A New Record of the Pomacanthid Fish *Centropyge interruptus* from the Hawaiian Islands

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Recently a female of the pomacanthid angelfish, *Centropyge interruptus* (Tanaka), was collected at Kure Atoll in the Hawaiian Islands. Previously considered a Japanese endemic (Tominaga and Yasuda, 1973; Masuda et al., 1975), this specimen constitutes the first documented case of *C. interruptus* having been taken elsewhere and is the subject of this short note.

Material

At 1630 hrs on 12 September 1979, a small *C. interruptus* was sighted and speared by the author while SCUBA diving in water 18 m deep off the southwest shore of Green Island, Kure Atoll. This site marks the most northwesterly extension of the Hawaiian Islands archipelago, located 100 km to the north and west of Midway Atoll, at a position lat. 28°23′N and long. 178°19′W. The specimen was small (49.7 mm SL) and has been deposited in the Bernice P. Bishop Museum, Honolulu, Hawaii (BPBM 22726, Fig. 1).

Description

Counts and measurements are in general agreement with those provided by Tominaga and Yasuda (1973). Standard length 49.7 mm; total length 65.2 mm; dorsal XIV,16; anal III,17; pelvic I,5; caudal branched rays 8+7; branchiostegals 6; no pyloric caeca. Proportional morphometrics correspond to their values for all variables measured except the length of the dorsal base, length of 4th dorsal spine, snout to dorsal end, and body depth. For these variables the values of the Kure specimen are greater in all cases. These slight differences are probably attributable to allometry inasmuch as their specimen ZIUT (=ZUMT) 52793 was the smallest material they were able to examine (52.7 mm SL) and measurements from it formed the upper bound for the range of these variables in each case. Color notes agree very well with the juvenile description of Tominaga and Yasuda (1973) and the photograph of *C. interruptus* found

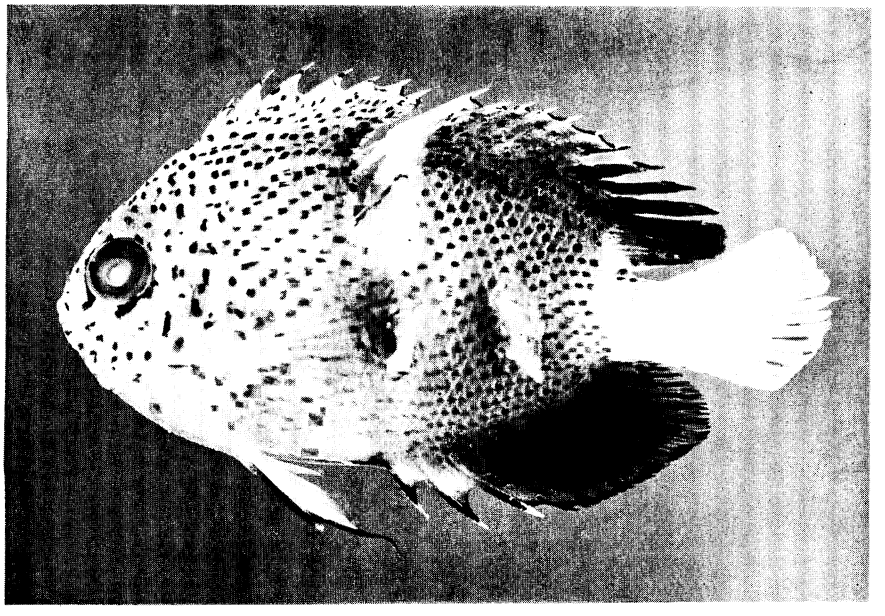

Fig. 1. *Centropyge interruptus* (BPBM 22726) speared at Kure Atoll, northwestern Hawaiian Islands. The three large lacerations along the midsection are due to spearing.

in Masuda et al. (1975: fig. F, p. 122).

The gonad was very small (0.005 g) and contained primary oocytes (0.03 to 0.04 mm diameter) and oogonia. The stomach was full, containing four genera of algae (*Antithamnion*, *Ceramium*, *Polysiphonia*, and *Tolypothrix*) and in addition much loose sand and debris. Both the intestine (263 mm) and rectum (21 mm) were packed full of sand and unidentifiable remains.

Habitat

The collection locality lies outside the lagoon along the fringing reef where the fish was speared under a low (0.5 m) overhang which sheltered many pomacentrid *Chromis hanui* and several pomacanthid *Centropyge potteri*. The physiography of the site was characterized by highly eroded limestone pavement transected by numerous erosional channels 2 to 4 m deep, the floors of which were covered with a layer of fine white calcareous sand and scattered fragments of dead coral. The walls of the channels, where the specimen was collected, were frequently undercut by small caves and ledges. Hermatypic corals present in the near area included *Pocillopora meandrina*, *Porites lobata*, *Cyphastrea occelina*, and *Psammocora stellata*. Additionally, several types of algae were common including the genera *Laurencia*, *Stypopodium*, *Zonaria*, *Dictyota*, *Microdictyon*, *Porolithon*, and *Halimeda*.

Discussion

Moyer and Nakazono (1978) have shown that this species is a protogynous hermaphrodite at Miyake-jima, Japan, where a single male dominates a harem of from 1 to 4 females. At Kure Atoll only one apparently immature female specimen was sighted and consequently no intraspecific behaviors noted.

The late hour when collected (1630 hrs) would account for the overall fullness of the gut. Members of the genus *Centropyge* have typically been found to be diurnal herbivores (Hiatt and Strasburg, 1960; Hobson, 1974).

There is an apparent trend in the structure and derivation of Hawaiian fish communities along the archipelago in which those communities associated with the northwestern Hawaiian Islands (Nihoa to Kure) show a much greater affinity to the Japanese ichthyofauna than do those found in the more southerly Hawaiian Islands (Hobson and Taylor, manuscript in preparation). The collection of *C. interruptus* at Kure Atoll supports the views of Drs. Hobson and Taylor, although it is not known at present whether a breeding population of this species exists in the northwestern Hawaiian Islands. While collections of fishes from this region have been extremely few, the specimen reported upon here may have been spawned in Japanese waters and transported to Hawaii (4700 km) by oceanic currents.

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ハワイからのレンテンヤッコの新記録

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ハワイ諸島の最西北端の Kure Atoll から，レンテンヤッコ *Centropyge interruptus* の雌若魚が採集された．この種類は，従来日本からのみ知られていたものである．

ハワイ諸島西北の Kure と Nihoa の魚類相は，より南のハワイ諸島本体の魚類相に較べ，より日本の魚類相に近いようである．Kure 周辺でレンテンヤッコが繁殖しているものか，あるいは日本近海から流れて来たものかは判らない．