

**FIRST RECORD OF CLARK'S FINGERSKATE, *Dactylobatus clarkii*  
(BIGELOW & SCHROEDER, 1958) (CHONDRICHTHYES, RAJIDAE),  
IN THE SOUTH ATLANTIC**

*Jules M. R. Soto, Carlos E. N. Consulim & Marcelo B. de Souza Filho*

Museu Oceanográfico do Vale do Itajaí, Universidade do Vale do Itajaí, Rua Uruguai, 458, CP 360, 88302-202, Itajaí, SC, Brazil. E-mail: soto@univali.br

The first record of the Clark's fingerskate *Dactylobatus clarkii* is reported in the South Atlantic, based on three specimens, one male and two females, 590-686 mm TL and 360-540 mm DW, collected off Rio Grande do Sul, southern Brazil, at depths from 360 to 437 m. Its distribution and color pattern are discussed. The analysis of the stomach contents revealed that the specimens feed mainly on bony fishes.

É apresentado o primeiro registro da raia-de-clark *Dactylobatus clarkii* no Atlântico Sul, com base em três espécimes, um macho e duas fêmeas, 590-686 mm CT e 360-540 mm LD, coletados no Rio Grande do Sul, sul do Brasil, entre 360 e 437 m de profundidade. Aspectos da distribuição e padrão do colorido da espécie são discutidos. A análise dos conteúdos estomacais dos espécimes mostrou que se alimentam principalmente de peixes teleósteos.

The Clark's fingerskate *Dactylobatus clarkii* is recorded from the western North Atlantic: east coast of Florida, throughout Gulf of Mexico, Caribbean coasts of Central and South America, Suriname, and the Lesser Antilles, between 366 and 915 m depth. It grows to at least 75 cm TL, and its biology is poorly known (Bigelow & Schroeder, 1958; Uyeno & Miyake, 1983; McEachran & Carvalho, 2002). During commercial trawl-fishing cruises off southern Brazil, three specimens of *D. clarkii* were collected. The purpose of this paper is to include this species in the Brazilian marine fauna, based on the first specimens collected in the South Atlantic.

#### MATERIALS AND METHODS

The three specimens were collected by bottom trawlers and they are deposited in the Museu Oceanográfico do Vale do Itajaí, as follow: MOVI 22664, female, 450 mm DW, 686 mm TL, 32°50.039'S, 50°24.361'W - 32°49'454'S, 50°24.295'W, 380-400 m, 10.v.2002, FV "Sambaqui III"; MOVI 22666, female, 448 mm DW, 670 mm TL, 32°38.878'S, 50°20.654'W - 32°33'184'S, 50°18.306'W, 360-400 m, 20.v.2002, FV "Sambaqui III"; and MOVI 24307, male, 360 mm DW, 590 mm TL, 32°49.068'S, 50°23.439'W - 32°36'593'S, 50°19.246'W, 433-437 m, 01.viii.2002, FV "Saga de Viking".

Methods of measuring are those cited by Rosa *et al.* (1987) and Stehmann (1988) (Table 1). The parameters used to determine the mature stages of development were: claspers rigid (calcified) and sperm found in the seminal vesicles (males) or large yolk follicles present in ovary and/or embryos present in uterus (female). The identification of prey items follows Menezes & Figueiredo (1985) for Mullidae. Other prey remains were identified until the family level according to Nelson (1994).

#### RESULTS AND DISCUSSION

The characters of the Brazilian specimens match those described by Bigelow & Schroeder (1958), Uyeno & Miyake (1983), and McEachran & Carvalho (2002): forward extension of anterior rays of pectoral fin not reaching as far as tip of snout; rostral cartilage robust, extending to tip of snout; middle of snout produced, but the sides of it slightly concaved; a band of small thorns on lower surface from tip of snout to extreme outer margin of pectoral; thorns of median row originated somewhat behind eye and extending to first dorsal; small thorns of lateral row present on tail; nasal curtain fringed; dorsal surface pale brown, with white laterally-elongated blotches with darker margins over disc (more prominent

in larger specimens); and ventral surface whitish. Holotype illustrated in the Figure 1. The Brazilian specimens have all the diagnostic characters except the size and number of white blotches, which are rounded, and not laterally elongated as observed by Bigelow & Schroeder (1958) and Uyeno & Miyake (1983) (Tab. 1, Fig. 2). Caudal thorns are illustrated in the Figure 3.

