

Short Note

A New Record of Flathead Fish, *Rogadius patriciae* (Platycephalidae), from Taiwan¹

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Jeng-Ping Chen and Kwang-Tsao Shao (1993) A new record of flathead fish, *Rogadius patriciae* (Platycephalidae), from Taiwan. *Bull. Inst. Zool., Academia Sinica* 32(2): 153-156. Two specimens of a rare flathead species, *Rogadius patriciae*, which was previously only found in waters near the Ryukyu Islands and off the western coast of Australia, were collected by long line and gillnet at a depth of between 40 and 80 meters near Kenting, at the southern tip of Taiwan. Because its geographic distribution has been greatly extended, it could spread throughout the entire tropical West Pacific region. The number of congeneric species in Taiwan has now been increased to two. Diagnostic characters and color photographs of this species are included in this paper; in addition, current taxonomic statuses of all flathead species, plus a revised key to all species of the family Platycephalidae in Taiwan, are also provided.

Key words: *Rogadius patriciae*, New record, Flatheads, Fish taxonomy, Taiwan.

The genus *Rogadius*, belonging to the family Platycephalidae, is characterized by: having fine serrations on the bone ridges of its head; a single preocular spine; 4 or 5 preopercular spines (the last being absent or antrorse if present); and a narrow interorbital space (less than 22% of eye diameter). There are four flathead species of *Rogadius* in the world; they are divided into two groups, depending on the presence or absence of an antrorse preopercular spine. *Rogadius asper* (Cuvier 1829) and *R. pristiger* (Cuvier 1829) have such a spine; *R. serratus* (Cuvier 1829) and *R. patriciae* (Knapp 1987) do not. *Rogadius patriciae* differs from *R. serratus* by having 12 soft dorsal fin rays instead of 11.

Rogadius patriciae is a rare species of flathead

fish which has recently been reported in the waters surrounding the Ryukyu Islands (Sakashita and Yoshino 1991) after being first recorded in type localities off the west coast of Australia. They have mostly been caught with trawl nets at depths between 65 and 100 meters (Knapp 1987). The present paper reports on two specimens which were caught by long line and gillnet at depths between 40 to 80 meters near Kenting, at the southern tip of Taiwan. Thus, its distribution is now known to extend northward to southern Taiwan and the Ryukyu Islands, in shallow water.

The taxonomic status of this flathead species in Taiwan should include the following corrections, since this family was recently revised by Shao and Chen (1987). The subfamily Bembradinae is now considered a valid family Bembridae (Knapp 1986, Eschmeyer

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personal communication). *Thysanophrys papillolabium* is now recognized as a junior synonym of *T. otaitensis*, while *Suggrundus brevirostris* is considered a junior synonym of *Thysanophrys celebicus*. The name *Onigocia tuberculatus* has been replaced by *Sorsogona*. *Suggrundus rodericensis* and *S. macracanthus* are both valid species, but the former species has been transferred to the genus *Kumococius*. *Kumococius detrusus*, previously published as a new record in Taiwan by Chen *et al.* (1986), was overlooked by Shao and Chen (1987); this name is now recognized as a junior synonym for *K. rodericensis* (Sakashita, personal communication). In total, there are 19 species belonging to 11 genera of Platycephalidae in Taiwan.

Methods for counting and measurements follow descriptions in Shao and Chen (1987). All specimens have been deposited in the Museum of the Institute of Zoology, Academia Sinica (ASIZP).

Rogadius patriciae Knapp, 1987

Figs. 1-2

Rogadius patriciae Knapp, 1987: 53-55 (West Australia).

Materials—One specimen, ASIZP 056590, 182.2mm SL, Sept. 10, 1989, Kenting, depth 60-80 m; one specimen, ASIZP 056654, 143.5mm SL, Dec. 20, 1990, O-lan-pi, depth approximately 40m.

