

Occurrence of *Urotrygon cimar* (Urotrygonidae) in the central Pacific coast of Mexico

by

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RESUMÉ. - Présence de *Urotrygon cimar* sur la côte Pacifique centrale du Mexique.

Une nouvelle limite septentrionale de l'aire de répartition d'*Urotrygon cimar* López & Bussing, 1998 est confirmée sur la côte Pacifique du Mexique. Un individu a été capturé à environ 2000 km au nord de sa répartition connue. Ceci confirme que l'aire de répartition de *U. cimar*, dans cette région, est beaucoup plus vaste que ce qui était mentionné jusqu'à présent dans la littérature.

Key words. - Urotrygonidae - *Urotrygon cimar* - ISE - Mexican Pacific - Distribution - New record.

Urotrygon cimar is a tropical marine species that inhabits the soft ocean bottom at depths of up to 85 m, but it is usually found in shallower waters (less than 10 m deep) in inshore areas (Lopez and Bussing, 1998; Robertson and Allen, 2006). Studies of the Family Urotrygonidae in the eastern Pacific are scarce. For this species in particular only the physical and morphological description is known; information on the basic biology and the distribution are nonexistent. This species has been reported in only two ichthyological collections globally: the Zoology Museum of the University of Costa Rica, where the holotype is kept and the Smithsonian National Museum of Natural History. Lopez and Bussing (1998) report records of this species inhabiting the continental shelf of the eastern Pacific between Corinto, Nicaragua and the Gulf of Nicoya, Costa Rica. The ichthyological collection of the Smithsonian National Museum of Natural History (<http://www.mnh.si.edu/rc/>) has records of this species caught at Bahia de Jiquilisco, El Salvador, at a depth of 14 m and a distance about 170 km further north-west of the distribution reported by Lopez and Bussing (1998), which indicates that the area of distribution for this species could be extended. Robertson and Allen (2006) establish its distribution range in the Eastern Pacific from Costa Rica to Guatemala, which is the current northern limit. Our note confirms the presence of *U. cimar* farther north than its previously known distribution.

One individual of *U. cimar* was captured during a demersal fish survey off the central Pacific coast of Mexico (17°58'58.3" N-102°04'51" W, Fig. 1) on September 21st 2001 using a trawl net fitted with a footrope 24 m long and a 50-mm liner at the cod-end at a depth of 8 m. The specimen was frozen and stored for further analysis. It was identified in the laboratory, sexed, and morphometric and meristic characters were taken. Measurements were made according to Lopez and Bussing (1998).

The specimen has a disc that is round in shape with an anterior margin that is evenly convex, and it possesses a small mouth. The tail length is short (measured from the mid-cloaca to the tip of the

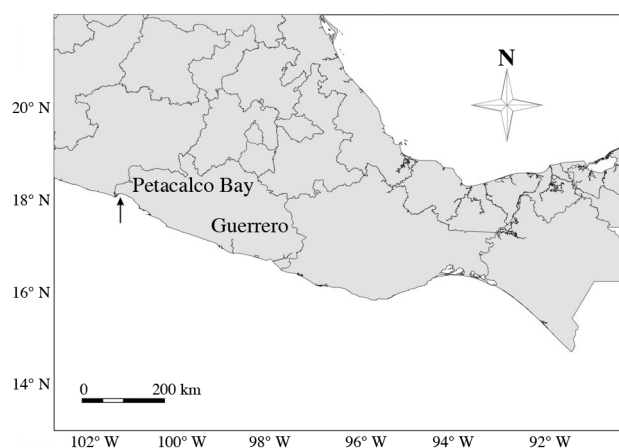


Figure 1. - Capture site of *Urotrygon cimar* off the Central Pacific coast of Mexico.

caudal fin; about 50% percent of TL) with a base that is strongly depressed and without lateral keels. The dorsal surface of the disc, tail and the dorsal half of the caudal fin are uniformly and densely covered with moderately-sized, strongly pungent denticles with small stelliform bases. The denticles are slightly recurved and are increasingly larger towards the midline of the disc, but they do not form distinct rows of enlarged denticles or thorns. The caudal fin is moderately wide with a rounded tip, and the dorsal lobe is slightly shorter than the ventral lobe. The tip of the caudal spine reaches to the origin of the dorsal caudal lobe. The pupillary operculum forms a small triangle, with the apex not reaching the ventral margin of the pupil. The disc, tail, caudal fin and the upper surface of the pelvic fins are a pale yellow-brown that is mottled with small darker brown spots; jet black blotches, varying from the size of the eye to the size of the spiracle, are scattered over the disc. The caudal fin is dusky with dark spots, and the ventral surface of the disc and the tail are white. A wide brown lateral margin continues onto the posterior border of the pelvic fins, contrasting sharply with the white belly (Lopez and Bussing, 1998).

