

XVIII. *A Description of the Porbeagle Shark, the Squalus Cornubicus of Gmelin, Var. α.* By the Rev. Samuel Goodenough, LL. D. F. R. S. Tr. L. S.

Read February 3, 1795.

MR. Pennant, whose zoological labours will ever be considered as a prime ornament to the science of Natural History as well as his native country, professes to have had no opportunity of seeing this species of *Squalus*. We lament that such copious and elaborate works should ever be defective in any respect; yet, whoever has turned his thoughts to such compositions, must be sensible that deficiencies are unavoidable. To complain of such omissions marks the Pseudo-naturalist. Instead of noting what has not been done, the grateful mind of a true naturalist receives with thankfulness what is collected for his information; he is anxious to supply little defects, and feels a laudable pride in making use of the opportunity. I am induced from motives of this kind, to lay before our society the description of the *Porbeagle Shark*.

During my stay at Hastings in the month of September 1793, the fishermen brought this animal to shore. My friend the Rev. Mr. Whitear (to the ingenuity of whose son, Mr. William Whitear, I am indebted for the drawing of its figure, which is executed with great exactness), happening to be at the sea-side at the time, secured  
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it for my inspection. It had been landed about four hours when I first saw it. It weighed twenty-six pounds.

The length of the body, from the tip of the nose to the extremity of the tail, was three feet ten inches. The colour of the body was a deep blue on the back, and white or silvery underneath. The shape was round, except for about six inches from the tail, where it was depressed. At about one inch from the tail was a semicircular or lunar fossule or impression, the points towards the tail. Where the body was depressed, the sides were raised into a sharp angle or elevated line. This line was about eight inches long, and ran out into the middle of the tail, or something more.

The nose was projecting and sharp. On either side from the nose to the eyes, were numerous minute perforations or pores. The eyes were placed four inches from the point of the nose, and were upon an exact level with the surface of the body. They were an inch in diameter, the pupil black, the irides white. Five inches and a half behind the eyes were five gills (*spiracula*) placed in a regular series; the apertures were perpendicular, and about three inches long: they occupied a space of nearly three inches and a half.

Immediately behind the gills were the pectoral fins, which were eight inches long, and behind of a semilunar form. Six inches behind the pectoral fins, the ventral were placed; they were three inches three quarters long, and behind also semilunar. Between the ventral fins was a longitudinal aperture nearly three inches long. *Intra fissuram utrinque mammilla brevis carnosae s. cartilagineae*: Four inches behind the ventral fins the anal appeared, one inch seven eighths long. It was placed vertically, behind semilunar. The base of the tail was four inches from the anal fin. The tail was of a lunar form, vertical, the upper lobe nearly one third longer than the lower.

Of the dorsal fins, the first was fifteen inches and three quarters from the point of the nose; it stood erect, four inches and a half high, and five and a half long. The second was twelve inches behind this, of the same length and size as the anal, to which it stood nearly opposite.

The skin, when stroked backwards, was a little roughish, and an obsolete line of minute tubercles ran from the head down the sides, and at length ended in the thick elevated ridge, which took place at the depression of the body near the tail.

We have been hitherto speaking of the fins and the upper side of the body.

