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Description of the Neotype of *Repomucenus sagitta* (Callionymidae) with Comments on the Species

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Abstract The neotype of *Repomucenus sagitta* is described. Specimens conspecific with the neotype from India, the Gulf of Thailand, the South China Sea, the Yellow Sea and Australia are described. Sexual characters, geographic variation, habitat and geographic distribution were noted. *Repomucenus macdonaldi* is a junior synonym of *R. sagitta* as defined by the neotype.

Fricke (1984) proposed designation of a neotype for *Repomucenus sagitta* (Callionymidae). His action was approved by Opinion 1388 (1986). However, this designation of the neotype is problematical, because we found that the neotype of *R. sagitta* agrees well with the holotype of *Repomucenus macdonaldi*, an Australian species. Although we believe it should have been better for *R. sagitta* to be treated as a nomem dubium, leaving *R. macdonaldi* as a valid name, we reluctantly follow Opinion 1388.

Prior to the designation of the neotype, the most recent description of *R. sagitta* was made by Fricke (1983) based on many specimens. There was no individual description of the neotype. We found these specimens examined as *R. sagitta* by Fricke (1983) comprised two species. *R. sagitta*, as defined by the neotype, is distributed widely in the Indo-West Pacific, including some geographic variations. It is necessary to describe the neotype of *R. sagitta* for clear identification of the species. We here describe the neotype of *R. sagitta.* We also noted the sexual characters, geographic variations, habitat and geographic distribution on the basis of specimens conspecific with the neotype, which were collected from the Indian Ocean, the Gulf of Thailand, the South China Sea, Australia and the Yellow Sea.

Proportional measurements are shown in Table 1. Methods for counts and measurements follow Nakabo (1982). Vertebrae were counted from soft-X ray negatives.

Repomucenus sagitta (Pallas, 1770)
(Figs. 1–7)
(Chinese name: Duan-Qi-Xian)
(New Korean name: Ch'am-Jugok-Yangt'ae)

Callionymus sagitta Pallas, 1770: 29–31, pl. 4, figs. 4–5 (Amboina). Type specimen was lost, but probably not *C. sagitta* ruled by the Plenary Power (Opinion 1388).

Callionymus sagitta: Fricke, 1984: 58–61 (neotype designation; mouth of River Hooghly, Sundarbans, Bengal Province, India). Fricke, 1981: 161, fig. 10 (mouth of River Hooghly, India). Fricke, 1982a: 348, fig. 3 (eastern India). Fricke, 1982b: 66 (listed).

Callionymus sagitta: Fricke, 1983 (part): 258–266, figs. 77–78 (from eastern coasts of India to northwestern Indonesia).

Repomucenus sagitta: Nakabo, 1982: 81 (listed).

Callionymus macdonaldi Ogilby, 1911: 56–58, pl. 6, fig. 2 (Moreton Bay, Queensland, Australia). McCulloch, 1926: 205, p. 14, fig. 1 (redescription of the holotype). Johnson, 1971: 122–125, fig. 18 (coastal Queensland). Fricke, 1983: 193–200, fig. 56 (off New Castle, New South Wales, Queensland and Northern Territory, Australia; Papua New Guinea).

Repomucenus macdonaldi: Nakabo, 1982: 81 (listed).

Callionymus kitaharae (not of Jordan et Seale): Li, 1955: 181–182, fig. 115 (Qingdao, China).

Material examined. India: CAS-SU (California Academy of Sciences–Stanford University Collection) 41392 (neotype of *R. sagitta*), a female, 88.3 mm SL, mouth of the Hooghly (Hugli) River, Sandarbans, west Bengal Province, India, S. W. Kemp, 1911. CAS-SU 41393, a male, 78.5 mm SL, Puri, Orissa, India, B. Prashad, 1938. **Yellow Sea:** SMWU (Sang Myung Women's University) 3052, 3053, FAKU (Department of Fisheries, Faculty of Agriculture,