Description—Dorsal fin rays IX, 12; anal fin rays 11; pectoral fin rays 23 (upper 2 and lower 9 unbranched); pored scales in lateral line 52-53, anteriormost 7-8 scales bearing small spines. Gill raker 1+6, inner surface armed with two rows of prickles; discal tubercles usually uniserial, moderately large, and interpolated between gill raker. Body elongated, depth 7.03; body

width 4.81; depressed head length 2.84 (all in SL). Eye large, diameter 3.74 in HL, iris lappet bilobed. Snout length a little longer than eye diameter (ED), 3.05 in HL; two nasal pores, anterior with long, slender dermal flap, posterior without dermal flap. Interorbital width narrow, 5.44 in ED. Interopercular membrane absent. Bone ridges of head with fine serrations; a single stout preocular spine in front of eyes, followed by a finely serrated superorbital ridge (larger specimen with a second, smaller preocular spine); suborbital ridge with fine serrations. Preorbital spine lacking; antorbital margin bearing 5-10 denticulations. Three preopercular spines; first is longest, about 50-60% of eye diameter; third is lowest and smallest. Two opercular spines without serrations along base.

Color (when fresh): body brown above, ventral part white; first dorsal fin with a large black spot from the upper part of the second to fifth dorsal spines; soft dorsal fin with small spots on rays; pectoral fins dark brown, except lowest 3 rays which are white; upper part of fins covered with small dark spots; pelvic fins black except for white base and margin; anal fin whitish with two elongated dark bands posteriorly. Caudal fin white with 4 or 5 dark patches (some of them forming short bars).

Distribution: Previously recorded from West Australia and the Ryukyu Islands.

Remarks: *Rogadius* is similar to its closely-related genus *Sorsogona*. The major differences between these genera are: 1) *Sorsogona* has two or more preocular spines, and 2) *Sorsogona* has a broader interorbital space than *Rogadius* (greater than 22.2% of eye diameter).

**Key to genus and species of the family
Platycephalidae in Taiwan**

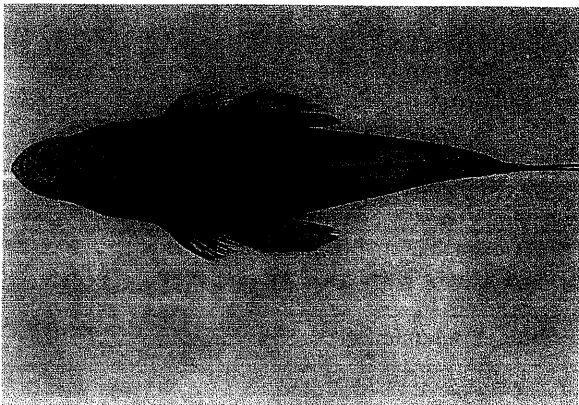


Fig. 1. *Rogadius patriciae*, ASIZP 056590, dorsal view.

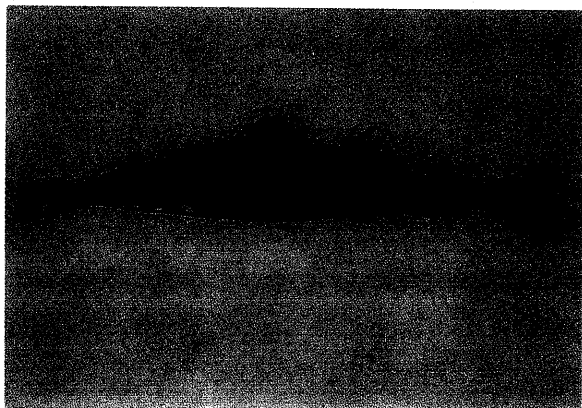


Fig. 2. *Rogadius patriciae*, ASIZP 056590, lateral view.

