

# ZOOLOGY.

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SEALS AND CETACEANS. *By William Henry Flower, F.R.S.*

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THREE species of seals and two of cetacea are known to be indigenous to Kerguelen Island. Single examples of two of the seals and one of the cetacea have been submitted to me, comprising—a skeleton of a female “sea leopard” *Ogmorhinus leptonyx* (Blainv.), one of a very young male “sea elephant” *Macrorhinus leoninus* (L.), and one of a full grown female cetacean of the genus *Globicephalus*. These are now in the British Museum.

## PINNIPEDIA.

### **Ogmorhinus leptonyx** (Blainv.).

*Phoca leptonyx*, Blainville, Journ. Phys. 1820, xci. 288.

*Stenorhynchus leptonyx*, F. Cuvier, Mem. du Mus. 1824, xi. 190, pl. xiii. 1 (not *Stenorhynchus*, Lamk. 1819, of the Crustacea; nor *Stenorhynchus*, Lat. 1823 of the Insecta).

*Ogmorhinus leptonyx*, Peters Monatsb. K. Akad. d. Wissenschaft. Berlin, 1875 Juni 10, &c.

“Sea Leopard.”—The female example killed in Observatory Bay, Royal Sound, 13th October 1874, judging from the condition of the bones, was not quite full grown. The skeleton does not differ to any appreciable degree from another of corresponding age and sex in the Museum of the Royal College of Surgeons, received from Tasmania. It has 7 cervical, 14 thoracic, 6 lumbar, and 3 sacral vertebræ. The tail was left in the skin. Extreme length from muzzle to tip of tail 7 feet 8 inches.

Dist.—This species is extensively distributed in the southern hemisphere, having been met with in South Georgia, the Falklands, Kerguelen Island, South Australia, Tasmania, New Zealand, Campbell Island, &c.

Professor Peters has lately proposed the name *Ogmorhinus* for the genus to which this seal belongs, the name *Stenorhynchus*, by which it is generally known, having been preoccupied in zoology.

### **Macrorhinus leoninus**, (L.)

*Phoca leonina*, Lin. Syst. Nat. ed. xii. 1766, i. 55.

*Ph. elephantina*, Molina, Saggio 1782, p. 260.

*Ph. proboscidea*, Perron, Voy. aux Ter. Austr. 1816, ii. 34.

*Macrorhinus proboscideus*, F. Cuv., Mem. du Mus. 1824, xi. 200, pl. xiii. (not *Macrorhinus* Lat., Fam. Nat. du Regne Anim. 1825, a genus of the *Coleoptera*).

*Mirounga patagonica*, J. E. Gray, Griffith's Animal Kingdom, 1827, v. 179.

*Morunga elephantina*, Gray, Cat. Osteol. Spec. Brit. Mus. 1847, p. 33; idem Cat. Seals and Whales, 1866, p. 38, fig. 13 (skull).

*Cystophora proboscidea*, Wyv. Thomson, in Good Words, 1874, November, p. 748 (Chal. Exped.).

*C. leonina*, J. W. Clark, in Nature, 1875, Sept. 2, p. 366 (German Tr. Exped.).

*Macrorhinus leoninus*, Kidder, Bulletin U. S. Nat. Mus. 1876, iii. 39 (Am. Tr. Exped.).

“Sea Lion and Lioness” Anson's Voy. 1748, p. 122 and figure.

“Sea Elephant” of authors; Eaton, Proc. Roy. Soc. 1875, xxiii. 502; “Platy-rhine seals,” idem, op. cit. p. 353.

Two young males casting their coats were killed with stones on the beach near Thumb Peak on the 8th December 1874; and several of each sex of corresponding age and size were shot with explosive bullets in Swain's Bay in the following month. These last were valueless as specimens.

Dist.—The sea elephant has long been known as an inhabitant of Kerguelen Island, and formerly was widely distributed along the coasts of the Antarctic and southern temperate seas.