Kyoto University) 55019, 55020, 5 males and 2 females, 41.2–78.9 mm SL, Aug. 29–Sep. 5, 1985. SMWU 3060, 2 males and a female, 26.2–72.8 mm SL, Aug. 20, 1984. SMWU 3123–3125, 3134, 3135, 3141, 3142, FAKU 55352–55354, 55356, 55357, 55365–55368, 12 males and 4 females, 42.0–92.6 mm SL, Nov. 9–18, 1985. SMWU 3167–3173, FAKU 56229–56235, 6 males and 8 females, 53.1–87.8 mm SL, Apr. 30, 1986. The above specimens from SMWU and FAKU were collected by S.-R. Jeon from Sa-dong, An-san-shi, Kyŏng'gi-do, Korea, 37°17′N, 126°47′E. SMWU 3083–3085, a male and two females, 77.2–83.7 mm SL, Yamido-ri, Misong-up, Okgu-gun, Chollabuk-do, Korea, 35°50′N, 126°30′E, S.-R. Jeon, Oct. 24, 1985. SMWU 3165–3166, 2 females, 67.0–68.0 mm SL, Oshik Island, Misong-up, Okgu-gun, Chollabuk-do, Korea, S.-R. Jeon, July 29, 1985. IZAS (Institute of Zoology, Academia Sinica) 31335, 31336, 31338, 2 males and a female, 74.6–83.1 mm SL, Qingdao, China (*C. kitaharae* of Li, 1955). **South China Sea:** IZAS 29024, 29427 and 30919, 2 males and a female, 74.6–82.6 mm SL, Beihai City, Guangxi. IZAS 44446, a male, 85.9 mm SL, South China Sea, China. CAS (California Academy of Sciences) 46956, a male, 72.4 mm SL, 22°22′N, 113°54′30E, Mouth of Pearl River, Urmston Road, Hong Kong, mud bottom, 11 fms deep, 14th Aug., 1958. **Gulf of Thailand:** URM-P (Department of Marine Sciences, University of the Ryukyus) 12830, 12832–12835, 4 males and a female, 69.1–77.8 mm SL, Pattani fish market, Thailand, coll. by H. Senou & C. V. Korn, 24th Oct., 1983. URM-P 14041, 4 females, 35.2–48.4 mm SL, Paknum fish market, Thailand, coll. by H. Senou and T. Wongratana, 11th Feb., 1984. FAKU 56200, a male, 76.2 mm SL, Songkhla fish market, Thailand, coll. by H. Senou & T. Yoshino, 7th Apr., 1984. FAKU 56374, a female, 67.9 mm SL, mouth of Songkhla Lake, Thailand, coll. by P. Sirimontaporn, 12th Feb., 1983. FAKU 56382, 56383, 2 males, 60.4–61.0 mm SL, mouth of Songkhla Lake, Thailand, coll. by P. Sirimontaporn, 20th Dec., 1983. FUMT-P (Department of Fisheries, University Museum, University of Tokyo) 7940–7942, 68.1–69.8 mm SL, off Patani, Gulf of Thailand, coll. by K. Mochizuki, 2nd Feb., 1985. **Australia:** QMI (Queensland Museum, Ichthyology) 2473 (holotype of *R. macdonaldi*), female, 97.6 mm SL, Moreton Bay, Queensland, Australia. QMI 8393–8398, 5 males and a female, 40.6–47.0 mm SL, beach, Townsville, northeast of Queensland, Aug. 18, 1943. QMI 8399–8402, a male and 3 females, 59.3–66.0 mm SL, Thursday Island, North of Queensland. FAKU 49932–49936, 4 males and a female, 65.5–83.3 mm SL, trawled off Redcliffe, Queens-

Table 1. Proportional measurements as the percent of standard length in *Repomucenus*

