

First Record of a Sicydiine Goby, *Stiphodon multisquamus* (Actinopterygii: Gobioidae: Gobiidae), from Okinawa Island, Japan

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The morphology of four specimens of *Stiphodon multisquamus* Wu and Ni, 1986, collected from two streams on Okinawa Island in the Ryukyu Archipelago, is described. This is the first record of this species of goby from Japan; it was formerly regarded as endemic to southern China (Hainan and Guangdong Provinces). *Stiphodon multisquamus* is very rare on Okinawa Island and may have arrived as a result of transport of pelagic larvae by ocean currents.

Key Words: *Stiphodon*, Sicydiinae, freshwater fish, amphidromy, colonization, Okinawa Island, Ryukyu Archipelago.

Introduction

The sicydiine gobies of the genus *Stiphodon* Weber, 1895 are distributed in freshwater streams from Sri Lanka and the western coast of Sumatra in the Indian Ocean, to southern Japan, northeastern Australia, and French Polynesia in the Pacific (Watson 1995). This genus comprises both endemic species, known only from a single small island (e.g., *Stiphodon julieni* Keith, Watson and Marquet, 2002 from Rapa, French Polynesia) (Keith *et al.* 2002) or a single river system (e.g., *Stiphodon larson* Watson, 1996 from the Gogol River System, Papua New Guinea) (Watson 1998), and widespread species, such as *Stiphodon semoni* Weber, 1895, which occurs in Indonesia, Papua New Guinea, the Solomon Islands, and northeastern Australia (Maeda and Tan 2013). At present, however, the distributions of most species of *Stiphodon* are not well understood, due to the lack of thorough faunal studies (Maeda and Tan 2013).

In Japan, five species of *Stiphodon*, *S. atropurpureus* (Herre, 1927), *S. surrufus* Watson and Kottelat, 1995, *S. imperorientis* Watson and Chen, 1998, *S. percnopterygionus* Watson and Chen, 1998, and *S. alcedo* Maeda, Mukai and Tachihara, 2012, have been reported (Maeda *et al.* 2012a). In the present study, the occurrence of a sixth species, *Stiphodon multisquamus* Wu and Ni, 1986, on Okinawa Island, the largest island in the Ryukyu Archipelago (Fig. 1), is reported, based on four specimens. Since this species has been described on the basis of only three or four specimens from rivers in the southern part of Hainan Island, China (Wu and Ni 1986; Wu 1991, 2008), and underwater observations in Guangdong Province, China (Nip 2010), the Japanese specimens are described herein in detail.

Materials and Methods

Using a hand net, the first author collected four specimens of *S. multisquamus* (two males and two females) in two streams on the eastern slope of Okinawa Island, Japan (Fig. 1). Detailed localities are not shown here due to the conservation perspective. Specimens were fixed in 10% formalin and then preserved in 70% ethyl alcohol before being deposited at the National Museum of Nature and Science,

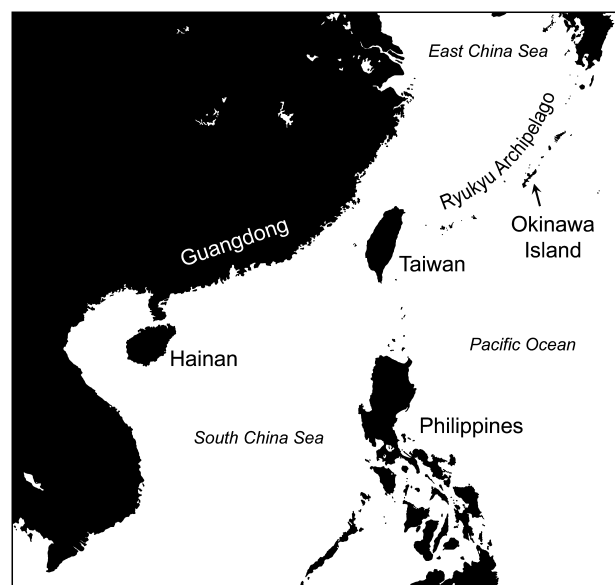


Fig. 1. Map showing the locations of Okinawa Island and Hainan and Guangdong Provinces, China, where *Stiphodon multisquamus* has been reported previously.