Range Extention of the Damselfish *Abudefduf starcki* from the Coral Sea to Japan

Hitoshi Ida and Jack T. Moyer
(Received February 15, 1975)

Abudefduf starcki Allen "new Japanese name Senaki-rurisuzumedai" was described from two specimens taken at depths of more than 30 m off Osprey Reef, Coral Sea (Allen, 1973). This colorful pomacentrid is established, but apparently rather rare, in the waters of southern Japan north to Miyake-jima (34°05′N, 139°30′E). Although most of our observations are from relatively deep waters (20～25 m), one of our two specimens (TMBS 740822-01) was collected at a depth of only 7 m at Miyake-jima as it fed on plankters in company with *Pomacentrus coelestis* Jordan et Starks. Our other specimen (ZUMT 53951) was collected as it sought shelter in a dead bivalve shell at a depth of 22 m off Ukuru-jima, Kochi Prefecture (32°48′N, 129° 02′E). Yasuda (1971) and Tateishi (1973) published photographs of unidentified damselfish, probably taken from Okinawa, which clearly belong to this species.

With the exception of the depths of our observations (7～25 m in Japan, as compared to 35～52 m in the Coral Sea), the habitat of *A. starcki* appears similar to the original records from the Coral Sea. Individuals were observed along the edges of submerged lava flows or coral ridges bordered by sand or pebbled channels at Miyake-jima. They often were seen feeding on plankters near the bottom.

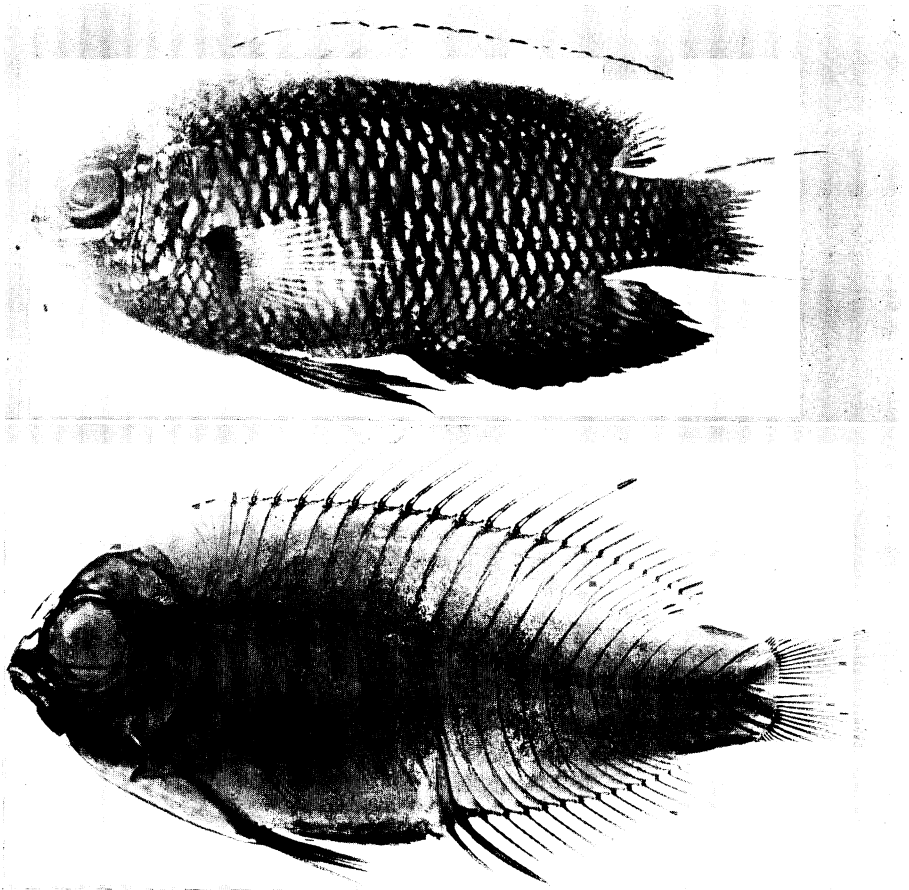

Fig. 1. Preserved specimen and radiograph of *Abudefduf starcki*, TMBS 740822-01, 42.1 mm in s. l., from Miyake-jima.

Comparison of specimens from Japan and the Coral Sea

The spectacular color pattern of a canary yellow dorsal stripe on a royal blue body (see color plate, Tateishi, 1973) differs only slightly from the original figure. Blue scale sheaths on the caudal fin of Coral Sea specimens form a point posteriorly from the caudal peduncle, differing in this respect from our specimens, which show two blue points extending into the yellow caudal fin (Fig. 1). Meristic and most proportional dimensions show little differences (Table 1). Differences in the interorbital width and snout length may reflect bias in measurement.

