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NOTA CIENTÍFICA

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Observaciones sobre el comportamiento de *Schroederichthys chilensis* (Carcharhiniformes, Scyliorhinidae)

Daniel Flores ¹ y Grant D. Adams ²

¹ Instituto del Mar del Perú – Sede Pisco. Av. Los Libertadores A – 12. Urbanización El Golf Paracas, Pisco, Perú.

² Cuerpo de Paz – Perú. Calle Vía Láctea 132, Surco, Lima 33, Perú.

Email Daniel Flores: dflores@imarpe.gob.pe

Email Grant Adams: grantadams60091@gmail.com

Abstract

Schroederichthys chilensis, the redspotted catshark or Chilean catshark, is an endemic species to Peruvian and Chilean waters. Observations on its behavior in the National Reserve System of Guano Islands, Islets, and Capes – Punta San Juan and Paracas National Reserve reveal that it curls when threatened. This hypothesized survival strategy has not been previously documented in this species and we recommend further studies to elucidate this behavior.

Keywords: Curling behavior; redspotted catshark; *Schroederichthys chilensis*; Punta San Juan; Paracas National Reserve.

Resumen

Schroederichthys chilensis, tiburón gato o tollo gato, es una especie endémica de las aguas peruanas y chilenas. Observaciones sobre su comportamiento en el medio natural de la Reserva Nacional Sistema de Islas, Islotes y Puntas Guaneras - Punta San Juan y Reserva Nacional de Paracas, revelan que se enrolla ante la presencia de peligro inminente. Esta estrategia de sobrevivencia no ha sido documentada para esta especie y se sugiere la realización de estudios que permitan conocer más sobre este comportamiento.

Palabras clave: Enroscarse; comportamiento; tiburón gato; *Schroederichthys chilensis*; Punta San Juan; Reserva Nacional de Paracas.

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The Chilean catshark, *Schroederichthys chilensis* (Guichenot, 1848), is an occasional bycatch in the artisanal fisheries of Chile and Peru (Lorenzen et al. 1979). This demersal species is distributed along the coastal waters of the Southeast Pacific from Ancón, Peru to Chiloé, Chile (Chirichingo 1974, Compagno 1984, Ojeda et al. 2000) inhabiting rocky substrate of the sublittoral zone (Fariña & Ojeda 1993) commonly found at depths of 1-100 m (Sielfeld & Vargas 1999), with some reports having caught specimens up to 180 m and 320 m (Pequeño & Riedemann 2006, Valenzuela 2005).

There are few studies on its ethology, ecology, or biology. Fariña and Ojeda (1993) found that the species is nocturnal or crepuscular; feeds primarily on crustaceans, but also eats polychaetes, fish, and algae; and it is believed that during the austral winter the shark migrates to deeper waters.

Given the little that is known of this animal, we note observations on its behavior from the field.

A specimen of *S. chilensis* was observed in the National Reserve System of Guano Islands, Islets, and Capes – Punta San Juan (15°21'40"S y 75°11'24"W). The animal was found at 10:00 a.m. on July 21st, 2014 at a depth of 5 m with in waters with a sea surface temperature of 14.0 °C. The catshark was found in a bed of Brown kelp, *Lessonia trabeculata*, over rocky substrate, close to the stipes over the rhizoids of the

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Figure 1. *Schroederichthys chilensis* specimen from the Paracas National Reserve curling its body after being grabbed.

algae. The ecological characteristics of this find are similar to previous reports that observe that the species lives in shallow waters associated with *Lessonia* kelp beds (Fariña & Ojeda 1993, Hernández et al. 2005, Piaget et al. 2005, Fariña et al. 2008).

Another specimen was encountered in the Paracas National Reserve (14°17'21"S y 76°10'33"W) on November 29th, 2014 at 9:50 a.m. in waters with a sea surface temperature of 15.1 °C at a depth of 5 m. The specimen was also observed near a kelp bed.

When grabbed under water the sharks formed a circle with their bodies, curling their bodies with their tail covering the eyes, and remained immobile (Fig. 1). Once freed, the specimens waited a few seconds before straightening and swimming away through the kelp bed. Local fishermen from Marcona and Pisco confirm that this species curls when threatened or touched.

The authors found only one mention of similar behavior in members of the same family, Scyliorhinidae, in the genus *Haploblepharus*, that remarks when captured or threatened the animal curls with the tail over the eyes (Compagno 1984). Additionally, we found no studies further explaining this behavior.

This is the first time that this behavior has been observed in the genus *Schroederichthys*. We hypothesize that this is a survival strategy used to make the animal bigger and more difficult for predators to swallow. Further studies are recommended on the ethology of this species to elucidate this behavior.

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