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THE CLYMENE DOLPHIN, *STENELLA CLYMENE*
(GRAY, 1846), IN THE SOUTHWESTERN
SOUTH ATLANTIC OCEAN

The clymene dolphin, *Stenella clymene*, was originally described by Gray (1846:p. 39) from a single skull of unknown locality. The name proposed by Gray (*Delphinus metis*), was already occupied on the previous page (p. 38) and corresponded to a skull of *Tursiops truncatus*. In view of that, Gray (1850) renamed his *D. metis* of page 39 as *D. clymene*. This taxonomic confusion was cleared up by Hershkovitz (1966), but the species remained virtually unknown or placed in other species' synonymies for over 130 yr, until it was redescribed by Perrin *et al.* (1981), on the basis of recent material. The clymene dolphin is usually considered a pelagic species of tropical and subtropical waters of the Atlantic, with almost all reports from the northern hemisphere (Perrin *et al.* 1981). In this paper, the known distribution of the species is enlarged with the first collection material report for the southwestern South Atlantic.

The animal stranded in mid-May was recovered on 11 June 1992 at Passo de Torres (29°18'18"S; 49°42'02"W) 1 km north of the mouth of Rio Mampituba, Santa Catarina State, Brazil (Fig. 1). The skull and a nearly complete postcranial skeleton (UFSC 1100) were preserved in the Laboratório de Mamíferos Aquáticos collection, of the Universidade Federal de Santa Catarina. Only four teeth were recovered, with marked wear at their tips. All epiphyses were fused to the centra. Skull characters and measurements (Table 1) provided the specimen identification as *Stenella clymene* (Gray 1846).

The carcass had stayed on the beach for almost a month and had suffered several mutilations, making it impossible to obtain the external measurements and color pattern. The beak and part of the mandible were exposed, as were

Table 1. Skull measurements in mm and percentage of the condylobasal length of *Stenella clymene* (UFSC 1100), compared with the extreme skull measurements of North Atlantic specimens (Perrin *et al.*, 1981).

| | UFSC 1100 | | North Atlantic | | | | Perc. Diff. ^a |
|----------------------------|-----------|--------|----------------|---------|-----|--------|--------------------------|
| | | | Minimum | Maximum | | | |
| Condylobasal length | 388 | 100.0% | 376 | 100.0% | 409 | 100.0% | |
| Length of rostrum | 227 | 58.5 | 218 | 58.0 | 250 | 61.1 | -2.6 |
| Width of rostr. at base | 99 | 25.5 | 80 | 21.3 | 90 | 22.0 | 3.5 |
| Width of rostr. at 60 mm | 70 | 18.0 | — | — | — | — | — |
| Width of rostr. at ½ L. | 56 | 14.4 | 49 | 13.0 | 58 | 14.2 | 0.2 |
| Width of pmx. at ½ L. | 30 | 7.7 | 21 | 5.6 | 29 | 7.1 | 0.6 |
| Width of rostr. at ¾ L. | 42 | 10.8 | 36 | 9.6 | 44 | 10.7 | 0.1 |
| Greatest preorbital W. | 171 | 44.1 | 156 | 41.5 | 171 | 41.8 | 2.3 |
| Greatest postorbital W. | 194 | 50.0 | 171 | 45.5 | 190 | 46.4 | 3.6 |
| Least supraorbital W. | 150 | 38.6 | — | — | — | — | — |
| Greatest w. of ex. nares | 44 | 11.3 | 40 | 10.6 | 48 | 11.7 | -0.4 |
| Zygomatic width | 185 | 47.7 | 167 | 44.4 | 189 | 46.2 | 1.5 |
| Greatest w. of pmx. | 71 | 18.3 | 62 | 16.5 | 74 | 18.1 | 0.2 |
| Parietal width | 150 | 38.6 | 135 | 35.9 | 146 | 35.7 | 2.9 |
| Height of braincase | 104 | 26.8 | 88 | 23.4 | 102 | 24.9 | 1.9 |
| Int. length of braincase | 103 | 26.5 | 99 | 26.3 | 114 | 27.9 | -1.4 |
| Length of temporal fossa | 55 | 14.2 | 45 | 12.0 | 56 | 13.7 | 0.5 |
| Height of temporal fossa | 42 | 10.8 | 32 | 8.5 | 44 | 10.7 | 0.1 |
| Major diameter of tem. f. | 35 | 9.0 | — | — | — | — | — |
| Minor diameter of tem. f. | 27 | 6.9 | — | — | — | — | — |
| Length of orbit | 51 | 13.1 | 44 | 11.7 | 48 | 11.7 | 1.4 |
| Length of preorb. process | 46 | 11.8 | 43 | 11.4 | 50 | 12.2 | -0.4 |
| Width of int. nares | 52 | 13.4 | 47 | 12.5 | 55 | 13.4 | 0.0 |
| Greatest L. of pterygoid | 83 | 21.4 | — | — | — | — | — |
| Length of upper tooththrow | 194 | 50.0 | 183 | 48.7 | 210 | 51.3 | -1.3 |
| Length of lower tooththrow | 195 | 50.2 | — | — | — | — | — |
| Length of ramus | 332 | 85.6 | 316 | 84.0 | 347 | 84.8 | 0.8 |
| Height of ramus | 63 | 16.2 | 56 | 14.9 | 62 | 15.1 | 1.1 |
| Length of symphysis | 43 | 11.1 | — | — | — | — | — |
| Teeth: upper | 40-41 | | 39 | | 49 | | |
| lower | 38-38 | | 38 | | 47 | | |

