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Anampses viridis Valenciennes 1840 (Pisces: Labridae)—a case of taxonomic confusion and mistaken extinction

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Abstract

Anampses viridis Valenciennes 1840 is known from only three specimens collected from Mauritius, and despite intensive sampling, the species has not been seen or reported since it was originally described. This apparent failure to ‘rediscover’ *A. viridis* at Mauritius has led to speculation that it is extinct, and the species has been widely cited as an example of a marine fish extinction. Far from being extinct, *Anampses viridis* has been taxonomically confused and actually is the adult male (terminal phase) colour form and a junior synonym of *A. caeruleopunctatus* Rüppell 1829, a species that is common and widespread throughout the Indo-West Pacific region.

Key words: *Anampses viridis*, *A. caeruleopunctatus*, taxonomy, marine fish extinction

Introduction

The genus *Anampses* (family: Labridae) is a small group of fishes, distinctive in possessing a single pair of broad projecting incisiform teeth at the front of the jaws, scaleless head, smooth preopercular margin, complete but abruptly curved lateral line, IX, 12 dorsal rays, and III, 12 anal rays, and either 26 or 27 lateral-line scales (subgenus *Anampses* – 12 species) or 48 to 50 lateral-line scales (subgenus *Pseudanampses* – one species, *A. geographicus*). Randall (1972) provides a detailed treatment of the genus with an in-depth description of morphological variation. Most of the species of *Anampses* are sexually dichromatic, with distinctive initial phase (IP) and terminal phase (TP) colour forms (the use of these terms follows the terminology applied to labroid colour phases by Warner & Robertson 1978).

Of the 13 species currently considered as valid (Parenti & Randall 2000), *Anampses viridis* Valenciennes 1840 is known from only three specimens collected at Mauritius, and despite intensive sampling in recent years, the species has not been seen or reported since it was originally described (Randall 1974). This apparent failure to ‘rediscover’ *A. viridis* at Mauritius has led to speculation that it is extinct (Hawkins *et al.* 2000), and subsequently the species has been widely cited as an example of a marine fish extinction (Reynolds *et al.* 2002; Dulvy *et al.* 2003, 2009; Pauly *et al.* 2005; Dulvy 2006; Hodge *et al.* 2012).

In this paper we show that far from being extinct, *Anampses viridis* has been taxonomically confused and actually is the TP colour form of *A. caeruleopunctatus* Rüppell 1829, a species that is common and widespread throughout the Indo-West Pacific region. A redescription of *A. caeruleopunctatus*, together with a discussion of our reasons for including *A. viridis* as a synonym of this species, is given below.

Methods and material

Type specimens of *Anampses viridis* were examined in the Museum National d’Histoire Naturelle, Paris (MNHN), and comparative TP specimens of *Anampses caeruleopunctatus* were examined in the MNHN and Natural History Museum, London (BMNH). Other institutional abbreviations used are: Academy of Natural Sciences, Philadelphia (ANSP); Senckenberg Naturmuseum, Frankfurt (SMF). Abbreviations of institutions follow Fricke and Eschmeyer (2013).