

RESEARCH NOTE

Presence of roughtail stingray *Bathytoshia centroura* (Elasmobranchii: Myliobatiformes: Dasyatidae) in the Southeastern Gulf of Mexico

Presencia de raya látigo isleña *Bathytoshia centroura* (Elasmobranchii: Myliobatiformes: Dasyatidae) en el sureste del Golfo de México

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Abstract. - A *Bathytoshia centroura* female of 181 cm disk width was found during the monitoring of small scale fishery in the state of Tabasco, Mexico. The specimen was caught by a gill net vessel at 32 km northeastern of the port of Sanchez Magallanes, at 78 m depth. Large size and spacing of mid-dorsal bucklers, conspicuous tubercles on the outer parts of disc and tail with numerous rows of small spines were used to verify the identification. The presence of this species in the southeast of the Gulf of Mexico is reported, increasing up to five, the number of the species of the subfamily Dasyatinae in this zone.

Key words: New record, *Bathytoshia centroura*, Dasyatinae, Tabasco

INTRODUCTION

The subfamily Dasyatinae in the South Gulf of Mexico comprises only one genus, *Hypanus* (Del Moral-Flores *et al.* 2015, Last *et al.* 2016). The species of *Hypanus* genus include: Atlantic stingray *Hypanus sabinus* Lesueur, 1824; Longnose stingray *H. guttatus* Bloch & Schneider, 1801; Bluntnose stingray *H. say* Lesueur, 1817 and Southern stingray *H. americanus* Hildebrand & Schroeder, 1928 (Castro-Aguirre & Espinosa-Pérez 1996, Del Moral-Flores *et al.* 2015, Last *et al.* 2016). The most common stingray in the capture of artisanal fishery in Southeastern Gulf of Mexico is *H. americanus* (Hernández-López 2009).

The *Bathytoshia* genus was formerly a junior synonym of *Dasyatis*, but now is recognized as a valid species (Last *et al.* 2016); hence, *Dasyatis centroura* is now *Bathytoshia centroura* (Rosa *et al.* 2016).

Bathytoshia centroura (Mitchill, 1815) can be distinguished from others stingray species by the following combination of characters: Lateral sides of tail with conspicuous tubercles and thorns in large juveniles and adults, longitudinal fin-fold along ventral side of tail about 1/2 as deep as height of tail (McEachran & de Carvalho 2002) and by its size, its maximum disc width is between 210 and 220 cm. The disc width for mature males is between 130 and 150 cm, and for mature females between 140 and 160 cm (McEachran & de Carvalho 2002).

Roughtail stingray was reported to occur in the tropical to warm temperate Eastern and Western Atlantic. In Western Atlantic has been recorded from Georges Bank and Cape Cod to the southern Florida, northern and northeastern Gulf of Mexico, Bahamas, and coast of South America from southeastern Brazil to Argentina (McEachran & de Carvalho 2002). However, Last *et al.*

(2016) stated that the rays identified as *D. centroura* and 5 species are currently populations of 2 species, *D. brevicaudata* and *D. lata* and the species of *Bathytoshia centroura* found in the Western Atlantic is not conspecific with *Bathytoshia* of the Eastern Atlantic. Therefore, the geographical distribution of *B. centroura* is only in the Western Atlantic. In this work, the presence of *B. centroura* was reported in the Southeast Gulf of Mexico.

MATERIALS AND METHODS

During the monitoring of small scale fishery on October 25, 2012, a female roughtail stingray, *Bathytoshia centroura* was recorded in Sanchez Magallanes landing port (18°17'36.57"N- 93°51'43.3"W) on the South coast of the Gulf of Mexico (Fig. 1). Taxonomic identification and ovarian maturity stage were made before tail removing and gutting, applying the criteria of McEachran & de Carvalho (2002) and Stehmann (2002).

Since roughtail is a commercial species, after landing, it was transported to La Viga fish market in Mexico City. The stingray was captured 32 km Northeastern of Sanchez Magallanes, Tabasco, Mexico (18°49'45"N-94° 08'14"W) by a 25 feet fishing boat with outboard motor, using gill net with 7 inches of mesh size, at a maximum depth of 78 m. The depth information was given by the fishermen and this was estimated using a Garmin fish finder.

RESULTS AND DISCUSSION

The roughtail stingray female had an ovarian maturity stage 3 (adult) and disk width (DW, straight line distance between outer corners of disc) of 181 cm. Total weight was not taken; the gutted, tailless and headless weight of the specimen was 99 kg. The coloration of the dorsal surface was dark brown, with side of body a tail covered with tubercles or thorns. Hoese & Moore (1998) reported this characteristic as an important distinguishing characteristic between *B. centroura* and *Hypanus americanus* in the zone (Fig. 2).

