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***Grammoplites vittatus* (Valenciennes), (Scorpaeniformes, Platycephalidae), removed from synonymy with *Grammoplites scaber* (Linnaeus)**

LESLIE W. KNAPP¹ & HISASHI IMAMURA²

¹Research Associate, Division of Fishes, National Museum of Natural History, MRC 534 Smithsonian Institution, P.O. Box 37012, Washington, D.C. 20013-7012, U.S.A. E-mail: knapp1@si.edu

²Laboratory of Marine Biology and Diversity (Systematic Ichthyology), Faculty of Fisheries Science, Hokkaido University, 3-1-1 Minato-cho, Hakodate, Hokkaido, 041-8611, Japan E-mail: Imamura@fish.hokudai.ac.jp

Abstract

Grammoplites vittatus (Valenciennes), often previously overlooked by authors or regarded as a junior synonym of *G. scaber* (Linnaeus), is shown here to be a valid species. It has more gill rakers (7–8) than *G. scaber* and *G. knappi* (usually 6) and a narrower interorbital width than *G. scaber*. A key to the species of *Grammoplites* Fowler is given.

Key words: *Grammoplites vittatus*, *Grammoplites scaber*., Platycephalidae

Introduction

In 1833, Valenciennes in Cuvier & Valenciennes, described a banded flathead from the Malabar coast of India and named it *Platycephalus vittatus*. Valenciennes distinguished his new species from the wide-ranging *G. scaber* (Linnaeus, 1758) in having a longer and narrower head, a narrower space between the eyes and a yellowish band along the side. As this holotype has the combination of a stout spine on each lateral-line scale and pored lateral-line scales with a single opening to the exterior, we follow Imamura (1996) in placing it in the genus *Grammoplites* Fowler (1904). Subsequent authors have either overlooked this species or regarded it as a junior synonym of *G. scaber* (Linnaeus). Although being similar to *G. scaber* in general spination and color pattern, *G. vittatus* with a gill raker count of 7–8 differs from *G. scaber* and *G. knappi* Imamura & Amaoka, 1994 (usually 6 gill rakers in the latter two). The genus *Grammoplites* also includes *G. suppositus* (Troschel, 1840) which with 13 anal fin rays, a much longer preopercular spine and lack of a spine on the posterior LL scales is quite different from the above three species. A key to the species of *Grammoplites* is given below.

Methods

Counts and measurements were taken according to Carpenter (1999). Measurements were taken with standard mechanical calipers to the nearest 0.1 mm. Terminology of head spines follows Knapp *et al.* (2000). Institutional acronyms follow Eschmeyer (1995). Abbreviations used are standard length (SL); head length (HL); lateral line (LL) and gill rakers (GR).

Material examined. NMNH 6903 (1, 94 mm SL), Bombay, Malabar., Dussumier, holotype of *Platycephalus vittatus*; LACM 38133-12 (11, 117–154 mm), Pakistan, Sind, 3–4 km. W of mouth of Turshian Cr., otter trawl, 15–29 m, Apr. 26, 1978, Camm Swift, CCS 78-21; LACM 38130-14 (4, 106–233 mm) Pakistan, Sind, 20 km S of mouth of Paitiani Cr. to N of Turshian Cr., shrimp trawl, 14–22 m, Apr. 25, 1978, Camm Swift, CCS 78-17; LACM 38312-2 (4, 104–185 mm), Pakistan, Baluchistan, Sonmiani Bay, trawl, 25–37 m, Feb. 5, 1979, Camm Swift, CCS 79-25; LACM 38314-1 (8, 66–193 mm) Pakistan, Baluchistan, Sonmiani Bay, 30 m fish trawl, 15–20 m, Feb. 6, 1979, Camm Swift, CCS 79-27; LACM 38135-12 (4, 107–152 mm) Pakistan, Sind, lower 10 km of Hajambro Cr., Apr. 27, 1978, Camm Swift, CCS 78-23; LACM 38136-14 (3, 115–127) Pakistan, Sind, just S of mouth of Hajambro Cr., 30 m fish trawl,

Diagnosis. A species of *Grammoplites* with a spine on every lateral-line scale and pored lateral-line scales with one opening to the exterior, uppermost preopercular spine not reaching opercular margin, narrow interorbital, anal fin rays 12 and total gill raker count on first arch 7–8.

Description. Except for the total gill raker count (7–8 in *G. vittatus*, usually 6 in *G. scaber* and *G. knappi*) there are no fin-ray or scale count differences between the three species. Morphometric differences between the three species appear in Figs. 3 and 4 with *G. vittatus* being intermediate between *G. scaber* and *G. knappi*. Some color pattern differences are given in the key to *Grammoplites* species that appears below.

Key to the Species of *Grammoplites*

- 1a Uppermost preopercular spine not reaching opercular margin; all LL scales bearing a spine; no discrete black blotch at rear of first dorsal fin; anal fin rays 12 2
- 1b Uppermost preopercular spine reaching to or past opercular margin; posterior LL scales may not bear spines; rear of first dorsal fin with prominent black blotch; anal-fin rays 13..... *G. suppositus*
- 2a Total GR count usually 6; dorsum brown with 3–4 darker bands; anal fin dusky, often with dark ray tips 3
- 2b Total GR count 7–8; dorsum gray or light tan with 5–6 indistinct bands; anal fin whitish..... *G. vittatus*
- 3a Interorbital width 9.8–13.1 % of HL; caudal fin usually with broad dark band at rear edge *G. scaber*
- 3b Interorbital width 6.4–8.4 % of HL; caudal fin yellowish *G. knappi*

Remarks. *Grammoplites suppositus* (Troschel, 1840) is found from the Red Sea to the Gulf of Aden, Persian Gulf and the Bay of Bengal. The range of *G. vittatus* appears to be restricted to the Persian Gulf and the northern Arabian Sea. *Grammoplites scaber* is more widely distributed, from the Bay of Bengal to the Gulf of Thailand and Indonesia. *Grammoplites knappi* was reported by Imamura and Amaoka (1994) from the Gulf of Thailand, Hainan Island, China, and from off Sarawak, Borneo. Additional collecting will hopefully determine more exact range limits for these species.

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