	Yellow Sea		South China Sea	
	male	female	male	female
Number of fish (NO)	28	20	4	1
Standard length (mm)	41.2–92.6	26.2–83.1	72.4–85.9	76.0
Body width	19.2–24.4 (22.4, 28)	18.7–26.3 (22.8, 20)	18.8–23.3 (21.1, 4)	24.1
Body depth	7.8–12.8 (10.7, 28)	8.6–12.5 (10.7, 20)	8.8–10.9 (10.0, 4)	8.7
Caudal peduncle depth	3.7– 5.3 (4.7, 28)	3.7– 5.1 (4.5, 20)	4.4– 4.7 (4.6, 4)	4.6
Predorsal length	32.7–37.3 (35.7, 27)	33.6–38.6 (36.3, 20)	34.3–36.2 (35.6, 4)	36.1
Caudal fin length	23.6–30.3 (26.3, 28)	23.4–28.2 (25.4, 20)	24.0–25.4 (24.7, 4)	26.3
Head length	25.3–29.5 (26.6, 28)	25.6–28.8 (26.9, 20)	24.9–27.7 (26.4, 4)	27.6
Eye diameter	6.4– 9.2 (7.5, 28)	6.7– 9.5 (7.6, 20)	7.5– 8.0 (7.7, 4)	8.6
Snout length	8.6–11.5 (9.7, 28)	8.0–11.2 (9.7, 20)	8.7–10.5 (9.9, 4)	9.6
Upper jaw length	8.1– 9.5 (8.8, 28)	8.4– 9.3 (8.8, 20)	8.0– 9.8 (8.8, 4)	8.8
Interorbital width	1.6– 3.0 (2.5, 28)	1.5– 2.5 (2.2, 20)	1.7– 2.5 (2.0, 4)	1.8
1st dorsal spine length	5.8– 9.4 (7.5, 27)	4.9– 8.0 (6.5, 20)	8.4– 9.9 (9.2, 4)	7.9
2nd dorsal spine length	5.5– 8.4 (7.0, 28)	5.1– 8.0 (6.7, 19)	8.4– 9.0 (8.6, 4)	7.8
3rd dorsal spine length	4.4– 8.4 (6.3, 28)	4.8– 6.9 (6.0, 20)	6.8– 8.0 (7.4, 4)	7.4
4th dorsal spine length	2.1– 4.7 (3.2, 28)	1.8– 3.7 (2.8, 20)	3.9– 4.8 (4.5, 4)	3.7
1st dorsal ray length	11.9–17.1 (15.6, 27)	9.9–17.1 (15.1, 20)	14.5–16.6 (15.4, 4)	15.8
Last dorsal ray length	12.3–20.8 (16.4, 28)	9.5–16.1 (13.6, 20)	16.8–19.7 (18.0, 4)	13.3
1st anal ray length	5.5– 8.6 (7.2, 28)	3.7– 8.5 (7.1, 19)	6.1– 7.6 (6.9, 4)	8.4
Last anal ray length	10.7–14.4 (12.6, 28)	9.5–13.4 (11.9, 19)	10.6–13.8 (12.5, 4)	13.7
Pectoral fin length	20.8–26.1 (23.7, 28)	19.1–25.8 (23.6, 20)	17.0–21.8 (20.5, 4)	24.6
Pelvic fin length	26.6–32.7 (29.5, 28)	26.3–37.3 (29.8, 20)	27.0–28.4 (27.9, 4)	31.1
Preopercular spine length	5.0– 7.3 (6.2, 27)	4.9– 8.4 (6.4, 20)	6.5– 6.8 (6.7, 3)	6.6
Anal papilla length	2.2– 4.1 (2.9, 28)	0.1– 1.6 (0.6, 19)	3.0– 4.1 (3.6, 4)	1.3

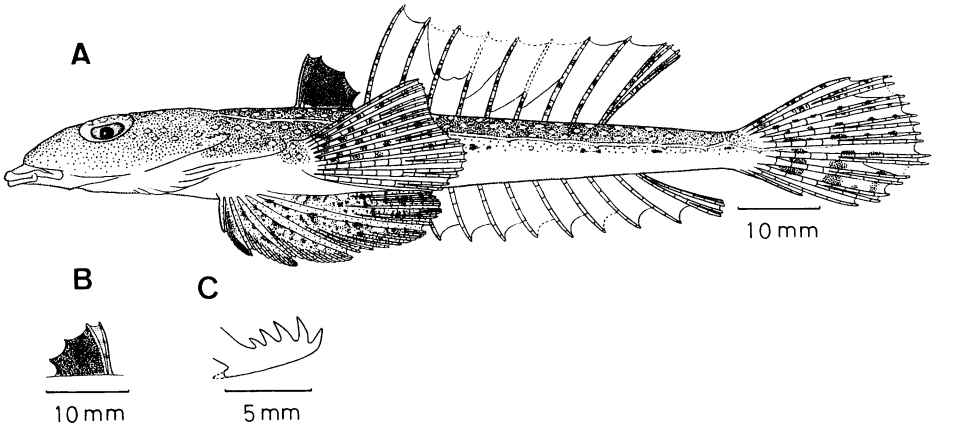

Fig. 1. Neotype of *Repomucenus sagitta* (Pallas), CAS-SU 41392, female, 88.3 mm SL, west Bengal, India. A, lateral view. B, right side of 1st dorsal fin. C, preopercular spine.

land, 5 fms deep, Mar. 17, 1975.

Comparative material examined. *Repomucenus planus*; CAS-SU 35688, a male and 2 females, 59.2–72.4 mm SL, Singapore, coll. by A. W. Herre, May 7, 1937.

Description of the neotype (female). D IV-9; A 9; P_1 i+18; P_2 I, 5; C i+7+ii; VN 7+14.

