

## Taxonomic status of the dolphin *Stenopontistes zambezicus* Miranda-Ribeiro, 1936

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MIRANDA-RIBEIRO (1936) described a new genus and species of dolphin as *Stenopontistes zambezicus*. The holotype was reported to be from the Zambesi coast of south eastern Africa. *Stenopontistes zambezicus* was described as being the "cranium case of *Tursiops*, the rostrum, form of dentition and symphysis of *Steno* and the symphysis with the number of teeth of *Sotalia*". In the original description, both the measurements of *Stenopontistes zambezicus* and the comparative data for *Steno* and *Sotalia* (= *Sousa* as used by FRASER and PURVES 1960) presented were very meager.

ALLEN (1939) in his checklist of African mammals listed *Stenopontistes zambezicus* as a junior synonym of *Steno rostratus* (= *Steno bredaensis*). ELLERMAN and MORRISON-SCOTT (1951), SCHEFFER and RICE (1963), and HERSHKOVITZ (1966) have all followed ALLEN (1939) and listed *Stenopontistes zambezicus* as a junior synonym of *Steno bredanensis* (LESSON, 1828). BEST (1971) listed the type locality of *Stenopontistes zambezicus* under the distribution of *Steno bredanensis*, perhaps following the above authors. None of these authors discussed their reasons for this placement. The purpose of this paper is to reexamine the taxonomic status of *Stenopontistes zambezicus*.

Thanks to the cooperation of Prof. DALCY OLIVEIRA ALBUQUERQUE of the National Museum of Rio de Janeiro, Brazil, I was able to examine and photograph the holotype (MN 131) of *Stenopontistes zambezicus* (see Figs. 1, 2, and 3 and Table 1).

MIRANDA-RIBEIRO (1936) stated that the tooth count of *Stenopontistes zambezicus* which is upper right 34 (+1), upper left 35 (+1), lower right 31 (+2), and lower left 31 (+2) exceeded that of *Steno*, but the tooth count is within the range of several nominal species of *Sousa*. TRUE (1889) reported for *Steno* upper tooth counts between 20 and 25 and lower tooth counts between 20 and 27. The teeth are as described by MIRANDA-RIBEIRO (1936), but the rugose surface of the teeth of *Steno*, *Inia* and *Lipotes* is much more developed than in *Stenopontistes zambezicus*. Other than the tooth count the most important differences between *Stenopontistes* and *Steno* are the general shape of the skulls and the ventral topography of the basicranium (compare Fig. 3 of *Stenopontistes zambezicus* with that of *Steno bredanensis* illustrated in Plate 24 of FRASER and PURVES 1960).

The skull measurements, skull shape and ventral topography of the basicranium of *Stenopontistes zambezicus* agree well with the nominal species of Indo-Pacific *Sousa* (compare Figures 1, 2, and 3 and Table 1 of *Stenopontistes zambezicus* with plates 22 and 23 and table 12 of nominal species of Indo-Pacific *Sousa* from PILLERI and GIHR 1972 and Plate 25 of *Sousa borneensis* from FRASER and PURVES 1960). Therefore *Stenopontistes zambezicus* is reidentified here as one of the nominal species of Indo-Pacific *Sousa*.

FRASER (1966) stated that the status of the four nominal species of *Sousa* known from the Indo-Pacific region (*chinensis*, *plumbea*, *lentiginosa*, and *borneensis*) requires

