

## First Record of the Pacific Fanfish *Pteraclis aesticola* (Jordan and Snyder, 1901) in the Tropical Eastern Pacific

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**Abstract** – One specimen of *Pteraclis aesticola* was collected off San José del Cabo, Baja California Sur, México (22°54'N, 109°45'W), in March 2007. Present record is the first reported occurrence of the species in the Tropical Eastern Pacific biogeographic region (Gulf of California to southern Ecuadorian waters). Its large fan-like anal and dorsal fins and its counts of fin rays and vertebrae can distinguish the Pacific fanfish from the other species in the genus. This fish may have not yet been recorded in the region because its presence has been overlooked in the past because of rarity and lack of commercial value.

**Key words** – Bramidae, Pacific fanfish, *Pteraclis aesticola*, Tropical Eastern Pacific

### 1. Introduction

The family Bramidae (pomfrets) comprises 22 species grouped in two subfamilies and seven genera, distributed mostly epipelagically in the Atlantic, Indian and Pacific oceans (Nelson 2006). Seven pomfret species have been recorded in the eastern Pacific, namely *Brama dussumieri* Cuvier, 1831; *B. japonica* Hilgendorf, 1878; *Pteraclis aesticola* (Jordan and Snyder, 1901); *P. velifera* (Pallas, 1770); *Taractes asper* Lowe, 1843; *T. rubescens* (Jordan and Evermann, 1887); and *Taractichthys steindachneri* (Döderlein, 1883).

The Pacific fanfish can be distinguished from its allied species, the spotted fanfish *P. velifera* Valenciennes, 1831 and *P. carolinus* (Pallas, 1770), on the basis of branchiostegal rays, dorsal, anal and pectoral rays, and vertebrae (Fitch and Schultz 1978; Last and Moteki 2001). The spotted fanfish

presents a dorsal fin with 54-57 rays, anal fin with 47-50 and 51-54 vertebrae versus 49-52, 40-54 and 45-48 respectively for the Pacific fanfish. The species *P. carolinus* is restricted to the Atlantic Ocean (Bearez *et al.* 2001). The specimens of the Pacific fanfish are exceedingly rare and at present, there are 22-catalogued records in museums and collections worldwide (Froese and Pauly 2008).

In this paper, we report for the first time the occurrence of *P. aesticola* in the Tropical Eastern Pacific (TEP) biogeographic region (Gulf of California to southern Ecuadorian waters).

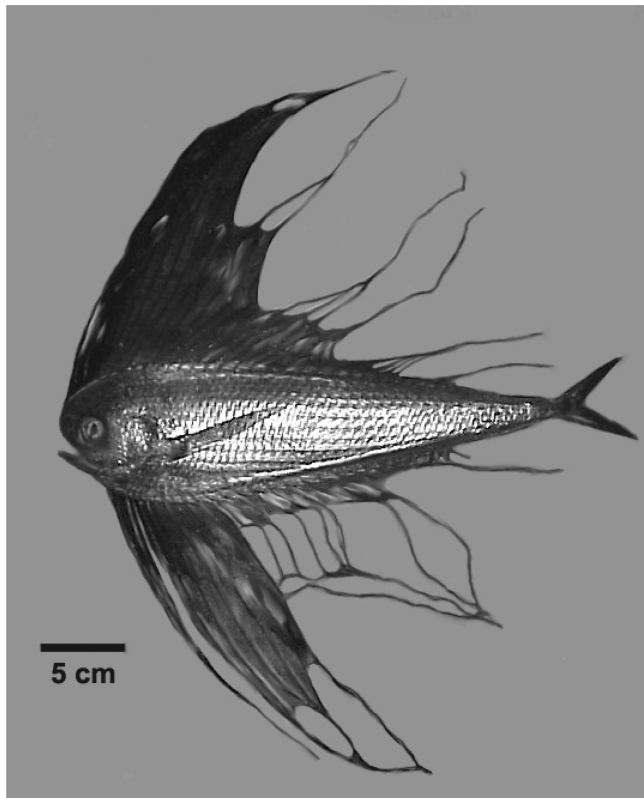
### 2. Material and Methods

On 11 March 2007, a specimen of the Pacific fanfish of 331.3 mm total length (TL) (Fig. 1) was caught by a local fisherman using hook and line. The capture site was approximately 12.5 km off San Jose del Cabo, Baja California Sur, México (22°54'N, 109°45'W; Fig. 2), in the Gulf of California. Counts and measurements followed those of Hubbs and Lagler (1964) and Bearez *et al.* (2001). The specimen was preserved in the ichthyological collection (CI) of the Centro Interdisciplinario de Ciencias Marinas (CICIMAR-IPN), at La Paz, B.C.S., Mexico (catalogue number CICIMAR-CI 6417). Meristic and morphometric features are given in Table 1.