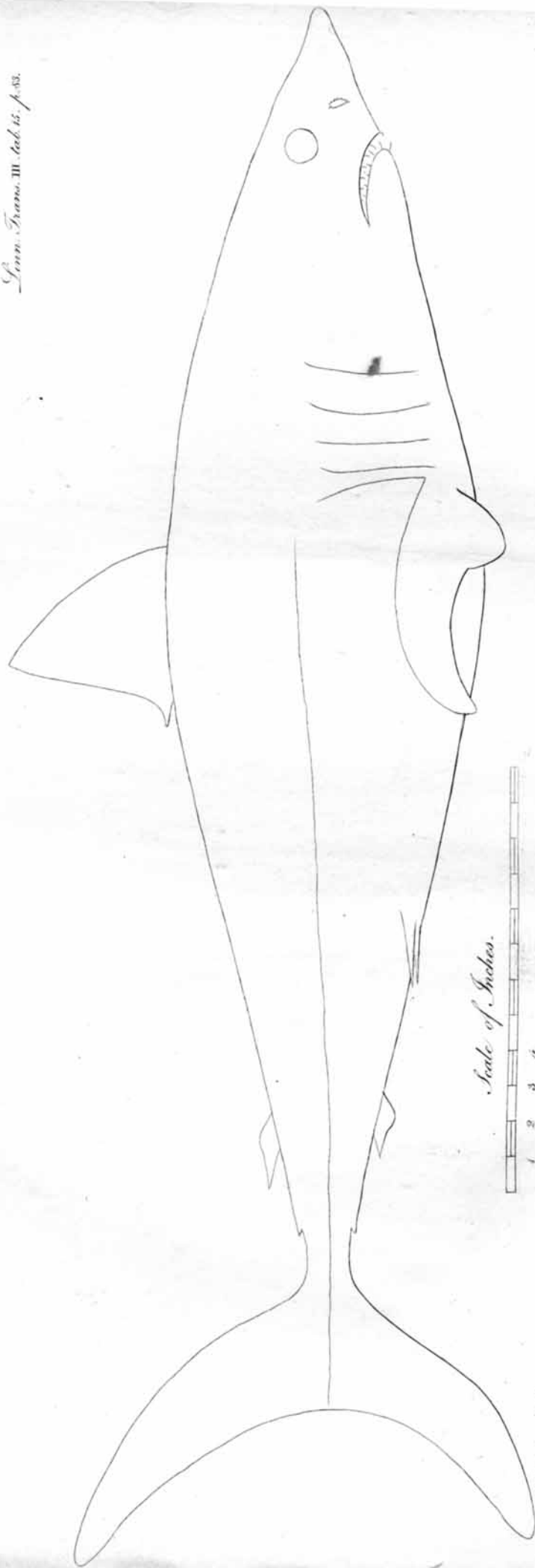
On the under side, from the point of the nose to the nostrils, were numerous minute pores or perforations. The nostrils were three inches from the point of the nose, of a lunar form, the extremities pointing towards the tail. At an inch and one eighth from the nostrils, was the highest part of the curvature of the mouth. The mouth was semicircular, about five inches wide. The upper jaw had two rows of teeth, except in the front, where the two middle ones stood single. The under jaw had two rows also, except in the front, where the two middle teeth had a triple row. The inward row was bent inwards, the others all turned outward. The teeth were white, very sharp, smooth, two-edged, with a little acute process at the base on either side. This process in many lay concealed within the gums. The tongue was white, very short and cartilaginous.

All the fins were blueish before and whitish behind; they were also all of a firm texture, very strong, cartilaginous, and to all appearance, for I did not dissect them, without bone or nerve.

The genus of *Squalus* is not well known, owing to the very imperfect descriptions which we have of them; this has induced

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*Linn. Trans. III. Tab. 14. p. 88.*



*Scale of Inches.*



*W. Whistler del.*

me to be so very particular in my account of this species. If I am wrong in supposing it the *Porbeagle* of Mr. Pennant, I can answer for the exactness of the description. It cannot be the *Beaumaris Shark*, because Mr. Davies (upon whose consummate accuracy any one may implicitly rely) describes it with a blunt nose; this has a sharp one. Upon what authority Gmelin joins the *Porbeagle* and *Beaumaris* sharks as one species, I do not pretend to know. Perhaps it would be advisable that those who have opportunities should examine them very minutely. Gmelin describes it as having a fold or plait (*plica*) on each side of the tail. In the present species there was a strong elevated line or ridge, but nothing of a plait.

From the rows of the teeth, the fishermen who caught it judged it to be two years old. My friend Mr. Whitear told me, that he has seen them eight feet long, with a triple row of teeth.

~~There was nothing in the stomach.~~

The essential character of this species may be expressed as follows:

*S. corpore tereti antice acuto caudam versus depresso et utrinque angulato.*

TAB. 15 represents an outline of the *Squalus Cornubicus*, one fourth of its natural size.