STUDIES IN AUSTRALIAN SHARKS, No. 3.

By Edgar R. Waite, F.L.S., Zoologist.

(Plates xxxix.-xli.).

Carcharias brachyurus, *Günther.*

(Plate xxxix.).

Carcharias brachyurus, Günther, Cat. Fish. Brit. Mus., viii., 1870, p. 369.

Carcharias macrurus, Ramsay and Ogilby, Proc. Linn. Soc. N.S. Wales, (2), ii., 1887, p. 163.

Dr. Günther's description was based upon a stuffed example, and under the circumstances, such plastic characters as the shape of the mouth and the snout can scarcely be regarded as affording reliable specific characters. Messrs. Ramsay and Ogilby, however, draw attention to these features as providing recognisable points whereby to distinguish a species described as new.

The omission of *C. macrurus* from my "Synopsis of the Fishes of N. S. Wales"[1] would indicate that I regarded this name as a synonym, an opinion strengthened by the examination of a specimen recently received in the flesh. This was forwarded from Lake Macquarie by Mr. James R. Rumsey, and is a female, 840 mm. in length. It is illustrated on the accompanying plate, which provides an accurate representation. Messrs. Ramsay and Ogilby describe the eyes as being rather nearer to the end of the snout than to the anterior gill opening ; the former measurement was evidently taken round the curve of the snout, and yields a much longer line than can be shown in a profile drawing. The phrase "the space between the dorsal fins being rather more than one-third of the distance between the end of the second and the base of the caudal" is incorrect, and should read "the space between the dorsal fins is three times that between the second dorsal and the base of the caudal." The position of the anal is not mentioned in the description of *C. macrurus:* I find its

---

[1] Waite—Mem. N. S. Wales Nat. Club., No. 2, 1904, p. 7.

origin to be beneath the middle of the second dorsal while Dr. Günther describes it as being opposite to that fin.

This shark is locally known as the "Whaler," and the following account is by the late Mr. Edward S. Hill,[2] written over thirty years ago, when the species seems to have been commoner than now.

"This shark attains only in its adult state to the length of five or six feet; the mouth is of a crescent shape, armed underneath and around with three or four rows of sharp teeth, and the point of the nose is almost of a transparent substance; it is gregarious, and may be caught on a moonlight night, in the early part of the year, by the score, provided you have good tackle.

A boat was in search of the mullet one fine night, just north of the Sydney Heads, with a long and strong net, when the crew of fishermen saw what to them appeared a fine school, and shot round it; but, to their astonishment it was whalers, and they succeeded in hauling over one hundred and fifty of these sharks, averaging about five feet long.

In strong tide rips like that of Port Stephens, at the Spit in Middle Harbour, or on the shallows near the Sow and Pigs and off Heeny's Head in Botany, they are troublesome, and will bite off as many hooks as you please; they afford good sport when you are inclined that way and have good lines and hooks.

At Middle Harbour we were very successful when we went on purpose to fish for these sharks; then we had hooks protected with wire, and of a good size. The female when caught was frequently opened, to examine the ovaries and count the young sharks attached to the outside of each egg by the umbilical cord. These were three or four inches long, and the moment they were liberated would swim about and become a prey to the others.

The whaler at this season, and in such position, will take a bait of any kind pretty well, even in day-time, and pull tolerably strong, and depend on the sharp teeth to cut the line whenever they please. It is curious and interesting to see their manœuvres, endeavouring to get free when they are secured with good tackle. First they will run; then they will get their shoulder towards the line, so that they might cut it across with the corner of their mouth; this failing they will then have recourse to rolling, to try their main strength. However, as you continue to haul them in, they will unroll, and try every dodge to get loose, till a blow with

---

[2] Hill—*Sydney Mail*, 1874.

a club on the point of the nose quietens them. It is astonishing how easily they are stunned by a blow on that part; on any other place the same would have no effect."

Egg-cases of the Cat Sharks.

The two types of egg-cases illustrated on Pls. xl. and xli. are not uncommon on the coasts in the neighbourhood of Port Jackson, but so far I have not succeeded in determining to what species of Shark they respectively belong. The majority of the cases which I have examined have been cast-up on the beaches, empty. The few I have seen alive have had the embryos insufficiently developed to make determination a certainty. They doubtless belong to the Scyliorhinidæ, of which we have two members, assigned to the genera *Catulus* and *Parascyllium* respectively.

