



## LXIV.—On the skeleton of the New-Zealand Pike Whale, *Balænoptera Huttoni* (*Physalus antarcticus*, Hutton)

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LXIII.—*On a new Species of Megapode.* By R. BOWDLER SHARPE, F.L.S., F.Z.S., &c., Senior Assistant, Zoological Department, British Museum.

THE Museum is indebted to Dr. Sharpey, F.R.S., for a specimen of a Megapode which was shot by Henry David Cooper, Esq., on the island of Trinkut, in the Nicobar group. I propose to call it

*Megapodius trinkutensis*, sp. n.

Above olive-brown, many of the feathers rather inclining to clearer and more rufous brown on their margins; wings uniform with back externally, the inner webs of coverts and quills deep brown, the primaries very pale fulvous brown on their outer webs; tail uniform with back; crown of head light bay; lores, cheeks, and region of the eye bare; ear-coverts, throat, sides of neck, and hinder part of latter forming a collar pale creamy fulvous; under surface of body rather lighter olive-brown than the back, greyish on the abdomen, thighs, and under tail-coverts; under wing-coverts olive-brown like the breast, except the greater series, which are greyish like the inner lining of the wing. Total length 15·5 inches, culmen 1·1, wing 9·7, tail 3·5, tarsus 2·45.

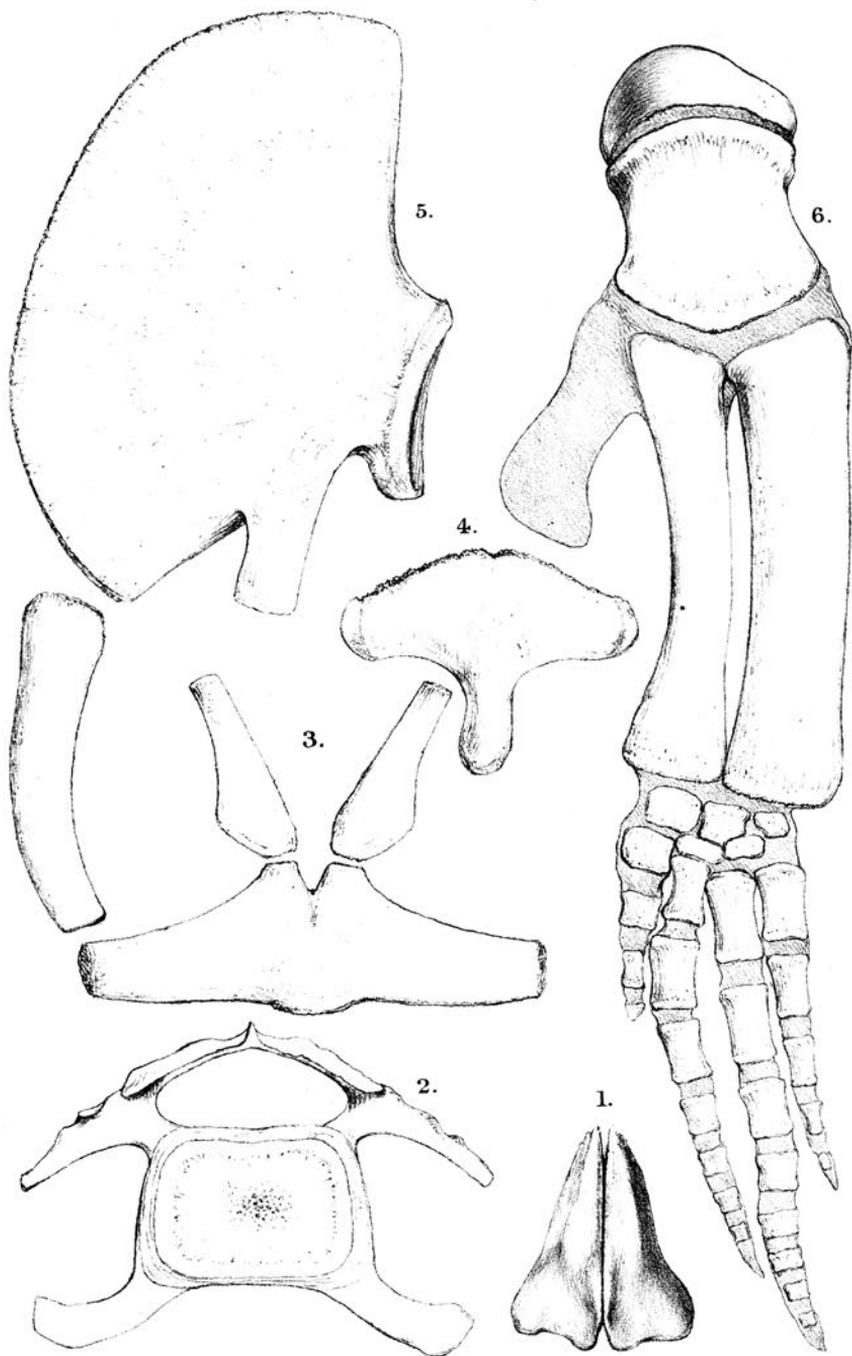
*Hab.* Trinkut Island, Nicobars.

