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Samariscus fasciatus Fowler, 1934, a Junior Synonym of *Plagiopsetta glossa* Franz, 1910 (Pleuronectiformes: Pleuronectidae)

Eiji Mihara[1] and Kunio Amaoka[2]

[1] Resources Management Division, Hokkaido Hakodate Fisheries Experimental Station, 1–2–66 Yunokawa-cho, Hakodate, Hokkaido 042, Japan
[2] Laboratory of Marine Zoology, Faculty of Fisheries, Hokkaido University, 3–1–1 Minato-cho, Hakodate, Hokkaido 041, Japan

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Plagiopsetta glossa Franz, 1910, the only member of the genus, is known from southern Japan (Franz, 1910; Kuronuma, 1940), Taiwan (Shen, 1982) and New South Wales, Australia (Cooper et al., 1994). *Samariscus fasciatus* was described by Fowler (1934) on the basis of a single specimen from near Hong Kong in the South China Sea, and no additional specimens having been reported subsequently. Ochiai and Amaoka (1962) mentioned the possibility that *S. fasciatus* was referable to the genus *Plagiopsetta.* Later, Li and Wang (1987) included *S. fasciatus* in *Plagiopsetta* in their key to Chinese flatfishes, but gave no reason for doing so.

Recently, we were able to examine the holotype of *S. fasciatus*, comparing it with the original description of *P. glossa* and 15 additional specimens. As a result, *S. fasciatus* is herein synonymized with *P. glossa.*

Counts and proportional measurements follow Hubbs and Lagler (1958), except as follows: because all the dorsal and anal fin rays were unbranched, all ray elements were counted as individual rays; pelvic-fin base lengths were measured from the base of the first ray to the base of the last ray; paired structures were counted and measured on both ocular and blind sides. Vertebral counts and osteological characters

