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Two New Records of Lizardfishes (Pisces: Synodontidae) from Japan

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To date, eleven named and one undescribed species of the genus *Synodus* (Pisces: Synodontidae) have been recorded from Japanese waters (Yamada, 1993; Donaldson et al., 1994). However, two specimens collected in the Ogasawara Islands in June, 1994, and subsequently identified as *Synodus lobeli* Waples and Randall and *S. oculeus* Cressey, constitute the first records of these species from Japanese waters.

Methods of counting and measuring followed Cressey (1981). Measurements are expressed in percent standard length (SL). The two specimens have been deposited in Yokosuka City Museum, Yokosuka (YCM-P).

Synodus lobeli Waples and Randall, 1988
(New Japanese name: Aosuji-eso)
(Fig. 1)

Material examined. YCM-P27845, ripe female, 233.6 mm SL, off west side of Mago-jima Island, Ogasawara Islands, 140 m, K. Sasaki, June, 1994.

Description. Dorsal fin rays 12 (first two unbranched); anal fin rays 9; pectoral fin rays 12 (uppermost two and lowermost unbranched); pelvic fin rays 8 (anteriormost and posteriormost unbranched); principal caudal fin rays 19 (uppermost and lowermost unbranched); lateral line scales 55; scale rows above lateral line 3.5; predorsal scales 17; circumpeduncular scales 15; total gill rakers 15+40=55; peritoneal spots 13.

Total length 116.2; head length 26.5; snout length 6.7; upper jaw length 17.2; diameter of bony orbit 4.3; least width of bony interorbital 2.6; snout to dorsal fin origin 43.0; snout to adipose fin origin 83.3; snout to anal fin origin 81.0; snout to pelvic fin insertion 35.2; body depth 15.8; caudal peduncle length 12.1; caudal peduncle depth 5.1; longest pectoral fin ray (3rd and 4th) 10.8; longest dorsal fin ray (3rd) 13.2; dorsal fin base 13.2; longest anal fin ray (3rd) 7.4; anal fin base 8.8; longest pelvic fin ray (6th) 21.4.

Anterior palatine teeth nearly same size as posterior ones and not forming a discrete group; posterior pelvic process broad; peritoneum pale; dermal flap of anterior nares long, slender, with pointed tip; pectoral fin not reaching a line between pelvic and dorsal fin origins.

Color when fresh.—Dorsal half of body pale reddish-brown, abruptly whitish ventrally; irregular bluish-gray markings along longitudinal scale rows on dorsal half of body, forming two, relatively distinct stripes, along upper border of lateral line and along dorsolateral surface of body; no black marks posterodorsally on opercle; vertical fins except caudal and paired fins pale, without bars, or markings; caudal fin pale yellowish; adipose fin pale brown.

Color in alcohol.—Two, faint dark, longitudinal stripes and seven, faint dark, broad vertical bars on dorsal half of body; ventral half of body uniformly whitish.

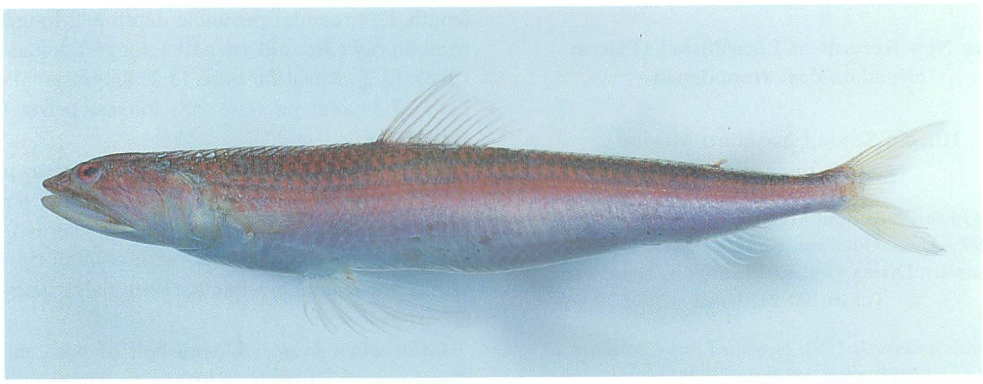
Distribution. Mago-jima Island, Ogasawara Islands (present study). Hitherto known only from Hawaii (Waples and Randall, 1988).

Remarks. The Ogasawara specimen agreed well with the original description and figures of *S. lobeli* Waples and Randall, 1988, except for the larger body size and some differing head and body proportions, including orbit diameter (4.3% SL vs. 4.9–7.0 of the latter), interorbital width (2.6 vs. 1.5–2.2), upper jaw length (17.2 vs. 15.6–16.5) and caudal peduncle length (12.1 vs. 10.2–11.4).

Waples and Randall (1988) reported the maximum recorded size of this species to be 116.3 mm SL, a fully-ripe female. The Ogasawara specimen, also a ripe female, measured 233.6 mm SL, the size difference probably being responsible for the differences in body proportions.

Although Waples and Randall reported the species as occuring on a sandy bottom at a depth of 32 m, Ogasawara specimen was collected from 140 m, although the bottom condition is unknown. However, in spite of considerable efforts by the second author, in the Ogasawara, no additional specimens have been found at same environments as the Hawaii.

