NOTES ON THE SEA ELEPHANT (*MIROUNGA LEONINUS*)

By

H. H. SCOTT, Curator of the Queen Victoria Museum, Launceston,

and

CLIVE LORD, Director of the Tasmanian Museum, Hobart.

Plates X.-XIV.

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A single specimen of the Sea Elephant (*Mirounga leoninus*) visited the East Coast of Tasmania recently, and was killed later by certain residents of Wedge Bay, Tasman Peninsula. Its skeleton was secured for the Tasmanian Museum Collection.

This is the first record of this species visiting the island for many years. Our historical records show that in the early days of last century Sea Elephants occurred at such places as King Island, Bass Straits, but excessive hunting exterminated these large mammals, and Macquarie Island is now their nearest home, so the lone straggler from the South must have had a long voyage before reaching these shores. It would be interesting to know the usual range of this species from its ordinary breeding grounds. Sea Leopards (*Ogmorhinus leptonyx*) visit Tasmania fairly frequently, as well as occasional Crested and King Penguins, so there must be a fair proportion of Subantarctic types which wander northwards.

OSTEOLOGY.

The skeleton is of interest. The skull is very massive, and follows the general characteristics of the marine carnivora, except for the recessed nasals, flat maxillary areas, and extensive narial basin, all of which features relate to the trunk of the Sea Elephant, and therefore differ from the usual seal type.

The premaxillaries articulate with the maxillaries by harmonia, the sutures running straight backwards for 146

mm., as they form the floor of the narial basin. Mesially they embrace the vomer, which is exposed for 40 mm., and although 32 mm. wide it is so overlapped as to appear much less. The vomer is not seen in the palate, as with so many of the *Delphinidæ*. The meso-ethmoidal nasal septum, which is part of Professor Owen's prefrontal element, is an important feature in this area of the skull, projecting as it does upwards and forwards, to form a pillar for the recessed nasals to rest upon. Measured as a bony pillar it is 121 mm., with a basal width of 38 mm., and an anterior-posterior length of 41 mm. From the abacus of this pillar, the nasals curve downwards, throwing out two lateral processes that indicate the anterior orbital boundary. In this skull the parietals hardly develop any crest at all, and are slightly open upon the central line, which feature is almost certain to be an age character.

Into this cavity the frontals throw backward two bars of bone, 52 mm. long, and one naturally gets the idea that the suppressed interparietal may to some extent have coalesced with them, but nothing short of a young skull could solve the problem. The occipital regions are remarkable, chiefly, for the area of bone roughened for the attachment of the *ligamentum nuchæ*; the total measurement of this surface being 280 mm. long, and 45 mm. wide.

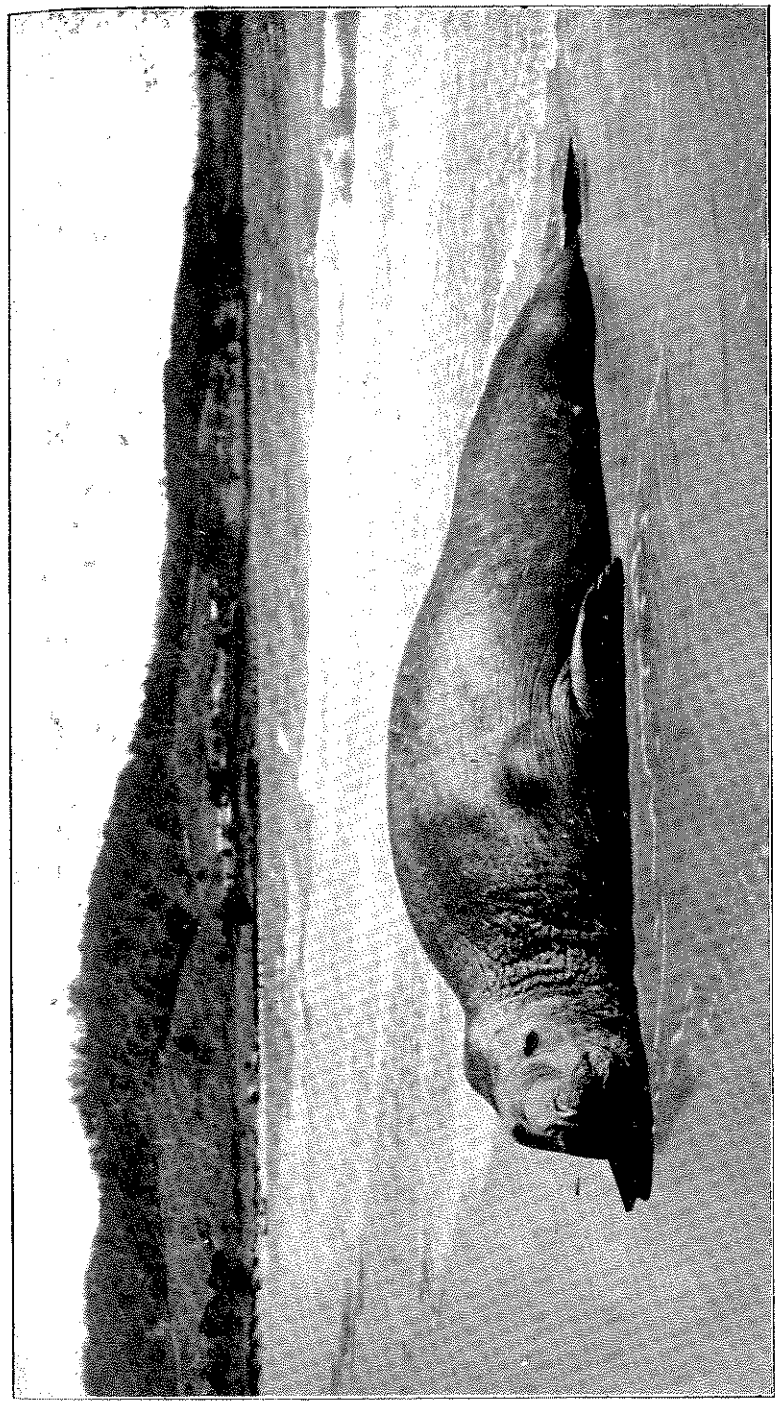
The malar throws up a post-orbital process, which is 130 mm. in width, and it encloses the massive process of the squamosal for a length of 115 mm. In the bony palate the premaxillaries claim the first 90 mm., the maxillaries the next 160 mm., and the palatines the remaining 32 mm. The pterogoids have not coalesced with the palatines, or with the sphenoids—their hamuli, internally, roof a groove 44 mm. long.

