

RECORDS OF THE DELPHINID GENUS *STENELLA* IN WESTERN SOUTH ATLANTIC WATERS

ROBERT L. BROWNELL, JR.

*Department of Vertebrate Zoology, National Museum of Natural History,
Smithsonian Institution, Washington, D. C.*

AND

RICARDO PRADERI

*Museo Nacional de Historia Natural
Casilla de Correo 399 Montevideo, Uruguay*

INTRODUCTION

Little information has been published on *Stenella* spp. from the western South Atlantic Ocean. Numerous references (Lahille, 1899 and 1905; Beddard, 1900; van Beneden and Gervais, 1880; Figueira, 1894; and others—see text) exist citing the long-snouted dolphin, *S. longirostris*, in Brazil, Uruguay, and Argentina, but none of these reports are confirmed with specimens. A single report of *S. attenuata* in this area is an unconfirmed mention from Cape Horn (Beddard, 1900). The holotype of the striped dolphin, *S. coeruleoalba*, was collected somewhere around the mouth of the Rio de la Plata (River Plate) between Uruguay and Argentina (Meyen, 1833). Since that time only three additional specimens have been reported from this region (Malm, 1871; and Praderi, *In: Ximenez, et al., 1972*).

The purpose of this note is to provide information on museum specimens of *Stenella* spp. in Uruguay and Argentina. We will also discuss the older references of *S. longirostris* in western South Atlantic waters.

MATERIALS

The present study is based on the examination of the cetacean collections in five South American museums. These are: Museo Argentino de Ciencias Naturales "Bernardino Rivadavia", Buenos Aires, Argentina (MACNBA); Museo de La Plata, La Plata, Argentina (MLP); Museo Nacional de Historia Natural de Montevideo, Uruguay (MNHNM); Museu Nacional do Zoologia de la Universidad de Sao Paulo, Brazil (MZSP); and Museu Nacional do Rio de Janeiro, Brazil (MNRJ). No specimens of *Stenella* were found in either of the Brazilian museums.

SPECIES ACCOUNTS

Stenella coeruleoalba—Fraser and Noble (1970) have concluded, based on pigmentation patterns of specimens, that several nominal species of *Stenella* (*Delphinus coerulealbus* Meyen, 1833; *D. marginatus* Desmarest, 1855±1; *D. euphrosyne*, Gray 1846; *D. styx*, Gray, 1846; and *D. lateralis* Peale, 1848) with a spinal blaze and eye-to-anus stripe (terminology of Mitchell, 1970) probably belong to one species, *S. coeruleoalba* Meyen, 1833). Hubbs *et al.* (1973) have stated that their records of *S. coeruleoalba* across the tropical Pacific supports the view "that the northern and far-southern populations of this species are conjoined and thus confirms the synonymy adopted by Fraser and Noble (1970)."

We have examined two *S. coeruleoalba* specimens: (1) a skull (MNHN M 1305) from Balneario Solymar, Depto. de Canelones, Uruguay (34°49'S., 55°55'W), Rio de la Plata; and (2) a skull (MACNBA 2625) from Miramar, Pcia. Buenos Aires, Argentina (38°17'S.) Atlantic Ocean. The cranium from Punta Jose Ignacio, Uruguay that Praderi reported in Ximenez *et al.* (1972) was not available to us.

The only skull measurements available for this species from the type locality are those of Meyen (1833) and Malm (1871: 63, holotype of *Clymenia burmeisteri*). Cranial dimensions in millimeters and dental counts of the two specimens we examined of *S. coeruleoalba* are presented in Table 1. No additional information is available for the Miramar specimen. The Solymar skull was collected from a stranded specimen by Praderi on 23 August 1959. The total length of the carcass (notch to tip of lower jaw) was 242 cm. The specimen was a male.

Stenella spp.—Various scientific names are currently used for spotted dolphins. These include *S. attenuata* (Gray, 1846) in the Pacific, Indian, and Atlantic Oceans, and *S. dubia* (G. Cuvier, 1812); *S. frontalis* (G. Cuvier, 1829), and *S. plagiodon* (Cope, 1866) in the Atlantic. There are probably only two valid species (Perrin, 1975).

