

**New Record of a Rare Gempylid,
Thyrsitoides marleyi, from
the Sea of Japan**

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Recently, through the courtesy of the Fishermen's Cooperative of Kyoto Prefecture, a specimen of gempylid fish was sent to our laboratory for identification. It was caught in a yellowtail set net off Ine, western Wakasa Bay, Sea of Japan, on May 4, 1971 and preserved in formalin.

It is identified as *Thyrsitoides marleyi* Fowler, a rare member of the family Gempylidae, chiefly on the basis of the following diagnostic characteristics: body very elongated; branched lateral line, of which lower branch extending along middle of body; no detached spines in front of anal fin; pelvic fin well-developed; no completely detached finlets; tip of each jaw having a cartilaginous process.

T. marleyi has long been known around Japan as *Mimasea taeniosoma* (Japanese name: nagatachikamasu), which was first described by Kamohara (1936) based on three specimens from Mimase, Kochi Pref. Kamohara's original description of *M. taeniosoma* agrees so closely with the original description of *T. marleyi* by Fowler (1929) from Natal, South Africa that *M. taeniosoma* Kamohara is considered a senior synonym of *T. marleyi*. Forster et al. (1970) have already briefly pointed this out.

There has been no record of *T. marleyi* in the Sea of Japan although about 10 specimens have been known from the Pacific coast of Japan since Kamohara (1936) reported the first three specimens from Kochi. This is the

first occurrence of *T. marleyi* reported from the Sea of Japan where gempylids are quite rare. Hitherto, the only other gempylid recorded in the Sea of Japan was *Promethichthys prometheus* listed by Mori (1956) off Kasumi, in the southern Sea of Japan, although *Rexea prometheoides* was listed off Tongyong situated at the southern entrance of the Sea of Japan (Mori, 1952). Lindberg and Krasnyukova (1975), however, recognized from literature only the distribution of *P. prometheus* in their recent review of the fishes of the Sea of Japan.

This specimen is believed to be the second largest size record in Japanese waters. The largest (1.2 m) was reported from Okinawa by Gushiken (1972) without further description. As descriptions given so far from Japanese waters were all based on smaller specimens (about 40 cm in body length) and because some morphological changes with growth were observed, the description of the specimen given below will contribute to an understanding of the species in comparison with *M. taeniosoma* described previously. The methods of measurements and counts mostly follow Hubbs and Lagler (1947).

Thyrsitoides marleyi Fowler

Thyrsitoides marleyi Fowler, 1929, Ann. Natal Mus., 6(2): 256~257, fig. 2 (original description; type locality: Natal, South Africa).
Mimasea taeniosoma Kamohara, 1936, Zool. Mag. (Japan), 48(11): 929 (in English), 930~931 (in Japanese), fig. 1 (original description; type locality: Mimase, Japan).

Material examined: FAKU (Department of Fisheries, Faculty of Agriculture, Kyoto University) cat. no. 44178, 1 specimen (688.9 mm in standard length), Ine, western Wakasa Bay, Sea of Japan, May 4, 1971.

D. XVIII, i, 17; A. ii, 16; P₁ i, 14; P₂ i, 5;

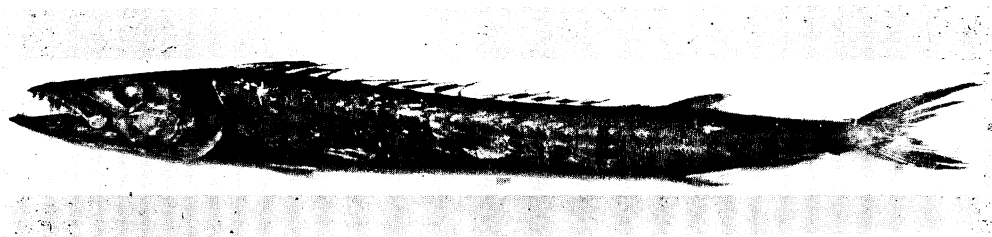


Fig. 1. *Thyrsitoides marleyi* from Ine, Kyoto (FAKU 44178).