Mr. Eaton in Proc. Roy. Soc. 1875, xxiii. 502, says:—“Some examples are uniformly reddish brown; others are pale, blotched and spotted with darker grey. They usually lie just above the beach, separately, in hollows among the *Acæna* and *Azorella*, where they are sheltered from the wind. On being approached they make no attempt to move away (possibly because there are no land animals, indigenous to the country, capable of molesting them, to cause them to acquire a habit of flight) but raise up the fore part of their body, open the mouth wide, and utter a peculiar slobbering cry.”

There is much confusion as to the synonymy of this species. It is the *Phoca leonina* of the Systema Naturæ, ed. xii., founded upon the “sea lion and lioness” of Juan Fernandez, described and figured in Anson's Voyage, 1748, the *P. elephantina* of Molina, 1782, and the *P. proboscidea* of Perron, 1815, and of many later authors. *Leonina* therefore is the earliest specific appellation.

With regard to the generic name, after *Phoca* (which of course is inadmissible, having since the dismemberment of the group been restricted by common consent of naturalists to *P. vitulina* and its immediate allies), *Cystophora* Nilsson, 1820, has priority for those who hold that there is not sufficient difference between the southern Sea Elephant and the well-known Hooded Seal (*Cystophora cristata*, Fab., or *borealis*, Nils.) of the Arctic seas to separate them generically. But those who hold the contrary opinion (and the remarkable dissimilarity of the auditory ossicles

inclines me to this view) should adopt *Macrorhinus* F. Cuv., 1824, which was afterwards needlessly superseded by *Morunga*, J. E. Gray.

It should be mentioned that *Macrorhinus* F. Cuv., is often (as in Agassiz, Nomenclator Zoologicus) quoted as if it had been first used in the Dict. de Sc. Nat. xxxix., 1826, and priority is accordingly misattributed to Latreille's use of the same name in the Fam. Nat. du Règne Animal, 1825, for a genus of the *Coleoptera*.

**Otaria gazella**, (Peters).

*Arctophoca gazella*, Peters, Monatsb. K. Akad. d. Wissensch. Berlin, 10 Juni 1875.

[The Fur Seal of Kerguelen Island does not resort to the sheltered waters visited by the American and English Expeditions. A single example was captured by the German Expedition at Betsy Cove, and according to Wyville Thomson (op. cit. p. 748) the Challenger Expedition seems to have obtained two in Fuller's Harbour.

It is due to Dr. Günther to state that, prior to my leaving England, he informed me of the occurrence at Kerguelen Island of an undetermined small species of seal besides the Sea Leopard and Sea Elephant, and showed me an unpublished drawing of its head. While the expedition was at Observatory Bay, I wrote to Captain Fuller of the "Roswell King," endeavouring to negotiate for a complete skeleton and skin of the Fur Seal, which he expected to meet with at Swain's Islands,—a small group off the N. E. coast of the main island. He returned in about a month afterwards without having killed or seen one in the course of his trip. The species was doubtless *A. gazella*, Peters.—*A. E. E.*]

CETACEA.

**Balæna australis**, Desmoulins.

[A pair of Right Whales were seen occasionally among the islands in Royal Sound, between the English Station at Observatory Bay, and the Prince of Wales' Foreland. I noticed portions of two old skeletons of this species stranded on the eastern shore of a promontory immediately to the eastward of Vulcan Cove, about five miles (an hour and a half's walk) from the head of Carpenter's Cove. They comprised the skulls, the lower jaws, the cervical and some of the other vertebræ, the scapulæ, and a few ribs. They were in tolerable condition, but it was impossible to convey even the scapulæ over so great an extent of bog and rocky hills to a boat at Carpenter's Cove.—*A. E. E.*]

**Globicephalus melas**, Traill.

? *Catodon svineval*, Lacepède, Hist. Nat. de Cétacés, 1804, p. 216, pl. xiii.

