

**First Record of the Schindlerid Fish,  
*Schindleria praematura*, from  
Southern Japan and the  
South China Sea**

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The schindlerid fishes, endemic to the tropical Indian and West Pacific regions (Bruun, 1940; Jones and Kumaran, 1964), have not been reported from the waters around Japan. In preliminary studies of fish larvae collections during 2 cruises of the R/V Hakuho Maru, Ocean Research Institute, University of Tokyo, the present authors recognized specimens of this family off southern Japan and in the South China Sea (Ocean Research Institute, 1974a, b, 1976). After those studies, one of the authors (T.O.) examined a plankton sample made at the lagoon of Ishigaki Island located at the southern end of Ryūkyū Islands (Fig. 2), and found one schindlerid specimen among 85 fish larvae. In this paper, these specimens are identified as *Schindleria praematura* and their occurrence is reported.

The schindlerids, with one genus and two species, are one of the smallest fishes (Bruun, 1940), and, showing slender body and lack of pigmentation except for eye and air-bladder, superficially resemble the larvae of clupeiforms. They have, however, a peculiarly shaped caudal peduncle area (Fig. 1) which discriminates them at once from all other fishes. The two species of schindlerids are

distinguishable from one another using meristic characters (Bruun, 1940; Jones and Kumaran, 1964). Among these, the number of anal fin rays seems to be the easiest and clearest; 11 to 14 rays in *S. praematura*, and 16 or 17 in *S. pietschmanni*.

Because almost all of the present specimens are lightly to heavily damaged, meristic counts were rather difficult except for those of anal fin rays. In Table 1, numbers of anal fin rays are given. As shown, they range from 11 to 14, and therefore the present materials can be referred to *Schindleria praematura* (Schindler, 1931). The morphological characters of this species are described in detail by Bruun (1940), Gosline (1959) and Jones and Kumaran (1964). It can be added that the fish has no scales, no nostrils and no gill rakers on any branchial arches, indicating the neotenic larval life of this species.

The material contains 2 postlarvae of 3.56 and 3.6 mm in SL (Table 1). They show pigment spots along the ventral contour (Fig. 1A); 4 or 5 spots along the intestine, 3 inside the muscle above the anal base of the 3.6 mm specimen, and 1 or 2 at the end of the anal base.

Almost all of the present specimens were collected in the surface layer of oceanic waters (Table 1 and Fig. 2). Their occurrence is extremely low when compared with numbers of samplings in the ocean off southern Japan and South China Sea. The present authors examined many ichthyoplankton samples collected during 3 cruises of the R/V Hakuho Maru from the given areas

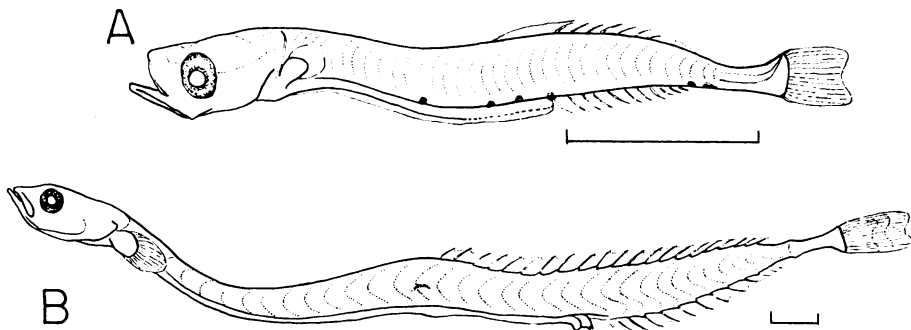


Fig. 1. *Schindleria praematura*. A, postlarva, 3.56 mm SL, from St. 4-3 of KH-73-5; B, adult female, 18.7 mm SL, from Ishigaki Is. Scales indicate 1 mm.

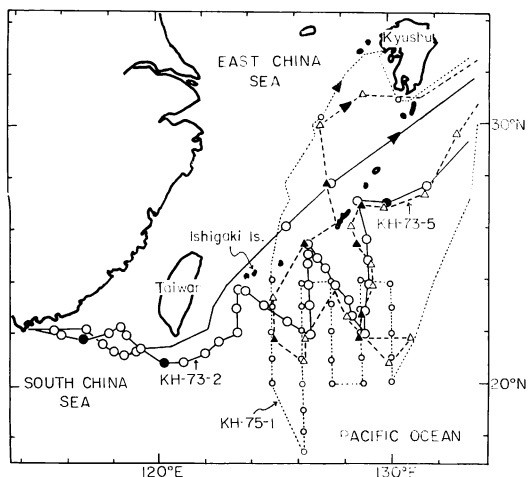


Fig. 2. Cruise tracks and sampling stations (circles and triangles) of 3 cruises of the R/V Hakuho maru. Closed and open symbols are positive and negative stations of *Schindleria praematura*, respectively.