### 3. Results and Discussion

The specimen was examined and shows a combination of characters that is typical of *P. aesticola*, besides the

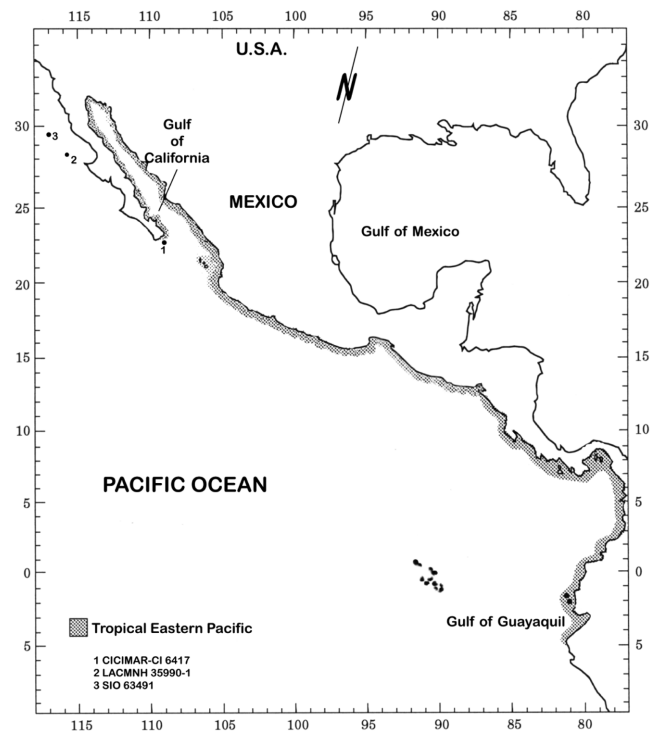
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**Fig. 1.** Pacific fanfish, *Pteraclis aesticola* (Jordan and Snyder, 1901), 331.3 mm total length, caught in the Tropical Eastern Pacific, off San José del Cabo, Baja California Sur, México (CICIMAR-CI 6417).

meristics above mentioned: a strongly compressed body, silvery, blue-greenish to black and covered with spiny scales; a narrow caudal peduncle and strongly forked caudal fin. The eyes are positioned well away from the arched head margin, having a large oblique mouth with the rear of the top jaw exposed. The large fan-like anal and dorsal fins are similar in size and shape and have exceedingly long bases. These fins are bright blue at the base changing to a blue-black coloration toward the tips, and can be depressed into slots created by enlarged scales (Last and Moteki 2001).

The Pacific fanfish is found in greatest abundance in the Indian Ocean around the western coast of Australia and in the Pacific region, from northern to central New South Wales (Mead 1972; Smith 1986). Other authors have cited its presence in waters of Korea, Japan, Hawaii and the Pacific Central North Gyre (*e.g.* Noble and Blodgett 1952; Eschmeyer *et al.* 1983; Bearez *et al.* 2001; Park *et al.* 2007). However, in the eastern Pacific Ocean, the species is very



**Fig. 2.** Map showing the collection localities of the Pacific fanfish *Pteraclis aesticola*, from the Tropical Eastern Pacific (TEP): 1. Present record (CICIMAR-CI 6417), and off the TEP: 2. Museum of Los Angeles County (LACMNH 35990-1), and 3. SIO Marine Vertebrate Collection (SIO 63491). Map modified from Hastings (2000).

rare and most likely seen as stomach content of large predatory fishes such as tunas and marlins (Fitch and Schultz 1978; Mead 1972). The published records of *P. aesticola* in the eastern Pacific have been from southern California (Fitch and Schultz 1978) and Chilean waters (Pequeño 1989).

To our best current knowledge, there are no previously published records of the Pacific fanfish in the Tropical Eastern Pacific biogeographic region (Gulf of California to Gulf of Guayaquil; *e.g.* Brusca 1980; Hastings 2000), the species being virtually nonexistent between tropical Mexican and northern Peruvian waters. Nevertheless a couple records not published, from the northern warm temperate Baja California peninsula, have been catalogued in the Museum of Los Angeles County (LACMNH 35990-1: 28°31'N, 115°30'W) and in the Marine Vertebrate Collection of Scripps Institution of Oceanography (SIO 63491: 29°55'N, 116°30'W). Those records are more than 600 km and 800 km northward, respectively, from the present

**Table 1.** Morphometrics and meristics of the specimen of the Pacific fanfish, *Pteraclis aesticola*, caught in the Tropical Eastern Pacific (CICIMAR-CI 6417), and other specimens from: 1=Bearez *et al.* (2001), 2=Fitch and Schultz (1978), 3=Noble and Blodgett (1952). Weight of the specimen (not eviscerated): 146.3 grams

Characteristics	CICIMAR - CI	1	2	3
Counts:				
Dorsal fin soft rays	49	-	48	34
Anal fin soft rays	41	40-43	41-44	32
Pectoral fin soft rays	17	-	19	-
Upper jaw rows of teeth	4	-	-	-
Lower jaw rows of teeth	4	-	-	-
Branchiostegal rays	4	-	-	-
Pored scales in lateral line	50	-	48	-
Measurements in millimeters (mm):				
Total length (TL)	331.3	408	560	510
Standard length (SL)	289.2	348	473	-
Head length	57.58	-	-	-
Body depth	77.64	-	-	-
Caudal fin length	48.52	-	-	-
Pectoral fin length	72.55	-	-	-
Dorsal fin base	212.48	-	-	-
Anal fin base	197.23	-	-	-
Length of the dorsal fin spread	290.19	-	-	260
Length of the anal fin spread	247.94	-	-	200
Diameter of eye	14.13	-	-	20
Pre-orbital distance	14.42	-	-	-
Pre-dorsal length	8.86	-	-	-
Height of caudal peduncle	10.55	-	-	-
Maximum height of dorsal scale sheath	8.33	-	-	-
Maximum height of anal scale sheath	8.11	-	-	-

record (Fig. 2).

Due to the extreme rarity of this species in the area little is known about it; however most specimens catalogued of *P. aesticola* have been captured in purse seine fisheries targeting tunas and billfishes; therefore the capture of the present specimen by hook and line and short distance from land, is unusual. We cannot discard the possibility that the species had previously been overlooked in the region, since it occurs in small numbers mainly in deep open waters and because it has no commercial value.

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