Japanese Journal of Ichthyology
Vol. 27, No. 2 1980

魚類学雑誌
27巻2号 1980年

Matsubaraea Taki, a Senior Synonym of *Cirrinasus* Schultz (Percophididae)

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(Received February 18, 1980)

Abstract The statuses of the poorly known western Pacific percophidid fishes *Matsubaraea setouchiensis* Taki, 1953, and *Cirrinasus fusiformis* (Fowler, 1943) are examined based on comparisons of type-specimens and material collected since the original descriptions of the two species. *Cirrinasus* Schultz, 1960, is considered to be a junior synonym of *Matsubaraea* Taki, 1953, and two species, i.e. *M. setouchiensis* and *M. fusiformis*, are provisionally recognized based on slight differences in counts of vertebrae and anal fin rays.

While examining various trachinoid fishes relevant to studies of the percophidid genus *Chrionema* Gilbert (see Iwamoto and Staiger, 1976), I noted a collection of peculiar and distinctive fishes (CAS (California Academy of Sciences) 32846) from the Gulf of Thailand that were identified by Dr. Joseph S. Nelson as *Cirrinasus fusiformis* (Fowler, 1943). I had previously examined a collection (CAS 34695), as it turned out, from the same station, but had arrived at an identification of *Matsubaraea setouchiensis* Taki, 1953, for the specimens which, on comparison, appeared to be identical with those from CAS 32846. A careful perusal of the original descriptions of the two nominal species and a comparison with the specimens at hand suggested a synonymy of genera, which Iwamoto and Staiger (1976: 491) previously proposed but without documentation. It is the purpose of this paper to present evidence for the generic synonymy and to provide data for differentiating the two species provisionally recognized.

Materials. *Matsubaraea setouchiensis*: CAS 35531 (3 paratypes, 46.1～55.5 mm SL), Takamatsu Fish Market, Kagawa Prefecture, Japan, 25 Mar. 1940. CAS 32846 (10, 50.8～66.7 mm SL) and CAS 34695 (4, 54.4～67.4 mm SL), Gulf of Thailand, Prachuab Khiri Khan Prov., W beach of Prachuab Khiri Khan Bay in front of Phukhao Chong Kajok (11°48′55″N, 99°48′19″E), coll. H. A. Fehlmann et al., 21 June 1961 (GVF reg. no. 2655).

Roxasella fusiforme: USNM (U.S. National Museum of Natural History) 99517 (holotype, 54.8 mm SL (radiograph only)) and USNM 99518 (paratype, 38.4 mm SL), Asparri, Luzon, Philippines, 18 Nov. 1908.

Comparisons. Taki's (1953) description and illustration of *Matsubaraea setouchiensis* is detailed, and all features he gives except three are in close agreement with the Gulf of Thailand specimens. Taki (1953) gives the branchiostegal ray count as five, whereas I counted seven in three CAS paratypes and all Gulf of Thailand specimens. A difference of even one would normally be highly significant, except that the two uppermost rays are entirely hidden and closely approximated to the gill cover and could be easily overlooked. I feel this is what happened when Taki (1953) wrote his description. Taki (1953) also gives the dorsal fin ray count at "III, II+17", whereas I counted D_1 as III, D_2 as 17, with no spines in the second dorsal (Table 1). I assume that his fin formula can be interpreted as three spines in the first dorsal fin and two spines in the second dorsal, followed by 17 soft rays. The anterior two rays in the second dorsal fin of CAS specimens are pointed and unbranched, but are segmented; those that follow are segmented and branched. Indeed, the rays are identical to those shown in Taki's (1953: pl. 1, fig. 2) figure of his species. Notably, he figured 18 rays in total, not 19, as would be the case were his fin formula correct. Taki's (1953) count of II, 17 was probably a *lapsus calami* and should have been II, 15 for a total of 17. It is also possible that the specimen figured had a count different from others he examined (in the three CAS

paratypes and the 14 Gulf of Thailand specimens, all but one had 17; the exception had 16). Finally, Taki's illustration of the outer gill arch (Taki, 1953: fig. 4) shows four plate-like gill rakers on the lower limb and none on the upper limb. All CAS paratypes of *M. setouchiensis* and the Gulf of Thailand *Matsubaraea* have a small raker on the upper limb just above the angle. This small raker may have been overlooked or it may have been accidentally removed before the illustration was made. My gill raker counts were 1+4~5. Aside from these descriptive differences, all other features suggest that the Gulf of Thailand specimens are conspecific with *M. setouchiensis*.

Fowler's (1943) description and illustration of *Roxasella fusiforme* are also in close agreement in almost all points with the Gulf of Thailand specimens, including the curious cirri fringing the nasal openings (from which the generic name *Cirrinasus* Schultz was derived). His lateral-line scale count, at 29+1, is considerably lower than what I have counted (36+2) in the Gulf of Thailand specimens. However, a count of the scale rows in Fowler's (1943: fig. 23) illustration shows 30 rows from the caudal fin to the base of the pectral fin, and the origin of the lateral line is well forward of the pectoral fin base—several more scales are normally present anterior to this point. It seems likely that the upper margin of the gill cover in his specimens hid the origin of the lateral line, resulting in an abnormally low count. Indeed, Mr. J. Frank McKinney, who kindly examined Fowler's holotype (USNM 99517) for me, counted 37 pored lateral-line scales, and my examination of the paratype (USNM 99518) showed 37 to the terminus of the hypural plate plus 2 on the caudal fin. Furthermore, although Fowler (1943) gave a dorsal ray count of "D. III-16", his illustration and my radiographs of the holotype and paratype show III+17 — the same count that I obtained from Gulf of Thailand specimens (W. N. Eschmeyer (pers. comm.) and others have indicated that Fowler frequently gave wrong meristic information in his later publications). The anal fin ray count in Fowler's (1943) holotype and paratype is 26, which is the same as the number of caudal vertebrae (the vertebral count is 9+26, including the first ural centrum). All Gulf of Thailand specimens and the three CAS paratypes of *M. setouchiensis*, on the other hand, have 25 anal rays, and radiographs of seven of these (from CAS 32846 & 35531) showed 9+25 vertebrae. Taki (1953) gave 25 as the anal ray count for his specimens.