Body strongly depressed. Head strongly depressed. Snout long. Eye moderately large. Interorbital space somewhat narrow and slightly concave. Predorsal long. Gill-opening small, oval, located

sagitta. Data show ranges; the means and sample sizes are in parentheses.

Gulf of Thailand		India		Australia		
			neotype of *R. sagitta*			holotype of *R. macdonaldi*
male 8	female 8	male 1	female 1	male 10	female 5	female 1
60.4–74.8	35.2–77.8	78.5	88.3	41.1–83.3	40.6–82.0	97.6
19.2–26.7 (24.1, 8)	21.4–26.2 (24.0, 8)	22.7	26.3	21.2–24.0 (22.7, 10)	21.2–24.4 (23.6, 5)	21.2
9.8–13.1 (11.5, 8)	9.1–12.9 (10.9, 8)	9.4	12.6	10.8–12.4 (11.6, 10)	11.3–12.8 (11.8, 5)	11.2
4.7– 5.6 (5.2, 8)	4.4– 5.1 (4.8, 8)	5.0	4.8	4.5– 5.9 (5.3, 10)	4.8– 5.9 (5.3, 5)	4.1
34.9–38.4 (36.6, 8)	35.7–38.5 (36.6, 8)	36.6	40.8	35.0–36.9 (36.3, 10)	35.0–39.5 (36.9, 5)	34.9
24.5–25.6 (25.1, 8)	20.2–26.3 (24.1, 8)	26.1	26.5	27.0–29.5 (27.7, 10)	26.0–29.3 (27.5, 5)	27.6
27.1–28.5 (27.9, 8)	26.4–29.1 (27.4, 8)	28.2	31.3	26.0–28.3 (27.3, 10)	25.9–28.8 (27.9, 5)	25.8
7.2– 8.7 (8.0, 8)	7.7– 8.8 (8.1, 8)	7.8	8.0	7.2–10.0 (8.4, 10)	7.8– 9.4 (8.4, 5)	7.5
9.8–12.1 (10.5, 8)	8.9–10.4 (9.7, 8)	10.3	12.6	8.6–10.7 (9.5, 10)	9.1–11.6 (10.2, 5)	9.0
8.6– 9.4 (8.9, 8)	8.5– 9.3 (8.9, 8)	9.4	9.4	7.6– 9.2 (8.1, 10)	7.6– 9.9 (8.4, 5)	7.8
1.8– 2.6 (2.2, 8)	1.6– 3.0 (2.2, 8)	2.5	1.8	1.5– 2.9 (2.2, 10)	1.5– 2.4 (1.9, 5)	1.9
5.5– 7.0 (6.1, 8)	6.2– 7.8 (6.7, 8)	7.5	7.4	8.0–10.8 (9.2, 10)	6.6– 8.9 (7.7, 5)	8.9
4.9– 6.6 (6.0, 8)	5.5– 7.8 (6.8, 8)	6.9	7.4	7.5–10.4 (8.9, 10)	6.7– 8.6 (7.6, 5)	8.2
4.6– 6.8 (5.7, 8)	5.4– 6.9 (6.2, 8)	5.9	6.2	6.2– 9.2 (7.6, 9)	4.8– 6.9 (6.1, 5)	7.6
2.1– 4.3 (3.2, 8)	2.3– 3.7 (3.1, 8)	3.7	2.9	3.6– 5.5 (4.5, 10)	1.9– 4.8 (3.6, 5)	4.2
13.2–15.7 (14.9, 8)	13.4–16.0 (14.8, 8)	15.4	15.4	15.1–16.9 (15.9, 10)	14.7–16.0 (15.4, 5)	12.5
14.1–16.2 (15.0, 8)	11.1–14.2 (13.3, 8)	21.1	14.6	10.0–18.5 (14.9, 10)	12.1–15.1 (13.9, 5)	15.9
6.3– 8.9 (7.7, 8)	6.0– 8.7 (8.1, 8)	7.6	7.6	7.3– 9.0 (8.2, 10)	7.3– 8.6 (8.0, 5)	8.3
11.8–15.3 (12.6, 8)	11.1–13.6 (12.5, 8)	13.9	12.5	10.7–14.5 (12.7, 10)	11.4–13.4 (12.3, 5)	13.4
20.8–22.8 (22.1, 7)	20.2–24.7 (22.3, 8)	22.4	23.7	22.1–25.3 (23.2, 10)	22.3–25.5 (23.4, 5)	23.5
26.8–29.5 (28.0, 8)	26.0–30.0 (28.2, 8)	28.0	31.4	29.9–32.9 (31.6, 10)	30.9–32.8 (31.7, 5)	30.1
6.5– 9.2 (8.0, 8)	7.9– 9.1 (8.5, 8)	7.4	7.1	8.0–10.0 (9.4, 9)	7.3– 8.8 (7.9, 4)	7.6
1.6– 4.2 (2.9, 8)	0.2– 1.0 (0.4, 8)	3.3	0.6	2.1– 4.0 (3.1, 10)	0.2– 0.9 (0.4, 5)	0.5

