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Min-Review

Rare Catch of *Aethra Scutata* Crab (Brachyura: Aethridae) in the *Panulirus* Lobster Fishery in the southeastern Gulf of California

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Min-Review

Information about the rare capture of the *Aethra scutata* crab is presented Smith, 1869 associated with capture of spiny lobsters *Panulirus inflatus* and *Panulirus gracilis* Streets, 1871 in gillnets in the southeastern Gulf of California, Mexico. This crab is very rarely reported in this area. Two specimens were collected with sizes: male AC= 99.02, LC= 63.29 and AL=28.47 mm and weight 87.8 g. Female AC= 89.9, LC= 58.25 and AL=27.01 mm and weight 77.7 g. *A. scutata* has only been reported twice (1878 and 1997). Therefore, it has not been reported from this area in 24 years in the southeastern Gulf of California, Mexico. Considering *A. scutata* as a rare catch species in the *Panulirus* lobster fishery in this area. The spiny lobster fishery in the southeastern Gulf of California is represented by *Panulirus inflatus* and *P. gracilis*, within this fishing activity, the fauna associated with these species, is characterized by some species of fish, mollusks and other crustaceans. In this area, there are studies of its fishery and accompanying fauna by an academic group of the Faculty of Marine Sciences of the Autonomous University of Sinaloa (FACIMAR-UAS), who have contributed for 24 years in research of *P. inflatus* and *P. gracilis* [1-5]. Within the accompanying fauna of these Hendrickx et al. (1997) have only reported lobster species in the southeastern Gulf of California, *Aethra scutata* (Figure 1) with two crabs.



Figure 1: *Aethra scutata* Smith, 1869. Dorsal view / *Aethra scutata* Smith, 1869. Dorsal view.

The objective was to analyze the sizes and sexes of two specimens (male and female) of *A. scutata* for taxonomic purposes as a rare species in the *Panulirus* lobster catch in the southeastern Gulf of California. Monthly samplings were conducted from December 2018 to June 2019 on the southeastern coast of the Gulf of California, the organisms were captured with bottom trawling sets with a three-inch mesh-light gillnet with 200X² m nylon multifilament thread, covering a drag area of 400 m². The working time of the network in the rocky substrate was approximately 24 h. The crustaceans were preserved in 70 % alcohol and labeled with field date for the conformation of reference collection (cocru-uas). The Regional Invertebrate Collection of the Benthic Invertebrate Laboratory of the National Autonomous University of Mexico (ICMyL-UNAM-Mazatlán) also corroborated the taxonomic determination of *A. scutata* [6, 7].



Taxonomy Kingdom: Animalia, Phylum Arthropoda, Subphylum Crustacea, Class Malacostraca, Subclass Eumalacostraca, Superorder: Eucarida, Order Decapoda, Suborder Pleocyemata, Infraorder Brachyura, Superfamily Aethroidea, Family Aethridae, Genus *Aethra*, Species: *Aethra scutata* Smith, 1869.

Description

The male was larger in size and weight than the female of *A. scutata* (Table 1). Both organisms are rocky benthic habitats, they are dark brown in colour, due to their size and weight, they do not represent economic or nutritional interest and could go unnoticed like a rock.

Table 1: Morphometric measurements of *Aethra scutata*/Mediciones morfométricas de *Aethra scutata*.

Characters	Measurement (mm)	
	Female	Male
Carapace width	89.9	99.02
Carapace length	58.25	63.29
Carapace height	27.01	28.47
Weight (g)	77.7	87.8
Colour of specimen	Dark brown	Dark brown

Distribution

Mazatlan, Sinaloa [6, 8], La Paz, Cabo San Lucas, Southern California, Gulf of California [9] and Revillagigedo Islands (Garth, 1992) [4,10] Mexico to Ecuador [11].

Comments

In the last twenty-four years of continuous research of Lobster Project FACIMAR-UAS (Faculty of Marine Sciences, Autonomous University of Sinaloa), only four specimens of *A. scutata* have been collected. The first two crabs by [8] and the second collection in this study with two organisms. The collections by [8] were used with a lobster trap in front of El Delfín beach (north Mazatlan) and the other crab was caught with a gillnet at a depth of 5.5 m in Lobos Island (from Mazatlan). In this study, the two specimens were captured by gillnet in Marmol beach (north Mazatlan) at a depth of 12m. In this area and according to [8] *A. scutata* was first reported in 1878, followed by [8] and finally by this study. For only two occasions collected *A. scutata* in the accompanying fauna of *P. inflatus* and *P. gracilis*, we reaffirm as rare species in this fishery and for this area.

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