

# STUDIES IN ICHTHYOLOGY.

No. 14.\*

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(Plate xvii and Figures 1-5.)

Family CARCHARIIDAE.

Genus *Odontaspis* Agassiz, 1835.

*Odontaspis* Agassiz, Poissons Fossiles, iii, 1835, p. 55; and 1838, p. 87; 1843, p. 287, pl. G, figs. 1, 1a-d (as *Lamna*) and pl. P, figs. 1-4. Orthotype, *Carcharias ferox* (Risso). *Odontaspis* White, Vertebr. Faunas Engl. Eocene, May, 1931, p. 48.

*Odontaspis herbsti*, sp. nov.

(Plate xvii, fig. 1, and Figure 1.)

Head subconic with the long snout broadly rounded from both dorsal and lateral aspects, not produced as in *Mitsukurina*. Nostrils large, transverse, with small, rather acute lobe, much nearer mouth than tip of snout. Eyes large, oval, nearer end of snout than first gill-opening, not adnate to side of head, and without nictitating membrane; pupil a vertical ellipse. No visible spiracle. Aquaeductus vestibuli inconspicuous, 10.7 inches from tip of snout. Mouth crescentic, anteriorly level with nostrils and before eye-level and not reaching far behind eyes. Tongue and palate rather rough. Teeth said to be embedded in the gums in the live shark, except when biting, when they are exerted and the lips are drawn back. No central symphyseal tooth, the shagreen entering the mouth at symphyses. Teeth mostly with a pointed central fang and two (rarely three) small acute cusps on each side of it, but there is much variation in size and shape on different parts of the jaws, and those at the corners of the mouth are very small. There are no serrations. The enlarged anterior fangs are flexuous and thick, but the lateral ones are thinner and more erect. The two subequal roots are separated by an arc and the bases of adjacent teeth do not overlap. The teeth of the lower jaw are slenderer than those of the upper. Some of the anterior teeth of the holotype were broken during its struggles; it has four small "eye-teeth" on each side in upper jaw.

The dentition is better shown in the cleaned jaws of the paratype, a larger specimen (Austr. Mus. regd. no. IB. 1859), which agrees well with Dr. Errol White's restricted concept of the genus *Odontaspis* (White, Vertebr. Faunas Engl. Eocene, 1931, page 47), that is, "the crowns of the teeth, especially in the front of the jaws, are very sharply pointed and flanked (on either side) by two lateral denticles equally sharp". There is

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\* For No. 13, see RECORDS OF THE AUSTRALIAN MUSEUM, Vol. xxii, Part 1, June 30, 1948, pp. 70-94, figs. 1-11.

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