

ZIPHIUS CAVIROSTRIS ON THE QUEENSLAND COAST.

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Plates III and IV.

(*Read before the Royal Society of Queensland, 28th July, 1919.*)

In December, 1918, Mr. B. H. Todd kindly informed me that the remains of a large marine animal were stranded on the coast at Nikenbah, near Maryborough, South Queensland, on the property of Mr. Emil Jensen. Fortunately the remains were above tidal influence, and the opinion was expressed by Mr. Todd that the animal must have "committed suicide" to get ashore in such a way. Probably it was endeavouring to escape from some enemy. On being communicated with, Mr. Jensen kindly covered the remains with sand, to facilitate cleaning, and in February forwarded to the Queensland Museum all the bones obtainable. Special care was taken to preserve the cranium, the detached rami of the lower jaw and a single tooth. Examination shows that the bones are those of a specimen of Cuvier's Whale, *Ziphius cavirostris*, which has not previously been recorded from the Coasts of Australia. Reg. No. Q.M.J. 3262.

The distribution of this interesting Cetacean was dealt with by Dr. S. F. Harmer, in 1915, who reviewed the previous references and recorded the occurrence of two specimens on the Southern Coast of Ireland.* Previous records included specimens from both sides of the Atlantic, Bering

*Harmer, Proc. Zool. Soc., 1915, pp. 559-566.

Sea, the Mediterranean, South Africa and New Zealand, but notwithstanding its wide range *Ziphius cavirostris** seems to be one of the rarer Ziphioid whales. The affinities of the New Zealand specimens, first described by Haast and Hector as distinct species, were demonstrated by Turner.* A specimen reported from Liscannor, Co. Clare, Ireland, was subsequently found to be True's *Mesoplodon mirum*.†

Skull,—The majority of the sutures are markedly open, as may be seen from the illustrations. In the occipital plane, the lateral sutures separating the parietals may be distinguished. There is a median suture between the frontals. The massive, conjoined nasals include an asymmetrical bone which protrudes in advance of the frontals for some distance in the median suture. A partial suture is also present on the right nasal. The prenasal basin, so characteristic of adult forms, is not strongly developed. The premaxillæ in this region are flattened, especially that on the right, whilst a longitudinal groove is present on the left. The foramen of the left premaxilla is smaller and is situated a little anteriorly to that on the right. The mesorostral ossification is not prominent, only appearing on the floor of the deep groove formed in the rostrum by the semi-tubular premaxillæ. For some distance in front of their lateral expansions, the maxillæ have a well-marked double (ectomaxillary) ridge. The maxillary prominences are small and unequally developed, that on the right side being the larger.

The anterior part of the palatal surface of the rostrum is formed by the premaxillæ, the vomer appearing 145mm. from the tip. The converging sides of the maxillæ are produced between the palatine strips and just exclude the vomer, which reappears after a few millimetres and separates the palatines as they junction with the pterygoids. The palatine strips are only about 8 mm. across in this region. The slender jugals are lost, with the exception of an anterior fragment on the left side. The ear-bones were misplaced in transit, and in Plate IV. the mastoid portion is missing in the postero-lateral contour. Although detached, both tympanic and both periotic

*Turner, Challenger Zoology, vol. 1, No. iv, 1880, p. 27.

†“Nature,” May 22nd, 1919, p. 237.

bones are present. When compared with the interesting series figured by True, they are found to agree best with No. 4, which is the type of *Z. grebnitzkii*. In one periotic the fenestra ovalis was closed by a simple rod of bone representing the stapes.

Mandible.—The rami of the mandible are not ankylosed. The superior contours agree well with figure 1 in Plate 22 of F. W. True's work on the Ziphiidae.* The alveolus terminating the right side has an open groove anteriorly, but this may be abnormal; unfortunately the corresponding portion of the left ramus is broken, and cannot be compared. The single tooth forwarded is 51mm. in length. It tapers from a basal diameter of 12 mm. to an acuminate enamelled tip. In section it is sub-circular; the root is hollow and the cavity extends to within 12 mm. of the tip. When placed in the alveolus only the tip protrudes.

In certain characters, notably the small conical tooth, the absence of a mesorostral ossification and of a pronounced prenarial basin, our specimen exhibits the characters of an immature female.