Bigelow & Schroeder (1958), Uyeno & Miyake (1983), and McEachran & Carvalho (2002) confirmed that this skate is demersal on the continental and insular shelves and slopes from 366 to 915 m depth. The cap-

ture of single specimens described in the literature and reported in the present paper suggests that the species may be solitary or occurs in small schools. The records of *D. clarkii* off Brazilian coast are restricted to the State of Rio Grande do Sul, which is probably the south limit of distribution of the species. Its general distribution in the western Atlantic (McEachran & Carvalho, 2002), suggests a great gap between 5°N and 32°S. The collecting sites indicate the species inhabits a mud-bottom habitat on the upper slope, generally found in waters deeper than 350 m.

Table 1. Measurements of the holotype (from Gulf of Mexico) and three specimens of *Dactylobatus clarkii* (from southern Brazil).

Measurements	USNM 156712*		MOVI 22664		MOVI 22666		MOVI 24307	
	mm	%DW	mm	%DW	mm	%DW	mm	%DW
Disc width (DW)	457	100	448	100	435	100	358	100
Disc length	366	80.1	356	79.5	354	81.4	300	83.8
Disc length (to axil)			326	72.8	329	75.6	280	78.2
Preorbital length	94	20.7	97	21.7	96	22.1	80	22.3
Prespiracular length			118	26.3	116	26.7	96	26.8
Pre-first dorsal length			602	134.4	600	137.9	525	146.6
Prenarial length	102	22.3	68	15.2	65	14.9	52	14.5
Preoral length			103	23	97	22.3	83	23.2
Prebranchial length			150	33.5	149	34.3	128	35.8
Head length			215	48.0	214	49.2	188	52.5
Intergill length			44	9.8	48	11.0	41	11.5
Snout-vent length	355	77.7	374	83.5	368	84.6	307	85.8
Caudal finfold width (left)			2	0.4	2	0.5	2	0.6
Caudal base width			36	8.0	35	8.0	34	9.5
Caudal base height			20	4.5	20	4.6	14	3.9
Pre-first dorsal fin width			14	3.1	12	2.8	10	2.8
Pre-first dorsal fin height			7	1.6	7	1.6	5	1.4
Eye length	21	4.7	20	4.5	20	4.6	18	5.0
Spiracle width	22	4.8	14	3.1	16	3.7	12	3.4
First gill slit width	8	1.7	9	2.0	9	2.1	8	2.2
Third gill slit width	11	2.3	10	2.2	10	2.3	8	2.2
Fifth gill slit width	9	1.9	8	1.8	9	2.1	6	1.7
First dorsal fin base	29	6.3	25	5.6	25	5.7	22	6.1
First dorsal fin height	11	2.5	13	2.9	11	2.5	11	3.1
First dorsal fin length			29	6.5	27	6.2	26	7.3
Interorbital (cranial) space			30	6.7	30	6.7	23	6.4
Interspiracular space	40	8.7	42	9.4	48	11.0	37	10.3
Internarial space			35	7.8	33	7.6	30	8.4
Mouth width	58	12.7	59	13.2	65	14.9	56	15.6
Interbranchial space (first)	99	21.7	102	22.8	104	23.9	79	22.1
Interbranchial space (third)			91	20.3	94	21.6	66	18.4
Interbranchial space (fifth)	59	13.0	70	15.6	74	17.0	50	14.0
Interaxial space			130	29.0	136	31.3	121	33.8
Second dorsal fin base	29	6.3	25	5.6	20	4.6	20	5.6
Second dorsal fin height	11	2.5	13	2.9	11	2.5	12	3.4
Second dorsal fin length			27	6.0	25	5.7	25	7.0
Hepatic weight (g)			90		85		40	

\* According to Bigelow & Schroeder (1958).

