a heavy, flabby, heart-shaped disc with broadly rounded and rather short pelvic fins. The snout is long, broad based and triangular in adults, and its shape and length vary with growth and preservation. The tail is short with 1 or 2 caudal stings and a low, elongate caudal fin with noticeable dorsal and ventral lobes. Six pairs of small gill slits are located on the ventral head. Eyes are small and positioned well forward of very large spiracles. Its mouth is large, wide, tube-like and highly protractile. Nostrils are well separated with nasal flaps fused to form a short, broad nasal curtain that does not overlap the mouth. The entire body is smooth, devoid of denticles, and the skin is very thin and easily damaged. Viviparous (histotrophic). Several species of sixgill stingrays have been described from the South China Sea, based mainly on relative snout length and shape. At present, pending further morphological and genetic analyses, they are considered as either ontogenetic or intraspecific variations of a single, widely distributed species, *Hexatrygon bickelli*. A rarely caught ray with few specimens recorded and preserved. Probably widespread in deep parts of the tropical Indo–Pacific, but its known distribution is patchy. Appears to be most common off Taiwan but this may be an artefact of fishing effort.

SIXGILL STINGRAY

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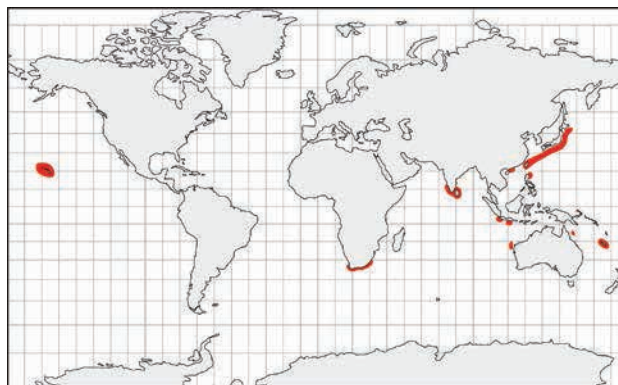
Hexatrygon bickelli Heemstra & Smith, 1980

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IDENTIFICATION. Large stingray with a soft, extremely flabby heart-shaped disc with a long triangular snout, small widely separated eyes, and short tail with long and slender caudal fin. Disc deeply concave beside eyes, apex broadly rounded, posterior margin evenly convex. Snout highly flexible and gelatinous, pointed, broad based and triangular; its shape and length varying with growth, much shorter and more obtuse in juveniles than adults. Eyes positioned far apart, closer to disc edge than to each other; separated from very large, obliquely oriented spiracles by several times corneal length. Six widely separated pairs of small gill slits. Mouth very broad, straight, capable of projecting forward to form a narrow tube. Nostrils widely set apart, nasal curtain broad but extremely short. Skin smooth on both sides, without denticles; very delicate and easily rubbed off or torn. Pelvic fins very small, narrower than mouth width across their bases. Tail much shorter than disc, slender but not whip-like, with one or two stings; caudal fin well developed, elongate, with upper and lobes narrow and similar in length.

COLOUR. Dorsal side of disc pale pinkish to reddish brown with slightly darker posterior margins; snout whitish to somewhat translucent; tail brownish with brownish black caudal fin. Ventral side largely milky white; pectoral and pelvic fins with broad dusky to black margins.

SIZE. Attains 170 cm TL. Males mature at ~110 cm TL, females at ~113 cm TL; born at ~45–48 cm TL.



HABITAT AND BIOLOGY. Indo-Pacific; South Africa to Hawaii (USA). Deepwater demersal, occurring on both soft and rocky bottoms, mainly on continental and insular slopes at 360–1120 m depths, rarely found in shallow water near the coast. Produces litters of 2–3 pups. Feeds on benthic invertebrates, mainly shrimps, which are presumably ingested using its tube-like protractile mouth. The highly dexterous snout is presumably used as a sensory organ to detect prey items in the substrate.

SIMILAR SPECIES. All other ray species possessing a caudal sting have 5 (rather than 6) pairs of gill slits.

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Sixgill stingrays : family Hexatrygonidae.

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