F. W. True has shown that *Ziphius gervaisii* (Duvernoy) represents a female of *Z. cavirostris*, and Dr. S. F. Harmer also accepts this principle of sexual diagnosis (loc. cit.), so there is sound reason for classifying these remains as a female of Cuvier's species. So long ago as 1870, Owen referred to the small size of the mandibular teeth as typifying a female.†

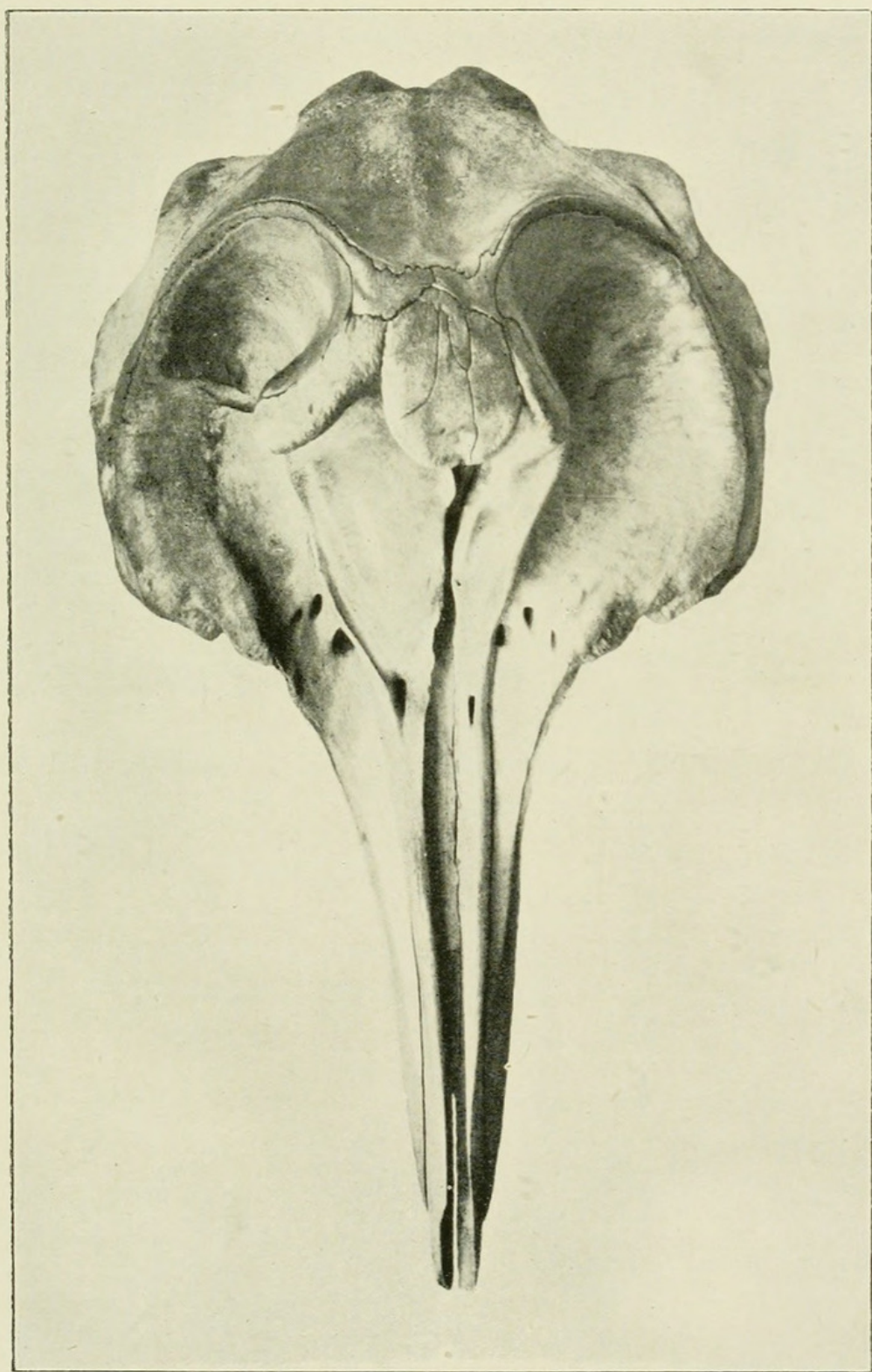
No actual measurements were taken by the discoverers, but the specimen when first stranded is said to have been "about nineteen feet."