We examined one skull that can be referred to the spotted dolphin complex. This specimen (MACNBA 23-46) is from Mar del Plata, Pcia. Buenos Aires, Argentina (38°00'S.) Atlantic Ocean. The date of collection was 1923, but no additional information is available for this specimen. Skull measurements and dental counts of this specimen are presented in Table 1. The skull is illustrated in Plate 1.

Stenella longirostris—This species was described as *Delphinus longirostris* from an unknown locality (Gray, 1828). Van Bree (1971) stated that the complete synonymy proposed by Herskovitz (1966: 37-40) is probably correct, but "much more must be known before definite conclusions can be drawn about the taxonomic status and nomenclature of *Stenella longirostris*." This species has been reported from both sides of the tropical Atlantic Ocean (Moore, 1953; Cadenat and Doutre, 1959; Layne, 1965; van Bree, 1971; Caldwell *et al.*, 1971; and van Halewijn and van Bree, 1972). We found no specimens referable to

TABLE 1. SKULL MEASUREMENTS (MILLIMETERS) AND DENTAL COUNTS OF
STENELLA spp. FROM WESTERN SOUTH ATLANTIC WATERS.

Measurements	MACNBA	% CBL	MNHN	MACNBA	% CBL
	2625 mm		1305 mm	23-46 mm	
Condylo-basal length	442	100.0	402+	389	100.0
Rostrum length	260	58.8	—	230	59.1
Rostrum basal width	111	25.1	120	93	23.9
Rostrum, width 60 mm anterior to base	70	15.8	77	60	15.4
Rostrum, width at middle	59	13.3	—	45	11.6
Rostrum, width at 3/4 the distance from the base	—	—	—	34	8.7
Premaxillae width at middle	—	—	—	24	6.2
Tip of snout to blowhole	305	69.0	—	272	69.9
Tip of snout to pterygoid	321	72.6	—	—	—
Preorbital width	185	41.8	217	163	41.9
Post-orbital width	206	46.6	236	—	—
Orbital width	191	43.2	215	162	41.6
Zygomatic breadth	209	47.3	233	—	—
Blowhole, width at	—	—	—	43	11.1
Maximum width premaxillae	—	—	—	70	18.0
Braincase width across parietals	150	33.9	174	142	36.5
Temporal fossa length	71	16.1	71	65	16.7
Temporal fossa height	46	10.4	45	48	12.3
Length of tooth row upper R.	230	52.0	—	186	47.8
Length of tooth row upper L.	229	51.8	—	189	48.6
Mandible length	374	84.6	407	—	—
Coronoid height	67	15.1	76	—	—
Length of symphysis	50	11.3	—	—	—
Length of tooth row lower R.	226	51.1	231	—	—
Length of tooth row lower L.	226	51.1	227	—	—
Number of teeth upper R.	44	—	—	34+	—
Number of teeth upper L.	45	—	—	37	—
Number of teeth lower R.	43	—	50+	—	—
Number of teeth lower L.	43	—	49+	—	—

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S. longirostris in five eastern South American museums. As noted in the introduction, numerous authors have reported *S. longirostris* and the probably conspecific nominal species (see van Bree, 1971) *Delphinus alope* and *D. microps* from localities including Brazil, Uruguay, Argentina and Cape Horn. All southern "records" are without documented specimens or observations. In view of this confusion, we present below the genesis and chronological review of western South Atlantic "records" for this species.

Gray (1866) reported *Delphinus alope* from "Cape Horn", but the specimen is apparently now not extant in the British Museum (Natural History) and no

additional information is available in the museum on the collection locality of this specimen (W. F. Perrin, per. comm., 1973). Based on the valid records of *S. longirostris*, this species is known worldwide only in tropical waters. It is extremely unlikely that *S. longirostris* will ever be recorded from the cold-temperate waters of southern South America. In fact, this species is still not known from any of warm-temperate waters of the world. The reports of this species from Chilean waters by Schneider (1946) and Mann (1957) are without any type of documentation and should be discounted. The "records" of Gray (1866), Schneider (1946) and Mann (1957) are probably what influenced Marcuzzi and Pilleri (1971) to map the erroneous distribution of *S. longirostris* around Cape Horn.