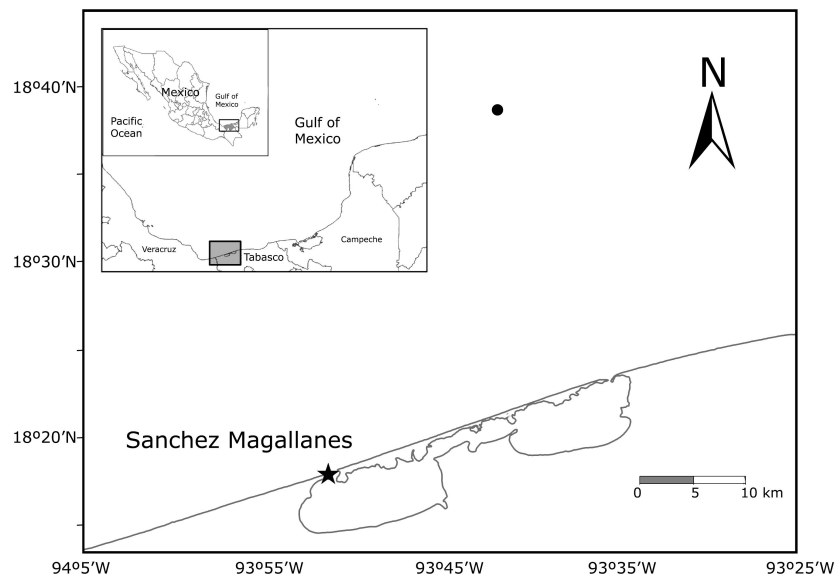


Figure 1. Map of Tabasco, Mexico, showing the site where roughtail stingray *Bathytoshia centroura* was recorded (star) and captured (circle) / Mapa de Tabasco, México mostrando el sitio donde la raya látigo isleña *Bathytoshia centroura* fue registrada (estrella) y capturada (círculo)

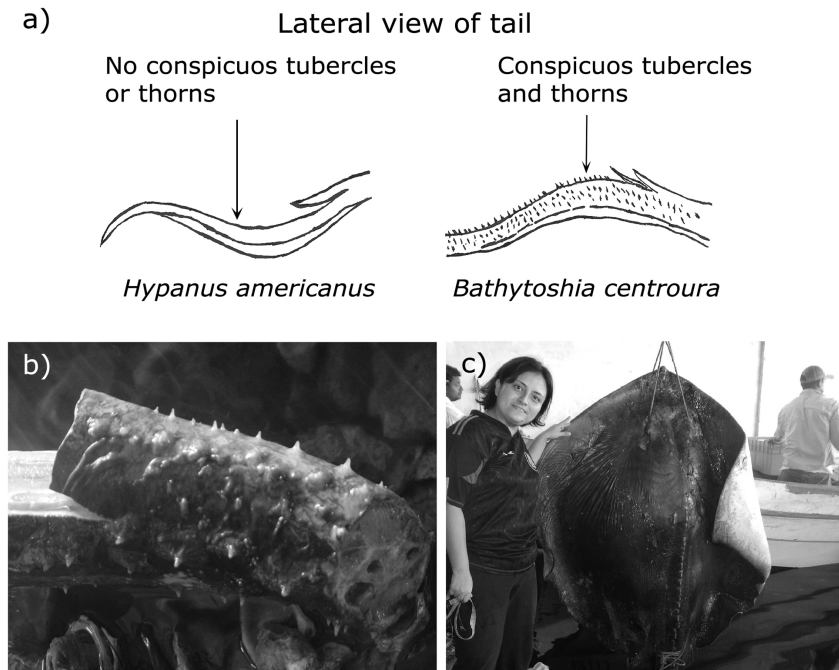


Figure 2. *Bathytoshia centroura* (Mitchill, 1815). a) Main characteristic of identification of *B. centroura* with respect to the most similar stingrays species in the zone (McEachran & de Carvalho 2002) b) Small piece of tail covered with tubercles or thorns and c) Photograph of the captured complete specimen. (Photo credits: J.L. Cruz Sánchez) / *Bathytoshia centroura* (Mitchill, 1815). a) Principal característica de identificación de *B. centroura* con respecto a las especies de rayas más similares en la zona (McEachran & de Carvalho 2002), b) Pequeño trozo de la cola cubierta de tubérculos o espinas and c) Fotografía del espécimen completo capturado

The capture of this specimen has usually been reported at a depth of less than 100 m (McEachran & Fechhem 1998), which coincides with the estimated depth of capture (78 m). Roughtail stingray was captured along with 8 scalloped hammerhead *Sphyrna lewini* and two silky shark *Carcharhinus falciformis*.

The National Action Plan for the Management and Conservation of Sharks, Rays and Related Species in Mexico (PANMCT) mentioned the presence of this species in the Mexican coast of Gulf, but it does not specify in which zones has been captured (CONAPESCA-INP 2004). On the other hand, in a recent published scientific work, this species is not reported for the coasts of Gulf of Mexico (Del Moral-Flores *et al.* 2015). This situation suggests that occurrence of this species is rare,

since small scale shark fisheries and longline fleets in Mexican zone of Gulf of Mexico have not reported the presence of roughtail stingray (DOF 2012)¹. Possibly, this lack of reports is the result of a misidentification of the organisms analyzed. Therefore, this work contributes to report the presence of this species in southeast coast of the Gulf of Mexico.

¹DOF. 2012. Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación. Acuerdo por el que se da a conocer la actualización de la Carta Nacional Pesquera. Viernes 24 de agosto de 2012. Diario Oficial de la Federación. (Segunda Sección) 21. <<http://www.inapesca.gob.mx/portal/documentos/publicaciones/CARTA%20NACIONAL%20PESQUERA/24082012%20SAGARPA.pdf>>

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