U. cimar is similar to other Urolophidae species inhabiting the study area, especially *U. munda*, *U. chilensis* and *U. rogersi*, with which it shares taxonomic characters like shape and colour. *U. cimar* and *U. munda* both possess similar disc shapes and denticles on the dorsal surface of the disc, tail and dorsal half of the caudal fin. However, in *U. munda* the tail is longer than the disc, the denticles have a different shape and the pupillary operculum is round and covers half of the pupil (Mc Eachran, 1995; Lopez and Bussing, 1998).

The anterior margin of *U. chilensis* is triangular, and denticles

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Table I. - Biometric and meristic characters of the captured *Urotrygon cimar*.

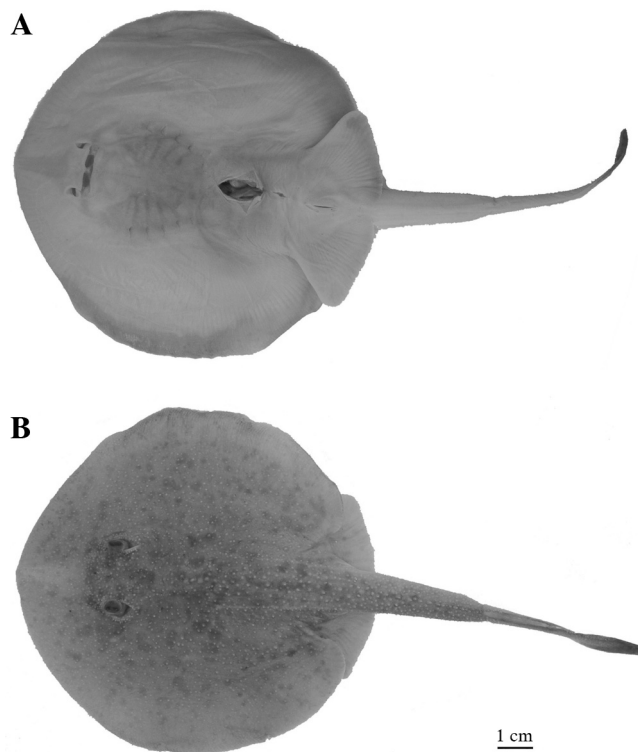
Collection catalogue number	ICML 724.01
Locality	Petalcalco Bay
Sex	Female
Total length	188 mm
Disc width	103 mm
Disc length	96 mm
Preorbital length	28 mm
Preoral length	25 mm
Prenasal length	19 mm
Nasal curtain length	6 mm
Nasal curtain width	5 mm
Eye diameter	5 mm
Interorbital width	14 mm
Spiracle length	6 mm
Mouth width	11 mm
Distance between nostrils	12 mm
Pelvic fin length	22 mm
Pelvic fin width	26 mm
Caudal fin height	27 mm
Length of caudal fin upper lobe	29 mm
Tail height at axil of pelvic fin	7 mm
Width of first gill opening	3 mm
Width of third gill opening	3 mm
Width of fifth gill opening	2 mm
Distance between first gill openings	26 mm
Distance between fifth gill openings	16 mm
Distance snout to cloaca	87 mm
Distance cloaca to tail spine	42 mm
Distance cloaca to caudal fin origin	63 mm
Distance cloaca to tip of caudal fin	95 mm

are absent from the dorsal surface of the disc and tail, except on the dorsal part of the head. A series of strong spines are present in the middle part of the disc and tail. The pupillary operculum is short and round and covers the upper part of the pupil (Mc Eachran, 1995; Lopez and Bussing, 1998). The anterior margin of *U. rogersi* is also triangular; the denticles are present in two parallel lines with a line of strong spines in the middle that run from the head to the tip of the caudal fin. The pupillary operculum is small and round and only covers a small part of the pupil (Mc Eachran, 1995; Lopez and Bussing, 1998).

The biometric and meristic characters of *U. cimar* are presented in table I, and the specimen is shown in figure 2. It was preserved in 70% ethanol after being fixed with 10% formalin and was then deposited in the Ichthyological Collection of the Instituto de Ciencias del Mar y Limnología, UNAM, with the fish catalogue number ICMYL 724.01.

The presence of *U. cimar* more than 1700 km northwest of its reported range of distribution and more than 1500 km northwest of the range reported in the ichthyological collection of the Smithsonian National Museum could be related to the fact that this is an uncommon species that is similar to other more common species Urotrygonidae in the area, and can be misidentified.

To date, only seven specimens of *U. cimar* were recorded (eight including the specimen in this study). Lopez and Bussing (1998) reported six individuals from the Pacific coast of Nicaragua and

Figure 2. - *Urotrygon cimar* caught off Petalcalco bay (State of Guerrero, Mexico). A: Ventral view; B: Dorsal view.

Costa Rica and the ichthyological collection of the Smithsonian National Museum reported one from El Salvador. These records are all from the Panamic Province. Our study extends the distribution of this species to the Mexican province in the Central Pacific coast of Mexico, and it is the northernmost record for the species in the eastern Pacific, as well as the first record from Mexican waters.

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