The tusks in this macerated skull are exposed for 70 mm., and have a basal girth of 136 mm.

So deeply is the supra-occipital recessed that a line drawn across the condyles is removed 83 mm. from the skull wall.

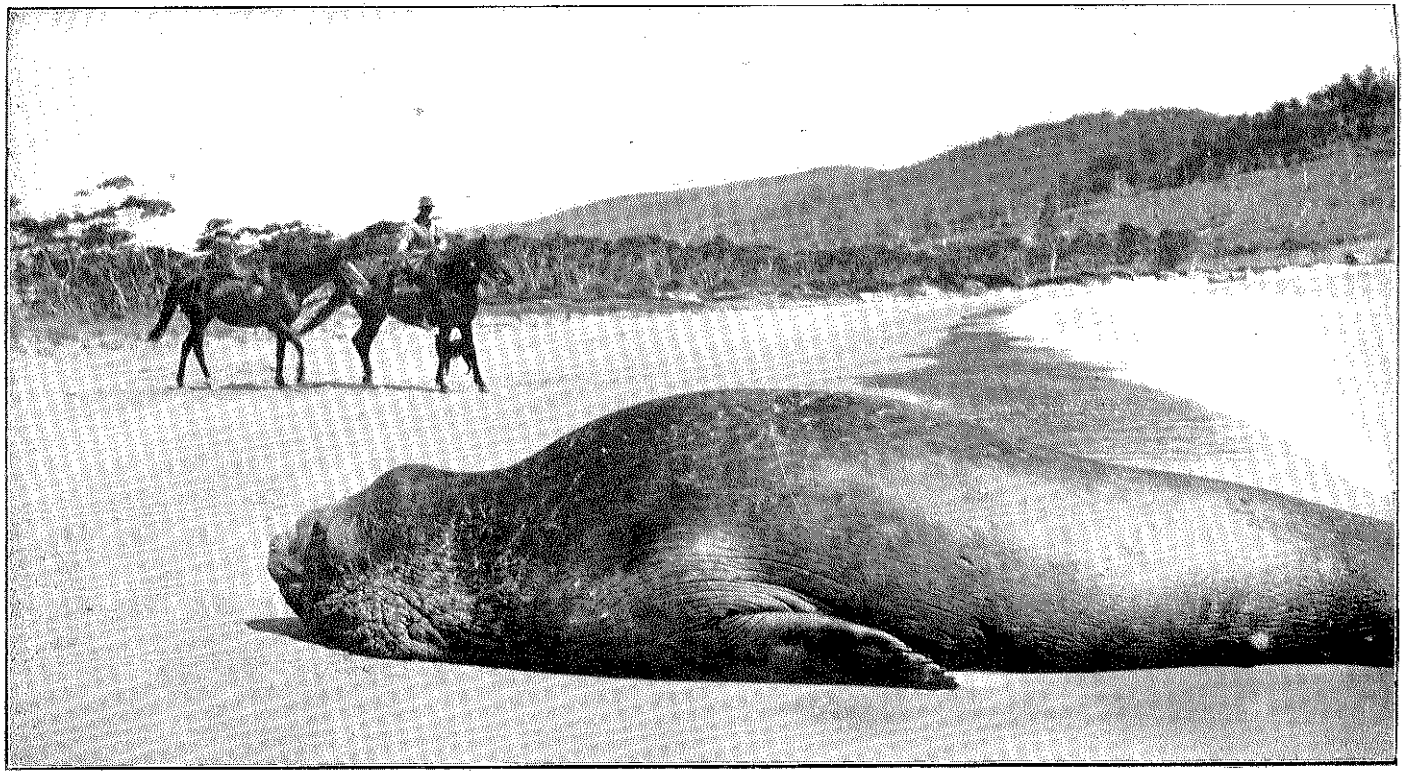
The mandible has a total length of 412 mm. The symphysis has a vertical height of 160 mm., and although so massive is not ankylosed to sutural extinction, a second proof that, although adult, the skull is not super-ossified to its full limit, and in this individual specimen the rami had to be bolted together for Museum exhibition purposes.