(Ocean Research Institute, 1974a, b, 1976), and found only 16 specimens of *S. praematura*; 4 specimens from 243 samples of KH-73-2 (Feb. 20 to Mar. 27, 1973), 12 from 238 of KH-73-5 (Nov. 21 to Dec. 18, 1973) and none from 133 of KH-75-1 (Jan. 9 to Feb.

7, 1975).

Up to date, two species of *Schindleria* are recorded from lagoons and from areas very close to islands (Bruun, 1940; Jones and Kumaran, 1964), and in Hawaii they are one of the most abundant fish "larvae" (Watson and Leis, 1974). Judging from the extreme paucity in abundance among the Hakuho Maru samples and the occurrence in lagoons in the other areas stated above, the Hakuho Maru specimens seem to have been carried away offshore in southern Japan and the South China Sea. The collection of one specimen from Ishigaki Island seems not to be an accident. Lack of previous reports from coral reefs of the Ryūkyū Islands may be due to the small size and superficial resemblance of this species to clupeiform larvae, which might have prevented its detection from among larval fishes, as stated by Jones and Kumaran (1964).

The authors propose the new Japanese name, "Shirasu-uo" (white-bait fish), for this species.

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Table 1. Data of collection and measurements of *Schindleria praematura* from the two cruises (KH-73-2 and KH-73-5) of the R/V Hakuho Maru and at Ishigaki Island. Figures in method show diameter of nets used. The specimens of Stations 3-2 and 31-2 of KH-73-2 were presented to Dr. Tominaga of University of Tokyo.

Cruise	Station	Date	Lat., N	Long., E	Method	Haul depth (m)	No. of specimen	Standard length (mm)	No. of anal fin rays	
KH-73-2	3-2	II/23, 1973	27°01.9'	129°41.8'	4 m	0~150	1	15.3	13	
	"	31-2	III/ 8, "	20°58.7'	120°19.7'	1.6 m	0	8.2	damaged	
	"	39-3	III/10, "	21°56.5'	116°41.3'	4 m	0	17.4	12	
	"	39-11	III/11, "	21°53.3'	116°38.3'	4 m	0	12.5	11	
KH-73-5	4-3	XI/24, "	27°10.4'	128°40.5'	1.6 m	0	2	3.56, 3.6	ca. 11	
	"	6-11	XI/25, "	25°55.7'	128°36.2'	1.6 m	0~75	1	5.1	14
	"	9-4	XI/26, "	22°53.8'	128°56.7'	1.6 m	0	1	10.7	12
	"	10-20	XI/27, "	21°55.7'	128°47.3'	1.6 m	0	1	8.0	14
	"	10-23	XI/27, "	21°56.8'	128°47.6'	4 m	0~75	1	14.1	13
	"	10-26	XI/27, "	21°57.8'	128°47.3'	1.6 m	0	1	9.3	12
	"	10-27	XI/27, "	21°57.8'	128°47.0'	1.6 m	0	1	11.5	12
	"	D-17	XII/ 5, "	22°15.7'	125°07.6'	4 m	0~75	1	17.2	12
	"	16- 4	XII/ 6, "	25°35.0'	126°31.1'	1.6 m	0	2	6.0, 6.0	11, 13
	"	55-10	XII/13, "	28°13.3'	127°25.1'	1.6 m	0	1	12.0	11
		VII/15, 1976	lagoon of Ishigaki Island		with sucking pump	0	1	18.7	13	

Experimental Station. Dr. Hiroshi Tsukahara of Faculty of Agriculture, Kyushu University, kindly criticized the manuscript.

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**日本南方海域と南シナ海から初記録のシラスウオ  
(新称)**

小沢貴和・松井誠一

日本南方と南シナ海の外洋域および石垣島での仔稚魚標本において、シラスウオ科(新称) Schindleriidae のシラスウオ(新称) *Schindleria praematura* が日本近海に出現することを初めて記録した。外洋域では多くの採集にもかかわらず採集個体数は少なく、本種はサンゴ礁およびその周辺海域に生息するものと推定した。

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