- 1a. Vomerine teeth in a crescentic band; L.I. 68-82; soft dorsal rays 13 (genus *Platycephalus*) *Platycephalus indicus*
- 1b. Vomerine teeth in 2 separate bands; L.I. 34-65; soft dorsal rays 11-12 2
- 2a. L.I. 34-42 (genus *Onigocia*) 3
- 2b. L.I. 48-65 4
- 3a. Lateral line with 8-11 spined scales *Onigocia spinosa*
- 3b. Lateral line with 2-4 spined scales *O. macrolepis*
- 4a. Suborbital and supraorbital ridges bearing small spines or serrations 5
- 4b. Suborbital and supraorbital ridges bearing larger spines 7
- 5a. Two or more preocular spines, interorbital space broader (less than 4.5 in eye diameter) (genus *Sorsogona*) *Sorsogona tuberculatus*
- 5b. One preocular spine, interorbital space narrow (more than 4.5 in eye diameter) (genus *Rogadius*) 6
- 6a. Preopercle with a strong antrorse spine on lower margin *Rogadius asper*
- 6b. Preopercle without an antrorse spine *R. patriciae*
- 7a. All scales of L.I. with a strong backward spine (genus *Grammoplites*) ... *Grammoplites scaber*
- 7b. Only anterior part of L.I. scales with spine 8
- 8a. Teeth highly specialized; those on upper jaw canine-like and able to be depressible (genus *Ratabulus*) *Ratabulus megacephalus*
- 8b. Teeth all villiform; no canine teeth 9
- 9a. Dorsal surface of head well granulated and denticulated (genus *Suggrundus*) 10
- 9b. Dorsal surface of head not granulated 12
- 10a. Longest preopercular spine longer than eye diameter; lateral line with 19-22 spined scales *Suggrundus macracanthus*
- 10b. Longest preopercular spine shorter than eye diameter; lateral line with 3-11 spined scales 11
- 11a. Lateral line with 8-11 spined scales; head and body with black spots *S. meerdervoorti*
- 11b. Lateral line with 1-4 spined scales; head and body without black spots *S. longirostris*
- 12a. First preopercular spine longer than second and more than 1/2 of ED; discal tubercles at first gill arch very small (genus *Kumococius*) *Kumococius detrusus*
- 12b. First preopercular spine a little longer or same as second and less than 1/2 of ED; discal tubercles at first gill arch large 13
- 13a. Suborbital ridge with 5 or more spines (genus *Thysanophrys*) 14
- 13b. Suborbital ridge with less than 4 spines 17
- 14a. A simple papilla on eye *Thysanophrys celebicus*
- 14b. No papilla on eye 15
- 15a. Edge of lips with papillae *T. otaitensis*
- 15b. Edge of lips without papillae 16
- 16a. Least width of bony interorbital space 1.1-2.0 in eye diameter *T. arenicola*
- 16b. Least width of bony interorbital space 5.5-6.0 in eye diameter *T. chiltonae*
- 17a. Suborbital ridge with 3 or 4 spines; interopercle flap absent (genus *Cociella*) *Cociella crocodila*
- 17b. Suborbital ridge with 2 spines; interopercle flap present (genus *Inegocia*) 18
- 18a. Interopercular flap large (tongue-like), anterior 1-3 pored-scales spined; snout longer, 2.9-3.1 in head length *Inegocia guttata*
- 18b. Interopercular flap small (pointed), anterior 6-8 pored-scales spined; snout shorter, 3.2-3.6 in head length *I. japonica*

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帕氏倒棘鯛，一種臺灣新記錄的罕見牛尾魚

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一種罕見的帕氏倒棘鯛(*Rogadius patriciae*)牛尾魚已在臺灣南部之墾丁海域被採獲，此屬之牛尾魚在臺灣記錄現增為二種。本文之發表，印證此魚種之分布範圍從原始發表之西澳洲海域擴大至臺灣及琉球，因此推測其分布範圍應可遍及熱帶西太平洋海域。本文中，除詳細描述本新記錄魚種之形態特徵及提供標本照外，尚且對以往臺灣產牛尾魚科魚類之同種異名等分類問題加以訂正，並附上牛尾魚科(Family Platycephalidae)之屬檢索表，以資參考。