Gray's comments (1850:126, 1866:240 and 1871:69) are all apparently based on one specimen of *Delphinus microps* from the "coast of Brazils" from Dr. Dickie's collection. This specimen was probably collected in the tropical waters somewhere north and east of Rio de Janeiro. Burmeister (1867 and 1879) provided the following accounts about *D. microps*: (1867) "vive en el alto mar Atlantico al sud del ecuador y se presenta muchas veces a los viajeros en buques de velas. Tenemos en el Museo Publico dos craneos completos, el uno regalado por el Sr. Dr. D. Miguel Olaguer Feliu", (We could not find either of these skulls in the museum, MACNBA.) and (1879) "on trouve cette espece dans l'Ocean Atlantique, principalement au sud de l'Equateur, par troupes de 20 a 30 individus. Ils suivent quelquefois la marche du navire et passent en bondissant a son avant. Je les ai apercu et etudies plusieurs fois pendant les quatre voyages que j'ai faits dans cette partie de l'Ocean. (Voyez mon voyage du Bresil, page 37, Berlin 1853)". Van Beneden and Gervais (1880) cited *D. microps* from the mouth of the Rio de la Plata and the coast of Brazil. They provided no new data and probably just followed the above statements by Gray and Burmeister. Figueira (1894) noted that "*Delphinus microps* Gray. *Tonina*. Es una de las especies mas comunes en nuestras costas sobre el Rio de la Plata, especialmente en los meses de Noviembre a Febrero". *Tonina* is used today in Uruguay by laymen for *Tursiops cf. truncatus* and this is what Figueira's records of *D. microps* must have been. Lahille only noted the following: (1899) "*Delphinus delphis* Linneo. Esta especie (*D. microps* Burm, nec Gray) se ha notado en las costas del Chubut" and (1905) "*Prodelphinus longirostris*. Cabo de Buena Esperanza, Australia; Costas de la Provincia de Buenos Aires". Carcelles (1948) stated that "*Prodelphinus longirostris* Cuvier, Habita tambien el litoral atlantico bonaerense, asi como las Islas Galapagos, Panama, Australia. En el Museo de la Estacion Hidrobiologica de Puerto Quequen, puede verse un modelo en yeso del cráneo".

RESUMEN

Se proporcionan medidas y detalles de 3 ejemplares de delfinidos del género *Stenella* del Océano Atlántico Sudoccidental. Se cita por primera vez para esta

area un ejemplar del "spotted species complex". Se mencionan tambien 2 especimenes de *S. coeruleoalba*, 1 de Uruguay y 1 de Argentina, de las proximidades de la localidad tipica (desembocadura del Rio de la Plata). De *S. longirostris* no se encontraron ejemplares en ninguna de las colecciones de 5 museos sudamericanos (ver Materials) del cual tampoco existen datos de especimenes documentados en la literatura, citados para el Oceano Atlantico Sudoccidental.