This first record of the species from Japanese



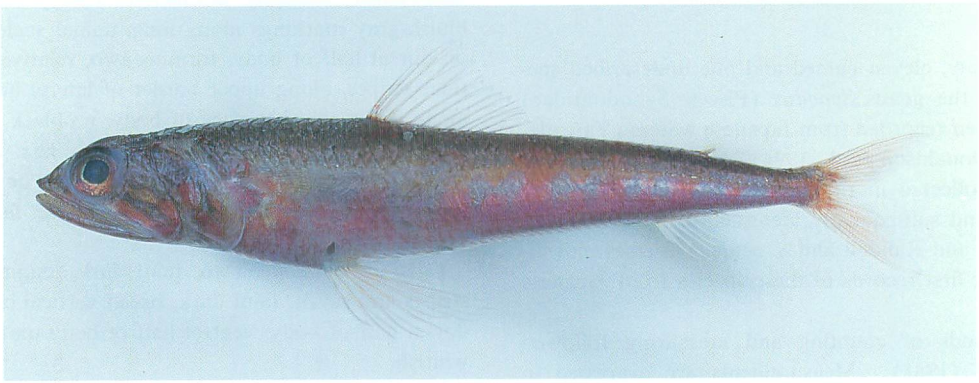


Fig. 1. *Synodus lobeli*, YCM-P27845, ripe female, 233.6 mm SL, off west side of Mago-jima Island, Ogasawara Islands, 140 m, June 1994, photo by M. Hayashi.

Fig. 2. *Synodus oculeus*, YCM-P27846, ripe female, 183.1 mm SL, off west side of Mago-jima Island, Ogasawara Islands, 140 m, June 1994, photo by M. Hayashi.

waters is also the first from outside of the Hawaiian Islands.

Synodus oculeus Cressey, 1981
(New Japanese name: Irezumi-ome-eso)
(Fig. 2)

Material examined. YCM-P27846, ripe female, 183.1 mm SL, off west side of Mago-jima Island, Ogasawara Islands, 140 m, K. Sasaki, June, 1994.

Description. Dorsal fin rays 13 (first two unbranched); anal fin rays 10; pectoral fin rays 12 (uppermost two and lowermost unbranched); pelvic fin rays 8 (anteriormost and posteriormost unbranched); principal caudal fin rays 19 (uppermost and lowermost unbranched); lateral line scales 55; scale rows above lateral line 3.5; predorsal scales 15; circumpeduncular scales 14; total gill rakers 10+16=26; peritoneal spots 8.

Total length 117.5; head length 29.8; snout length 6.4; upper jaw length 17.7; diameter of bony orbit 7.9; least width of bony interorbital 5.7; snout to dorsal fin origin 43.3; snout to adipose fin origin 85.3; snout to anal fin origin 78.5; snout to pelvic fin insertion 37.6; body depth 19.3; caudal peduncle length 12.6; caudal peduncle depth 5.0; longest pectoral fin ray (3rd) 13.1; longest dorsal fin ray (3rd) 15.1; dorsal fin base 14.5; longest anal fin ray (3rd) 8.1; anal fin base 8.8; longest pelvic fin ray (6th) 20.8.

Anterior palatine teeth nearly same size as posterior ones and not forming a discrete group; posterior pelvic process narrow; peritoneum pale; dermal flap of anterior nares broad rounded, length less than base width; pectoral fin reaching slightly beyond a line between pelvic and dorsal fin origins.

Color when fresh.—Dorsal half of body pale brown, silver-gray ventrally; irregularly shaped, variously sized red blotches on ventral half of body, some on dorsal half; three longitudinal red bands on

posterior part of eye, mid-band partially yellow; some red markings on opercular region; no black marks posterodorsally on opercle; all fins except adipose fin pale, without bars or markings; adipose fin grayish.

Color in alcohol.—Three pale bands on posterior part of eye; dorsal half of body darkish; some faint dark markings on lateral side of body; ventral side of body whitish.

Distribution. Mago-jima Island, Ogasawara Islands (present study). Hitherto known from Somalia, Andaman Sea, and South China Sea (Cressey, 1981), and southern Indonesia (Gloerfelt-Tarp and Kailola, 1984).

Remarks. The present specimen agreed well with the original description and figures of *S. oculeus* Cressey, 1981.

The species is easily distinguishable from other Indo-Pacific *Synodus* species in having the following combination of characters: anteriormost palatine teeth nearly same size as posterior ones; narrow posterior pelvic process; pectoral fin extending beyond a line between pelvic and dorsal fin origins; pale peritoneum with 7 to 8 peritoneal spots; lateral line scales less than 58; no bars or markings on dorsal fin; nasal flap length less than width.

Three longitudinal red bands on the posterior part of eye are also distinctive diagnostic characteristics of living or fresh specimens.

Acknowledgments

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小笠原諸島から採集された日本初記録のエソ科アカエソ属の2種

瀬能　宏・森田康弘・新井一政

小笠原諸島孫島の西側沖の水深140 mから，日本近海からは初記録の *Synodus lobeli* Waples and Randall, 1988 アオスジエソ（新称）および *Synodus oculeus* Cressey, 1981 イレズミオオメエソ（新称）の2種がそれぞれ1標本釣獲されたので，ここに記載した．アオスジエソは模式産地のハワイ諸島以外からの初記録でもあり，小笠原産の個体はハワイ産のものより体長が著しく大きく（ハワイ産の最大個体は121 mmで，小笠原産は233.6 mm），より深い深度（ハワイ産は水深32 m）から得られた．

（瀬能・新井：〒250 神奈川県小田原市入生田499　神奈川県立生命の星・地球博物館；森田：〒100-21 東京都小笠原村父島字東町　小笠原ダイビングセンター）