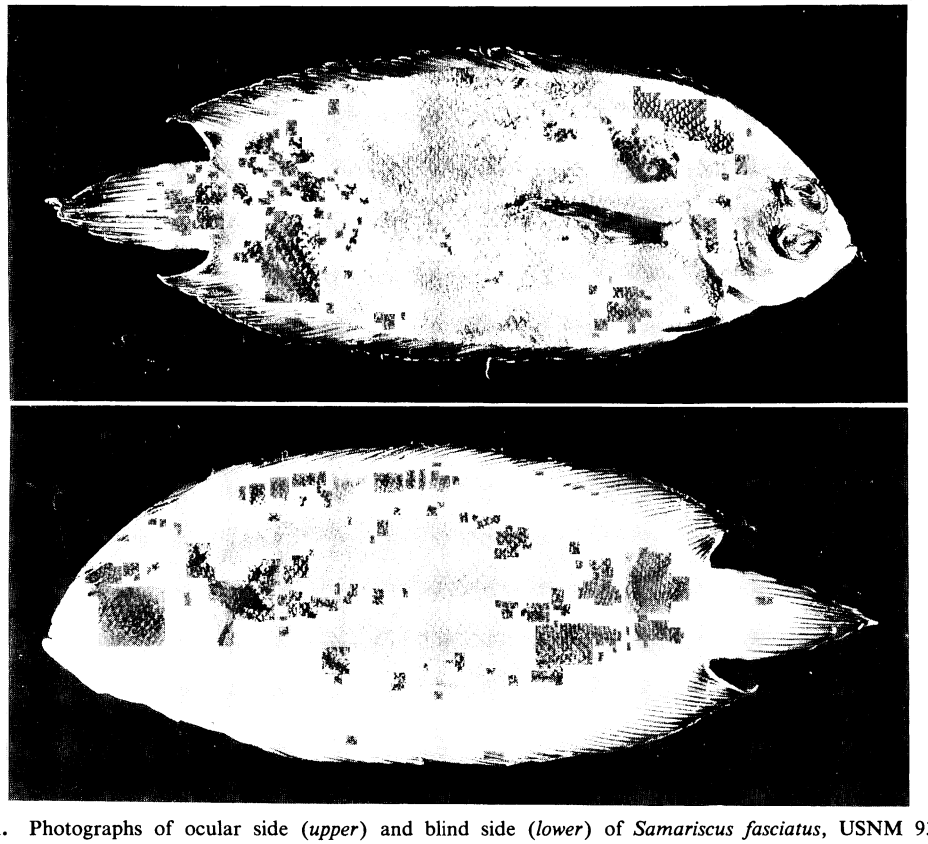

Fig. 1. Photographs of ocular side (*upper*) and blind side (*lower*) of *Samariscus fasciatus*, USNM 93090, holotype, 54.5 mm SL, near Hong Kong, South China Sea.

were taken from radiographs. Institutional abbreviations follow Leviton et al. (1985).

Plagiopsetta glossa Franz, 1910 (Fig. 1)

Plagiopsetta glossa Franz, 1910: 64, pl. 8, fig. 58 (original description, Yagoshima [Yaku Is.?], Japan, depth 150 m); Tanaka, 1931: 38 (listed); Kamohara, 1935: 21, fig. 5 (Mimase, Kochi Pref.); Kamohara, 1938: 61 (listed); Okada and Matsubara, 1938: 433, pl. 107-1 (Sea of Sagami and Kumano, Japan); Okada, 1938: 267 (listed); Kuronuma, 1940: 57 (Owase, Kochi Pref.); Matsubara, 1955: 1278, pl. 131, fig. 448 (Sea of Sagami and Kumano, off Kochi Pref., Wakasa Bay, Japan); Takegawa and Morino, 1970: 388 (listed); Minami and Nakamura, 1978: 33 (listed); Shen, 1982: 210, figs. 10–12 (Taiwan); Sakamoto, 1984a: 353, pl. 318-F; Shen, 1984: 138, pl. 138, fig. 440-5; Sakamoto, 1984b: 101, 211, figs. 5X, 17J, 25I, 27I, 37P, 43H (osteology); Yamada, 1986: 400, 3 figs. (East China Sea, depth 90–200 m); Li and Wang, 1987: 505, fig. 2592 (key, East and South China Seas); Abe, 1987: 923, 1 fig.; Quéro et al., 1989: 112 (key); Graham et al., 1993: 63, 69 (listed); Nakabo, 1993: 1184, 1 fig.; Cooper et al., 1994: 215, fig. 1 (New South Wales, Australia, depth 65–154 m).

Samariscus glossa: Norman, 1931: 603 (key).

Table 1. Proportional measurements and counts of *Samariscus fasciatus* and *Plagiopsetta glossa*

	S. fasciatus		*P. glossa*	
	This study holotype	Fowler (1934) holotype	Franz (1910) holotype	This study $n=15$
Locality	Hong Kong	Hong Kong	Japan	Japan
Total length (mm)	66.7	68	110	64.8–191.7
Standard length (mm)	54.5	—	—	51.9–146.3
Proportions:				
In standard length				
Head length	3.95	3.8	4.5	3.93–5.09
Body depth	2.44	2.4	—	2.28–2.62
In head length				
Snout length	4.93	3.75	5.0	4.39–5.84
Upper eye diameter	3.00	—	—	2.75–3.65
Lower eye diameter	3.29	3	3.5	3.00–3.73
Interorbital width	17.25	—	—	7.70–18.86
Upper-jaw length (O)	3.29	3	—	2.90–3.43
Upper-jaw length (B)	3.54	—	—	3.35–3.98
Lower-jaw length (O)	2.16	—	—	2.01–2.37
Lower-jaw length (B)	2.26	—	—	2.16–2.55
Depth of caudal peduncle	1.84	2	—	1.39–1.89
Pectoral-fin length (O)	0.95	0.99	—	0.78–1.08
Pelvic-fin length (O)	2.12	1.67	1.67	1.23–2.13
Pelvic-fin length (B)	3.07	—	3	1.92–3.31
Pelvic-fin base length (O)	4.76	—	—	3.50–4.71
Pelvic-fin base length (B)	5.11	—	—	4.86–6.42
Longest dorsal fin ray	1.66	1.88	1.67	1.25–1.61
Longest anal fin ray	1.66	1.75	—	1.21–1.66
Mid-caudal fin ray	1.05	1	—	0.62–0.99
Counts:				
Dorsal fin rays	70	66	70	68–73
Anal fin rays	54	53	53	52–57
Pectoral fin rays	9	7	10*	8–10
Pelvic fin rays (O)	5	—	—	5
Pelvic fin rays (B)	5	—	—	5
Caudal fin rays	16	—	—	16–17
Scales in lateral line	62	45	66	59–68
Gill rakers	3+8	5+9	—	3–6+7–13
Vertebrae	10+28	—	—	10+27–28

