

TRANSACTIONS  
OF THE  
*Nova Scotian Institute of Natural Science.*

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ART. I. — ORTHAGORISCUS MOLA. COUCH. TAKEN HALIFAX HARBOR, OCT. 1873. BY J. BERNARD GILPIN, ESQ., M. D., M. R. C. S.

*(Read November 9, 1873.)*

THIS singular oceanic fish measured, extreme length five feet six inches; breadth, half way between tip of nose and dorsal fin, three feet one inch; eye, diameter three inches, and eight inches from tip of nose; dorsal fin two feet two inches in height; anal one foot eleven inches. Color, upper part dorsal anal and caudal fins and back, bluish black. Lower parts of cheeks, chin and belly soiled white. The soil being caused by small black points on the white. In reflected lights the whole white parts had a bright pearly lustre. In form orbicular, and much compressed, perhaps (though not measured) not more than ten inches in its thickest part. The back and belly both with a sharp carinated edge. Two roundish ridges commencing above and below the eye lost themselves about the middle of the body. The upper forming a kind of eye-brow, the latter making a pouting lip and cheek. The mouth was roundish, small with a feeble look, and an interrupted band of enamel served for teeth to both jaws. The nostrils were two lunated slits on each side of what resembled nasal bones rather than intermaxillaries, and which were moveable. The iris was in a sunken orbit of three inches in diameter in death, (though no doubt in life protuding) it is silvery and half covered by a fattish membrana nictitans. The gill was also a sunken elliptic orifice below which a dark purple spongy substance showed. The pectoral fin was immediately behind the gill, orbicular small, having several radiating ridges on its substance, nearly immovable and lodged in a hollow of the body. The skin was covered with large granulations or small tubercles, pearly in a reflected light. There was no

lateral line. The dorsal and anal fins both had rays in faint longitudinal marks. The part of the body behind the fins tapered gradually away, the upper half was divided into four irregular lobes, the lower part too irregular a line to classify, and contained a sharp point near the bottom. I could not detect anything approaching to fin rays edging what may be called the tail, except that the tubercles or granulations covering the whole body were larger and more numerous on the free edge.

Gunther speaks of a spine or horn on the forehead, this was wanting, though there was an approximation to it in a sharp protuberance. His spine in the tail was also only a sharp place. A faint brownish wash on the breast was the only approach to Couch's colouring, nor was there that decided black band around the tail as described and figured by Dr. DeKay. These probably are the markings of the young. I was unable to dissect the whole fish from its putrid state. The liver was very large, pale yellow, and oily; the intestines simple and short, and the whole body of the fish formed by an oily cartilagenous substance about two inches thick on the belly, three or more on the back. The skin was intimately joined to this, as not to be separated by a knife; but pieces cut out and exposed to the air, slowly dissolved in oil, leaving the skin entire. This substance was beautifully white, cut with a fine pearly edge, and resembled adipocere. The whole fish was of one undulatory elastic mass. The bones as far as I could perceive were cartilagenous and cut easily with a knife. In profile the fish resembles the single screw propeller used in the service, and no doubt the motion gained by rotation, is in the fish obtained by the oscillation in opposite directions by both fins, the tail part having motion enough to steer. The fishermen relate accounts of its great velocity when attacked and roused, though usually it is surprised basking upon its side and sleeping.

Cuvier informs us that the skeleton of this order of fishes is fibrous, yet its "tardy indurations" to use his own expression—its—all but rudimentary ribs, and absence of suture in the maxillary bones bring it exceedingly near the cartilagenous fish, and causes one to wonder how motion can be transmitted through its unwieldy undulatory elastic mass.