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## Description of a new species of *Trimma* (Perciformes: Gobiidae) from the Red Sea, with a discussion of the generic separation of *Trimma* and *Priolepis*, with discussion of sensory papillae terminology

DOUGLASS F. HOESE<sup>1</sup>, SERGEY V. BOGORODSKY<sup>2</sup> & AHMAD O. MAL<sup>3</sup>

<sup>1</sup>Senior Fellow, Australian Museum 6 College Street, Sydney, NSW 2010, Australia

<sup>2</sup>Station of Naturalists, Omsk, Russia. E-mail: [ic187196@yandex.ru](mailto:ic187196@yandex.ru)

<sup>3</sup>Marine Biology Department, Faculty of Marine Sciences, King Abdulaziz University, Jeddah, Saudi Arabia.

E-mail: [aomal@kau.edu.sa](mailto:aomal@kau.edu.sa)

<sup>4</sup>Corresponding author. E-mail: [doug.hoese@austmus.gov.au](mailto:doug.hoese@austmus.gov.au)

### Abstract

A new species of Pygmygoby, *Trimma quadrimaculatum*, n. sp., is described from the Saudi Arabian coast of the Red Sea on the basis of 16 adult specimens. It is small-sized species, with the largest examined specimen reaching only 16.8 mm SL. The new species has characteristics of both *Priolepis* and *Trimma*, and easily may be confused with *Priolepis randalli* and *Trimma mendelssohni*; it can distinguish from other species by combination of characters: dorsal-fin rays D VI + I,8; anal-fin rays I,7; longitudinal scale series 23–25; median predorsal scales 6–8 (usually 7 or 8); head naked; a pair of modified elongate papillae on nape; fifth pelvic-fin ray with 2 dichotomous branches; body with broad, irregular, brown bars, last bar posteriorly on caudal peduncle extending basally on to rays of caudal fin; head with three dark brown bars below eye; four subcutaneous dark brown spots ventrally on posterior half of body; and basal quarter of second and third membranes of first dorsal fin with diffuse dark blotch. Placement of the new species in *Trimma* is based on the presence of more characteristics currently associated with *Trimma* than with *Priolepis*. The generic separation of the two genera is discussed, suggesting that further work is needed to clarify the separation of these two genera.

**Key words:** Gobioidae, systematics, coral reef fishes, Saudi Arabia

### Introduction

The genus *Trimma* Jordan & Seale, known as Pygmygobies, is a widespread coral reef genus found throughout the Indian Ocean to the central Pacific Ocean. Species are generally associated with coral or rock reefs. Members of the genus are commonly found over a wide range of depths, with some species found subtidally and others to depths of over 110 m. Currently it is thought that the genus contains over 110 species with 92 currently described valid species (Allen 2015, Suzuki 2015; Winterbottom *et al.* 2014, 2015; Winterbottom & Hoese 2015; and including current species). In 2015, 14 species were described, and many others are currently under description. Species of the genus are characterized by the lack of cephalic sensory canal pores, a reduced transverse cephalic sensory papillae pattern, a wide gill opening usually extending anterior to a vertical at the posterior margin of the preoperculum, lacking spicules (odontoids) on the outer gill rakers of the first gill arch, 7–12 segmented dorsal and anal-fin rays, usually no pelvic frenum (= interspinal membrane), and a fifth, often dichotomously branched, pelvic-fin ray usually 50–75% length of fourth pelvic-fin ray.

Red Sea species of the genus were reviewed by Winterbottom (1995), who treated nine valid species: *T. avidori* (Goren, 1978), *T. barralli* Winterbottom, 1995, *T. filamentosus* Winterbottom, 1995, *T. fishelsoni* Goren, 1985, *T. flavicaudatum* (Goren, 1982), *T. mendelssohni* (Goren, 1978), *T. sheppardi* Winterbottom, 1984, *T. taylora* Lobel, 1979, and *T. tevegae* Cohen & Davis, 1969. During a survey of Red Sea fishes, small-sized adult gobies were collected from different localities off the Saudi Arabian coast by the second author. These specimens resemble *Priolepis randalli* Winterbottom & Burrige, 1992 in possessing broad dark brown bars on the head and