* Taken from figures in original description. O, ocular side; B, blind side.

Samariscus (?) *glossa*: Norman, 1934: 412, fig. 301 (description).
Samariscus fasciatus Fowler, 1934: 344, fig. 98 (original description; near Hong Kong, depth 183 m); Ochiai and Amaoka, 1962: 84 (key); Quéro et al., 1989: 112 (key).
Plagiopsetta fasciatus: Li and Wang, 1987: 505, fig. 2593 (key).

Material examined. USNM 93090 (female, 54.5 mm SL, holotype of *Samariscus fasciatus*), vicinity of Hong Kong, South China Sea, 21°33′N, 116°13′E, 183 m, Nov. 4, 1908; HUMZ 37129, sex unknown, 51.9 mm SL, Mimase, Kochi Pref., date unknown; HUMZ 58700, male, 103.0 mm SL, Mimase, Kochi Pref., Oct. 24, 1976; HUMZ 75345, male, 68.8 mm SL, Mimase, Kochi Pref., Mar. 1, 1978; HUMZ 79905–79910, 79924, 79925, 5 males and 3 females, 79.8–136.7 mm SL, Sea of Kumano, 85–95 m, Dec. 11, 1978; HUMZ 80548, 80550–80552, 4 males, 127.6–146.1 mm SL, East China Sea, Oct. 1978.

Results and Discussion

The monotypic genus *Plagiopsetta* was originally designated by Franz (1910), based on the type species, *P. glossa*. Subsequently, some investigators discussed the similarities between *Plagiopsetta* and *Samariscus*, and the validity or otherwise of the former (Norman, 1931, 1934; Kuronuma, 1940). Ochiai and Amaoka (1962) considered the higher number of pectoral fin rays in *Plagiopsetta* to be the only character distinguishing it from *Samariscus*, although Sakamoto (1984b) later added the following characters, also distinguishing *Plagiopsetta* from *Samariscus*: interorbital process not developed, preorbital sensory canal absent on ocular side, epimeral absent, no scales on eyes and supratemporal branch of lateral line present. Recently, Cooper et al. (1994) added two further characters to the diagnosis of P. glossa: feebly pigmented snout and presence of a medial dark pigmented spot on the mandibles and intermandibular area.

The holotype of *S. fasciatus* shows all the characters of the genus *Plagiopsetta*, except the interorbital process and preorbital sensory canal conditions, which were not apparent on the radiograph of the specimen. Our measurements and counts sometimes differ from Fowler's (1934) original description, especially with regards to lateral line scales, pectoral fin ray counts and snout length (Table 1). These are considered to be Fowler's mistakes. Also, none of the morphometric and meristic characters of *S. fasciatus* differed significantly from Franz's (1910) original description of *P. glossa* and the 15 comparative specimens examined (Table 1). In larger specimens of *P. glossa*, the blind side of the body was uniformly (or at least posteriorly) grayish-brown coloration. The holotype of *S. fasciatus* (54.5 mm SL) was uniformly pale brown on the blind side of the body (Fig. 1). Such coloration is typical of young specimens (less than 68.8 mm SL) of *P. glossa*. Accordingly, there appears to be no basis for continued recognition of the two species, and *S. fasciatus* is hereby relegated to the junior synonym of *P. glossa*.

