

## *Halichoeres radiatus* (Puddingwife Wrasse)

Family: Labridae (Wrasses)

Order: Perciformes (Perch and Allied Fish)

Class: Actinopterygii (Ray-finned Fish)



**Fig. 1.** Puddingwife wrasse, *Halichoeres radiatus*.

[<http://www.coralreefphotos.com/juvenile-puddingwife-halichoeres-radiatus/>, downloaded October 26<sup>th</sup>, 2016]

**TRAITS.** *Halichoeres radiatus* is locally known as the puddingwife wrasse, and is the largest species of wrasse found in the Caribbean (Crites, 2013). Maximally, the species can reach 51cm in length, though most do not surpass 40cm (Brown, 2015). This colourful species is known to exhibit different traits throughout its lifetime. In the initial phase, the young are yellowish-green to bluish-green with regions of gold. The upper back has five white bars and about two black rectangular regions between the last bars. Juveniles feature two yellow to gold parallel stripes on the body with a white stripe in between. The upper back has five white dots and a navy to blue spot at the centre of its back and dorsal fin (Figs 1 and 2). In the terminal phase, the body is solid blue or green with a yellowish margin on the tail, a dark dot at the base of the pectoral fin and sometimes a white midbody bar. Its head features greenish-blue marks (De Kluijver, Gijswijt, De Leon, and Da Cunda, 2016).

**DISTRIBUTION.** *Halichoeres radiatus* is native to Trinidad and Tobago. It is distributed throughout the western Atlantic Ocean (Fig. 3), ranging from North Carolina to Bermuda, and offshore islands of Brazil (Rocha and Craig, 2010). The species is known to be absent in Brazilian coastal waters (Brown, 2015).

**HABITAT AND ECOLOGY.** This species is very common throughout its distribution range. It is found on lagoons and reef flats, usually over sand or rock and rubble substrates (Brown, 2015). Adults are often seen on shallow patch or seaward reefs from 10-55m deep, whilst juveniles and subadults are found in shallower (1-5m) water (Lieske and Myers, 1994). The puddingwife wrasse is always active during the day time, however they retreat before any other fishes and rise last. Smaller wrasses tend to dive beneath the sand to sleep, whilst larger wrasses force themselves into cracks or crevices (Rocha and Rosa, 2001). The puddingwife wrasse feeds on molluscs, sea urchins, crustaceans, and brittle stars (Lieske and Myers, 1994).

**BEHAVIOUR.** Semi-aggressive; often observed feeding in association with the bar jack (*Caranx tuber*). The two actively pursue each other (Fig. 4), thus maintaining heterospecific foraging “teams”. This social behaviour proves beneficial to the puddingwife wrasses as their bite and search rates are higher when teamed up with a *Caranx tuber*. Otherwise, puddingwife wrasses move about singly, however terminal phase fish can be seen moving actively around a loose-knit group of about six initial phase fish. This can be viewed as an illustration of premating behaviour (Warner and Robertson, 1978).

**APPLIED ECOLOGY.** *Halichoeres radiatus* is listed on the Red List of threatened species by IUCN as a species of “Least Concern”. Additionally this species is distributed in range of a number of marine protected areas, therefore there are no specific conservation measures in place for this species. *Halichoeres radiatus* is sometimes collected in the aquarium trade as well as in some cases it is captured in multi-species fisheries (Rocha and Craig, 2010).

## REFERENCES

- Brown, B. B. 2015. Coral Reef Photos » Blog Archive » Juvenile Puddingwife, Halichoeres Radiatus. Coral Reef Photos RSS. <http://www.coralreefphotos.com/juvenile-puddingwife-halichoeres-radiatus/>. Accessed 30 October 2016.
- Crites, B. 2013. Puddingwife. <http://www.snorkelstj.com/puddingwife.html>. Accessed 26 October 2016.
- De Kluijver, M., Gijswijt, G., De Leon, R. and Da Cunda, I. 2016. Interactive Guide to Caribbean Diving. [http://species-identification.org/species.php?species\\_group=caribbean\\_diving\\_guide](http://species-identification.org/species.php?species_group=caribbean_diving_guide). Accessed 31 October 2016.
- Lieske, E. and Myers, R. F. 1994. Coral Reef Fishes. Princeton, NJ: Princeton University Press.
- Rocha, L. and Craig, M. 2010. *Halichoeres radiatus*. The IUCN Red List of Threatened Species 2010. <http://dx.doi.org/10.2305/IUCN.UK.2010-4.RLTS.T187736A8616408.en>. Accessed 26 October 2016.
- Rocha, L. A., and Rosa, R. S. 2001. *Halichoeres brasiliensis* (Bloch 1791), a Valid Wrasse Species (Teleostei: Labridae) from Brazil, with Notes on the Caribbean Species *Halichoeres radiatus* (Linnaeus, 1758). [http://luzrocha.com/academic/Publications\\_files/Rocha\\_and\\_Rosa\\_2001.pdf](http://luzrocha.com/academic/Publications_files/Rocha_and_Rosa_2001.pdf). Accessed 26 October 2016.
- Warner, R. R., and Robertson, R. 1978. Sexual Patterns in the Labroid Fishes of the Western Caribbean, I the Wrasses (Labridae). Smithsonian Contributions to Zoology, **254**: 1-27.

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**Fig. 2.** *Halichoeres radiatus*, puddingwife wrasse: a) male, b) female, c) juvenile.

[[http://luizrocha.com/academic/Publications\\_files/Rocha\\_and\\_Rosa\\_2001.pdf](http://luizrocha.com/academic/Publications_files/Rocha_and_Rosa_2001.pdf), downloaded 28 October 2016]



**Fig. 3.** Puddingwife wrasse geographic distribution map.

[<http://www.iucnredlist.org/pdf/link.8616408>, downloaded 27 October 2016]



**Fig. 4.** Puddingwife wrasse being shadowed by a bar jack.

[[http://jettbritnell.blogspot.com/2012\\_01\\_01\\_archive.html](http://jettbritnell.blogspot.com/2012_01_01_archive.html), downloaded 31 October 2016]

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