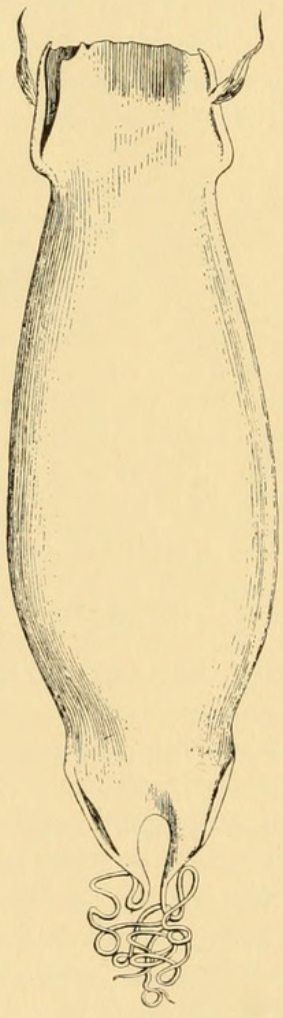

Fig. 38.
Catulus analis, Ogilby.

Catulus analis, *Ogilby, sp.*

(Plate xl., and Fig. 38).

Scyllium anale, Ogilby, Proc. Linn. Soc. N. S. Wales, x., 1885, pp .445, 464.
Scylliorhinus analis, Ogilby, *loc. cit.*, (2), iv., 1889, p. 180.
Catulus analis, Waite, Mem. Austr. Mus., iv., 1899, p. 31, pl. ii., fig. 1.

This, the smaller of the Cat Sharks, attains a length of 570 mm., and to it I tentatively assign the egg-case illustrated on Pl. xl. The body of the case is comparatively long and narrow, maximum examples measuring 73 mm. in length and 25 mm. in width. The exact size and shape of a large specimen is depicted at fig. 38, and a contained embryo measuring 32 mm. in length, was developed only sufficiently to enable it to be identified as a member of the family. The plate shows an egg-case *in situ*, attached by its tendrils to a sea-weed *(Phyllospora comosa)*. In colour, the egg-case of the Spotted Cat Shark is usually dark brown, though some specimens are much lighter in tint.

Parascyllium collare, *Ramsay & Ogilby.*

(Plate xli.).

Parascyllium collare, Ramsay and Ogilby, Proc. Linn. Soc. N. S. Wales, (2), iii., 1888, p. 1310; Waite, Mem. Austr. Mus., iv., pl. ii., fig. 2.

The Collared Cat Shark reaches larger dimensions than the fore named species, attaining the length of 825 mm. The egg-case, which I believe to be of this species, is of considerable capacity, measuring 73 mm. in length and 38 mm. in breadth, and is light horn-colour in tint. The illustration shows its shape very well, and represents an example trawled on the "Thetis" Expedition in 1898, and obtained at a depth of 63-75 fathoms off Port Kembla. Another living egg was trawled off Botany Bay in 79-80 fathoms. The former specimen is attached to a Gorgonia (*Plumarella penna*, Lamarck), and contained an embryo measuring 43 mm. in length.

I take this opportunity of correcting an error in the explanation of the plate, published in the Memoirs of this Museum and quoted above. "Fig. 2. Male, three-fourths natural size," should read "less than one-fourth natural size."

Waite, Edgar R. 1906. "Studies in Australian sharks. No. 3." *Records of the Australian Museum* 6, 226–229.
https://doi.org/10.3853/j.0067-1975.6.1906.1002.

View This Item Online: https://www.biodiversitylibrary.org/item/31431
DOI: https://doi.org/10.3853/j.0067-1975.6.1906.1002
Permalink: https://www.biodiversitylibrary.org/partpdf/15844

Holding Institution
Harvard University, Museum of Comparative Zoology, Ernst Mayr Library

Sponsored by
Harvard University, Museum of Comparative Zoology, Ernst Mayr Library

Copyright & Reuse
Copyright Status: NOT_IN_COPYRIGHT

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at https://www.biodiversitylibrary.org.

This file was generated 16 April 2022 at 12:10 UTC