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NOTA

RECORD OF THE BLURRED SMOOTH LANTERNSHARK, *Etmopterus bigelowi* Shirai and Tachikawa 1993 (SQUALIFORMES, DALATIIDAE) CAPTURED BY BOTTOM HOOK, IN SOUTHERN BRAZILIAN WATERS

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ABSTRACT

In this paper the occurrence of an immature female specimen of the Blurred Smooth Lanternshark, *Etmopterus bigelowi* is reported. The individual was caught by a longline vessel using a bottom hook on March 20th, 2014, off South Brazil.

Key words: Chondrichthyes, deep water shark, Squaliformes

RESUMEN

Ocurrencia del tiburón lucero liso, *Etmopterus bigelowi* Shirai & Tachikawa 1993 (Squaliformes, Dalatiidae), capturado con anzuelo de fondo, en aguas del sur de Brasil. En el presente trabajo de registra la ocurrencia de una hembra inmadura del tiburón lucero liso. El individuo fue capturado por una embarcación de palangre, usando un anzuelo de fondo, el 20 de marzo del 2014, en el sur de Brasil.

Key words: Chondrichthyes, tiburón de profundidad, Squaliformes

The genus *Etmopterus* Rafinesque, 1810 is a diverse taxon composed of small to medium size deep water sharks, with adults reaching from 23.0 to 75.0 cm of total length and habiting mostly waters between 180 and 2000 m of depth (Compagno, 1984; Gianeti & Vooren, 2008). There are 35 described species (Weigmann, 2016), four of them occurring in Brazilian waters, i.e. *E. bigelowi*, *E. gracilispinis* Krefft, 1968, *E. granulosus* Günther, 1880 and *E. lucifer* Jordan & Snyder, 1902 (Soto, 2001; Gianeti & Vooren, 2008).

The Blurred Smooth Lanternshark, *E. bigelowi,* is often misidentified as *E. pusillus* and is characterized by: (1) the number of turns in the intestinal valves varying between 16 and 19, (2) the distance from pectoral fin axil to the first dorsal fin origin being shorter or equal to 1/3 of the interdorsal space, (3) the distance from free rear tip of pectoral fin to first dorsal fin origin being shorter than the horizontal diameter of the eye, (4) the distances snout tip to first gill slit being longer than distance from the first gill slit to first dorsal origin and (5) a bigger length of the first dorsal spine than *E. pusillus* (Shirai & Tachikawa, 1993; Gianeti & Vooren, 2008).

The species attains sexual maturity at 63.0-65.0 cm for females and 60.0 cm for males, with suggested size segregation. In the upper continental slope of southern Brazilian waters, juvenile individuals and a pregnant female *E. bigelowi* were caught between 400 and 599 m depth, suggesting a migration to shallower waters to give birth (Gianeti *et al*., 2009).

On March 20, 2014, a specimen of the Blurred smooth lanternshark was caught by a longline vessel, using a bottom-hook baited with meat pieces of Thunnus alalunga Jordan, Tanaka, & Snyder, 1913, at a depth between 600-800 m (33º24'S-51º6'W) (Fig. 1). The gear was being occasionally used by the crew during the night to capture the Argentine hake *Merluccius hubbsi* Marini, 1933 or Groupers (Serranidae) for consumption.

The specimen captured (Figs. 2 and 3) was 46.5 cm length, 12.0 cm of interdorsal space, 17 turns in intestinal valves, 3.5 cm between pectoral fin axil and first dorsal origin, 1.5 cm between free rear tip of pectoral fin and first dorsal origin; 2.8 cm of horizontal length of the eye, 8.8 cm between snout tip to first gill and 7.5 cm between the first gill slit and the first dorsal origin and 2.5 cm length of the first dorsal spine, characterizing it as *E. bigelowi* following Gianeti & Vooren (2008) (Table 1).