This new species is closely allied to *M. nicobariensis*, as might have been expected; but on examining the excellent account of the latter bird lately published by Mr. Hume ('Stray Feathers,' ii. p. 276), it is evident that the Trinkut bird is distinct. It has none of the "French-grey" tinge on the throat and sides of neck, but, on the contrary, has these parts a pale fulvous colour, forming a collar round the hind neck.

LXIV.—*On the Skeleton of the New-Zealand Pike Whale,* Balænoptera Huttoni (Physalus antarcticus, Hutton). By Dr. J. E. GRAY, F.R.S. &c.

[Plate XVIII.]

THE skeleton of the whale of which Professor Hutton's account and figure are given in the 'Annals' (*ante*, p. 316, Pl. XVI. A), from Otago Head, has arrived at the British Museum. It is in a very perfect state and beautiful condition, wanting only one ear-bone, which Professor Hutton says he will send at the next opportunity.



It proves to be a species of the Pike Whale (*Balænoptera*), the Australian representative of the Pike Whale of Northern Europe, but perfectly distinct from it, and probably smaller than the European species; for though the skeleton is that of a young whale, the bones of the specimen sent are generally well knit, the epiphyses of only a few of the cervical vertebræ are free; the lateral wings of the atlas and the edge of the scapula are imperfectly developed. It differs from the European species in the larger size of the head, the fewer vertebræ, and the longer fingers compared with the length of the forearm.

Professor Hutton gave the name of *Physalus antarcticus*, Gray, to this species, thereby intending the *Balænoptera antarctica* mentioned by me in the 'Zoology of the Erebus and Terror,' p. 51, and founded on some yellowish-white Finnerbaleen imported from New Zealand. But this baleen must come from a very much larger species of true Finner; for it is much broader compared with its length. The New-Zealand Finner is not to be confounded with the *Balænoptera antarctica*, Van Beneden (Ostéog. Cét. p. 234), which name he gave to the gigantic *Sibbaldius antarcticus* described by Burmeister from Buenos Ayres (Proc. Zool. Soc. 1865, p. 713, figs. 1 & 2; Gray, Cat. Seals and Whales, p. 381, fig. 87), which Malm has named *Physalus antarcticus*. The bladebone of this species is 6 feet broad and 3 feet high. The bladebone of the Otago Pike Whale is only 15 inches broad and 9 inches high; and it differs from that figured by Burmeister not only in size, but in the glenoid being much more oblong, and in the shape and direction of the coracoid and glenoid processes.

It is necessary to refer this species to the genus *Balænoptera* and give it a new specific name, as *Balænoptera antarctica* is already used by Van Beneden. I therefore propose to call it *Balænoptera Huttoni*.