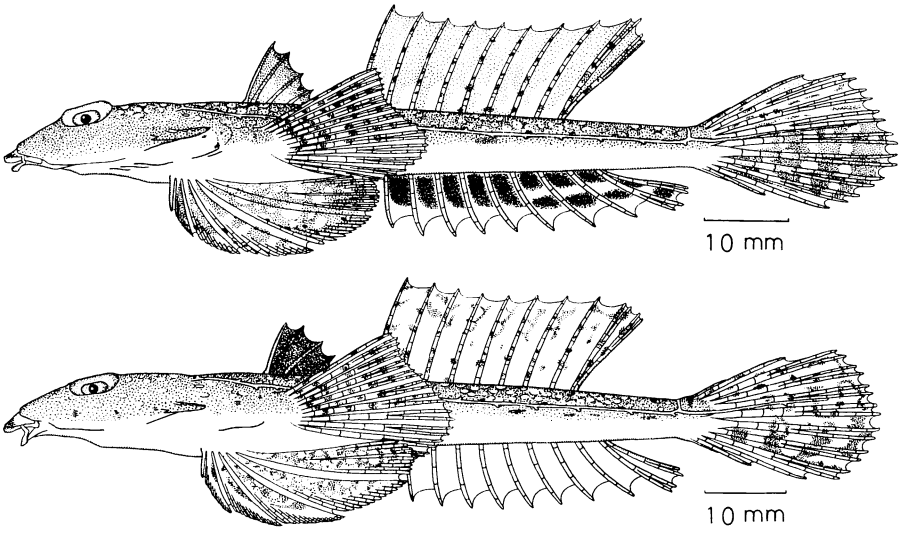

Fig. 2. *Repomucenus sagitta* from northwestern coasts of Australia. Upper, male, FAKU 49932, 81.0 mm SL. Lower, female, FAKU 49936, 82.0 mm SL.

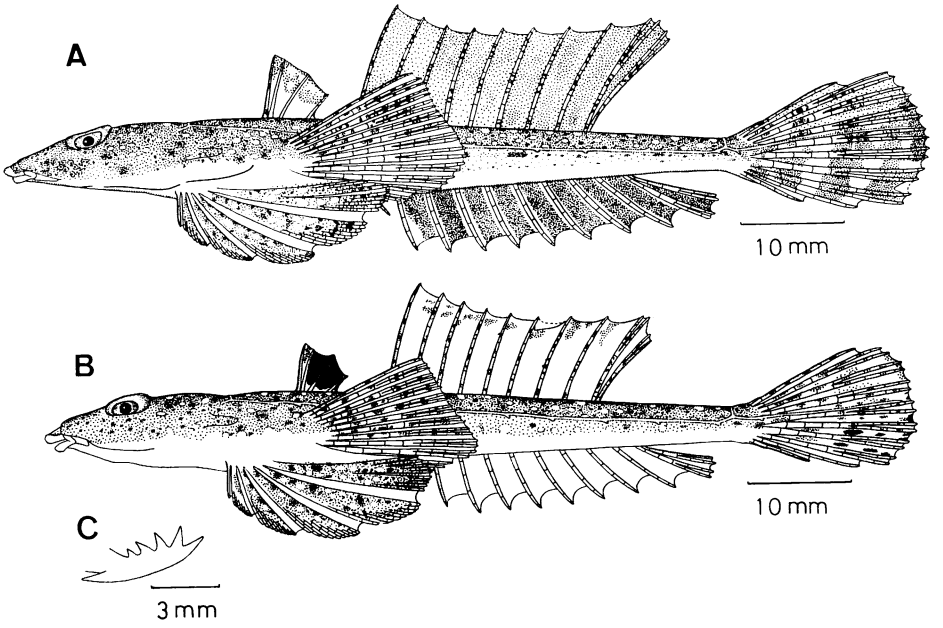

Fig. 3. *Repomucenus sagitta* from the Yellow Sea. A, lateral view of a male, FAKU 55019, 70.5 mm SL; B, lateral view of a female, SMWU 3166, 67.0 mm SL; C, preopercular spine of SMWU 3173, male, 81.4 mm SL.

midway between dorsoposterior edge of eye and upper origin of pectoral fin. Preopercular spine somewhat long with an antrorse process at base and 4 upward processes on inner side; its posterior tip upcurved. Upper jaw protractile, its posterior end not reaching anterior edge of eye. A pair of nostrils with very short tube on preorbital region. Teeth on jaws villiform in broad bands. Palatine and vomer toothless. Anal papilla conical and very short.