Additional note. Norman (1934) was unable to trace the holotype described by Franz (1910). Kuronuma (1940) mentioned that "if, as mentioned by Norman (1934), the type specimen is lost, these specimens eventually become neotype." However, recognition of a neotype is unnecessary according to Article 75 (b) of the International Code of Zoological Nomenclature (1985), because *P. glossa* is the only member of the genus and is clearly distinguishable from species of related genera.

Franz (1910) gave the type locality of *P. glossa* as "Yagoshima, Japan," but the only locality of that name in Japan is inland. Consequently, we suggested that he meant Yaku Is. (Yaku-shima), Japan.

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Literature Cited

Abe, T. 1987. Illustrated fishes of the world in colour. Hokuryukan Co., Ltd., Tokyo. 1029 pp.

Cooper, J. A., K. Graham and F. Chapleau. 1994. New record of the tongue flatfish, *Plagiopsetta glossa* (Samaridae, Pleuronectiformes) from Australia. Japan. J. Ichthyol., 41: 215–218.

Fowler, H. W. 1934. Description of new fishes obtained 1907 to 1910, chiefly in the Philippine Islands and adjacent sea. Proc. Acad. Nat. Sci. Philad., 85: 233–367.

Franz, V. 1910. Die japonischen Knochenfische der Sammlungen Haberer und Doflein. Abh. Bayer. Akad. Wiss., 4 Suppl.-Bd., 1: 1–135, pls. 1–11.

Graham, K. J., G. W. Liggins, J. Wildforster and S. J. Kennelly. 1993. Kapala Cruise Report No. 110. Report for cruises 90-08 to 91-05 conducted between May 1990 and April 1991. Fisheries Research Institute, Cronulla, Australia 2230. 69 pp.

Hubbs, C. L. and K. F. Lagler. 1958. Fishes of the Great

Lakes region. Bull. Cranbrook Inst. Sci., 26: 1–213.

ICZN (The International Commission on Zoological Nomenclature). 1985. International code of zoological nomenclature, third edition, adopted by the general assembly of the International Union of Biological Sciences. International Trust for Zoological Nomenclature, London. xx+338 pp.

Kamohara, T. 1935. Supplementary note on the fishes collected in the vicinity of Kochi (VIII). Zool. Mag., 48: 17–22. (In Japanese.)

Kamohara, T. 1938. On the offshore bottom-fishes of Prov. Tosa, Shikoku, Japan. Maruzen Co., Ltd., Tokyo. 86 pp.

Kuronuma, K. 1940. The heterosomate fishes collected in deep waters of Japan. Bull. Biogeogr. Soc. Jap., 10: 29–61.

Leviton, A. E., R. H. Gibbs, Jr., E. Heal and C. E. Dawson. 1985. Standards in herpetology and ichthyology: Part I. Standard symbolic codes for institutional resource collections in herpetology and ichthyology. Copeia, 1985: 802–832.

Li, S.-Z. and H.-M. Wang. 1987. Pleuronectiformes. Pages 489–513, 1386–1421, figs. 2520–2634 *in* C. Quingtai and Z. Baoshan, eds. Systematic synopsis of Chinese fishes. Science Press, Beijing, Peoples Republic of China. (In Chinese.)

Matsubara, K. 1955. Fish morphology and hierarchy. Part II. Ishizaki shoten, Tokyo. v+816 pp. (In Japanese.)

Minami, T. and I. Nakamura. 1978. Seasonal occurrence of pelagic stages of flatfishes (Pleuronectiformes) in the coastal waters of western Wakasa Bay, the Japan Sea. Mem. Coll. Agric., Kyoto Univ., 112: 29–47.

Nakabo, T. 1993. Pleuronectidae. Pages 1175–1185 *in* T. Nakabo, ed. Fishes of Japan with pictorial keys to the species. Tokai Univ. Press, Tokyo.

