

ART. XVII.—*Notes on the Skull of Balæna marginata, described in "Transactions of the New Zealand Institute," Vol. ii., p. 26., as the Type of a New Genus, Neobalæna.* By Dr. J. E. GRAY, F.R.S., etc.

[Reprinted from "*Annals and Magazine of Natural History*," 1870, p. 154.]

[Read before the Wellington Philosophical Society, October 22, 1870.]

IN the essay on Whales published in the "Voyage of the Erebus and Terror" I established a species of true Whalebone-Whale on three examples of whalebone which I had received from Western Australia, believing it to belong to the same genus as the Greenland Whale (*Balæna*), as the whalebone was of long slender shape, and of a very fine texture, with a large quantity of enamel, which is a peculiarity of the baleen of that genus. Sir George Grey, the late Governor of New Zealand, has obtained the skull of *Balæna marginata* from the Island of Kawau, New Zealand, and has presented it to the Museum at Wellington. Dr. Hector has given figures exhibiting four views of this skull in the *Transactions and Proceedings of the New Zealand Institute* for 1869, Vol. ii., which was issued in April, 1870. These figures show that the whale, which has long, slender, and fine-textured whalebone or baleen like that of the Greenland Right Whale, forms a very different genus from the restricted genus *Balæna*. The brain-cavity forms a much larger part of the skull; the beak is much shorter and broader at the base, gradually tapering to a point in front; and the lower jaw bones are thin, compressed, and high, with the upper edge dilated and inflexed the greater part of their length, and the lower edge similarly dilated in the front part or chin.

I propose for this animal the name *Neobalæna*; and it may be thus characterized:—

NEOBALÆNA.

Skull rather depressed; brain-cavity nearly as long as the beak, depressed, much expanded on the sides, with a very deep notch on the middle of each side over the condyles of the lower jaw, and with a subtriangular crown-plate. The nose as broad as the expanded brain-cavity at the base, regularly attenuated to a fine point in front, and slightly arched downwards. Lower jaw laminar, compressed, high; the upper edge thin, and inflexed the greater part of its length, erect in front; the lower edge inflexed in front, the rest of the edge being simple. The baleen elongate, slender, several times as long as broad, with a fringe of a single series of fine fibres; enamelled surface smooth and polished, thick.

Neobalæna marginata.

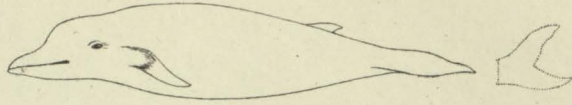
Balæna marginata, Gray, *Cat. Seals and Whales Brit. Mus.*, p. 90; Hector, *Proc. and Trans. New Zealand Institute*, 1869, t. 2b. f. 1-4; *Ann. and Mag. Nat. Hist.*, 1870, Vol. v., p. 221.

Hab. New Zealand.

This is interesting, as showing that the true *Balæna* or Right Whale of the North Sea and that of the South Sea are each a peculiar genus.

The width and general form of the beak of the skull is somewhat like the beak of some of the Finner Whales; but it does not at all justify Mr. Knox's idea that *Balæna marginata* is a Finner. But this difference of skull makes us more anxious to have the description of the entire animal and its skeleton, as the animal may prove to be the type of a new family of Whales, between the true Whales and Finners.

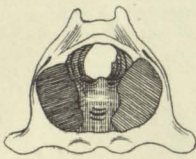
This pigmy whale, which is not more than 15 or 16 feet long, is a representative in the Southern Ocean of the gigantic Right Whale of the Greenland seas. It has the most beautiful, the most flexible, most elastic, and the toughest whalebone or baleen yet discovered; and if it were of larger size, it would fetch a much higher price than the whalebone of the Greenland whale, the latter being three or four times the value of the brittle coarse whalebone of the *Eubalæna* or Right Whales of the Southern and Pacific Oceans. The trade of the Continental nations being chiefly confined to their colonies, or their merchants obtaining the whalebone that is used in their manufactures second-hand, there are not in the market the varieties of whalebone and finnerbone which we have in this country, where the whalebone and finnerbone from different localities bear each a different value. This perhaps explains why the Continental zoologists (as Eschricht) who have paid attention to the structure of whales have not paid sufficient attention to the characters afforded by the shape, structure, and colour of this substance to which I called their attention more than twenty years ago, and showed its value as a character for distinguishing the genera and species. It has been a fertile subject of reproach to me that I established some species on the characters afforded by this substance; but I need only quote, as a proof of the little attention M. Gervais has paid to this part of my work, that, in his book on the anatomy of whales, now in progress, after saying that I have established the species *Balæna marginata* on three blades of whalebone, he says I have called it *Eubalæna marginata*—thus confounding it with the whales with brittle and coarse whalebone, whereas the chief reason that induced me to consider the blades to belong to a distinct species was their very fine and tough structure. The accuracy of the determination is now proved by the very different form of its skull from that of any other known whale. In the same manner, the *Physalus antarcticus*, also established on finner-fins or baleen imported from New Zealand, has been proved to be a very distinct species of that genus, named Sulphur-bottoms by the whalers.



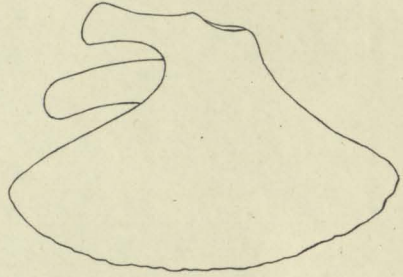
ZIPHID WHALE

See Papers by Knox & Hector.

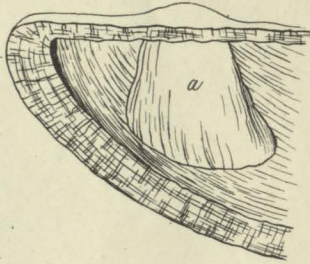
Profile of Species seen in 1862.



Cervical Vertebrae.



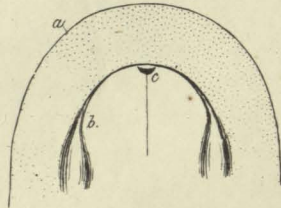
Scapula.



Tooth enclosed in a capsule (a) after removal of jaw.



Anterior limb.



Lower buccal surface.
(a.) Lip when cuticle removed covered with minute hairs.
(b.) Denture groove and dental prominences.
(c.) Glandular orifice.