Cephalic lateral line system well developed. Infraorbital canal with 3 downward branches and extending beyond anterior edge of eye. Postocular

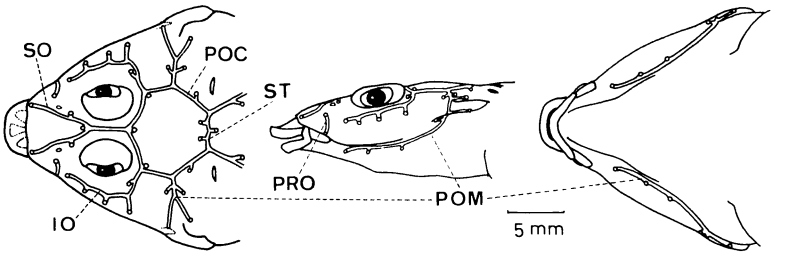

Fig. 4. Cephalic lateral line of *Repomucenus sagitta*, SMWU 3166, female, 67.0 mm SL. Left, dorsal view. Middle, lateral view. Right, ventral view. IO, infraorbital canal; POC, postocular commissure; POM, preoperculomandibular canal; PRO, preorbital canal; SO, supraorbital canal; ST, supratemporal canal.

commissure connected with preoperculomandibular canal; dorsal part of preoperculomandibular canal with an antrorse short branch and two retrorse (short and long) branches. Lateral line extending beyond caudal peduncle and reaching near distal tip of median caudal fin ray; the line of opposite side interconnected by a transverse commissure across dorsal surface of caudal peduncle.

First dorsal fin very small. Second dorsal fin slightly concave; dorsal rays unbranched distally except both branches of last ray divided at base. Anal rays unbranched distally except both branches of last ray divided at base. Pectoral fin reaching 4th dorsal ray; upper half somewhat concave, lower half convex. Pelvic fin round, reaching 1st anal ray, and connected by membrane to middle part of pectoral fin base. Caudal fin round.

Color in 70% ethyl alcohol. Dorsal surface of body brown with many small white spots like the surface of a sandy bottom, ventral surface white. First dorsal fin blackish-brown with white 1st membrane on one side, uniformly blackish-brown on other side (white 1st membrane facing the surface when the fin folded). Second dorsal fin almost transparent. Upper half of pectoral fin with many small dark spots, lower half transparent. Pelvic fin faint dark brown with many white spots. Anal fin transparent. Upper half of caudal fin with some faint dark spots and some dark spots on each ray, lower half with 3 transverse dark bands.

Description of other material (males and females). D IV-9 (rarely 8 or 10); A 9 (rarely 8); P_1 i+16–20; P_2 I, 5; C i+7+ii; VN 7+14.

Preopercular spine with 3–5 upward processes on inner side. Anal papilla more elongate in male than in female. First dorsal fin smaller in female than in male; that of female becoming smaller with increasing standard length (Fig. 5). Last ray of 2nd dorsal

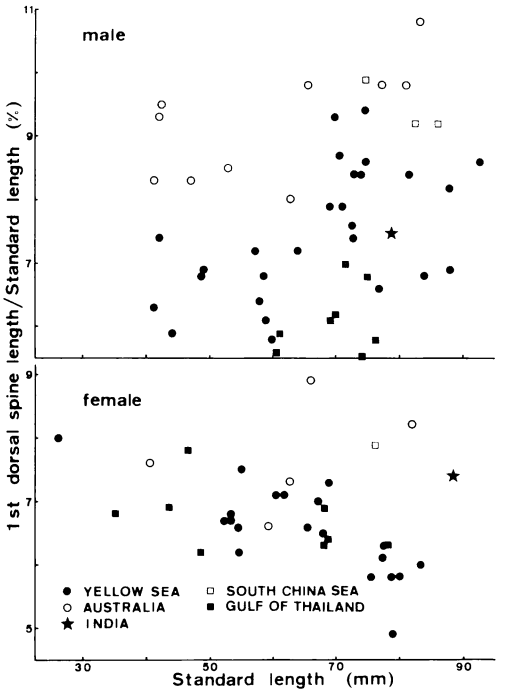

Fig. 5. Relationship between percent of 1st dorsal spine length/standard length and standard length in *Repomucenus sagitta* from 5 geographic areas.

fin a little longer in male than in female. Pectoral fin reaching 3rd or 4th dorsal ray. Pelvic fin nearly reaching or slightly exceeding 1st anal ray.

