



On the status of the species of *Acanthistius* (Gill, 1862) (Percoidei) in the South-West Atlantic Ocean

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Abstract

We review the species of *Acanthistius* Gill (1862) (Osteichthyes, Percoidei) from the South-Western Atlantic, solving a discrepancy concerning the taxonomic status of *Acanthistius brasiliensis* (Cuvier & Valenciennes 1828) and *Acanthistius patachonicus* (Jenyns 1842), and providing an objective diagnostic key for the two species. While Argentinean fishery biologists consider *A. patachonicus* to be a synonym of *A. brasiliensis*, ichthyologists elsewhere regard them as separate species with different distributional ranges. Based on a literature review, examination of museum specimens and observation of live individuals in the field, we identified the sources of the dissent and concluded that *A. brasiliensis* and *A. patachonicus* are separate species, differing in diagnostic morphological characters and distinctive color patterns and having slightly overlapping distributional ranges. Distinction between these two species has significant implications for management and conservation.

Key words: Fish taxonomy; South Atlantic; Conservation

Introduction

The percoid fish genus *Acanthistius* (Gill, 1862) is confined to the southern hemisphere, and comprises ten marine species: five in Australian waters, two in the South East Pacific, two in the South West Atlantic, and one in the South East Atlantic (Hutchins & Kuitert 1982; Heemstra & Randall 1986; Pequeño 1989; Anderson *et al.* 2000). While historically the genus has been placed in different subfamilies of the Serranidae, Smith and Craig (2007) considered it *incertae sedis* within the Percoidei, based on an analysis of mitochondrial and nuclear DNA sequences (see also Craig and Hastings 2007).

The two South West Atlantic species were described in the eighteenth century: *Acanthistius brasiliensis* (Cuvier & Valenciennes 1828) based on two specimens collected off Brazil, and *Acanthistius patachonicus* (Jenyns 1842) based on three specimens collected by Darwin off Argentina (Fig. 1). Despite various attempts at clarifying the taxonomic status of these two species and defining their diagnostic morphological characters, fishery biologists still disagree on their status. While Argentinean fish biologists (e.g., Ciechomski & Casia 1976; San Román 1980; Dell'Arciprete *et al.* 1987; Cousseau & Perrota 2000) followed De Mahieu & Capezani (1974) considering *Acanthistius patachonicus* a synonym of *Acanthistius brasiliensis*, ichthyologists elsewhere regard them as separate species with different distributional ranges (e.g., Figueiredo & Menezes 1980; Nakamura 1986; Carvalho-Filho 1999).