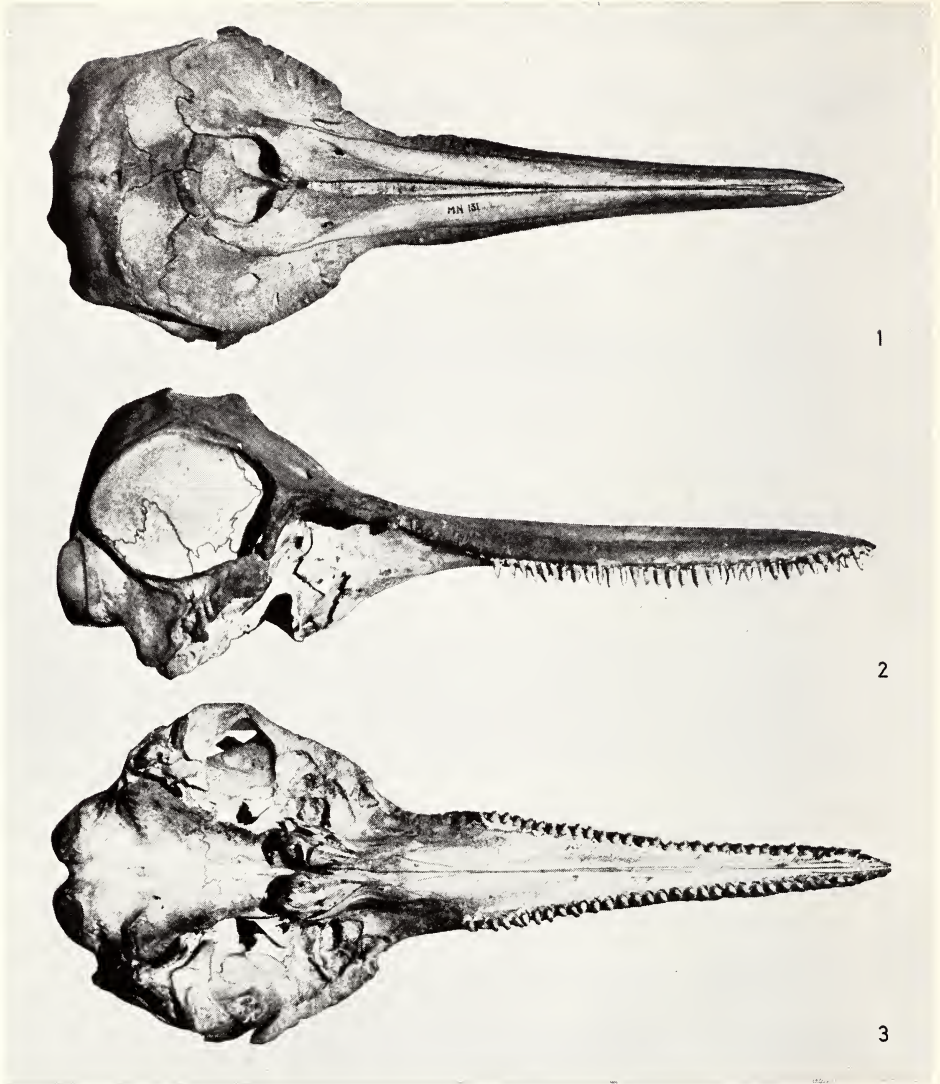


Fig. 1—3. (from top to bottom). Dorsal, lateral and ventral view of the holotype of *Stenopontistes zambezicus* Miranda-Ribeiro, 1936

redefinition. PILLERI and GIHR (1972) have discussed these nominal species of Indo-Pacific *Sousa* and concluded that only two species *chinensis* and *plumbea* are valid. Measurements and proportions of *Stenopontistes zambezicus* are presented the Table, and all but two of the proportions are within the ranges presented by PILLERI and GIHR (1972; Table 12) for two samples of *Sousa plumbea*. However, these two differing proportions (rostrum, width at middle 7.7% and length of mandibular symphysis 26.8%) are both exactly the same as those proportions reported by TRUE (1889) for the holotype of *Sousa plumbea*. Therefore *Stenopontistes zambezicus* is conspecific with *Sousa plumbea* (G. CUVIER 1829) and becomes a junior synonym of *Sousa plumbea* and not of *Steno bredanensis* (Lesson 1828) as previously reported.

Table

Skull dimensions and proportions of the holotype of *Stenopontistes zambezicus* Miranda-Ribeiro, 1936 (MN 131, Museu Nacional do Rio de Janeiro, Brazil)

	mm	%
Condylo-basal length	530	100.0
Rostrum length	333	62.8
Rostrum basal width	103 <sup>1</sup>	19.4
Rostrum, width 60 mm anterior to base	72 <sup>1</sup>	13.6
Rostrum, width at middle	41	7.7
Rostrum, width at $\frac{3}{4}$ of its length	29	5.5
Tip of rostrum to blowhole	374	70.6
Tip of rostrum to pterygoid	401	75.7
Preorbital width	— <sup>1</sup>	—
Post-orbital width	206	38.9
Zygomatic width	198 <sup>1</sup>	37.4
Braincase, width across parietals	160	30.2
Premaxillae, maximum width	82	15.5
Post-temporal length (right side)	106	20.0
Post-temporal height (right side)	80	15.1
Length of upper right tooth row	288	54.3
Length of upper left tooth row	289	54.5
Number of upper teeth (right and left)	34(+1) 35(+1)	
Mandible length	456	86.0
Mandible height at coronoid	83	15.7
Length of mandibular symphysis	142	26.8
Length of lower right tooth row	274	51.7
Length of lower left tooth row	275	51.9
Number of lower teeth (right and left)	31(+2) 31(+2)	

<sup>1</sup> damaged portions of the skull.

