

## Lack of the caudal fin in a Shark-sucker (*Echeneis naucrates* Linnaeus, 1758) in the Colombian Caribbean

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### Resumen

La ausencia de la aleta caudal de una rémora (*Echeneis naucrates* Linnaeus, 1758) del Caribe colombiano. Se informa sobre el hallazgo del "Pega-Pega" (*Echeneis naucrates*) en el sur del Caribe colombiano en las faenas de pesca experimental, frente a las costas de Cartagena de Indias (Bolívar) Colombia. El ejemplar tiene la particularidad de no tener aleta caudal y de presentar un muñón al fin de su columna vertebral. Se concluye que probablemente la anomalía de la rémora se debe a una alteración en su proceso de organogénesis. Su supervivencia fue posible gracias a su hábito de fijarse en el cuerpo de otros peces óseos, o cartilagosos, o a mamíferos marino-estuarinos, desde edades muy tempranas.

**Palabras claves:** Aleta caudal, Caribe, Cartagena, Colombia, "Pega-Pega".

### Abstract

The Lack of the caudal fin in a shark-sucker (*Echeneis naucrates* Linnaeus, 1758) from Colombian Caribbean. This is a report about one specimen of "Pega-Pega" (*Echeneis naucrates*), caught in experimental fishing, off the coast of Cartagena (Bolívar), in the south of the Colombian Caribbean, Colombia. The specimen is unique for not having caudal fin and for presenting a stump at the end of its spine. We conclude that, probably, the abnormality of the shark-sucker is due to a disturbance in its organogenesis process. The fish survival was possible due to its observation, from early ages, of the body behavior of other bony or cartilaginous fish, or estuarine-marine mammals.

**Key words:** Caudal fin, Caribbean, Cartagena, Colombia, "Pega-Pega".

### Résumé

L'absence de la nageoire caudal dans un glisser (*Echeneis naucrates* Linnaeus, 1758), dans la Caraïbes Colombiennes. Cet est le report d'un glisser qui a été capturé par la pêche expérimental au large des côtes de Cartagena (Bolívar), dans le sud de la Caraïbe Colombienne. Le poisson est unique en l'absence de sa nageoire caudal et par ayant un moignon à la fin de sa colonne vertébrale. La survie du poisson a été possible par son observation, aux âges précoces, du comportement des corps des poissons osseux, poissons cartilagineux et mammifères.

**Mots clefs:** Cartagena, Caraïbe, Colombia, nageoire caudal, "Pega-Pega".

### Introduction

The absence of fins in fish can cause substantial difficulties to ensure their stability, displacement and survival. However, if these fish relate themselves with the substrate to facilitate their mobilization and feeding, these effects are attenuated significantly. This is the case of a Shark-sucker, also known as "Pega-Pega" (*Echeneis* spp.), which since its early ages lives in association with other fish (sharks,

rays, tarpon) and even mammals (manatees) giving this species the possibility to survive and grow with relative success to commercial sizes (Dahl 1971, Colmero *et al.* 1988), as is the case of the specimen to be recorded.

Shark-sucker's behavior is very interesting as well as its importance on the environment it belongs to. This mainly related for shifting their host species as these enter into fresh water. But this behavior must not be assumed to be a

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parasitic one, as the gain of the fish, regarding its hosts, is just transportation and pieces of food its host did not eat. Moreover, the shark-sucker is not considered to be edible in the Colombian Caribbean, and so was formerly used as bait to catch sea turtles (Dahl 1971). In addition, reported abnormalities of shark-suckers (Family Echeneidae) are very rare or nonexistent in the Natural Environment.

This paper describes the Absence of the caudal fin in a shark-sucker captured close to "Cartagena of Indians City" which is located in the Colombian Caribbean coast. This City, capital of the Bolivar Department in Colombia, has a large tourist development but it is also the small-scale fishing subsistence for fishermen communities nearby.

One specimen of *E. naucrates*, locally known as "Pega-Pega", was captured in November of 1992 with gill-nets of 100 m long, 10 m high, and 10 cm stretched mesh eye, in the coastal area off Bocagrande District. The fish was 585 mm standard length, 1.0 kg weigh total, and was a female specimen on its fourth (IV) state of maturation. The state of maturation criteria was determined by Vegas-Vélez (1987) for all the 79 species caught in the fishing activities; it establishes four states, for each of the sexes, to estimate the size of gonad maturity. This criteria can be applied to Báez *et al.* (1982), determined the following criteria: (a) condition factor average length class, (b) Percentage of mature fish by length class in the breeding season, taking over for a certain percentage of mature individuals; (c) The lowest individual of each sex with mature gonads (Ospina-Arango *et al.* 2008).