Internal characters

Characters other than those described by Allen are as follows. Vertebral count is 11+15 (urostyle is counted as one). The last two haemal spines which are slightly expanded, parhypural, five hypural plates, three epurals and one neural spine of the antepenultimate vertebra support the caudal fin. The last two haemal spines are articulated with the centra i. e. autogenous. There are three predorsals. Pterygiophores of all but the first two spines of the dorsal correspond 1–1 to the neural spines, and those of the soft dorsal correspond 2–1. The second and third predorsals are located between the second and third neural spines. The pterygiophore of the anal spines attaches to the first caudal or 12th vertebra. Length of the second anal and last dorsal spines and the depth of the caudal peduncle are semiequal.

Distribution

We observed a few wintering fishes of this species in the coldest months of 1975 in Miyake waters; but, wintering at this island may be rather exceptional. Dr. C. Araga (personal communication) informed us of the appearance of this species in waters around Shirahama, Kii Peninsula. Judging from its abundance, the species seems to be established in the waters around Okinawa and Shikoku, but its appearance in Miyake waters may be somewhat sporadic.

The range extention of *A. starcki* from the Coral Sea to Japan is not surprising in view of the continuity of Tropical Indo-West Pacific fish fauna.

Table 1. Proportional measurements in percentage of standard length and counts of types and Japanese specimens of *Abudefduf starcki*.

	Coral Sea (Allen, 1973)		Miyake-jima	Ukuru-jima
	Holotype	Paratype	740822-01	ZUMT 53951
Standard length (mm)	44.7	36.0	42.1	34.5
Body depth	45.0～46.1 (45.5)		45.1	45.8
Head length	29.4～30.4 (29.9)		30.9	34.2
Snout length	5.8～ 6.1 (5.9)		7.1	7.5
Eye diameter	12.8～13.9 (13.3)		10.9	11.6
Interorbital width	6.7～7.9 (7.3)		9.5	9.6
Caudal peduncle depth	13.1～13.9 (13.5)		14.3	15.9
Pectoral fin length	29.5～32.3 (30.9)		30.4	34.8
Pelvic fin length	29.1～30.6 (29.8)		33.7	32.8
Dorsal base	60.8～63.0 (61.9)		60.1	60.9
Anal base	31.1～33.0 (32.0)		33.3	31.6
Snout—D. origin	32.5～33.4 (32.9)		36.1	37.7
Snout—A. origin	62.4～62.8 (62.6)		61.8	64.4
Snout—Pelvic fin	40.0～40.0 (40.0)		40.2	40.6
Dorsal fin	XIII, 14	XIII, 14	XIII, 14	XIII, 14
Anal fin	II, 14	II, 15	II, 15	II, 15
Pectoral fin	17	17	ii, 13, ii	ii, 12, ii
Pelvic fin	I, 5	I, 5	I, 5	I, 5
Vertebral count			11+15	11+15
Branched caudal ray	13	13	7+6	7+6
Gill raker	22	21	5+1+14	5+1+13

Literature cited

Allen, G. E. 1973. Three new species of deep-dwelling damsel fishes (Pomacentridae) from the South-west Pacific Ocean. Aust. Zool., 18 (1): 31～43, 3 figs. 5 tbs.

Tateishi, A. 1973. Corals and reef fishes of Okinawa (Okinawa no sango to nettaigyo). Fudokisha Co., Naha, 1～143, many figs. In Japanese.

Yasuda, F. 1971. Coral fishes 4. Mar. Diving, (8); 61～63. In Japanese.

(HI: School of Fishery Sciences, Kitasato University, Sanriku-cho, Kesen-gun, Iwate-ken, 022-01; JTM: Tatsuo Tanaka Memorial Biological Station, Toga Farm, Ako, Miyake-jima, Tokyo, 100-12 Japan)

Abudefduf starcki セナキルリスズメダイ（新称）の本邦における記録

井田　斉・Jack T. Moyer

A. starcki は青色の地に背方が鮮黄色という特徴的な体色で同属の他種とは明瞭に区別される．同属の魚の多くが 10 m 以浅の浅海に棲息するのに比べ，本種は 20～50 m 深の範囲に棲息するため記載されたのは最近 (1973 年) で，サンゴ海からであった．本種は西部太平洋の温熱帯域に分布する事が確認された．本邦における分布は四国以南で establish しており，紀伊半島，三宅島における本種は偶因分布と判断された．サンゴ海から本邦沿岸への分布記録の拡大は西部太平洋の温熱帯域の海洋動物相の均一性に対する知見をさらに裏付けている．

(井田: 022-01 岩手県気仙郡三陸町　北里大学水産学部; Moyer: 100-12 東京都三宅島阿古 富賀農園　田中達男記念生物実験所)