

Acanthemblemaria spinosa (Spinyhead Blenny)

Family: Chaenopsidae (Tube Blennies)

Order: Perciformes (Perch and Allied Fish)

Class: Actinopterygii (Ray-finned Fish)



Fig. 1. Spinyhead blenny, *Acanthemblemaria spinosa*.

[<http://www.fishbase.org/Photos/PicturesSummary.php?StartRow=1&ID=16486&what=species&TotRec=4>, downloaded 2 November 2016]

TRAITS. Small, tube-dwelling blennies (Skaphandrus, 2016), with an elongated body (Wikipedia, 2016) (Fig. 1). The maximum length is 3.1cm (Fishbase, 2016) with an average of 20-25mm long (Clark et al., 2005). There is minor sexual dimorphism between the sexes with males being larger and outnumbering their female counterparts 2:1. Body with 20-22 dorsal spines; 2 anal spines; 21-25 anal soft rays; and 13-16 dorsal soft rays (IUCN, 2016). Colour ranges from pale grey to yellow (Synder and Burgess, 2016) to green and brown (Greenfield and Johnson, 1981). Body characteristic of brown blotches and white spots (Skaphandrus, 2016). Head is rounded with numerous branched and unbranched cirri; fleshy stalks and spikes (Synder and Burgess, 2016).

DISTRIBUTION. Widespread over the western Atlantic (Fig. 2) on coral reefs. Spans from Florida to Bahamas and throughout the Caribbean islands (Clarke et al., 2005).

HABITAT AND ECOLOGY. Inhabits shallow marine waters less than 15m in depth. They are found mainly on elkhorn corals (Buchheim and Hixon, 1992) and *Acropora palmata* corals (Greenfield and Johnson, 1981). Spinyhead blennies live and spend most of their life confined in calcareous worm holes (holes created by invertebrates in corals - Fig. 3), on both living and dead portions of coral heads. Their abundance on a reef is usually high, but is directly related to the availability of worm holes. These holes are slightly bigger in diameter than the occupant and relatively deep. They feed by means of lightning fast darts out of their hole to capture their prey (Buchheim and Hixon, 1992). As they do not go out in search of food, water currents play a vital role in transporting benthic and planktonic prey they feed on (Clarke et al., 2005). Due to their life-style, they tend to live for many years as predation is greatly minimized.

REPRODUCTION. There exists minimal published data on the reproductive aspect of this species. They are referred to as demersal spawners; depositing eggs in pre-prepared nest (Fishbase, 2016). Masculinity is reflected in terms of superiority of holes, and as such, males try to acquire ideal holes to attract females. Upon selection of holes, characteristically deep, a female will lay eggs and males fertilize them. Males guard these eggs until they hatch into larvae.

BEHAVIOUR. Societal organization is predominantly developed around competition for worm holes. The bigger and more dominant spinyhead blenny usually gets the best holes. There is no sharing of holes and no sexual preferences on neighbours, which are in extremely close proximity to each other. Upon outgrowth of a hole the spinyhead blenny simply finds another hole (Buchheim and Hixon, 1992). Predation rates are extremely low due to their close-fitting tube life-style (Clarke, 1996). When threatened in their holes, spinyhead blennies aggressively swing their head and open their mouth wide in an attempt to scare off the threat (Fig. 4). In a failed display, they simply withdraw within the protection of the hole (Greenfield and Johnson, 1981).

APPLIED BIOLOGY. On the IUCN red list it is of Least Concern and is not endangered (IUCN, 2016). It is abundant in coral reefs of the Caribbean and plays an integral role in the food web and rich fauna associated with the coral reef but is often overlooked because of its life-style.

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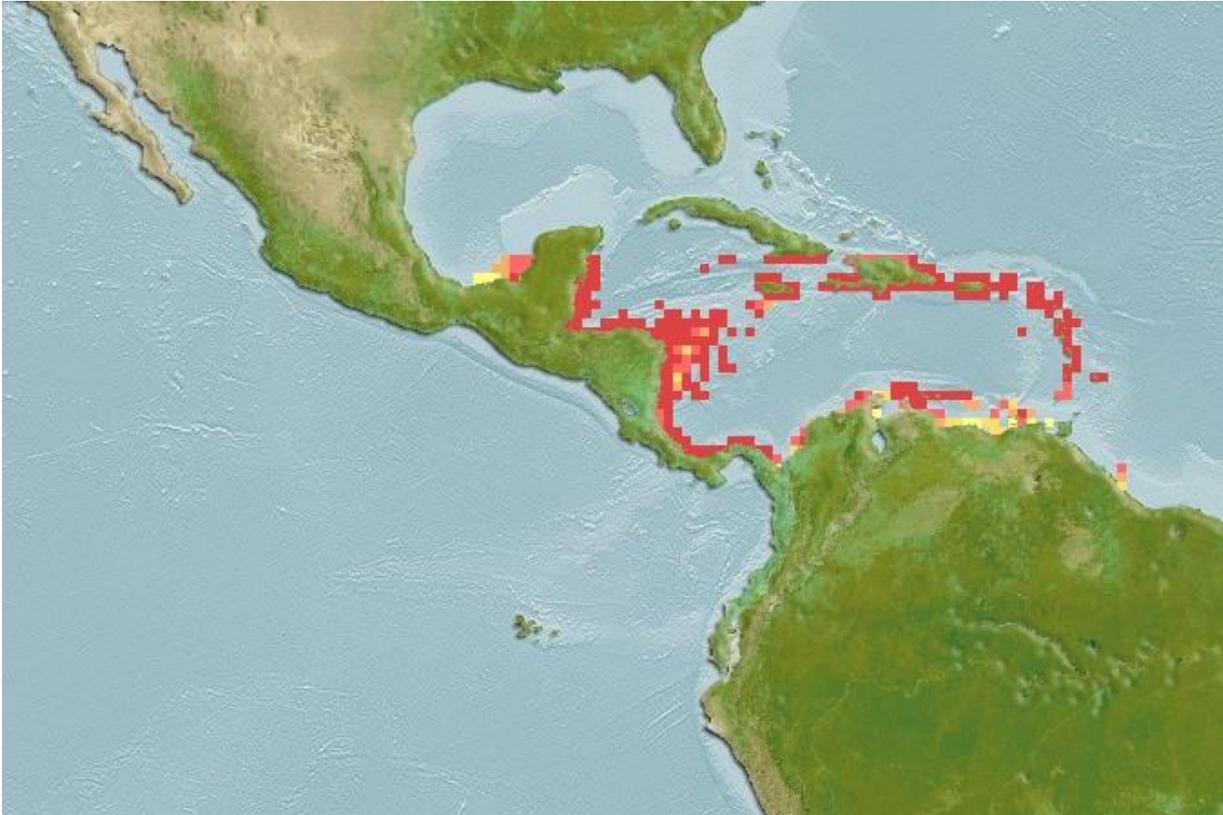


Fig. 2. Spinyhead blenny geographic distribution.

[http://www.aquamaps.org/receive.php?type_of_map=regular, downloaded 2 November 2016]



Fig. 3. Spinyhead blenny in calcareous tube (worm hole).

[<http://reefguide.org/carib/pixhtml/spinyheadblenny2.html>, downloaded 2 November 2016]



Fig. 4. Aggressive display to threaten predators and enemies.

[<http://www.alertdiver.com/m/?a=art&id=1702>, downloaded 2 November 2016]