

**First Record of the Leiognathid Fish,
Gazza minuta from Japan**

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Gazza minuta (Bloch, 1797) is distributed in the coastal waters of the Indo-Pacific Region: the Red Sea, the east coast of Africa, the Indian Ocean, the Philippines, Taiwan, the East China Sea, and North Australia to the Society Islands (Weber and de Beaufort, 1931: 339–341; Matsubara, 1955: 569; Chen, 1962: 454; 1963: 298–299; Kühlmorgen-Hille, 1974). Specimens of *G. minuta* are recorded from Okinawa Island, Japan for the first time in this report.

***Gazza* Rüppell, 1835**

(Japanese name: Kobanhiiragi-zoku)

Gazza Rüppell, 1835: 3 (type species, *Gazza equulaeformis* Rüppell, 1835 [= *Scomber minutus* Bloch, 1797]).

Weber and de Beaufort (1931: 338–339) described characters of genus *Gazza* in detail. Presently, *G. minuta* and *G. achlamys* Jordan et Starks, 1917 are recognized in the genus *Gazza* (Jordan and Starks, 1917). Caudal skeleton character of the genus was described by Yabumoto (1980).

***Gazza minuta* (Bloch, 1797)**
(Japanese name: Koban-hiiragi)

(Fig. 1)

Scomber minutus Bloch, 1797 (type locality; Malabar).

Material examined. KMNH (Kitakyushu Museum of Natural History) VR-100, 092 and 100, 093, 2 specimens, females, 115.4 mm and 116.9 mm SL, collected at Yonabaru (127°45'E, 26°12'N), Okinawa I. by a set net, June 25, 1983, Y. Yogo and K. Kanashiro. URM-P (Department of Marine Sciences, University of the Ryukyus) 8403-1-7, 7 specimens, 104.1 mm–114.4 mm SL, collected at Chinen (127°50'E, 26°10'N), Okinawa I. by a set net, May 7, 1978.

Diagnosis. This species is distinguished from *G. achlamys* by the following characters: body depth 2.27–3.14 times in standard length; dorso-anterior part of body scaly; dorsal spines slender and flexible; fine serration on lower margin of preopercle.

Description. The proportional measurements and counts are shown in Table 1.

Body compressed, dorsal and ventral profile equally convex. Dorsal profile from snout to occipital region straight. Head length about 3.3 times in standard length. Snout length slightly shorter than eye diameter, nearly equal to interorbital width. Eye with narrow membranous eyelid. Supraorbital ridge (lateral edge of frontal) serrated. Lateral ethmoid bearing two small spines on its dorsal end, just above anterior corner of eye. A pair of large canine-like teeth at symphysis of premaxillary,

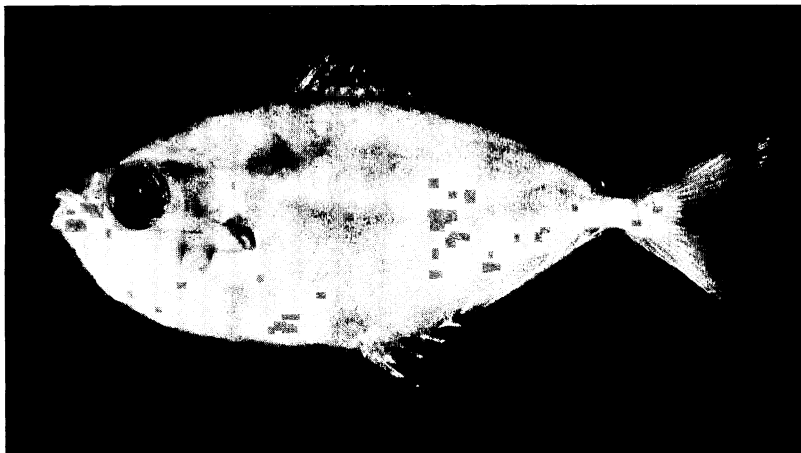


Fig. 1. *Gazza minuta*, KMNH VR-100, 093, St. L. 116.9 mm from Yonabaru, Okinawa.

Table 1. Measurements and counts of nine specimens of *Gazza minuta*. Measurements are expressed in percentages of the standard length.

