

First Japanese Record and a Revised Diagnosis for *Dictyosoma tongyeongensis* (Osteichthyes: Perciformes: Stichaeidae)

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(Received 10 July 2015; Accepted 6 November 2015)

Seven specimens of *Dictyosoma tongyeongensis* Ji and Kim, 2012, collected from Notojima, Ishikawa, Japan, are described in detail and a revised species diagnosis is proposed. Morphological comparisons and sequence data from the mitochondrial DNA cytochrome *c* oxidase subunit I gene support the conspecificity of Japanese and Korean specimens, but suggest that the congener *D. burgeri* van der Hoeven, 1855 as currently recognized may include two separate species.

Key Words: Teleostei, Actinopterygii, distribution, mitochondrial DNA, *Dictyosoma burgeri*, *Dictyosoma rubrimaculatum*.

Introduction

The stichaeid fish genus *Dictyosoma* Temminck and Schlegel, 1845 is a member of the subfamily Xiphisterinae Jordan and Gilbert, 1883 (Mecklenburg and Sheiko 2004), characterized as follows: body moderately elongate, relatively deep anteriorly; dorsal fin with pronounced gradation, first spine noticeably shorter and weaker than last one; anal fin with 1–3 spines at origin; pelvic fins absent or with one spine and no soft rays; cheek scales absent. Included in the tribe Xiphisterini (Xiphisterinae *sensu* Makushok 1958) by Mecklenburg and Sheiko (2004), it is the only known genus in the tribe occurring in the western North Pacific. A phylogenetic analysis by Yatsu (1986), based on morphological characters and focused on Xiphisterini (Xiphisterinae *sensu* Makushok 1958), defined *Dictyosoma* on the basis of several synapomorphies, including reticulate lateral lines and one postcleithrum. Although the genus had long been considered to include only two species, *Dictyosoma burgeri* van der Hoeven, 1855 and *Dictyosoma rubrimaculatum* Yatsu, Yasuda, and Taki, 1978, Yatsu *et al.* (1978) recognized two geographic forms (“a” and “b”) in their *D. burgeri*, the former occurring on the Pacific coast of Japan from Shizuoka to Chiba Prefectures, and the latter on the Sea of Japan (East Sea of Korea) and East China Sea coasts of Japan from Nagasaki northward to Hokkaido, the Pacific coast of northern Honshu Is., Japan, and southern coast of the Korean Peninsula (Yatsu *et al.* 1978; Ji and Kim 2012). Because of morphological differences between the forms, including counts of dorsal-fin spines, anal-fin rays, and total vertebrae, Mecklenburg and Sheiko (2004) considered them to be two subspecies of *D. burgeri*. Recently, Ji and Kim (2012) described

an additional species, *Dictyosoma tongyeongensis* Ji and Kim, 2012, from the southern coast of the Korean Peninsula.

Seven specimens of *D. tongyeongensis* were recently collected from Enome, Notojima, Ishikawa, Japan, representing the first records of this species from Japan (Fig. 1). Detailed descriptions of the Japanese specimens are given below and the diagnostic characters of the species are revised. Partial sequence data from the mitochondrial DNA (mtDNA) cytochrome *c* oxidase subunit I (COI) gene of Japanese and Korean specimens of *D. tongyeongensis* confirmed their conspecificity. In addition, the two geographic forms of *D.*

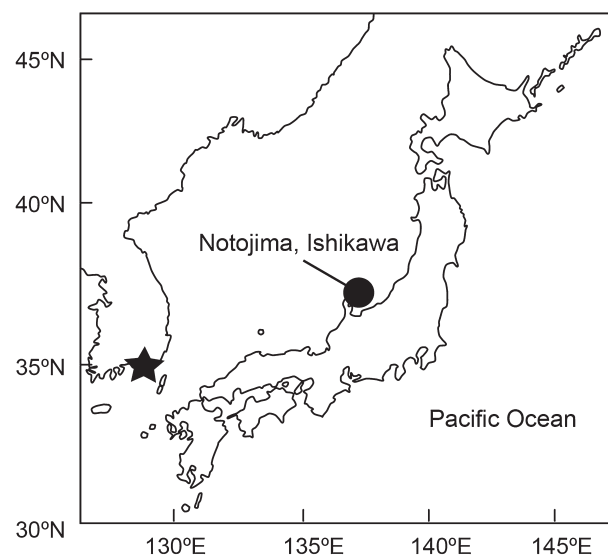


Fig. 1. Collection sites of *Dictyosoma tongyeongensis* examined in the present study. Solid star: type specimens; solid circle: other specimens.