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Northernmost record of a poorly known tuskfish, *Choerodon margaritiferus* (Perciformes: Labridae), from southern Japan, and first description of a female

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Abstract

We describe 5 specimens of *Choerodon margaritiferus* Fowler and Bean, 1928 (94.5–107.0 mm standard length, 1 male and 4 females) collected near Okinawa Island, southern Japan. This is the northernmost record of this species and the first record of it in Japanese waters; until now, *C. margaritiferus* was recorded only from the western central Pacific. This species was originally described on the basis of 1 male specimen, and all additional specimens described in the literature were also male. Morphological characters of both sexes are described, and new diagnostic characters of the female are presented.

Key words: Pisces, labrid, distribution, Okinawa, Japan

Introduction

The labrid genus *Choerodon* Bleeker, 1847 contains 25 valid species (Gomon 1997; Parenti & Randall 2000, 2011; Shimada 2013). Members of the genus are found on reefs and the adjacent sand-rubble bottoms of the tropical Indo-Pacific (Allen & Randall 2002). They generally have relatively deep heads and blunt, rounded snouts, and their maximum size ranges from about 12 to 90 cm (Allen & Randall 2002). They are distinguishable from all other labrid genera in having XII, 8 or XIII, 7 dorsal-fin rays, 27 total vertebrae, and a mostly naked subopercle (Gomon 1997; Westneat 2001). The body color of *Choerodon* is extremely variable ontogenetically and interspecifically (Gomon 1997).

Choerodon margaritiferus Fowler and Bean, 1928 is a small, slender species that has not been commonly observed or collected. It is recorded only from a small number of specimens from the western central Pacific in New Caledonia, Chesterfield Islands, Indonesia, the Philippines, and Taiwan (Fowler & Bean 1928; Parenti & Randall 2000; Shea & Li 2010; Allen & Erdmann 2012; White *et al.* 2013; Puckridge *et al.* 2015). The species may be distinguished from congeners by its unique coloration: A blue or white stripe below the eye that continues as a line of white or blue spots to the base of the upper pectoral fin, an additional stripe located dorsally on the caudal-peduncle and below most of the dorsal-fin base, a white or blue bar on the pectoral-fin base, and blue or white spots on the scales (Fowler & Bean 1928; Westneat 2001; Allen & Randall 2002). These diagnostic characters were established by the observation of male specimens, whereas the morphology of females was not described in previous studies.

In August 2014, a local sports fisherman caught 5 unfamiliar labrid fishes (95.4–107.0 mm standard length, 1 male and 4 females) near Okinawa Island, southern Japan. We obtained these fishes alive and identified them as *C. margaritiferus* on the basis of morphological observation and DNA analysis. This is the northernmost record of the species and the first record of it in Japanese waters, as well as the first description of the female. Herein, we describe the morphological characters of both sexes on the basis of these specimens.