

XLIII.—On a New-Zealand whale (*Physalus antarcticus*, Hutton), with notes

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natural groups. The isolated ones, which contained the indigo, were more or less globular, from 1 to $1\frac{1}{2}$ 6000th of an inch in diameter; provided with a short, pointed beak supporting a single cilium, about five times the diameter in length, and throwing out and retracting ray-like pseudopodia from their circumference, which was thus ever changing its form.

The "groups" consisted of an aggregation of such spongozoa charged with the indigo, and altogether formed round or elliptical dark blue masses, with a hollow interior and a circumference not only fringed with cilia, which were motionless, but also with a number of shorter ray-like pseudopodia.

The interiors appeared to be in direct communication with the branched system of excretory canals; but how the particles of indigo get from the pores to the canals I am ignorant. Possibly the pores and the canals may also be in direct communication, and cilia not only take the particles of food into the spongozoa, but, by reverse action, bring out the undigested parts by the same course.

Thus, however, in *Halisarca Dujardinii* the same kind of spongozoa exist as probably in all the other sponges, aggregated into similar groups, communicating respectively with the excretory system of canals.

I need hardly add that *Halisarca Dujardinii* is void of spicules, as Dujardin and Johnston have described it ('Annals,' *loc. cit.*), and not the spiculiferous sponge described by Dr. Bowerbank under this name. It is, *minus* the spicules, of the same structure as the Gummineæ; and therefore all these gelatinous sponges may be assumed to possess the same kind of spongozoa (*vide* 'Annals,' *loc. cit.*).

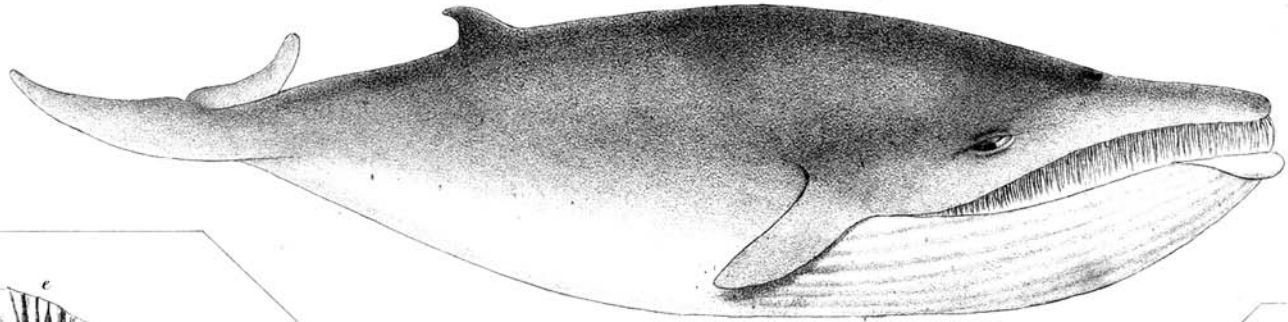
XLIII.—*On a New-Zealand Whale* (*Physalus antarcticus*, Hutton), with Notes. By Dr. J. E. GRAY, F.R.S. &c.

[Plate XVI.]

PROF. F. W. HUTTON, keeper of the Otago Museum, Dunedin, New Zealand, has sent the skeleton of a whale taken off Otago Head in October, 1873. He has also sent a slight account accompanied by a drawing of the whale, and the measurements of it when fresh, as follows:—

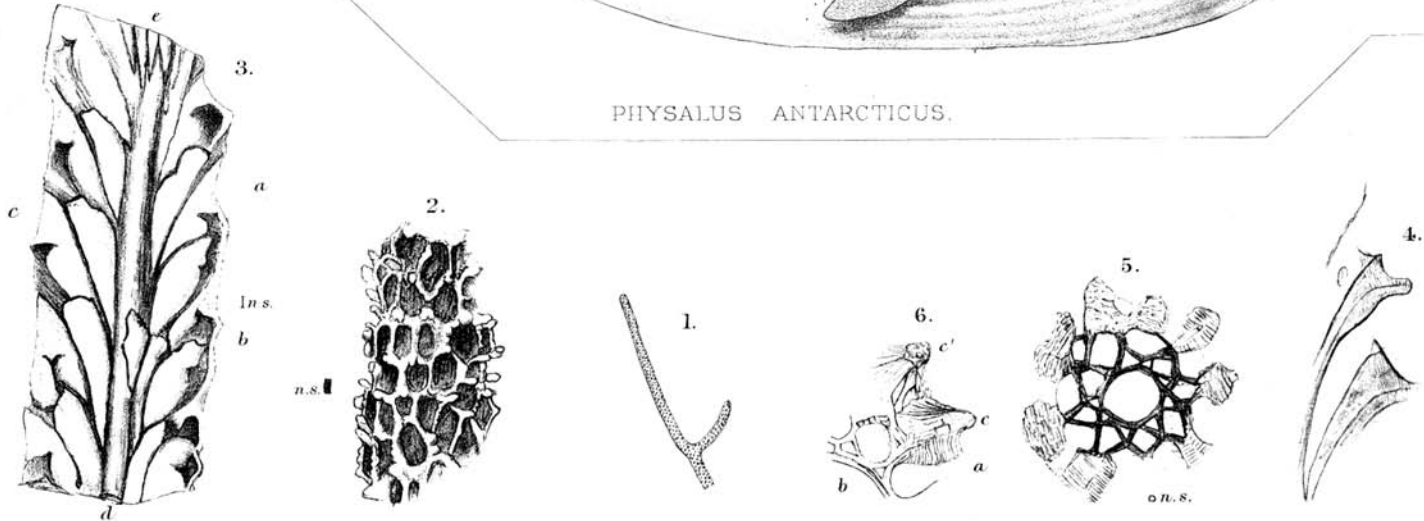
"Whale dark grey above, shading off gradually into yellowish white below. Baleen yellow with a narrow black margin.

