

BEAUFORTIA

SERIES OF MISCELLANEOUS PUBLICATIONS

ZOOLOGICAL MUSEUM OF THE UNIVERSITY OF AMSTERDAM

No. 237

Volume 18

February 10, 1971

On two skulls of *Delphinus dussumieri* Blanford, 1891 (Notes on Cetacea, Delphinoidea I)

P. J. H. VAN BREE

ABSTRACT

Two skulls of *Delphinus dussumieri* in the collections of the British Museum (Natural History) are discussed and their dimensions given. They represent the first ones known about 140 years after the description of the species, based on one skull from the Malabar Coast.

In 1829 (:288), G. Cuvier described a species of dolphin in the following words: "Le même naturaliste [= Dussumier] en a rapporté un de Ceylan (*D. velox* Duss.), qui a le museau un peu plus allongé, et partout quarante-dents; et un autre de la côte de Malabar, qui surpasse même le dauphin commun par le nombre de ses dents; il en a partout de cinquante-cinq à soixante; M. Dussumier le nomme *D. longirostris*." The skull of the animal mentioned is still in the collections of the Muséum National d'Histoire Naturelle (Laboratoire d'Anatomie Comparée) in Paris and bears the registration number A-3065 (Dr. D. Robineau, *in litteris*).

The skull has been mentioned and pictured by van Beneden & Gervais (1868-80: 600-604, pl. 39, figs 10, 11), and discussed in detail by True (1889: 58-59). The last author points out the contradiction between the number of teeth given in the text by van Beneden & Gervais (*loc. cit.*) and the number shown in their figures; he also publishes a list of measurements of the type skull.

The species has been discussed briefly by Pucheran (1859: 452) and Flower (1883: 503) but no new data were reported. As the name *Delphinus longirostris* Cuvier, 1829 is preoccupied by *Delphinus longirostris* Gray, 1828 (now *Stenella longirostris*), Blanford (1891: 588) gave a new name to the species and called it *Delphinus dussumieri*.

The species has been cited in various taxonomic works and in faunal checklists but gradually its taxonomic status (through the lack of new

Received: December 18, 1970

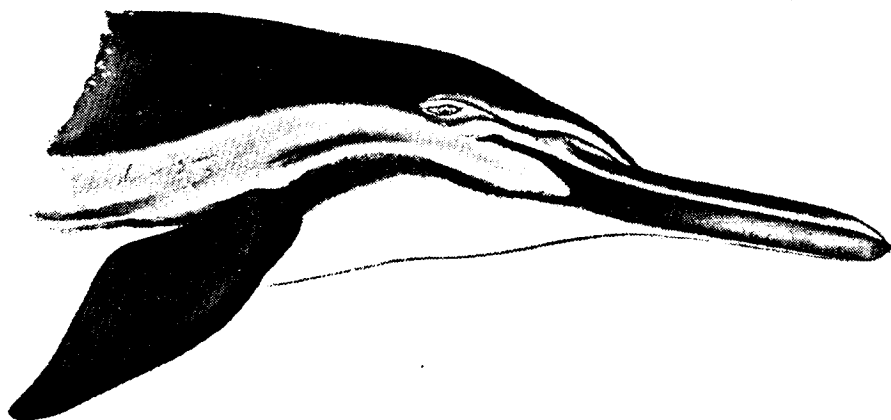


FIG. 1. Reproduction of the water colour, Mr. A. Fraser Brunner made of the head of *Delphinus dussumieri* (BMNH 1949.7.15.4). A pencil note on the sketch indicates that the pectoral fin was black on both sides.

material) became somewhat doubtful. For instance, Fraser (in Ellerman & Morrison-Scott, 1951: 731) lists *D. dussumieri* under *Incertae sedis*.

It is understandable therefore that the present author was pleasantly surprised to find in the collections of the British Museum (Natural History), two skulls of dolphins, which doubtless can be attributed to the species *Delphinus dussumieri* Blanford, 1891. The specimens are:

BMNH 1954.9.9.2 — Skull; caught off Berbera, Somali Republic (formerly British Somali Land Protectorate), 16-II-1953, sex and size unknown. Leg. V. T. Hinds.

BMNH 1949.7.15.4 — Skull and postcranial skeleton; caught off Berbera, Somali Republic (formerly British Somali Land Protectorate), 18-II-1949, sex unknown, total length intact specimen (tip snout to notch between flukes) 200 cm. Length pectoral fin (anterior insertion to tip) 26 cm. Water colour of the head made by the collector (see figure) in the files of the British Museum. Leg. A. Fraser Brunner.

One skull (BMNH 1949.7.15.4) was formerly labeled *Delphinus capensis*; the present labels read *Delphinus delphis*. In common with *Delphinus delphis* Linnaeus, 1758 the skulls under discussion have deep palatine grooves, the typical shape of the pterygoids and other similar anatomical characters, but they differ from this species by the more numerous teeth and the proportionally longer rostrum. In *D. delphis* (as in *Delphinus capensis* Gray, 1828, of which the taxonomic status is not yet clear) 40—55 teeth, normally 45—53, can be found in each side of the jaws. In the two British Museum skulls of *D. dussumieri* the number of teeth are 59—60, 55—?, and 60—59, 55—54; in the type skull 65—65, 57—58. The lengths of the rostrums in percentages of the condylobasal lengths are 68.7 and 67.6 in the London skulls and in the Paris skull, 67.9. In *D. delphis* these values vary from 58.7 to 65.5. The length of the rostrum in relation to the width of the skull (length rostrum/zygomatic width) is different in the two species. In *Delphinus*

