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First Record of the Acanthurid Fish, *Naso fageni*, from Japan

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Naso fageni was described by Morrow (1954) on the basis of a single specimen from Kenya, and three specimens from the Philippines which had been mistakenly identified by Fowler and Bean (1929) as *Naso tapeinosoma*. This species has been subsequently reported from the western Indian Ocean and northwestern Australia (Smith, 1966; Allen and Swainston, 1988). Smith (1966) mentioned that a juvenile from New Caledonia described briefly but not named by Jouan (1861) was probably this species.

Smith (1966) stated that *N. fageni* attained 1000 mm, and that the final stage of the adult was characterized by an obvious, stout, horn-like process fused along the top of the snout, the tip extending beyond the upper lip.

I collected a specimen, 89.5 mm in standard length, of *N. fageni* from shallow coastal water off central Japan. Since the species is new to Japan, and detailed descriptions of small specimens of the genus *Naso* are scarce (Smith, 1966; Randall and Struhsaker, 1981), I herein describe the specimen in detail. This is the smallest example of *N. fageni* described and the northernmost record of the species.

The methods of counts and measurements mostly follow Hubbs and Lagler (1958), except for the length of caudal fin which is represented by the distance from the structural base of the longest caudal fin ray to its distal tip. Vertebrae and vertical fin rays were counted from X-ray photographs.

The specimen is deposited in Yokosuka City Museum, Kanagawa (YCM).

Naso fageni Morrow, 1954
(New Japanese name: Moai-tenguhagi)
(Fig. 1)

Naso tapeinosoma (not of Bleeker, 1884) Fowler and Bean, 1929: 283, fig. 23 (Bugsuk I. and Zamboanga, Mindanao I., Philippines).

Naso fageni Morrow, 1954: 799 (type locality: Bugsuk I., Philippines; one paratype from Shimoni, Kenya); Smith, 1966: 655, fig. 7 (western Indian Ocean from Mozambique to Seychelles); Allen and Swainston, 1988: 158, pl. 70, fig. 938a (northwestern Australia).

Cyphomycter cavallo Smith, 1955: 173, pl. 1, fig. 3 (type locality: Pinda, Mozambique; east Africa from Bazaruto to Malindi).

Rhinodactylus baixopindae Smith, 1956: 686, fig. 1 (type locality: Pinda, Mozambique; other specimens from Ibo, Mozambique).

Material examined. YCM-P19648, 89.5 mm SL, Arasaki (35°11′N, 139°36′E), Miura Peninsula, central Japan, at a depth of 4 m on rubble, collected by snorkeling with a dip net, September 21, 1984.

Description. Dorsal rays V, 26; anal rays II, 24; pectoral rays 16; pelvic rays I, 3; vertebrae 9+13=22.

Measurements in percent of standard length: Total length 120.1; body depth 48.5; head length 27.8; snout length 17.3; orbit diameter 8.9; interorbital width 8.8; caudal peduncle depth 5.5; caudal peduncle length 15.4; predorsal length 33.7; prepelvic length 32.4; preanal length 43.8; length of dorsal fin base 63.7; length of longest dorsal spine (1st) 15.6; length of longest dorsal ray (1st) 13.6; length of anal fin base 51.4; length of 1st anal spine 7.9; length of 2nd anal spine 9.5; length of longest anal ray (4th) 11.1; length of caudal fin 21.6; length of pectoral fin 18.4; length of pelvic fin 15.4; length of pelvic spine 14.7.

Body ovate and compressed. Dorsal and ventral profiles evenly convex. Snout profile straight; no sign of horn or hump on head. Eye large, nearly equal to interorbital width. Mouth small, terminal, horizontal. Teeth uniserial, slender, lanceolate; 5 to 9 denticulations along each edge of distal converging part, about forty teeth on each jaw. Two very low, weak, caudal plates on each side of caudal peduncle without keel.

Origin of dorsal fin above slightly before the dorsal end of gill opening; spines and rays gradually decreasing in length posteriorly. Anal fin distinctly lower than dorsal, originating below between bases of 4th and 5th dorsal spines; 1st spine shorter and stouter than 2nd; 4th ray longest, successive rays progressively decreasing in length. Caudal fin slightly emarginate; the upper lobe slightly longer. Pectoral fin short, 5th ray longest. Pelvic fin originating below top of pectoral fin base; long, reaching to base of 2nd anal spine when depressed.

Scales minute, close-set; head and body completely scaled except for lips.