The genus *Balænoptera* may be divided into two sections, thus:—

- \* **BALÆNOPTERA.** Vertebræ fifty; cervical vertebræ sometimes ankylosed, with the neural canal broad, trigonal; fingers scarcely the length of the forearm-bone. *B. rostrata*: northern seas.
- \*\* **DACTYLÆNA.** Vertebræ forty-eight; cervical vertebræ quite free, with the neural canal broad, oblong, low; fingers the length of the forearm-bone. *B. (D.) Huttoni*: Antarctic seas.

*Balenoptera Huttoni.*

Dorsal fin erect, compressed, about two thirds the entire length from the nose. Skull about one fourth the entire length. Baleen elongate, triangular, much longer than broad. Vertebrae forty-eight; neural canal of cervical vertebrae broad and low, transverse; ribs 11 . 11, first simple-headed. Pectoral fin moderate, the middle finger as long as the forearm-bone.

*Physalus antarcticus*, Hutton, Ann. & Mag. Nat. Hist. 1874, xiii. p. 316, t. xvi. A (not Gray, 'Voy. Erebus and Terror').

*Hab.* Southern New Zealand, Otago Head.

The skull is elongate, 46 inches long, 50 inches over the curve, and 22 inches wide in front of the orbits. The back of the brain-cavity slopes forwards from the *foramen magnum* nearly to the nasal bones. The beak is 32 inches long from the back edge of the nasal bones, slightly arched, and gradually tapers from the front of the orbit to the tip; the sides of the maxillary bones are nearly straight or very slightly concave. The intermaxillaries are narrow, rather broader in the middle of their length, flat on the front part, and concave on the sides of the blower.

The skull greatly resembles that of *Balenoptera rostrata*, especially in the form of the intermaxillaries and the concavity at the hinder part of them.

The nasal bones solid; the pair above elongate, triangular, nearly twice as long as broad, flat at top behind, and shelving off on each side in front, leaving an angular keeled central ridge, which is square at the top, broader below, 4½ inches long and 3½ inches wide.

The lower jaw is strong, curved, 44 inches long, and has a distinct conical tapering coronoid process.

The palatine bones at the end of the underside of the upper jaw are oblong, four-sided, longer than broad; they are truncated, but rounded on the outer side of the front edge, and united by a straight median suture; they are attached by a large broad laminar suture to the pterygoid bones behind. These bones are much larger and broader than those of the *Rorqual du Cap*, Cuvier, 'Oss. Foss.' v. p. 370, t. xxvi. fig. 3 b; and they are much broader and larger than those of *Balenoptera Schlegelii* figured by Van Beneden, 'Ostéogr. Cétacés,' t. xiv. fig. 2.

The palatine bones are generally large in the Mysticetes, and the pterygoid bones are very small and widely separate; but in the New-Zealand Pike Whale they are larger than usual. The development of the palatine bones is one of the characters which separate the whalebone-whales from the

toothed Cetacea (Denticetes). In the porpoise the palatines merely form a band between the maxillæ and the pterygoid bones; but they vary in size in the different genera, being larger in some, as *Platanista*; they are very small, and the pterygoids large in *Hyperoodon* (Cuvier, Oss. Foss. v. t. xxiv. fig. 19, *g* & *h*); and they are large in *Catodon* (Cuvier, Oss. Foss. v. t. xxiv. fig. 1, *m* & *n*), where they approach nearer to the shape of those of the whalebone-whales.

One (the left) ear-bone is attached to the skull, and appears to differ from the ear-bones of *Balenoptera rostrata* figured in the 'Catalogue of Seals and Whales in the British Museum,' p. 191, fig. 56, in being shorter; but it cannot well be seen, as I do not wish to detach it from the skull.

The baleen is elongate, triangular, longer than broad at the base—when dry, horn-coloured, blackish on the straight edge, whitish on the inner hairy margin and at the tips. A blade is 15 inches long, and 2 inches wide at the base; but there are some rather larger.