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EXPLANATION OF PLATE

PLATE I

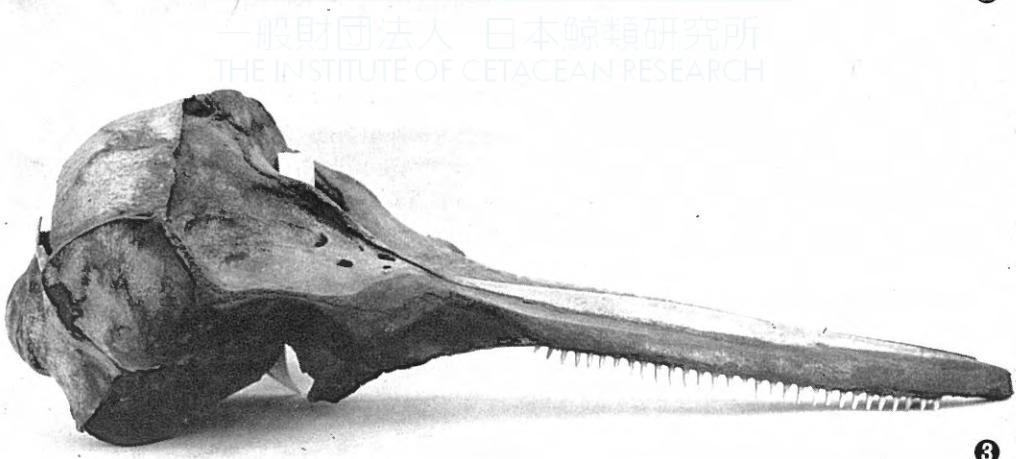
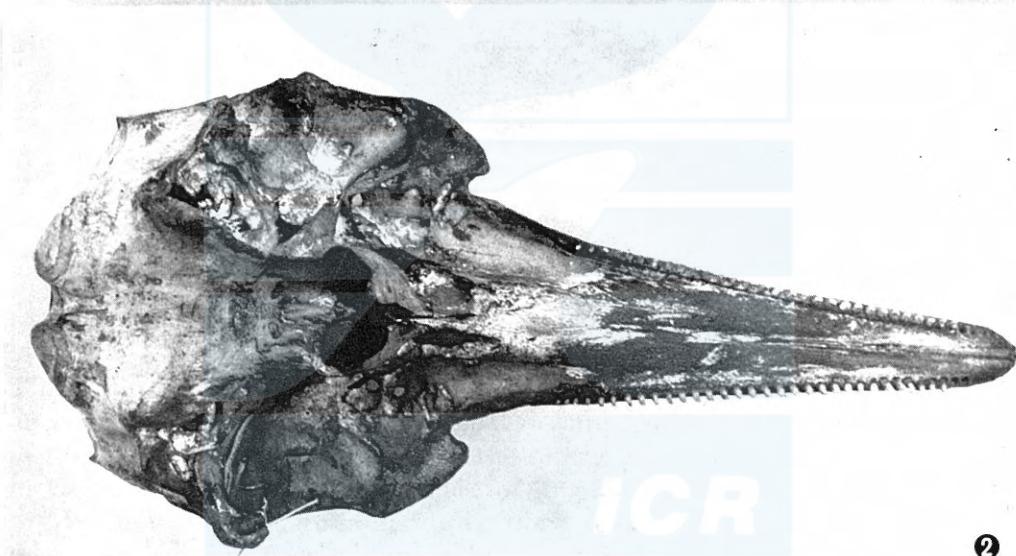
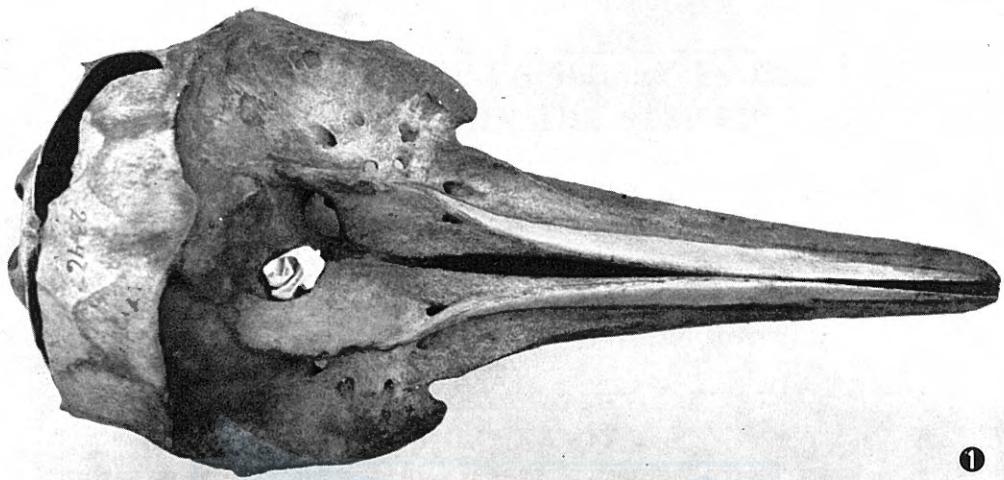
Fig. 1. *Stenella* sp. referred to the spotted dolphin complex (see text). This specimen (MACNBA 23-46) is from Mar del Plata, Pcia. Buenos Aires, Argentina (38°00'S.) Atlantic Ocean. Dorsal view of specimen.

Fig. 2. *Stenella* sp. (MACNBA 23-46) ventral view of specimen.

Fig. 3. *Stenella* sp. (MACNBA 23-46) lateral view of specimen.



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