Discussion. In the absence of other distinguishing features, a one-ray, one-vertebrae difference would hardly seem sufficient to continue recognition of two species, but the consistency of the counts as either one or the

Table 1. Meristic data for selected specimens of *Matsubaraea setouchiensis* and type-specimens of *M. fusiforme*.

Character	*M. setouchiensis*										*M. fusiforme*	
	CAS 32846					CAS 34695		CAS 35531**			USNM 99517*	USNM 99518**
Standard length	66.7	58.3	52.0	62.2	52.9	64.1	64.2	55.5	50.0	46.1	54.8	38.4
Dorsal	III+17	III+17	III+17	III+16	III+17	III+17	III+17	III+17	III+17	III+17	III+17	III+17
Anal	25	25	25	25	25	25	25	25	25	25	26	26
Pectoral (rt/lt)	15/15	15/15	15/15	15/15	15/16	15/15	15/16	15/15	15/16	15/15	15	15/15
Lateral line scales	36+2	36+2	36+?	36+2	36+2	36+2	36+2	ca. 38	ca. 36	35+1	37	37+2
Gill rakers	1+5	1+4	1+4	1+5	1+4	1+5	1+4	ca. 1+4	ca. 1+5	1+5	1	1+5
Vertebrae (precaudal+ caudal)	9+25	9+25	—	—	—	—	—	—	9+25	9+25	9+26	9+26
Branched caudal rays	4+3	4+3	—	—	—	4+3	4+3	4+3	4+3	3+3	4+3	4+3

* holotype; ** paratypes.

other has led me to follow a conservative course. Detailed analysis of these and other characters from specimens collected in localities transiting the circumscribed distribution of the nominal species are needed to render a more cogent picture. Comparison of mensural data suggested no avenues for distinguishing the two species and are thus not given.

The species of *Matsubaraea* are thus *M. setouchiensis* Taki, 1953, from Japan and the Gulf of Thailand, and *M. fusiforme* (Fowler, 1943) from the Philippines. The generic synonym is:

Genus *Matsubaraea* Taki

Roxasella Fowler, 1943 (type-species, *Roxasella fusiforme* Fowler, 1943, by original designation); preoccupied by *Roxasella* Merino, 1936, in Insecta.

Matsubaraea Taki, 1953 (type-species, *Matsubaraea setouchiensis* Taki, 1953, by monotypy).

Cirrinasus Schultz, 1960 (replacement name for *Roxasella* Fowler, 1943, preoccupied).

The familial position of *Matsubaraea* has been uncertain. Fowler (1943) considered his genus, *Roxasella*, as a member of the Pteropsaridae, but Golvan (1962) placed it in the Hemerocoetidae. Taki (1953), on the other hand, placed his genus, *Matsubaraea*, in the Leptoscopidae, as did Golvan (1962). Matsubara (1955) and Okamura and Kishida (1963) relegated the genus *Matsubaraea* to the family Bembropidae (Pteropsaridae) and Kamohara (1955) to the Pteropsaridae. Schultz (1960), recognizing the still unsettled classification of the various trachinoid groups, considered *Cirrinasus* to be a Percophididae. McKay (1971) attempted a grouping of these and closely related genera. He recognized both *Matsubaraea* and *Cirrinasus*, including both in the Percophididae. These authors considered these groups to belong in the suborder Trachinoidei, but Nelson (1976) placed the "trachinoids" into the suborder Blennioidei, with *Matsubaraea* and *Cirrinasus* in the Hemerocoetinae, one of three subfamilies in the expanded family Percophididae.

Acknowledgments

My special thanks to Dr. Iwao Taki (Professor Emeritus, Hiroshima University) for donating three paratypes of *Matsubaraea setouchiensis* to the California Academy of Sciences (CAS). I thank F. J. McKinney (formerly with the National Museum of Natural History (USNM)) for examining and x-raying the holotype and paratype of *Roxasella fusiforme*; USNM curators and S. Karnella for the loan of the paratype of *R. fusiforme*; L. J. Dempster, S. G. Poss, B. Powell, and W. C. Ruark (CAS) for technical assistance; and J. S. Nelson (University of Alberta) and W. N. Eschmeyer (CAS) for their review of the manuscript.

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マツバラトラギス属のシノニム

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マツバラトラギス *Matsubaraea setouchiensis* Taki と *Cirrinasus fusiformis* (Fowler) の模式標本を調査した結果，*Cirrinasus* Schultz はマツバラトラギス属 *Matsubaraea* Taki の junior synonym とみなされることが判った．マツバラトラギスと *M. fusiformis* は脊椎骨数と腎鰓条数の違いから，一応別種とみなしておく．