Norman, J. R. 1931. Notes on flatfishes (Heterosomata).—III. Collections from China, Japan, and the Hawaiian Islands. Ann. Mag. Nat. Hist., (10)8: 597–604.

Norman, J. R. 1934. A systematic monograph of the flatfishes (Heterosomata). 1. Psettodidae, Bothidae, Pleuronectidae. Brit. Mus., London. viii+459 pp.

Ochiai, A. and K. Amaoka. 1962. Review of the Japanese flatfishes of the genus *Samariscus*, with the description of a new species from Tonking Bay. Ann. Mag. Nat. Hist., (13)5: 83–91.

Okada, Y. 1938. A catalogue of vertebrates of Japan. Maruzen Co., Ltd., Tokyo. iv+412 pp. (In Japanese.)

Okada, Y. and K. Matsubara. 1938. Keys to the fishes and fish-like animals of Japan, including Kurile Islands, southern Sakhalin, Bonin Islands, Ryukyu Islands, Korea and Formosa. Sanseido Co., Ltd., Tokyo and Osaka. xl+584 pp., 113 pls. (In Japanese.)

Quéro, J. C., D. A. Hensley and A. L. Maugé. 1989. Pleuronectidae de l'ile de la réunion et de Madagascar. II. Generes *Samaris* et *Samariscus*. Cybium, 13: 105–114.

Sakamoto, K. 1984a. Family Pleuronectidae. Pages 351–354 *in* H. Masuda, K. Amaoka, C. Araga, T. Uyeno and T. Yoshino, eds. The fishes of the Japanese Archipelago. English text. Tokai Univ. Press, Tokyo.

Sakamoto, K. 1984b. Interrelationships of the family Pleuronectidae (Pisces: Pleuronectiformes). Mem. Fac. Fish., Hokkaido Univ., 31: 95–215.

Shen, S.-C. 1982. Study on the pleuronectid fishes (family Pleuronectidae) from Taiwan. Quart. J. Taiwan Mus., 35: 197–213.

Shen, S.-C. 1984. Coastal fishes of Taiwan. Dep. Zool. Nat. Taiwan Univ., Taipei, Taiwan, Republic of China. 189 pp., 152 pls.

Takegawa, Y. and H. Morino. 1970. Fishes from Wakasa Bay, Japan Sea. Publ. Seto Mar. Biol. Lab., 17: 373–392.

Tanaka, S. 1931. On the distribution of fishes in Japanese waters. J. Fac. Sci., Imp. Univ. Tokyo, Sec. 4, Zool., 3: 1–90, pls. 1–3.

Yamada, U. 1986. *Plagiopsetta glossa* Franz. Page 400 *in* O. Okamura, ed. Fishes of the East China Sea and the Yellow Sea. Seikai Reg. Fish. Res. Lab., Nagasaki. (In Japanese.)

Samariscus fasciatus（カレイ科，ツキノワガレイ属）はベロガレイの新参シノニム

三原栄次・尼岡邦夫

Samariscus fasciatus Fowler, 1934 は南シナ海の香港近海から得られた 1 個体に基づき原記載されたが，それ以来報告がない．今回，*S. fasciatus* の完模式標本を調べたところ，本科のベロガレイ属 *Plagiopsetta* の特徴を示した．さらに，本種とベロガレイ属の唯一の種であり，日本南部，台湾及びオーストラリアのニューサウスウェールズから知られるベロガレイ *Plagiopsetta glossa* Franz, 1910 の原記載及び日本から採集された 15 個体を比較したところ，両者の間に明瞭な差は認められなかった．従って，*S. fasciatus* はベロガレイ属に属し，しかもベロガレイの新参シノニムであると判断された．

（三原：〒042 函館市湯川町 1-2-66 北海道立函館水産試験場資源管理部；尼岡：〒041 函館市港町 3-1-1 北海道大学水産学部水産動物学講座）