Dimensions of Cranium and Mandible :—

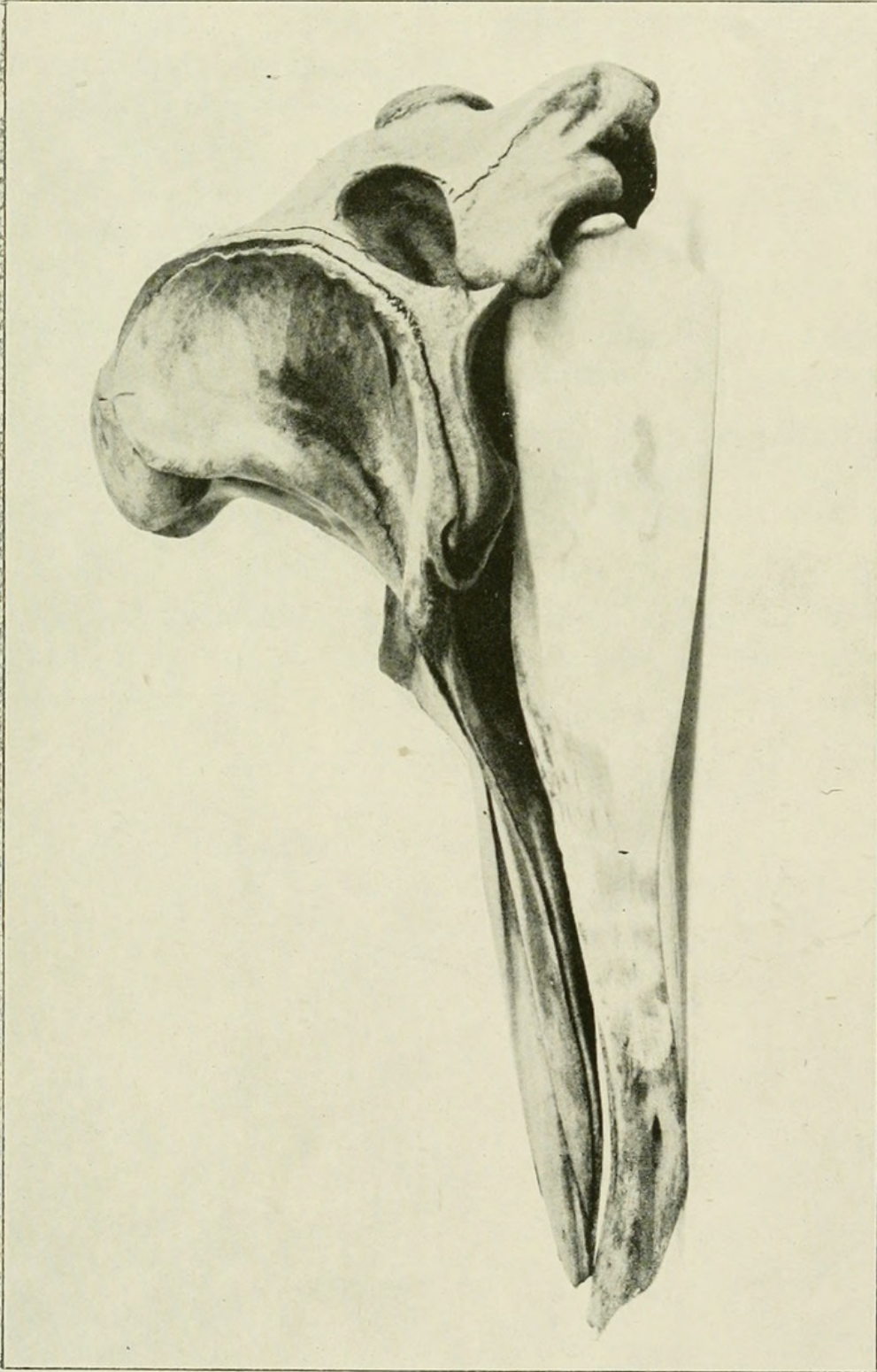
Total length of cranium		830mm
Maximum breadth (between zygomatic processes of the squamosal)		467mm
Maximum height (from inferior border of pterygoids to vertex)		414mm
Distance from tip of rostrum to posterior median margin of pterygoids		636mm

*True, Bull. 73, United States Nat. Mus., 1910.

†Owen, Mon. Brit. Foss. Cretacea, No. 1, 1870, p. 12.



Ziphius cavirostris Cuvier.



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Length of rostrum	450mm
Distance from tip of rostrum to anterior border of nasals	580mm
Length of mandible	740mm
Depth of mandible at coronoid	147mm
Length of symphysis	130mm

Vertebrae.—There are four coalesced cervical vertebrae. In the atlas the foramina in the arch for the exit of the first pair of spinal nerves are complete on each side ; the inferior lateral processes are thick and strong and slightly bent backwards, the maximum diameter between them being 250 mm.

There are seven thoracic vertebrae, probably being the 2nd, 3rd, 4th, 5th, 7th, 8th and 9th. The last three have facets for the articulation of ribs on the transverse processes only.

There are fourteen post-thoracic vertebrae, four of which are caudal centra only. Four incomplete ribs, one chevron bone and five epiphyseal discs are present.

Three vertebrae of a dugong and the coracoid of a turtle were forwarded at the same time, and testify to the efforts of the donor to secure as many bones as the circumstances permitted.



Longman, Heber Albert. 1920. "Ziphius cavirostris on the Queensland Coast."
The Proceedings of the Royal Society of Queensland 31, 90–93.
<https://doi.org/10.5962/p.351455>.

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