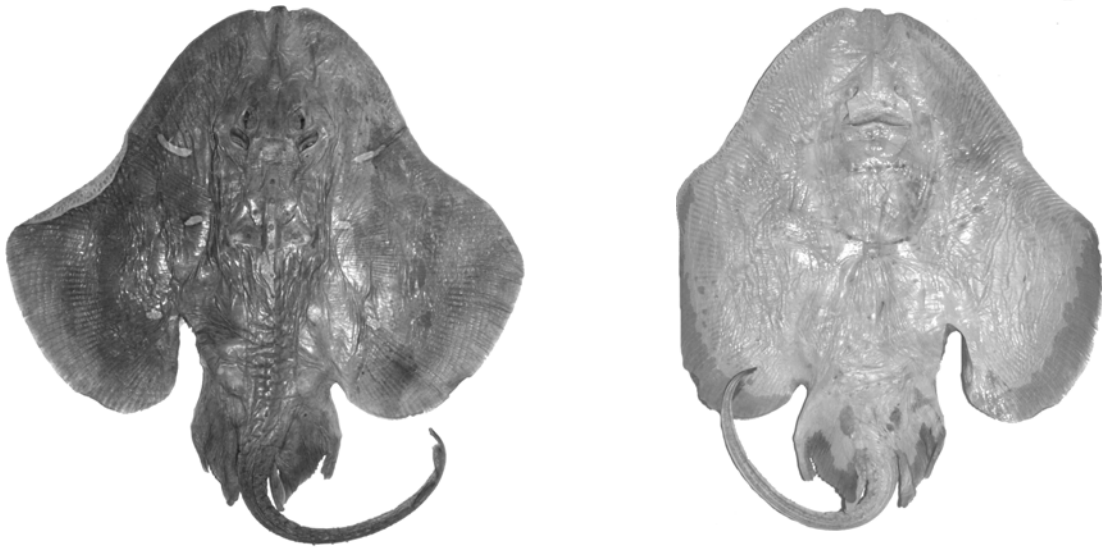


Figure 1. Dorsal and ventral views of *Dactylobatus clarkii*, USNM 156712, holotype, immature male, 665 mm TL.