*Delphinus melas*, Traill, Nicholson's Journ. 1809, xxii. 81–83.

*D. globiceps*, Cuv. Ann. du Mus. 1812, xix., pl. i. 2.

*Globicephalus*, Lesson, Compt. de Buffon, 1828, i.

*Globiocephalus svineval*, Gray, Zool. Ereb. & Ter., 1846, p. 32.

*G. macrorhynchus*, auctorum (not Gray, op. cit., p. 33); Van Bened. & Gerv., Osteogr. der Cét. pl. lii.; Hector Trans. N. Zeal. Instit. vii., pl. xxvi. 3.

The "Blackfish," "Cäaing Whale," or "Pilot Whale."

This was the animal mentioned in Mr. Eaton's First Report (Proc. Roy. Soc. 1875, xxiii. 501), as found by Mr. Midshipman Forrest, dead in shallow water in Swain's Bay. The example is an adult female, all the epiphyses being united to the bodies of the vertebræ. The skeleton was complete; but about five of the caudal vertebræ and a few of the terminal phalanges have been lost. There are 7 cervical vertebræ, of which five are coherent, 11 dorsal, and 35 lumbo-caudal. Maxillæ visible as a narrow strip along the whole of the outer border of the rostrum.

Detention  $\frac{10-10}{10-10}$  (teeth much worn). Extreme length of body in the flesh, 19 ft. 4 in.

Principal measurements of the skull :—

Total length	-	-	-	-	26 inches.
Length of rostrum from the tip to the centre of a line drawn across the anteorbital notches	-				13·5 „
Width of base of rostrum at the anteorbital notches	-				10·3 „
Width of rostrum in its middle	-	-	-		8·7 „
Greatest width of skull	-	-	-		19·0 „
Breadth of occipital condyles	-	-	-		7·1 „
Mandible, length of	-	-	-		20·6 „
„ length of tooth line of	-	-	-		6·2 „
„ height of, at coronoid process	-	-	-		6·1 „

I can detect no difference between this skeleton and that of the "Blackfish" from the seas round Tasmania, five examples of which, presented by Mr. W. L. Crowther, F.R.C.S., of Hobart Town, are in the Museum of the Royal College of Surgeons. Indeed I must go further, and add that I can find no tangible osteological grounds for separating either the Kerguelen or the Tasmanian specimens from the well known Cäaing Whale, *Globicephalus melas*, Traill, of the N. Atlantic, the Grindval of the Faröese. When only one or two examples of each are compared together, it is not difficult to discover distinctions between them, because numerous individual variations occur in different parts of the skeleton; but when larger series of both Northern and Southern specimens are examined, these variations do not appear to resolve themselves into constant characters by which the one can be distinguished from the other. The reasons for giving to the specimens from distant seas a distinctive appellation have been mainly derived from the supposition that it was impossible that cetacea from widely remote localities could be specifically identical with one another; but this is an assumption too great to be made without proof, and in the present instance is especially inadmissible, considering that *Globicephali* almost, if not quite, identical have been observed by voyagers in all

intermediate localities. If an assumption such as this could be allowed, it would strike at the root of all our knowledge of the geographical distribution of animals. It is, however, possible that future observers with still more ample opportunities may succeed better in discriminating between the two. Meanwhile, until some valid distinctive characters shall be pointed out, I think it will be safest and most in accordance with the true principles of zoological nomenclature to designate them all by the specific name *melas*, under which one member of the group was first clearly described by Traill.

The *Catodon svineval* of Lacepede (1804) is possibly founded on the present species; but the description is so vague and inaccurate that it can hardly be conceded priority over the excellent account and figure given by Traill (1809). Cuvier, unacquainted with Traill's memoir, described and figured the animal independently in 1812 under the name of *Delphinus globiceps*. This hybrid word was modified by Lesson in 1828 into the generic term *Globicephalus*. Dr. Gray in 1846 revived the specific term *svineval*, and definitely applied it to this species in his subsequent catalogues, altering Lesson's generic designation at the same time to *Globiocephalus*.