The specimen of this paper lacked the typical very-elongated body, had a depth 8 to 14 times in the standard length, and its pectoral fins were pointed. Its body color grayish to back, having a dark longitudinal band, bordered with white, on both sides; other body description includes: anal-fin base long, anal rays 29 to 41; sucking disc with 18 to 28 laminate; 30 vertebrae (that are normal at specific), all of which correspond to the normal characteristics of any specimen of this species. However, in this specimen, the caudal fins is

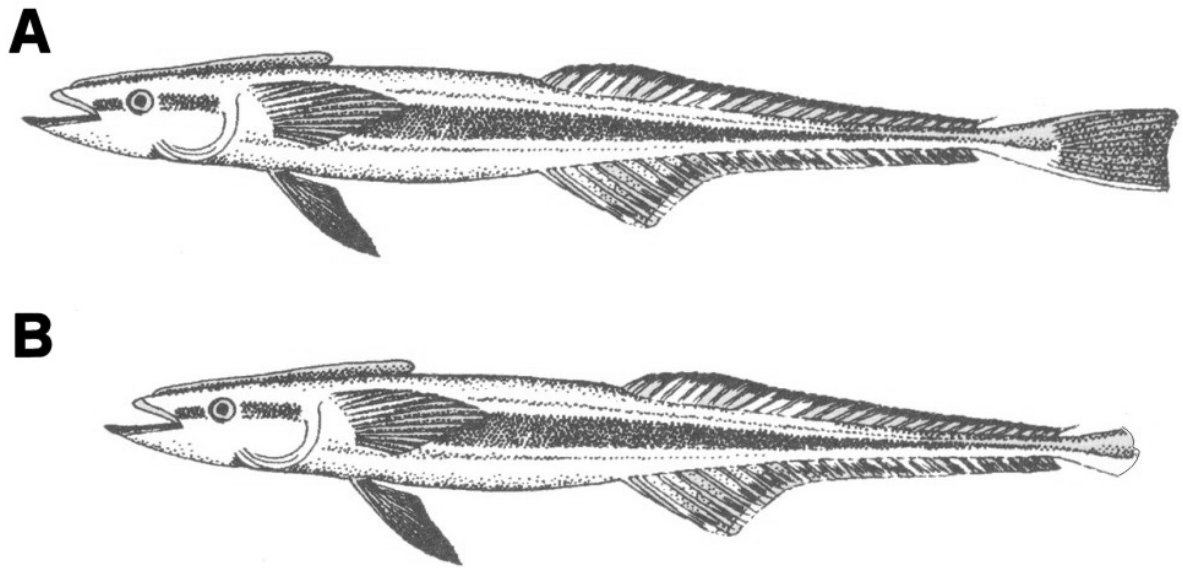
absent, having one irregular stump (hipural complex) replacing it.

The first records of *E. naucrates* in Colombian waters were done by Fowler (1953), captured in Cartagena and with 610 mm standard length, and by Dahl (1971), being the last one who recorded the maximum size ever of the Caribbean coast, with 800 mm standard length. Furthermore, Lachner (1977) recorded that species the genus *Echeneis* are often free-swimmers and occur in shallow-inshore waters.

Live shark-suckers are used by natives as a bait to capture other animals in fish lines. A line-fishing is described as a line tied up around the caudal peduncle of the shark-sucker and then it is released into the water, upon attaching to a host it is reeled in to the fisherman; shark-sucker is readily taken on hook and line; occasionally are seen in markets. But, even their utilization as bait, Dahl (1971) affirms that shark-suckers are not considered as comestibles and that they don't have any commercial importance for fishermen. In addition, Dahl (1971) remarks the use of *E. naucrates* in a curious way of fishing sea turtles, which by the way, is actually useless because of the scarcity of the turtles.

The absence of caudal fin in this specimen of *E. naucrates* (Figure 1), captured in the southern Caribbean, was apparently originated by morphogenic processes, not having any proofs or evident relations for it being caused neither by other animal predation nor by fishermen mutilation, which will undoubtedly cause obvious disadvantages. However, by the size of the specimen, the lack of the fin apparently had not caused serious difficulties for movement and development. The finding is quite special and it is also apparently rare in this species in the coastal areas of Colombia, where it had never been registered by artisanal fishermen, or industrial fisheries.

The way how the lack of the caudal fin functioned while the shark-sucker swims together with the advantages or disadvantages it may have caused to the fish are still



**Figure 1.** *Echeneis naucrates*. A) Normal specimen in the Colombian Caribbean (Dahl 1971); B) abnormal specimen (drawing by authors).

unknown. We did not find the occasional host, but we found it swimming with three different fish species inside the Cartagena Bay: *Opisthonema oglinum* (Clupeidae), *Caranx crysos* (Carangidae) and *Scomberomorus brasiliensis* (Scombridae) (Pardo-Rodríguez *et al.* 2003).

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