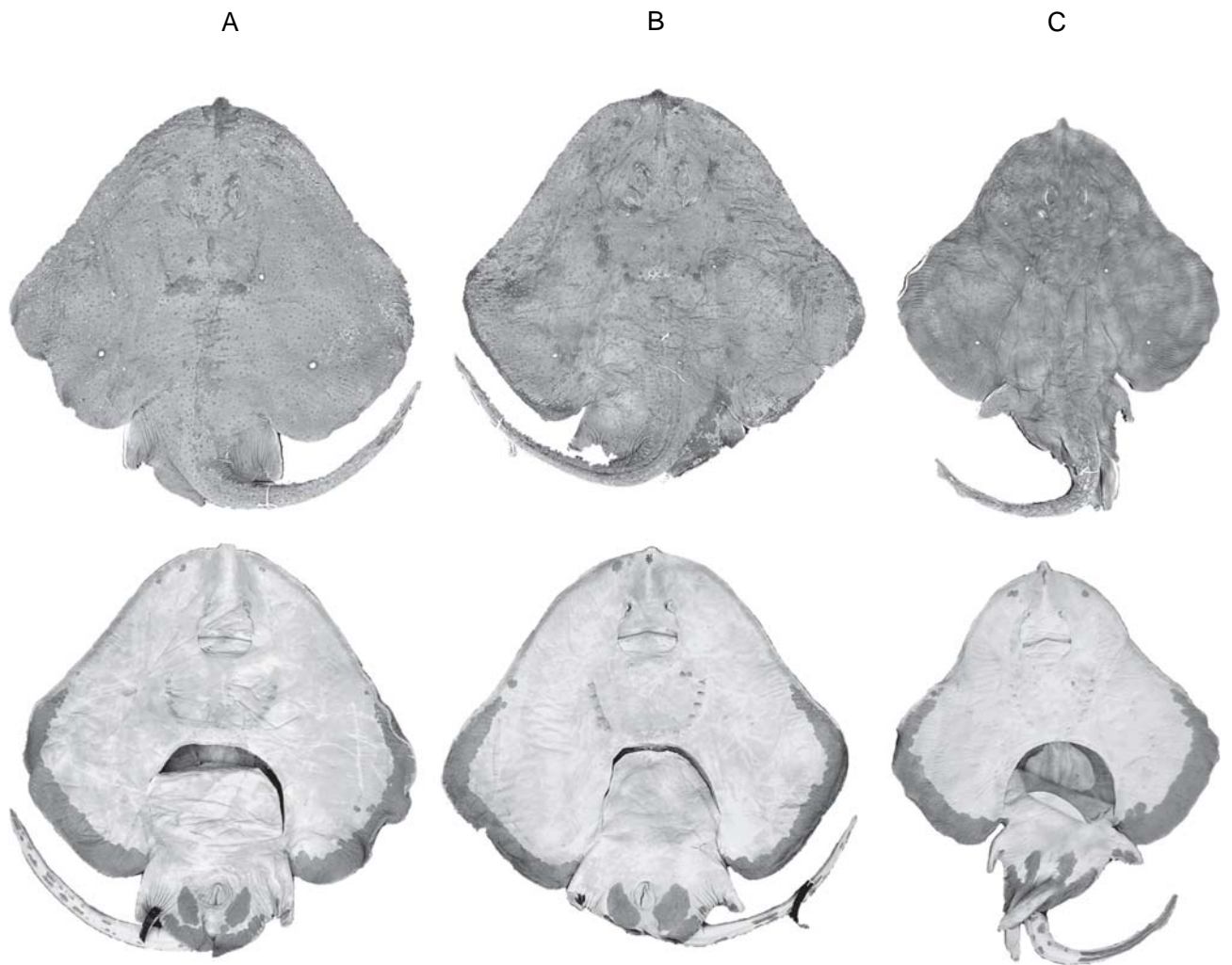


Figure 2. Dorsal and ventral views of *Dactylobatus clarkii*: A - MOVI 22664, immature female, 686 mm TL; B - MOVI 22666, immature female, 670 mm TL; and C - MOVI 24307, immature male, 590 mm TL.

Table 2. Stomach contents of three immature specimens of *Dactylobatus clarkii* from southern Brazil.

Prey items	Number of items		
	22664	22666	24307
Pisces			
Osteichthyes			1
Myctophiformes			
Myctophidae	2	1	6
Perciformes			
Mullidae			
<i>Mullus argentinae</i> Hubbs & Marini, 1933		1	

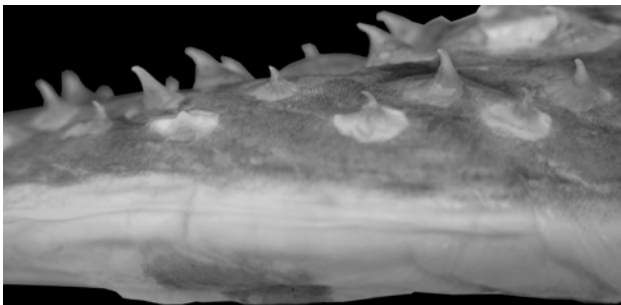


Figure 3. Caudal thorns of *Dactylobatus clarkii*: MOVI 24307, immature male, 590 mm TL.

All the specimens collected are immature. The male has a developed but not rigid clasper and the females have no developed follicles. The stomach contents of these specimens consisted of at least 3 different prey items, with one small specimen of *Mullus argentinae*, remains of one teleost fish and a predominance of Myctophidae fishes (Tab. 2). Also reported at the collecting sites were the sympatric chondrichthyans: *Etmopterus bigelowi*, *Squalus* aff. *blainvillei*, and *Dipturus leptocauda*.

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