A.



B.

PHYSALUS ANTARCTICUS.



	ft.	in.
Length along curve of back from end of caudal flipper to snout.....	16	2½
Straight	15	6
From snout to blowhole	2	5
From snout to eye	3	0
From end of caudal to dorsal	4	9
Girth at pectoral	10	0
Anterior margin of dorsal	1	3
Height of dorsal	0	7
Breadth „	1	0
Pectoral flipper, length	2	7
„ breadth	0	8
Caudal flipper, length	1	6
„ breadth	4	8
Weight	27 cwt.”	

Mr. Hutton has considered this whale to be my *Physalus antarcticus*, noticed in the ‘Zoology of the Erebus and Terror,’ from a quantity of yellowish white baleen sold as New-Zealand whalebone. But the small size of the whale, only 16 feet long, and the baleen being described as yellow with a narrow black margin, makes me think it probable that the animal is the one which yields the long slender whalebone on which I established the pigmy whale (*Balæna marginata*), which, we know, inhabits New-Zealand, because Governor Grey found its skull on the island of Kawau; it was figured by Dr. Hector, and was constituted by me a genus, *Neobalæna* (see Ann. & Mag. Nat. Hist. 1870, v. p. 221, vi. p. 155, figs. 1 & 2).

If this should prove to be the case, it will be a very important discovery; for it will prove that the genus *Neobalæna* forms a group intermediate between the true whales and the finners (*Physalidæ*). The animal, though it has the throat and front part of chest plaited like the finners, has the large head and short body of the whales, the head being one fourth the entire length, and the caudal fin in breadth rather more than one fourth the entire length from end of tail.

It is to be regretted that Mr. Hutton did not describe the shape of the baleen—if it was short and broad like that of the finners, or long and slender like that of the *Balænidæ*.

The baleen on which I established *Physalus antarcticus* is short and broad, like that of a true *Physalus*, and evidently belonged to a much larger whale than the one from Otago Head.

Neobalæna, although it has the whalebone of the true *Balænidæ*, has a very peculiar kind of skull and ear-bone; and I should not be at all astonished to find that it has the plaited

throat and dorsal fin of a finner, combined with the short body and large head of a true whale (Balænidæ). The ear-bone is somewhat intermediate in form between the two groups, and fully justifies my opinion that when the entire animal and skeleton are known it may prove to be the type of a new family of whales (Suppl. Cat. Seals & Whales, p. 41).

I will describe the skeleton as soon as it arrives; for there is no doubt, from the proportion and size of the head and body, it is a new form of whale, if it is not *Neobalæna*.

XLIV.—*A Revision of the Genera Epicharis, Centris, Eulema, and Euglossa, belonging to the Family Apidæ, Section Scapulipedes.* By FREDERICK SMITH, Assistant in the Zoological Department of the British Museum.

Generic Characters of Epicharis, Klug.

Head not so wide as the thorax: eyes elongate-ovate; ocelli three, placed in a slight curve on the vertex: antennæ geniculate; the flagellum filiform, the first joint narrowed to its base: the labial palpi four-jointed, the two basal joints elongate, the first one third longer than the second, both flattened and membranaceous within; the third and fourth minute, attached near the apex of the second joint: the maxillary palpi two-jointed; the basal joint large, barrel-shaped, with its apex truncate, the second joint pear-shaped and minute: mandibles stout, with three blunt teeth at their apex. *Thorax*: the anterior and intermediate tibiæ with a single spine at their apex; the posterior tibiæ with two spines, the inner one pectinated: the anterior wings with one marginal cell, pointed at the base and rounded at its apex, having three submarginal cells, the first and second of nearly equal length, the second narrowed towards the marginal cell, receiving the first recurrent nervure a little beyond the middle; the third submarginal cell about two thirds of the length of the second submarginal, and receiving the second recurrent nervure near its apex.

The characters are drawn from *Epicharis rustica*.

An asterisk is prefixed to the descriptions of such new species as are in the collection of the British Museum.

1. *Epicharis rustica*.

Epicharis rustica, Latr. Encyc. Méth. x. (1825) p. 530; St.-Farg. Hym. ii. p. 170, ♀ ♂.

Apis rustica, Oliv. Encyc. Méth. iii. p. 8, ♀ (1792).

A. hirtipes, Fab. Ent. Syst. ii. p. 325 (1793).

Epicharis dasyptus, Klug, Illig. Mag. vi.; Blanch. Hist. Nat. des Ins. iii. p. 405; Schomb. Faun. Flor. Brit. Guiana, p. 591.

Hab. Cayenne; Para; Catagallo; Venezuela.