



***Acanthurus tractus* Poey, 1860, a valid western Atlantic species of surgeonfish (Teleostei, Acanthuridae), distinct from *Acanthurus bahianus* Castelnau, 1855**

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Abstract

The ocean surgeonfish, *Acanthurus bahianus*, has been historically recorded from Bermuda and Massachusetts to southern Brazil and the islands of the central Atlantic. We have found that individuals in the southwestern and central Atlantic consistently have a posterior bright yellow margin on the caudal fin and an orange/red margin on the dorsal fin. This coloration is different from the characteristic white/blue fin margins on individuals from the northwestern Atlantic. In addition, there is a clear genetic distinction ($d = 2.4\%$ mtDNA, *CytB*) between these two lineages. With the corroborating coloration and genetic differences, we suggest that these two lineages represent distinct species. The South Atlantic species retains the name of *A. bahianus* and we propose to resurrect *A. tractus* (Poey 1860) as the valid name for the northwestern Atlantic species.

Key words: Caribbean, Brazil, Amazon barrier, biogeography, mtDNA

Introduction

The family Acanthuridae is comprised of six genera and 80 species of marine fishes commonly known as surgeonfishes (Nelson 2007). This group is distributed in tropical and subtropical seas around the world, being absent only from the Mediterranean (Nelson 2007). *Acanthurus* is the only surgeonfish genus that occurs in the western Atlantic, where it is currently represented by three species: *A. bahianus*, *A. coeruleus* and *A. chirurgus* (Randall 2002). Recently, an African species, *A. monroviae*, was also recorded off the coast of southeastern Brazil, but this record does not appear to represent an established population (Luiz-Junior et al. 2004). These species are characterized by deep, compressed bodies, with three movable anal spines and a lancet like spine on the side of the caudal peduncle (Randall 2002; Nelson 2007). They feed primarily on filamentous benthic algae and detritus, sometimes forming large aggregations that can overwhelm other herbivorous species such as territorial damselfishes.

Acanthurus bahianus was described by Castelnau (1855) from a specimen collected in Bahia, Brazil. Subsequently, Poey (1860) described *Acanthurus tractus* based on specimens from Cuba as a different species. According to Meek and Hoffman (1884), that species was distributed in Cuba, Panama and Key West. The original description showed no difference between *A. bahianus* and *A. tractus*, what led Randall (1956) to conclude that *A. tractus* was a junior synonym of *A. bahianus*. In his compendium of Cuban natural history, Poey (1860) did not mention *A. bahianus*, which probably indicates he was not aware of the description made by Castelnau in 1855.

The Ocean Surgeonfish, *A. bahianus*, has historically been reported from Bermuda and Massachusetts to southern Brazil, including the oceanic islands of Fernando de Noronha, Trindade, Ascension and Saint Helena (Randall 1956, Floeter et al. 2001). In this work we present morphological and molecular evidence that support the presence of two species north and south of the Amazon barrier, previously combined under *A. bahianus*. With this evidence we propose to resurrect *Acanthurus tractus* (Poey 1860) as the available name for the form that occurs in the northwestern Atlantic, and retain *Acanthurus bahianus* Castelnau 1855 for the species in the southwestern and central Atlantic.