All the specimens of *Globicephalus* from the southern hemisphere are often catalogued in systematic works under the name of *G. macrorhynchus*, Gray. In the *Osteographie des Cétacés*, pl. lii., a skull from New Zealand, closely resembling the one from Kerguelen, is figured by Van Beneden and Gervais under this name; but nothing is apparent in the figure to distinguish it from the skulls of *G. melas* from the coasts of Brittany and Iceland which are figured with it, excepting characters appertaining to a somewhat inferior age. The letterpress of this section of their work, which it is hoped may clear up some of the difficulties existing at present in the history and synonymy of this group, has not yet appeared. A skull figured by Dr. Hector in the *Transactions of the New Zealand Institute* (vol. VII., pl. xvi., fig. 3) under the name in question also resembles that of *G. melas*. And M. Fischer (*Journal de Zoologie*, 1872, i. 273) has been unable to detect any distinction of specific value between a skeleton of a *Globicephalus* brought from the Cape of Good Hope, by M. Verreaux, and those of individuals from the northern seas. The present specimen from Kerguelen Island, as well as the five from Tasmania mentioned at the commencement of these remarks, agree in the form of the cranium and the number of their teeth ( $\frac{10---10}{10-10}$ ) far more closely with skulls of *Globicephali* from Iceland (as figured in Van Beneden & Gervais *Osteogr. des Cet.* pl. li.), the Faroë Islands (*Mus. Roy. Col. Surgeons*), the British Coast (*British Museum*; figured in Gray *Cat. Seals and Whales*, 1866, p. 316, fig. 62), and the Mediterranean (as figured in Van Beneden & Gervais *Osteogr. des Cet.* pl. li.), than they do with the type of Gray's *G. macrorhynchus*. In all of them a strip of the maxilla is distinctly visible along the whole of the outer border of the rostrum.

It follows therefore, judging from the osteological characters only (for the descriptions of the external appearance of the "blackfish" of the south seas which we possess at present are too vague to furnish good zoological characters) that *Globicephali* almost if not quite identical are found in the North Atlantic and the Mediterranean, as well as in the seas of the Cape of Good Hope, Kerguelen, Tasmania, and New Zealand.

[Several decayed skulls of *Globicephalus* were found here and there on the shores of retired inlets in Royal Sound, and a pair of these animals often frequented a rocky bay adjacent to Observatory Bay, sounding along the edge of the kelp, and coming quite close to the land.—*A. E. E.*]

*Note.*—*Globicephalus macrorhynchus*, Gray, Zool. Ereb. and Ter. 1846, p. 33, is a well marked second species of this genus, whose geographical distribution is not yet clearly ascertained. The species was based upon a skull in the Museum of the Royal College of Surgeons (Osteol. Cat. No. 2519) presented by F. D. Bennett, Esq., and thus characterised by Dr. Gray:—

"Nose of skull short and broad, rounded in front, nearly as broad in the middle as at the preorbital notch. Teeth sub-cylindrical  $\frac{8}{8}$ . Lower jaw rounded in front."

This skull, which is quite adult, besides being smaller than that of *G. melas*, has the premaxillary bones so wide in their anterior half that they extend from side to side over the whole of the upper surface of the rostrum, concealing the maxillæ completely. A precisely similar skull from Guadeloupe is figured by Van Beneden and Gervais in the *Osteographia des Cétacés*, pl. lii. 3, under the name of *G. intermedius*, and another, from the Atlantic coast of the United States, by Cope in the *Proceedings of the Academy of Natural Sciences of Philadelphia*, 1876, p. 129, as *G. brachypterus*.

This is certainly not the species to which the Kerguelen specimen can be referred.

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