

Redescriptions of *Chromis notata* (Temminck and Schlegel, 1843) and *C. kennensis* Whitley, 1964 with the Description of a New Species of *Chromis* (Perciformes: Pomacentridae)

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Two species of *Chromis*, *C. notata* (Temminck and Schlegel, 1843) and *C. kennensis* Whitley, 1964, are redescribed, and the description of a new species, *C. yamakawai* sp. nov., is provided. Two nominal species that were previously regarded as valid, *C. flavomaculata* Kamohara, 1960 and *C. miyakeensis* Moyer and Ida, 1976, are synonymized with *C. notata*. *Chromis villadolidi* Jordan and Tanaka, 1927 is confirmed as a junior synonym of *C. notata*. Geographic variation of *C. notata* is discussed. Two populations previously treated as *C. flavomaculata* (regarded as a junior synonym of *C. notata* in this study) include two geographically disjunct species: *C. kennensis*, previously regarded as a junior synonym of *C. flavomaculata*, from the southwestern Pacific Ocean, and *C. yamakawai* from the northwestern Pacific Ocean.

Key Words: Western Pacific Ocean, damselfishes, synonymy, taxonomy, *Chromis miyakeensis*, *Chromis villadolidi*, *Chromis flavomaculata*.

Introduction

Fishes of the genus *Chromis* Cuvier, 1814, the most speciose genus in the family Pomacentridae, are common on coral and rocky reefs throughout tropical and warm temperate seas (Allen 1991). Eighty-eight species of *Chromis* are currently recognized as valid (Allen 1991; Randall and McCosker 1992; Randall 1994; de Moura 1995; Randall 2001; Allen and Randall 2004; Lecchini and Williams 2004; Allen and Erdmann 2005, 2008, 2009; Senou and Kudo 2007). The genus is characterized by having the following: an elliptical and moderately deep body, its depth 53–62% of standard length; a short snout; biserial teeth including an outer row of enlarged conical teeth; a fully scaled head, except for the tip of the snout and the area around the nasal openings; a dorsal fin with 12–15 spines and 10–15 soft rays; an anal fin with two spines and 10–14 soft rays; a caudal fin with 15 principal rays and five or six procurrent rays, the first two or three of the latter being spiniform; and less than 30 scale rows in the longitudinal series (Randall *et al.* 1981; Allen 1991).

Chromis notata notata (Temminck and Schlegel, 1843), originally described as *Heliases notatus*, and *C. notata miyakeensis* Moyer and Ida, 1976, originally described as *C. miyakeensis*, have been regarded as two valid subspecies by many authors (*e.g.*, Ida 1984; Aonuma and Yoshino 1993, 2000). Randall *et al.* (1981) were the first to treat *C. miyakeensis* as a subspecies, albeit somewhat tentatively.

They characterized it as having a deep body, but stated that more specimens should be examined to assess the validity of this feature. Since Randall *et al.* (1981), no taxonomic treatment of either *C. notata notata* or *C. notata miyakeensis* has been reported.

We examined a large number of specimens of *C. notata notata* from a wide distributional range and concluded that they represented three indistinct geographic populations, with *C. miyakeensis* being a junior synonym of *C. notata*. *Chromis villadolidi* Jordan and Tanaka, 1927 was also confirmed in this study to be a junior synonym of *C. notata*.

Chromis flavomaculata Kamohara, 1960 (type locality: Kochi, Japan), closely related to *C. notata* (see Randall *et al.* 1981), has been regarded as a valid species with an anti-equatorial distribution in the northwestern and southwestern Pacific Ocean (Randall *et al.* 1981, 1997; Randall 2005; Allen and Erdmann 2012). Examination of the holotype of *C. flavomaculata* in this study showed it to be identical with *C. notata*, and the two anti-equatorial populations were found to differ from each other in several morphological features. The northern population, previously identified as *C. flavomaculata*, is herein described as a new species. The name *Chromis kennensis* Whitley, 1964 (type locality: Kenn Reef, Coral Sea), previously regarded as a junior synonym of *C. flavomaculata* (*e.g.*, Randall *et al.* 1981; Allen 1991; Randall 2005; Allen and Erdmann 2012), should be applied to the southern population.

This paper provides redescriptions of *C. notata* (as a senior synonym of *C. villadolidi*, *C. miyakeensis*, and *C.*