Color in 10% formalin and 70% ethyl alcohol. In some specimens, a broad transverse darker band on cheek. First dorsal fin lighter black on distal half in male. Second dorsal fin faint dark in male, transparent with a row of dark spots near distal edge or some irregular dark marks on upper half in female; several dark spots on each ray in both sexes. Anal fin blackish brown on each membrane, white on each

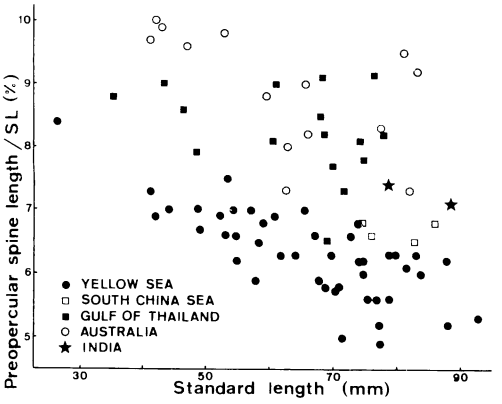

Fig. 6. Relationship between percent of preopercular spine length/standard length and standard length in *Repomucenus sagitta* from 5 geographic areas.

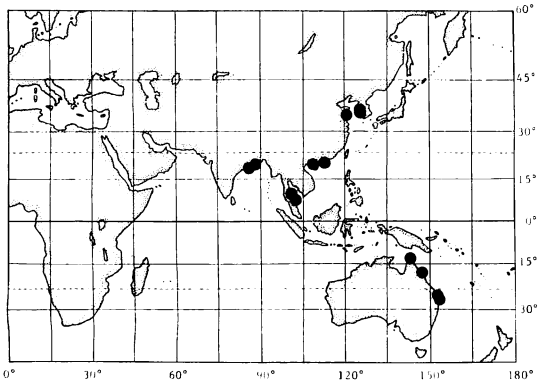

Fig. 7. Geographic distribution of *Repomucenus sagitta* based on the specimens examined in this paper.

ray in male; transparent in female. In male, upper half of caudal fin faint dark, with some dark spots on each ray; lower half with 4 broad transverse dark bands. In female, upper half of caudal fin with some faint dark spots and some dark spots on each ray, lower half with 3 or 4 transverse dark bands, or with several blackish-brown spots.

Other characters agree well with the neotype.

Geographic variation. The first dorsal spine length (Fig. 5) is longer in the specimens from Australia and the South China Sea than in those from the other areas (male, averages 9.2% of SL and 6.1–7.5% of SL; female, 7.7–7.9% of SL and 6.5–6.7% of SL, Table 1); in the specimens from the Gulf of Thailand, the 1st dorsal spine length is longer in females than in males, but in the specimens from other areas it is longer in males. The preopercular spine length (Fig. 6) is longer in the specimens from the Gulf of Thailand and Australia than in those from the other areas (averages 7.9–9.4% of SL and 6.2–7.4% of SL, Table 1).

A blackish brown area on each membrane of the male anal fin does not extend to the distal margin of the membrane in the specimens from Australia, unlike those from the other areas.

There are two types in coloration of the caudal fin. In the specimens from India, the Gulf of Thailand and Australia (Figs. 1, 2), the upper half of the caudal fin has some dark spots and oblong marks, and the lower half has 3 or 4 transverse broad dark bands; the transverse dark bands are darker and broader in males than in females. In the specimens from the Yellow Sea and the South China Sea (Fig. 3), the upper half of the male caudal fin is faint dark with some dark spots on each ray and the lower half transparent with 4 transverse broad dark bands; in the female, the upper half has some faint dark spots, with some dark spots on each ray, and the lower half has several blackish-brown spots.

Habitat and distribution. *R. sagitta* inhabits sandy-muddy bottoms in very shallow waters less than 10 m deep. This species often prefers the vicinity of river mouths. Off the western coasts of the Korean Peninsula, many specimens were collected from the sandy bottoms about 1–2 m deep near the mouth of rivers. This species is distributed in the Yellow Sea, the South China Sea, the eastern Indian Ocean, the Gulf of Thailand and off the northeastern coasts of Australia (Fig. 7).