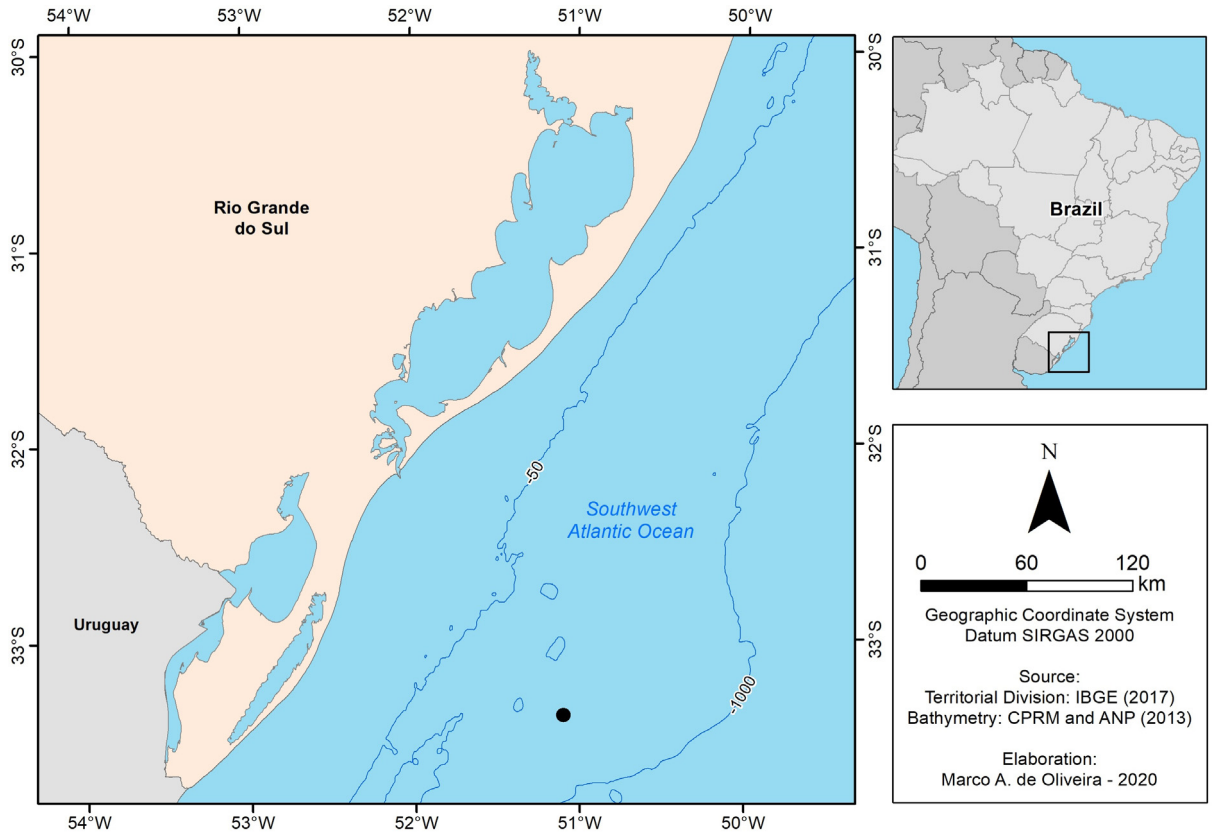

Fig. 1. Capture position of specimen of the Blurred smooth lanternshark, *Etmopterus bigelowi* female individual caught in March, 20, 2014, by bottom hook in south Brazil, Southwest Atlantic Ocean.

Fig. 2. Lateral view of an immature female specimen of the Blurred smooth lanternshark, *Etmopterus bigelowi*, caught on March 20th 2014 off South Brazil, Southwest Atlantic Ocean. Scale bar represents 5.0 cm.