^a Percentage differences between the relative (% CBL) measurements for the Brazilian specimen and maximum North Atlantic specimens.

the tail stock and flukes, and the last vertebrae could not be found. The right flipper was absent and the left one was incomplete. The entire dorsal fin had been removed by local inhabitants. The flanks and genital area were damaged by black vultures (*Coragyps atratus*), and the sex could not be determined. The bowels were in an advanced state of decomposition. According to the local fishermen's report, the dolphin was alive when it reached the coast showing clear signs of distress.

The complete skull ossification and the fusion of the vertebral epiphyses indicate that the specimen was an adult, possibly of advanced age. The skull (Fig. 2) shows marked characteristics: (1) small temporal fossa; (2) premaxillaries

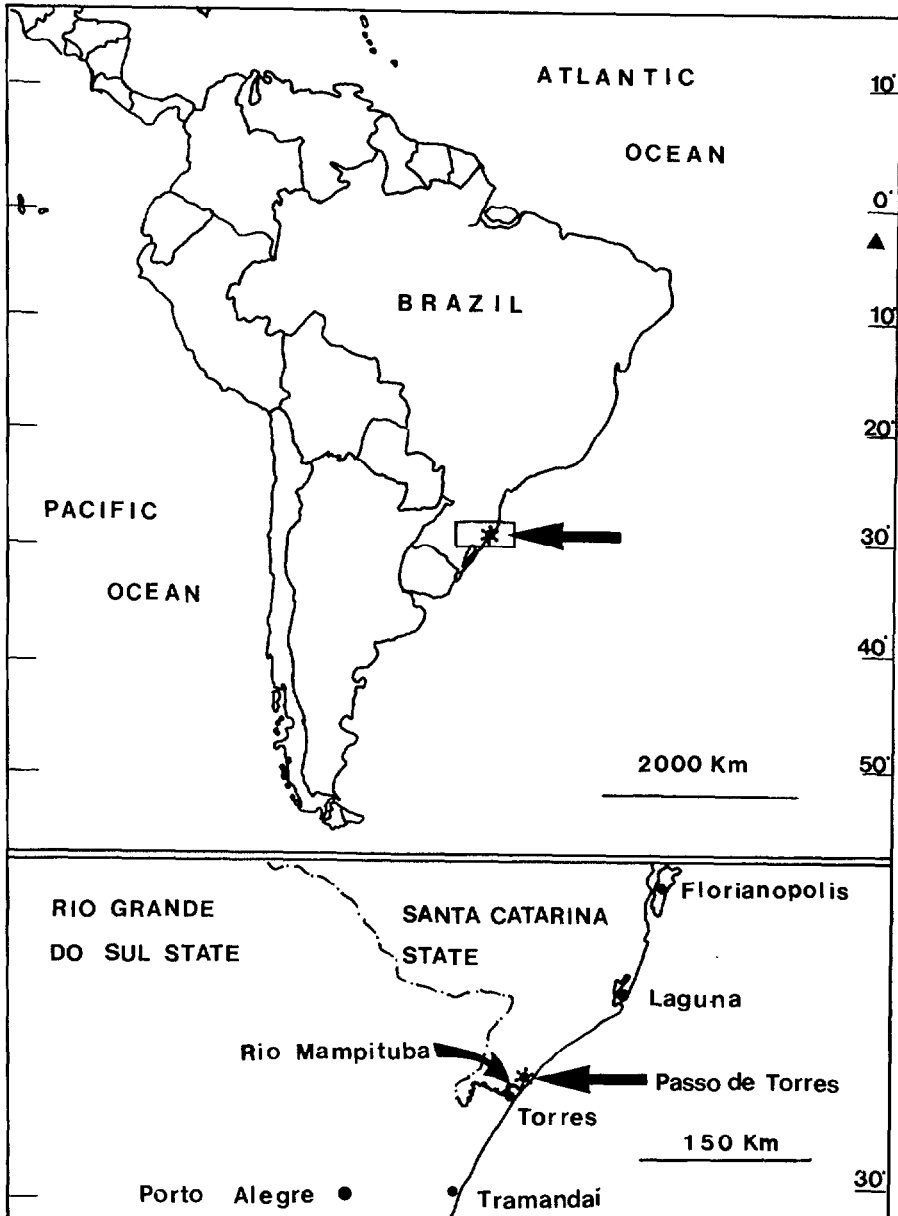


Figure 1. Map showing the new record of *Stenella clymene* on the southwestern South Atlantic Ocean.