TABLE 1. Dimensions (in mm and in percentages of the condylobasal length) of skulls of *Delphinus dussumieri*.

| | BMNH 1954.9.9.2 | | BMNH 1949.7.15.4 | |
|---|-----------------|-------|------------------|-------|
| | mm | % | mm | % |
| Total length of skull | 504 | 100.0 | 488 | 100.0 |
| Rostrum length | 346 | 68.7 | 330 | 67.6 |
| Rostrum basal width | 90 | 17.9 | 81 | 16.6 |
| Rostrum, width 60 mm anterior to base | 58 | 11.5 | 55 | 11.3 |
| Rostrum, width at its middle | 42 | 8.3 | 42 | 8.6 |
| Rostrum, width at $\frac{3}{4}$ of its length | 27 | 5.4 | 28 | 5.7 |
| Breadth across pre-orbital angles of supra-orbital processes | 154 | 30.6 | 147 | 30.1 |
| Breadth across post-orbital angles of supra-orbital processes | 178 | 35.3 | 166 | 34.0 |
| Zygomatic width | 178 | 35.3 | 165 | 33.8 |
| Width of braincase across parietals | 145 | 28.8 | 130 | 26.6 |
| Maximum width of premaxillae | 70 | 13.9 | 62 | 12.7 |
| Length temporal fossa | 74 | 14.7 | 66 | 13.5 |
| Height temporal fossa | 61 | 12.1 | 53 | 10.9 |
| Tip rostrum - nares | 387 | 76.8 | 372 | 76.2 |
| Length of upper toothrow (right side) | 296 | 58.7 | 285 | 58.4 |
| Length of upper toothrow (left side) | 296 | 58.7 | 285 | 58.4 |
| Tip rostrum - pterygoids | 384 | 76.2 | 362 | 74.2 |
| Number of alveoli (upper) | 59—60 | | 60—59 | |
| Length mandible | 433 | 85.9 | 429 | 87.9 |
| Height mandible at coronoid | 72 | 14.3 | 63 | 12.9 |
| Symphysis mandibles (length) | 77 | 15.3 | 80 | 16.4 |
| Length of lower toothrow (right side) | 279 | 55.4 | 275 | 56.4 |
| Length of lower toothrow (left side) | 278 | 55.2 | 274 | 56.1 |
| Number of alveoli (lower) | 55—? | | 55—54 | |
| Length rostrum/Zygomatic width | 1.94 | — | 2.00 | — |

dussumieri, the two London skulls show values of 1.94 and 2.00; the type skull a value of 2.06. In *Delphinus delphis* this relation varies from about 1.25 to 1.75.

For further measurements of the two newly found skulls, see the accompanying table; the measurements given (in mm) are taken in the manner recommended by Fraser (in the press). Each second column gives the dimensions as percentages of the condylobasal length.

It is remarkable that in *Delphinus dussumieri*, as in *Feresa attenuata* (Gray, 1875) and *Peponocephala electra* (Gray, 1846), such a long time has elapsed between the first description of the species and the discovery of new material. All three skulls of Dussumier's Dolphin now known, come from the Arabian Sea, the type from the east (Malabar Coast), the two now in London from the western side, the Gulf of Aden.

Whether the specimen of *Delphinus* from the South China Sea (USNM

49977), mentioned by Banks & Brownell (1969: 269) also belongs to *D. dussumieri* cannot be said yet in the absence of further published data but it would be worthwhile studying it more closely.

I wish to express my thanks to the authorities of the British Museum (Natural History) for their permission to examine the dolphin skulls in their collections and in particular to Dr P. E. Purves for his appreciated cooperation during my stay in London. I also want to thank Mr A. Fraser Brunner for his kind permission to reproduce the water colour he made of the head of *Delphinus dussumieri*.

REFERENCES

- BANKS, R. C. & R. L. BROWNELL
1969 Taxonomy of the Common Dolphin of the Eastern Pacific. — *J. Mammalogy*, **50**: 262—271.
- BENEDEN, P. J. VAN & P. GERVAIS
1880 Ostéographie des Cétacés vivants et fossiles: i—viii, 1—634 + Atlas (1868—1879) pls I-LXIV (Bertrand, Paris).
- BLANFORD, W. T.
1891 The fauna of British India, including Ceylon and Burma. Mammalia II: I—V, i—xx, 1—617 (Taylor & Francis, London).
- CUVIER, [G.]
1829 Le règne animal, etc. Nouv. éd. 1: i—xxxviii, 1—584 (Déterville & Crochard, Paris).
- FLOWER, W. H.
1883 On the Characters and Divisions of the Family Delphinidae. — *Proc. zool. Soc. London*,: 466—513.
- FRASER, F. C.
1951 In: J. R. Ellerman & T.C.S. Morrison-Scott: Checklist of Palaearctic and Indian Mammals, 1758 to 1946: 1—810 (Trustees Brit. Mus., London).
- PUCHERAN, [J.]
1856 Notices mammalogiques. — *Rev. Mag. Zool.*, **19**: 449—460.
- TRUE, F. W.
1889 Contributions to the natural history of the cetaceans: A review of the family Delphinidae. — *Bull. U.S. nation. Mus*, **36**: 1—192, 47 pls.

Drs. P. J. H. VAN BREE
Institute of Taxonomic Zoology (Zoological Museum)
University of Amsterdam
Plantage Middenlaan 53
Amsterdam 1004 — The Netherlands

For sale at the Administration of the Zoological Museum of the
University of Amsterdam
Price Hfl. 1.50 (Dutch Florins)