Remarks. When Fricke (1983) decribed *R. sagitta*, his material contained at least two species. Among the specimens examined as *R. sagitta* by him, a male and two female specimens (CAS-SU 35668) from Singapore were *Repomucenus planus* (Ochiai).

R. sagitta is closely related to *R. planus* in having similar body coloration, the same pattern of infraorbital canal, a strongly depressed body, and a similar preopercular spine and small 1st dorsal fin, but differs from the latter in the coloration of the cheek (without many dark brown spots in the former vs. many dark brown spots in the latter), the second dorsal fin of males (almost dark vs. faint dark with many white circles), the anal fin of males (blackish brown band on each membrane vs. a dark spot on each membrane), a little shorter preopercular spine, and the shape of the male 1st dorsal fin (distal margin not emarginated, vs. strongly emarginated).

The characters of *R. planus* noted above follow Ochiai (1955) and Nakabo (1983). *R. planus* has been recorded only off the southern coasts of Japan. The specimens of CAS-SU 35668 from Singapore are new to the area for *R. planus.*

Many authors have used the name *Callionymus sagitta* for specimens collected from many areas in the Indo-West Pacific. But, we excluded them from our synonym list for *R. sagitta*, because we could not know if their specimens were conspecific with the neotype.

The neotype of *R. sagitta* from India (Fig. 1) is a female, as is the holotype of *R. macdonaldi* from Australia. These two specimens agree well in almost all proportional characters and coloration of the 1st dorsal, pectoral, pelvic, anal and caudal fins. A male of *R. sagitta* from India agrees with males of *R. macdonaldi* (Fig. 2) from Australia; the small differences in the male 1st dorsal spine length, preopercular spine length and male anal fin coloration are most likely due to geographic variation (Fig. 2). Therefore, *R. macdonaldi* is considered to be a junior synonym of *R. sagitta.*

The specimens from Quingdao identified as *Callionymus kitaharae* Jordan et Seale (IZAS 31335, 31336, 31338) by Li (1955) were reexamined by us and identified as *R. sagitta.* We collected many specimens from the Yellow Sea coast line of the Korean Peninsula (Fig. 3), which were identical with the specimens from Quingdao. The Yellow Sea specimens also agree well with the neotype of *R. sagitta* (female) and the male specimen from India; they differ a little from the Indian specimens in the coloration of the caudal fin. This is most likely due to geographic variation.

R. sagitta is a new record from the Korean coasts of the Yellow Sea. Records from Korea as *C. kitaharae* by Mori (1952) are listed without description or figure, and *C. kitaharai* of Chyung (1977) is a repetition of the original description of Jordan and Seale (1906). Because these authors did not note the specimens examined, we cannot decide whether or not their identifications were correct. *C. kitaharae* Jordan et Seale is a synonym of *Repomucenus valenciennei* (Temminck et Schlegel) (Nakabo, 1983).

The geographic distribution of this species was shown by Fricke (1983). It was drawn on the bases of two species (*R. sagitta* and *R. planus*) and records by many authors which could not be identified as *R. sagitta* as defined by the neotype. Therefore, we show here the geographic distribution of *R. sagitta* on the basis of our material. Collecting sites will be increased in the future.

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インド・西部太平洋産ネズッポ科 *Repomucenus sagitta* (Pallas) の新模式標本の記載と，その種の再検討

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ネズッポ科ネズッポ属の *Repomucenus sagitta* (Pallas) は Fricke (1984) の提唱によって新模式標本の指定が行われ，Opinion 1388 (1986) で承認された種である．しかし，本種については，一番新しい記載である Fricke (1983) に用いられた標本の中に *R. sagitta* と *Repomucenus planus* (Ochiai) の 2 種が混合していたり，新模式標本そのものの記載もない状態である．そのため，今回新模式標本の記載と，それを基準にして同定された，東部インド洋，タイ湾，南シナ海，オーストラリア北東岸，黄海から得られた標本をもとに，雌雄差，地理的変異，生息場所，地理的分布を含めて *R. sagitta* の記載を行った．そして，オーストラリア北東岸に分布している *Repomucenus macdonaldi* (Ogilby) は本種の同種異名であること，黄海から採集され李 (1955) によって *Callionymus kitaharae* (Jordan et Seale) として報告されたものは本種であること，について述べた．

本種の新模式標本指定の決定には，後に同種異名がでるなど問題があるが，国際動物命名規約にのっとって，しかたなく Opinion 1388 に従った．

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