fused on the mesial margin; (3) shallow palatal grooves (2 mm at midlength of the rostrum) occupying about 60% of the palate length. Its small temporal fossa makes it different from the spotted dolphins, *S. frontalis* and *S. attenuata*. Additionally, *S. clymene* can be differentiated from *S. longirostris* and *S. coe-*

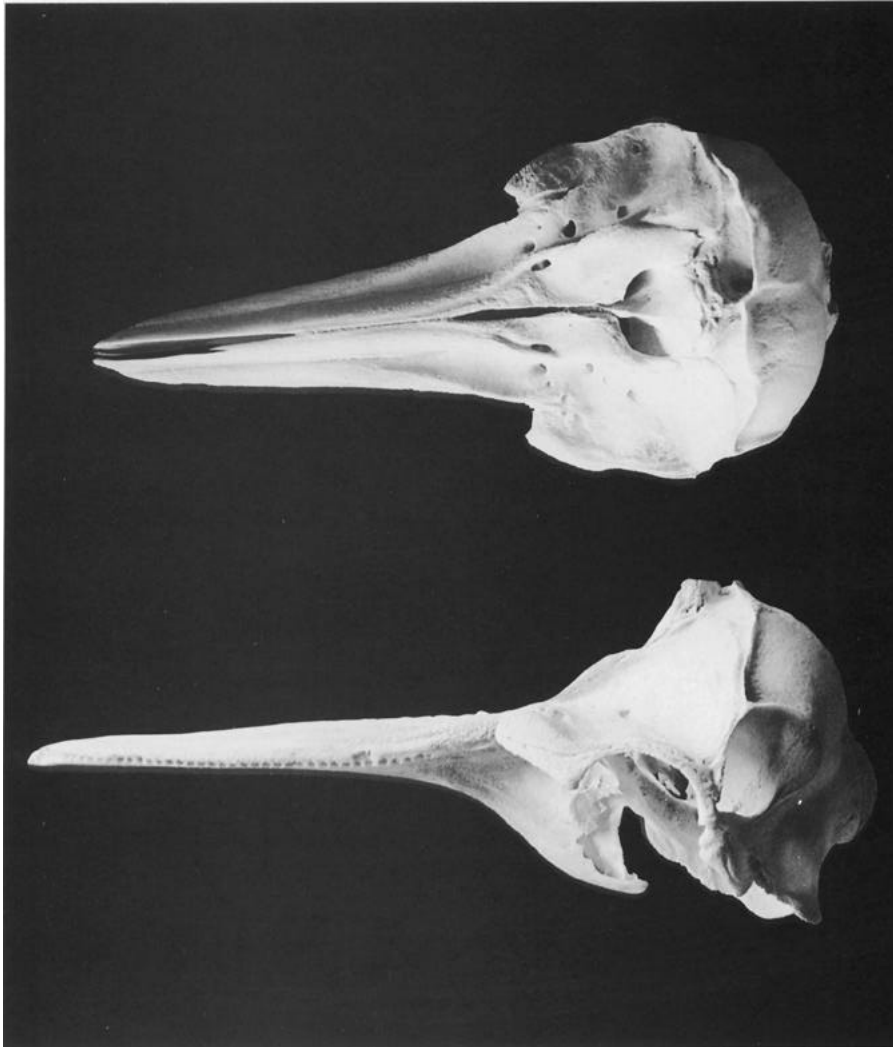


Figure 2. Dorsal and lateral view of the skull of *Stenella clymene* (UFSC 1100) from Passo de Torres (29°18'18"S; 43°42'02"W), Santa Cararina State, Southern Brazil.

ruleoalba by the size and by comparing the preorbital width against length of the upper toothrow (Perrin *et al.* 1981).

The skull measurements of this specimen (Table 1) correspond, generally, to the ones quoted by Perrin *et al.* (1981) for *S. clymene*. However, the percentages of some measurements, related to the condylobasal length, are slightly larger than the maximum percentages given for the North Atlantic specimens. These slight differences can be seen mainly in the measurements of the skull width: width of rostrum at base, greatest preorbital width, greatest postorbital width, parietal width and zygomatic width. But they can also be observed in the height

of braincase and length of orbit. Thus, the skull of the specimen (UFSC 1100) is higher and wider than the ones reported from the North Atlantic.

S. clymene is known only from the tropical and subtropical Atlantic in the northern hemisphere (Perrin *et al.* 1981). There was a single South Atlantic record at 3°40'S, 18°05'W, about half way between the American and African continents. This record was based on a specimen of Lutken (1889), identified afterwards by Perrin *et al.* (1981). The species was not known for any other pelagic or coastal locality in the South Atlantic. Thus, the stranding of this specimen (UFSC 1100) in the outskirts of the Rio Mampituba is the most austral record for the South Atlantic and the first for Brazilian waters.

ACKNOWLEDGMENTS

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