

STUDIES IN TASMANIAN CETACEA.

PART V.

Mesoplodon layardi, Gray.

By

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HISTORY.

The specimen under review was secured in Recherche Bay, D'Entrecasteaux Channel, during the winter of 1925, by Mr. H. Smith, and later the skeleton was obtained and has been articulated for the Tasmanian Museum collection. (Tasmanian Museum Coll. No. D.754.)

THE GENUS AND SPECIES.

As E. R. Waite has published in the Records of the South Australian Museum (1) a detailed description of a young male *Mesoplodon layardi*, and as the present specimen appears to be fully adult, it will be a useful comparison to construct our tables in terms of his; but, before doing so, attention is directed to the following notes upon the skull.

SKULL.

The skull, which is not quite intact, is 830 mm. long and 300 mm. wide at the *squamosal* regions. Its height from the par-occipitals to the vertex is 370 mm. The narial basin is 125 mm. wide and 112 mm. long, the limit in this direction being the actual bony depression which terminates at a line drawn across the two foramina. Narial asymmetry is not strongly marked, but standing behind the skull it can be noted that the right nasal aperture is slightly larger than the left. The mesorostral is completely ossified, the palatines, vomer, maxilla, and inter-maxilla having

all united to form a solid bony beak. For 25 mm. in front of the nasal basin there is a pit containing (2) perfectly hard, fenestrated bone, apparently the last remains of ethmoidal cells. In front of this the ossified mesorostral takes origin, and for the first 50 mm. of its length develops in the form of a groove 18 mm. wide, and manifests the minor asymmetry of the individual skull. For the next 75 mm. the bone contracts to about 8 mm. Thence, for the next 80 mm., it gradually expands to a maximum of 12 mm. — and lastly, for the next 230 mm., although retaining its width, it merges into the surrounding bones in an elongated area of depression. The present skull at its apex, namely, the common meeting place of the supra-occipital, the maxilla, inter-maxilla, nasals, and frontals, the whole of the bone is shattered by shot, dozens of which are still embedded in the bone.

Measurements of the girth of the beak, at points indicated above, give the following data:—

Girth at junction of area two and three	260 mm.
Girth at junction of area three and four	187 mm.
Girth at junction of area four and five	176 mm.
Girth at junction of area five and six	117 mm.

At the base of the skull the pterygoids are mutilated and except for a small moiety upon the right side the malars are missing—the fragment shows that at 40 mm. from its gomphosial origin it was only 2½ mm. in diameter. The mandibular symphysis is 280 mm. long, and a width between the posterior summit of the two teeth of 70 mm., the least anterior width being 35 mm. The teeth are 90 mm. long, and rise 35 mm. above the alveolar ridge. They are situated 210 mm. from the tip of the united rami. The coronoid is too mutilated to supply much evidence—apparently its depth was about 120 mm.

COMPARATIVE MEASUREMENTS.

Item.	Specimen described by Waite.	Tasmanian Whale.
Extreme length of Cranium	853 mm.	830 mm., incomplete.
Length of rostrum tip to antorbital notches	574 mm.	560 mm., ditto.
Tip of rostrum to end of palate	678 mm.	600 mm., mutilated at both ends.

Item	Specimen described by Waite.	Tasmanian Whale.
Height vertex to pterygoids	338 mm.	370 mm.
Breadth across orbits . .	328 mm.	300 mm., right side is mutilated.
Breadth at squamosals . .	256 mm.	315 mm.
Breadth at antorbital notches	197 mm.	200 mm.
Breadth in middle of rostrum	68 mm.	49 mm.
Breadth across condyles . .	115 mm.	110 mm.
Premaxilla greatest width behind anterior nares	156 mm.	no data (shot away).
Least width opposite anterior nares	110 mm.	118 mm.
Greatest width in front of anterior nares	111 mm.	122 mm.
Width of anterior nares . .	50 mm.	53 mm.
Length of tympanic	44 mm.	52 mm.
Width of tympanic	30 mm.	30 mm.
Length of ramus	742 mm.	no data, mutilated.
Length of symphysis	166 mm.	280 mm.
Height of ramus	113 mm.	120 mm.

Although fully adult, the rostral grooves are strongly in evidence, and apparently would be so throughout life.

VERTEBRÆ.

The species is usually accredited with 48 vertebræ, 46 are present and the last two or more caudals are missing. The cervicals show the last three quite free, and upon maceration a fourth may become detached, but the remainder are firmly ankylosed into a solid block. The vertebral formula was apparently:—C.7, D.10, L.11, Ca.20. Total, 48.

The largest lumbar gave the following data:—

Centrum, 95 mm. wide x 85 mm. high.

Length of body, 118 mm.

Across diapophyses, 260 mm.

Greatest height, 386 mm.

Width of spine, 130 mm.

The rest of the skeleton conforms to published accounts, and is available for detailed study if needed.

LITERATURE CITED.

- (1) E. R. Waite, F.L.S. Two Ziphoid Whales not previously recorded for South Australia. Rec. South Aus. Mus., Vol. 2, No. 2, 1922. Pages 209 *et seq.*
- (2) *Review of the Cetacea of the New Zealand Seas.* By W. R. B. Oliver, F.L.S., F.G.S.
- (3) *A Book of Whales.* F. E. Beddard, M.A., F.R.S., 1900.