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Halichoeres sazimai, a new species of wrasse (Perciformes: Labridae) from the Western South Atlantic

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Abstract

Halichoeres sazimai, **n. sp.** is described from the Western South Atlantic. During many years it was misidentified as *H. bathyphilus* from the Northwestern Atlantic, but it can be distinguished from the latter by striking color differences between the two species, with *H. sazimai* being characterized by a white body with a midline, zigzag patterned stripe on body, black and brownish in terminal males and yellow or golden in females and juveniles. Preserved specimens can also be distinguished by the visible mid-body stripe in *H. sazimai*, which disappears in *H. bathyphilus*. Diagnostic differences in the mitochondrial DNA cytochrome *b* gene separate *H. sazimai* from all other Western Atlantic labrids, with *H. bathyphilus* being its sister species. Individuals of *H. sazimai* were observed living on the deeper parts (20-40 m) of rocky reefs and sand bottoms, apparently associated with water temperatures lower than 18°C. This species is currently known from the southeastern and southern coasts of Brazil, from Espírito Santo to Santa Catarina States.

Key words: Taxonomy, Endemic Species, Brazilian Province, Rocky Reefs

Introduction

Reef fishes of the genus *Halichoeres* occur throughout tropical and subtropical reefs of the world from shallow to deep reefs (Parenti & Randall 2000). Randall and Böhlke (1965) recognized nine species occurring in the Northwestern Atlantic, five of which ranging south to Brazil: *Halichoeres bivittatus, H. poeyi, H. cyanocephalus, H. maculipinna*, and *H. radiatus*. More recently, the latter three species had their Southern Atlantic populations revalidated as *H. dimidiatus, H. penrosei* and *H. brasiliensis* respectively and considered endemics to the Brazilian Province (Rocha & Rosa 2001; Rocha 2004) with the notable exception of *H. radiatus* from Fernando de Noronha Archipelago, Atol das Rocas and St. Paul's Rocks whose population remain genetically linked with that of the Caribbean (Rocha *et al.* 2005). Additionally, two new species from the Northwestern Atlantic were described (Randall & Lobel 2003; Weaver & Rocha 2007), resulting in a total of fourteen species of *Halichoeres* in the Atlantic Ocean.

The deep-reef *Halichoeres bathyphilus* was described from Bermuda, caught in depths over 150 meters (Beebe & Tee-Van 1932) and since then it was rarely collected or observed (Smith-Vaniz *et al.* 1999). It was further recorded in the Northwestern Atlantic from North Carolina, Florida, the Gulf of Mexico, Yucatan Peninsula and off Venezuela's coast, in depths of 27 to 118 meters (Randall & Böhlke 1965; Cervigón 1993). For nearly two decades, a wrasse from the subtropical coast of Brazil (from 20ºS to 27ºS) has been identified as *H. bathyphilus* (Menezes & Figueiredo 1985; Moura *et al.* 1999; Carvalho-Filho 1999). Despite its morphological similarity, striking color differences noted during underwater observations and photographs

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