Color in life: Head and body brownish-olive dor-

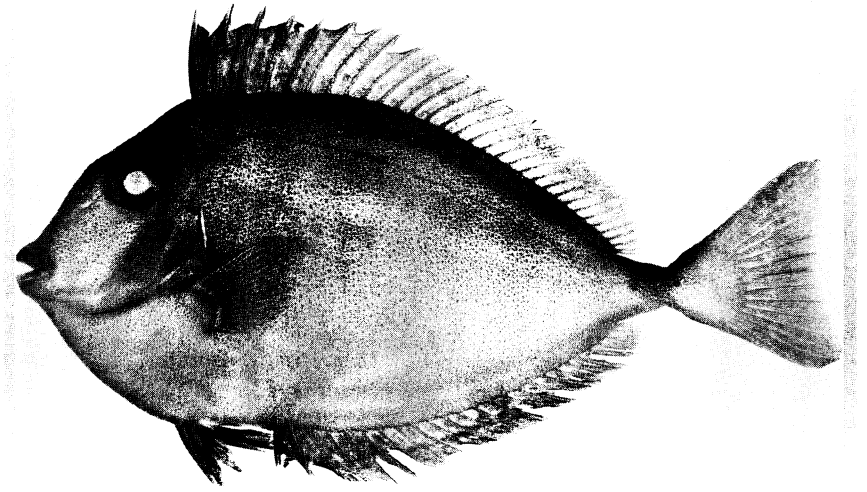

Fig. 1. *Naso fageni*, YCM-P19648, 89.5 mm SL.

sally, shading to yellowish-olive ventrally, scattered with many fine brown spots on each scale. The tip of lower lip white. Noticeable white band encircling caudal peduncle between caudal plates. This band became dark brown after death. Dorsal and anal fins brownish-gray, with translucent margins posteriorly; anal with three indistinct darker longitudinal stripes, partly broken and mottled. Caudal fin brownish-gray with narrow translucent posterior margin. Pectoral fins brownish-gray. Pelvic fin membranes gray, white basally.

Color in 10% formalin: Head and body brownish-gray, paler below, scattered with many fine brown spots on each scale. Darker band encircling caudal peduncle between caudal plates. Dorsal and anal fins dusky with white margins posteriorly; anal with three indistinct darker longitudinal stripes. Pelvic fins dusky, white basally. Pectoral fins dusky.

Remarks. The present specimen differs from the type specimens (245–571 mm SL) in having a deeper body, an emarginate, nearly truncate caudal fin, weak caudal plates without a keel, and lacking stripes on the dorsal fin. Since these characters tend to change with growth in the genus *Naso* (Smith, 1966; Randall and Struhsaker, 1981), the differences were recognized as intraspecific variations associated with size.

In the specimen of 180 mm in fork length, which was described and figured by Smith (1966), the caudal fin was lunate, and the upper lobe was longer. Furthermore, the 140 mm (probably FL) specimen reported by Jouan (1861) from New Caledonia, which was presumed to be this species by Smith (1966), had a forked caudal fin (cited by Smith, 1966). By comparison, the present specimen, 103 mm FL, has a slightly emarginate, nearly truncate caudal fin, with the upper lobe slightly longer. The 180 mm specimen had no spots on the body, but the present specimen has many fine brown spots on each scale.

N. fageni is distinguished from its congeners by having fewer soft dorsal and anal rays: D. 24–26, A. 23–25 in *N. fageni*; D. 26–31, A. 26–30 in the other *Naso* (Morrow, 1954; Smith, 1966). Although the present specimen has a deformity wherein the 1st and 2nd vertebrae are slightly fused, and distances between the 1st and 2nd spines of the dorsal and anal fins apparently narrowed as a result, this does not affect the distinguishing characteristics such as fin ray counts.

The present specimen closely resembles *N. annulatus* (Quoy et Gaimard) young of similar size in having brownish-olive coloration and a noticeable white band encircling the caudal peduncle. However, *N. fageni* differs from *N. annulatus* in lacking a white posterior margin on the caudal fin.

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日本初記録のニザダイ科魚類モアイテングハギ(新称)

荒井　寛

神奈川県三浦半島よりニザダイ科魚類の一種，モアイテングハギ(新称) *Naso fageni* の幼魚を1個体採集した．本種はインド洋西部，オーストラリア北西部，フィリピンから知られているだけであった．本種は背鰭と臀鰭の条数が少ないことで同属他種とは容易に区別される．これまでに知られた尾叉長170 mm以上の個体とは異なり，今回採集された尾叉長103 mmの個体の尾鰭は，三日月形ではなく，わずかに湾入していた．また，生時には尾柄に白帯があった．

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