The vertebræ are 48—cervical 7, dorsal 12 (with eleven pairs of ribs), lumbar 13 (with lateral processes, without any perforation at the base), caudal 16 (with only rudimentary lateral processes or none, and a perforation at base). There are seven chevron bones; but it is not quite certain that they are perfect.

Ribs eleven pairs. The first rib with a single head, and a broad sternal end; the other ribs slender, curved, all similar.

The cervical vertebræ are seven, all free. The atlas with a blunt broad process on each side; the axis thicker, with a keeled, wide, hood-like process above, the lateral processes abbreviated, leaving a broad rounded notch, most probably elongate when complete. The second, third, fourth, and fifth cervical vertebræ have a process from each lower side of the body. The processes of the second, third, and fourth are compressed, rather dilated at the ends, and rather produced at the upper margins of the end; those of the fifth are cylindrical, rather swollen at the ends; and there are only rudimentary ones on the sixth and seventh. The bodies of the vertebræ are oblong, four-sided, broader than high. The neural canals oblong, transverse; of the axis smaller, more rounded; of the other cervical vertebræ wider and lower, nearly as broad as the bodies of the vertebræ, and in this respect very different from the canal of the fifth cervical vertebra of *B. rostrata*, figured in the 'Catalogue of Seals and Whales in the British Museum,' fig. 51.

The sternum broad and expanded in front, and with a short stem behind; the front edge rounded, with a slight

notch in the middle, and with rounded ends. The sternum is  $6\frac{1}{4}$  inches broad, 5 inches long; the hinder part thick, cylindrical, about  $2\frac{1}{2}$  inches long, very different from that of *Balaenoptera rostrata* figured in the 'Catalogue of Seals and Whales in the British Museum,' p. 110, fig. 12, c, more like the sternum of *Balaenoptera musculus*, Van Beneden (Ostéogr. Cét. t. xii. fig. 14); but the upper part is more expanded, the central notch rudimentary, and the stem longer and more slender.

The os hyoides is  $8\frac{1}{2}$  inches wide and 3 inches long, dilated in the middle, with a notch in the front edge somewhat as in *Balaenoptera rostrata*. (Ostéogr. Cét. t. xii. fig. 4), but more dilated in the middle, and with a process on each side of the notch, to which is attached a flattened bone. M. van Beneden does not figure any processes to the os hyoides of any of his species in the 'Ostéographie' similar to those found in the skeleton from Otago.

The scapula broad and low, the upper edge being about one third of a circle, with well developed acromion and coracoid processes. The glenoid cavity large, oblong; the coracoid blunt; the acromion process coming from a ridge which extends up the upper margin, elongate and broad. The width 15 inches, the height 9 inches; the glenoid cavity  $4\frac{1}{4}$  by  $2\frac{5}{8}$  inches. The scapula is rather broader and lower, and has a smaller acromion process than that of *B. rostrata* figured by Van Beneden (Ostéogr. Cét. t. xii. fig. 6).

The bones of the fore fin are 28 inches long; the humerus 6 inches, the ulna and radius 10 inches, the longest finger 10 inches. The first finger with three bony joints and one cartilaginous one, the second with seven, the third (longest) with eight, the fourth with four joints.

There were sent with the skeleton a pair of ear-bones of another Finner; but they cannot belong to this skeleton, as the skull has the left one attached, and Professor Hutton informs me that one was unfortunately left behind, but it is on its way to the Museum. The pair of ear-bones sent are very like those of *Megaptera novæ-zelandiæ*, 'Catalogue of Seals and Whales,' p. 128, fig. 20.

## EXPLANATION OF PLATE XVIII.]

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|------------------------------------|--|---------------------------------------|
| <i>Fig. 1.</i> Nasal bone.         |  | <i>Fig. 4.</i> Sternum.               |
| <i>Fig. 2.</i> Cervical vertebrae. |  | <i>Fig. 5.</i> Scapula.               |
| <i>Fig. 3.</i> Os hyoides.         |  | <i>Fig. 6.</i> Arm- and finger-bones, |