	KMHN VR 100, 092	KMNH VR 100, 093	URM-P 8403-1	URM-P 8403-2	URM-P 8403-3	URM-P 8403-4	URM-P 8403-5	URM-P 8403-6	URM-P 8403-7
Standard length	115.4 mm	116.9 mm	107.1 mm	105.0 mm	114.4 mm	105.4 mm	106.7 mm	104.1 mm	107.8 mm
Body depth	41.6%	44.0%	42.3%	41.8%	42.0%	41.2%	41.4%	42.1%	41.1%
Head length	30.2	30.6	31.9	31.3	32.3	32.3	32.8	31.7	30.7
Snout length	10.1	9.4	10.3	9.4	10.1	10.3	10.3	10.0	9.6
Maxillary length	6.8	6.7	7.2	6.6	7.3	6.6	7.4	7.1	6.7
Eye diameter	10.9	10.1	11.2	11.3	11.3	11.1	11.4	11.3	11.5
Interorbital width	10.4	9.5	8.7	9.4	9.1	9.2	8.1	8.5	8.9
Length of supraoccipital crest	8.5	8.6	7.5	8.0	7.3	8.4	8.3	8.1	8.3
Length of frontal ridge	10.9	10.8	10.9	11.0	10.5	10.7	10.5	10.6	11.0
Width between anterior ends of frontal ridges	7.5	7.9	8.2	7.7	8.0	8.1	7.6	7.7	7.9
Depth of caudal peduncle	6.2	6.4	6.2	6.2	6.4	5.9	5.9	5.9	5.8
2nd dorsal spine length	18.6	(broken)	17.0	(broken)	16.9	16.3	14.7	16.8	(broken)
2nd anal spine length	14.8	(broken)	14.9	14.2	14.6	(broken)	14.1	13.4	15.0
Pectoral fin length	18.1	16.3	18.6	18.8	19.1	18.1	17.8	17.7	18.3
Pelvic fin length	14.6	12.6	14.4	14.3	14.3	13.9	13.7	14.6	14.1
Snout to dorsal origin	43.8	41.4	42.7	41.2	43.3	42.3	42.0	42.3	42.7
Snout to anal origin	58.2	56.5	59.1	56.4	43.5	57.8	57.8	57.9	56.3
Snout to pectoral insertion	30.9	29.2	32.7	31.7	33.2	32.2	31.9	32.9	31.2
Snout to pelvic insertion	39.4	38.5	41.2	39.1	40.2	40.4	40.3	40.2	38.7
Dorsal base length	54.7	55.3	54.5	54.2	53.3	52.8	53.7	53.6	53.7
Anal base length	43.2	45.7	45.1	45.3	43.8	43.5	43.5	44.1	46.4
Dorsal fin rays	VIII, 16	VIII, 16	VIII, 16	VIII, 16	VIII, 16	VIII, 16	VIII, 16	VIII, 16	VIII, 16
Anal fin rays	III, 14	III, 14	III, 14	III, 14	III, 14	III, 14	III, 14	III, 14	III, 13
Pectoral fin rays	17, 17	17, 17	17, 17	17, 18	17, 18	17, 17	18, 18	17, 17	18, 18
Pelvic fin rays	I, 5	I, 5	I, 5	I, 5	I, 5	I, 5	I, 5	I, 5	I, 5
Lateral line scales	59, 61	60, 60	61, 61	61, 62	60, 60	58, 59	57, 60	57, 60	61, 61
Gill rakers	16, 16	14, 14							



Fig. 2. Head of *Gazza minuta*, KMNH VR-100, 092, showing the forward protraction of the mouth and canine-like teeth on jaws.

other premaxillary teeth minute. Anterior dentary teeth generally larger than the posterior. Mouth directed forward when protracted (Fig. 2). Tip of mouth at level of the center of eye. Maxillary reaching to below front of pupil. Ventral margin of preopercle serrated. Scales covering the body, except head and breast. Dorsal spines slender and flexible.

Color in life silvery. Dark greenish band on body axis. Snout, dorsal margin of eye, dorsal surface of head, dorsal fin base, upper margin of membrane of dorsal fin and pectoral axil dusky. A small brown saddle on caudal peduncle.

Color in 10% formalin. Body yellowish white or gray. Back dusky. Dusky, brown and dark parts in life preserved as dusky or black.

Two specimens of KMNH VR-100, 092 and 100, 093 are females and have mature ovaries. The two specimens of *G. minuta* were collected with *Leiognathus leuciscus*, *L. fasciatus*, *L. equulus* and *L. bindus*. Other specimens (URM-P8403-1-7) were not examined for sex.

With this report, 9 species (Yabumoto, 1979) of the genus *Leiognathus* and 1 species of the genus *Gazza* are recognized from Japan.

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日本初記録のコバンヒイラギ *Gazza minuta*

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1978年5月に沖縄県知念の定置網で7個体, 1983年6月に同県与那原の定置網で2個体のコバンヒイラギ *Gazza minuta* (Bloch, 1797) が採集された。本種の日本からの記録はこれが初めてである。1983年の2個体の標本はイトヒイラギ *Leiognathus leuciscus*, シマヒイラギ *L. fasciatus*, セイタカヒイラギ *L. equulus*

とネッタヒイラギ *L. bindus* と共に採集された。今回の種を加え, 日本に分布するヒイラギ科魚類はヒイラギ属9種 (藪本, 1979) とコバンヒイラギ属1種となった。

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