Plate X.

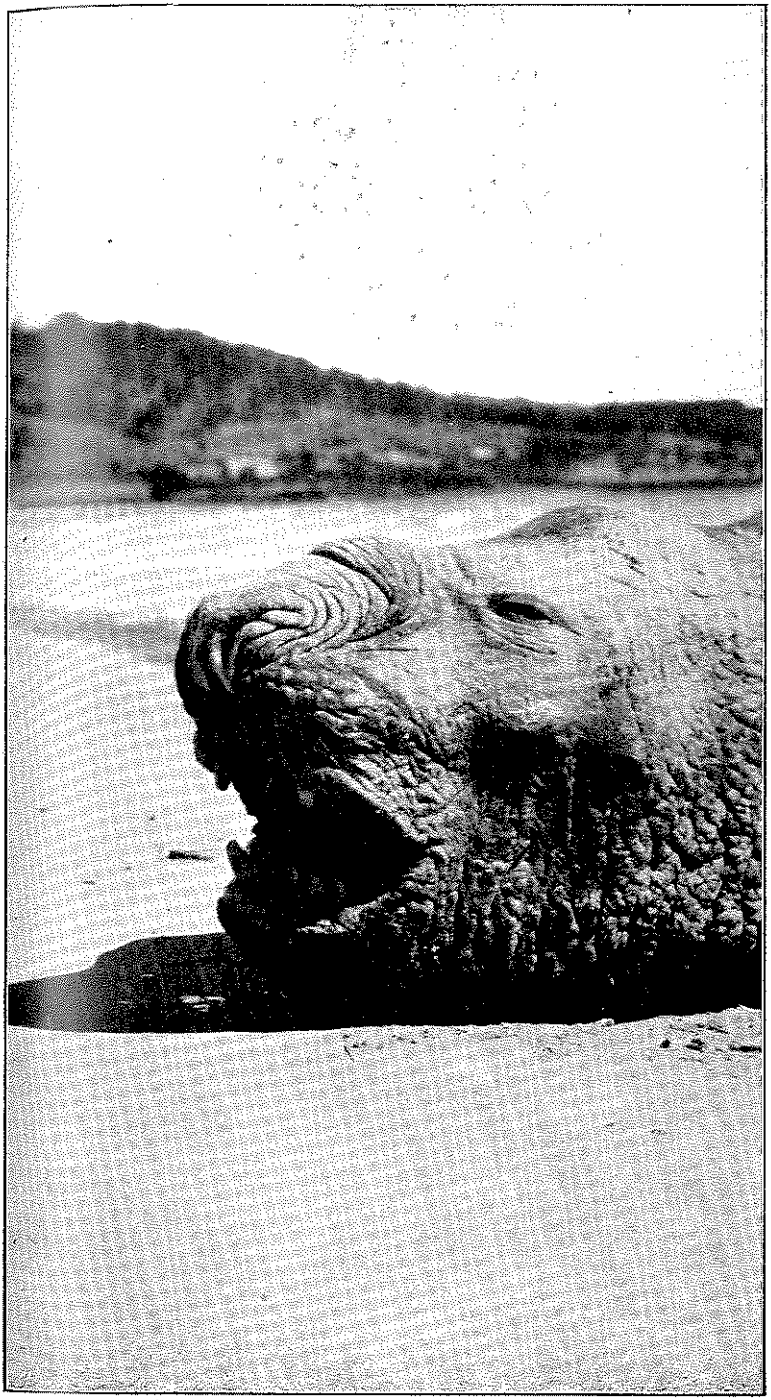


P. & P. Roy. Soc. Tas., 1928.

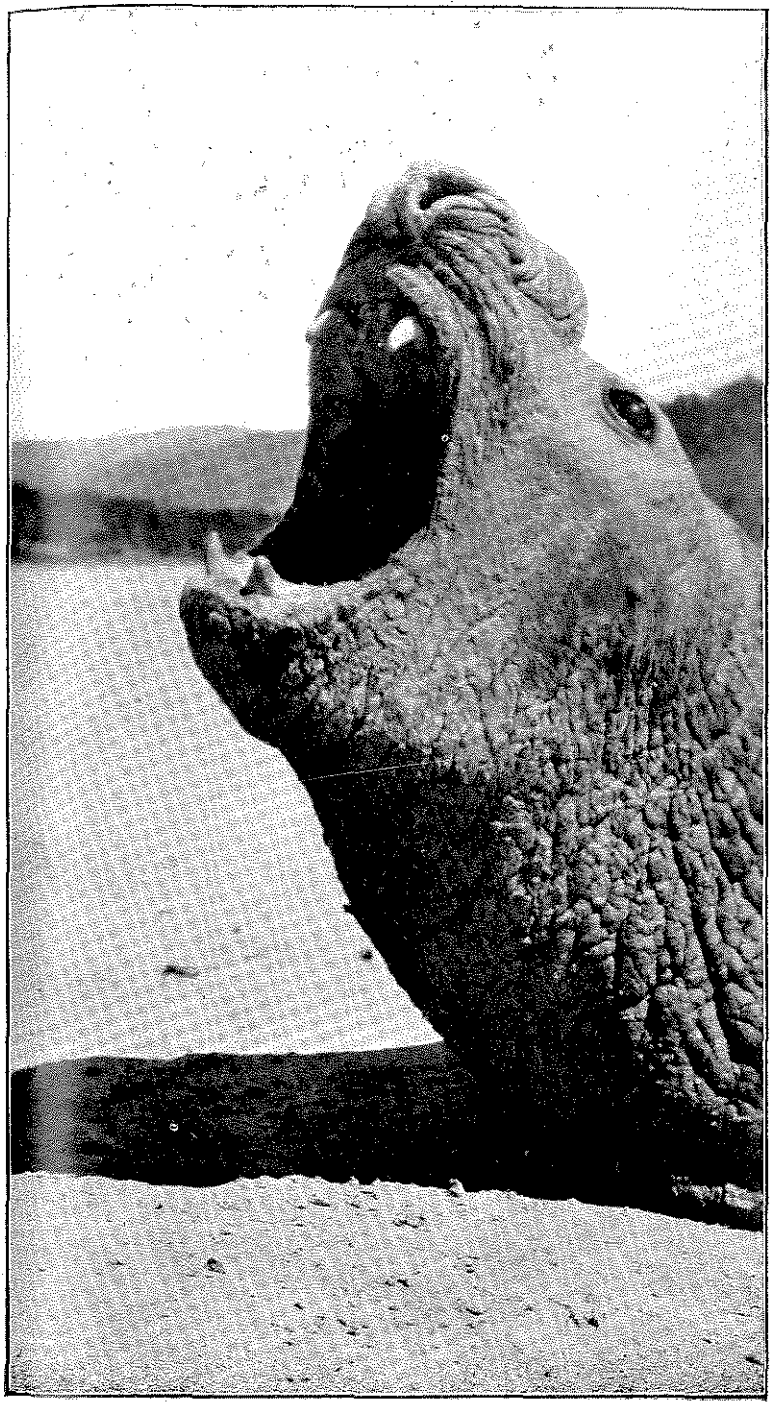
Sea Elephant (*Mirounga leoninus*) on the East Coast of Tasmania, 1927.



Sea Elephant (*Mirounga leoninus*) ashore on the East Coast of Tasmania, 1927.



Head of Sea Elephant (*Mirounga leoninus*).



Sea Elephant (*Mirounga leoninus*), East Coast, Tasmania.

Mirounga leoninus, showing posterior dorsal region, Wedge Bay, Tasmania.

The coronoid process is low, and extends backwards rather than forwards, and only rises 88 mm. above the condylar platform.

TABLE OF USEFUL MEASUREMENTS.

Total length of skull, including curved tusks	571 mm.
Width of zygomatic processes	400 mm.
Width across orbital processes of the maxillaries	183 mm.
Width across maxillo-maxillary regions	183 mm.
Length, in a straight line, of curved nasals	66 mm.
Width of narial basin	110 mm.
Length from nasal septum to incisor rim	165 mm.
Total length of palate (central line) without teeth	280 mm.
Greatest width of the palate	177 mm.
Skull width at glenoid regions	353 mm.
Basi-occipital depression to palatine nasal	29 mm.

DENTAL FORMULA.

Skull	I. 2.	C. 2.	P.M. 2.	M. 4.
Mandible	I. 2.	C. 2.	P.M. 2.	M. 3.
Total				38.