I wish to thank Prof. DALCY OLIVEIRA ALBUQUERQUE of the Museu Nacional do Rio de Janeiro for permission to examine the holotype of *Stenopontistes zambezicus*; and Dr. P. J. H. VAN BREE and Dr. HENRY W. SETZER for reading and commenting on the typescript.

#### Summary

*Stenopontistes zambezicus* Miranda-Ribeiro, 1936 is a junior synonym of *Sousa plumbea* (G. Cuvier, 1829) and not of *Steno bredanensis* (Lesson, 1828) as previously reported. The holotype of *Stenopontistes zambezicus* is a skull reported to be from the Zambesi coast of South eastern Africa.

#### Zusammenfassung

*Der taxonomische Status des Delphins Stenopontistes zambezicus* Miranda-Ribeiro, 1936

*Stenopontistes zambezicus* Miranda-Ribeiro, 1936 ist jüngerer Synonym von *Sousa plumbea* (G. Cuvier, 1829) und nicht von *Steno bredanensis* (Lesson, 1828), wie früher angenommen. Der Holotyp von *Stenopontistes zambezicus*, ein Schädel, soll von der Sambesiküste Südostafrikas stammen.

#### References

- ALLEN, G. M. (1939): A checklist of African mammals. Bull. Mus. Comp. Zool. **83**, 1—763.  
 BEST, P. (1971): Order Cetacea. Part 7, 1—10. In: The mammals of Africa—An identification manual (J. MEESTER and H. W. SETZER, eds.). Washington, D. C.: Smithsonian Inst. Press.

- ELLERMAN, J. R.; MORRISON-SCOTT, T. C. S. (1951): Checklist of Palaearctic and Indian mammals, 1758—1946. London; Brit. Mus. (Nat. Hist.).
- FRASER, F. C. (1966): Comments on the Delphinoidea. Pp. 7—31. In: Whales, dolphins and porpoises (K. S. NORRIS, ed.). Berkeley and Los Angeles. Univ. Calif. Press, 789 pp.
- FRASER, F. C.; PURVES, P. E. (1960): Hearing in cetaceans—Evolution of the accessory air sacs and the structure and function of the outer and middle ear in recent cetaceans. Bull. Brit. Mus. (Nat. Hist.) Zool. 7, 1—140.
- HERSHKOVITZ, P. (1966): Catalog of living whales. Bull. U. S. Nat. Mus. 246, 1—259.
- MIRANDA-RIBEIRO, A. DE. (1936): Notas cetológicas — (Os generos *Steno*, *Sotalia* e *Stenopontistes*) — Consideracoes sobre os generos “*Steno*” e “*Sotalia*”. Bol. Mus. Nac. Rio de Janeiro. 12, 3—46 (in Portuguese and English).
- PILLERI, G.; GIHR, M. (1972): Contribution to the knowledge of cetaceans of Pakistan with particular reference to the genera *Neomeris*, *Sousa*, *Delphinus* and *Tursiops* and description of a new Chinese porpoise (*Neomeris asiaorientalis*). In: Investigations on Cetacea, (G. PILLERI, ed.). Vol. 4, pp. 107—162. Berne, Switzerland.
- SCHAEFFER, V. B.; RICE, D. W. (1963): A list of the marine mammals of the world. U. S. Fish Wildlife Serv., Spec. Sci. Rep. Fish. 431, 1—12.
- TRUE, F. W. (1889): Contributions to the natural history of the cetaceans, a review of the family Delphinidae. Bull. U. S. Nat. Mus. 36, 1—191.

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## Copulatory behavior, gestation and parturition of the tayra (*Eira barbara* L., 1758)

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### Introduction

In the extensive literature on members of the family Mustelidae little has been published on the behavior and biology of the tayra, *Eira barbara* (KAUFMANN and KAUFMANN 1965; BROSSET 1968). Although this species is represented in most major zoo collections, captive breeding has been rare and nothing has been reported on sexual behavior, although tayras show some peculiarities not found in other mustelids.

### Material

The Louisville Zoological Garden received a tame ♂, about 1½ years old on May 4, 1969, and on May 6, 1969, a semi-tame ♀, not fully grown, and estimated to have been about 7 months of age; the latter animal was collected in Columbia. Both animals were housed in an oval-shaped, modified corn crib (Behlen Mfg. Co., Columbus, Neb.) of 6.10×3.66×6.10 m. This cage-like enclosure is covered by a solid roof, has a concrete floor, climbing branches, a boulder (60×80 cm) and a concrete den with two partitions (71×92×71 cm