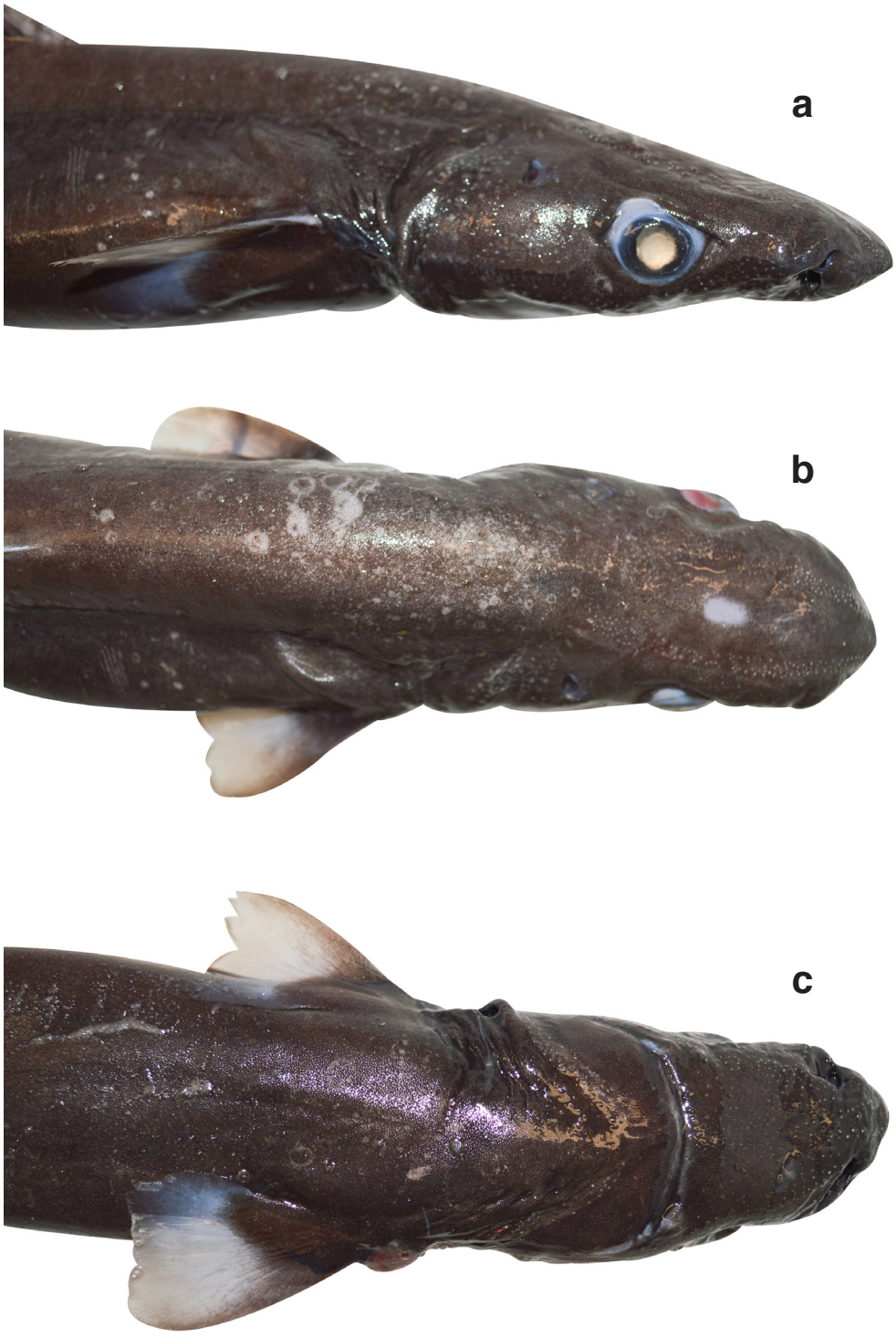

Fig. 3. Lateral (a), dorsal (b), and ventral (c) view of an immature female specimen of the Blurred smooth lanternshark, *Etmopterus bigelowi*, caught on March 20 2014 off South Brazil, Southwest Atlantic Ocean

Table 1. Distinctive characteristics of *Etmopterus bigelowi* and *E. pusillus* as suggested by Gianeti & Vooren (2008) and values measured in the female individual captured in March 20th 2014, by bottom hook in south Brazil. The abbreviation "NI" means "not informed"

Features	*E. bigelowi*	*E. pusillus*	Specimen in record
Number of turns in the intestinal valves	16-19	10-14	17
Interdorsal space	NI	NI	12.0 cm
Distance from pectoral fin axil to first dorsalfin origin	Shorter, or equal to 1/3 of interdorsalspace	Longer than 1/3 of the interdorsal space	3.5 cm
Horizontal length of the eye	NI	NI	2,8 cm
Distance from free rear tip of pectoral fin tofirst dorsal fin origin	Shorter than horizontal diameter of eye	Longer than horizontal diameter of eye	1.5 cm
Distance between the first gill slit and the first dorsal origin	NI	NI	7.5 cm
Distance from snout tip to first gill slit	Longer than distance from first gill slitto first dorsal fin origin	Shorter than distance from first gill slitto first dorsal fin origin	8.8 cm

No ovarian follicles were visible. Oviducts were represented by paired whitish, translucent, uniformly thread-like uteri, with indistinct oviducal glands. Ovaries were paired and whitish and with undistinguishable ovarian follicles, presenting 5.95 mm width. The uterus presented 1.65 mm width. These features characterize an immature individual.

This is the first record of capture by bottom hook for the area. The occurrence of specimens of this genus is rare, rather sporadical, and individual. The occurrence of a single mature female of *Etmopterus spinax* (Linnaeus, 1758), recorded in the Syrian Coast (Eastern Mediterranean) by Saad & Alkusairy (2018), is a good example of this.

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