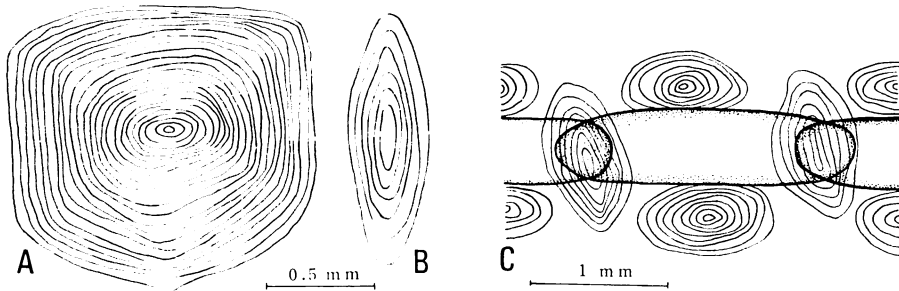


Fig. 2. Scales of *Thyrsitoides marleyi*. A: A scale on mid-lateral side of body. B: A scale on mid-dorsal side of body. C: Scales around lateral line canal of central part of lower lateral line.

branchiostegals 7; epineurals 28; epipleurals 26.

Measurements in mm followed by the percentage of the standard length in parentheses: Total length 794.8 (115.4); fork length 717.7 (104.1); standard length 688.9 (100.0); head length 170.9 (24.8); head width 38.6 (5.6); snout length 76.4 (11.1); length of upper jaw 78.1 (11.3); length of mandible 73.7 (10.7); interorbital width (fleshy) 31.5 (4.6); interorbital width (bony) 26.9 (3.9); suborbital width 15.0 (2.0); length of eye 25.9 (3.8); length of orbit 27.1 (3.9); postorbital length of head 71.0 (10.3); depth of caudal peduncle 21.4 (3.1); length of caudal peduncle 41.9 (6.1); distance from origin of anal fin to caudal fin base 164.1 (23.8); height of first dorsal fin 65.3 (9.5); height of second dorsal fin 55.7 (8.1); height of anal fin 55.7 (8.1); length of pectoral fin 72.2 (10.5); length of pelvic fin 44.3 (6.4); length of longest dorsal spine (2nd) 65.4 (9.5); length of longest dorsal soft ray (2nd) 57.4 (8.3); length of longest anal soft ray (3rd) 47.3 (6.9); length of longest pectoral ray 64.2 (9.3); length of pelvic spine 36.2 (5.3); body depth 75.6 (11.0); body width 36.9 (5.4); first predorsal length 159.4 (23.1); second predorsal length 514.3 (74.7); prepectoral length 173.8 (25.2); prepelvic length 202.9 (29.5); preanal length 527.4 (76.6); distance from tip of snout to anterior margin of anus 496.7 (72.1); distance from pelvic fin origin to anal fin origin 326.6 (47.4); length of upper lobe of caudal fin 113.8 (16.5); length of lower lobe of caudal fin 104.9 (15.2); length of first dorsal base 351.2 (51.0); length of second dorsal base 137.7 (20.0); length of anal base 128.3 (18.6).

Body greatly elongated (Fig. 1) and com-

pressed, covered with small, thin, cycloid scales (Fig. 2). Round scales (Fig. 2A) very deciduous on lateral side of body but remaining on caudal peduncle; elongated scales (Fig. 2B) remaining on nape and bases of soft dorsal and anal fins; irregular scales on lateral line canal (Fig. 2C). Skin very thin and papery. Head large, about 1/4 of standard length. Snout elongated and sharply conical; lower jaw sharply pointed, projecting beyond tip of snout by half of length of eye. A conical cartilaginous process at tip of each jaw. Mouth large, maxillary extending to below front edge of eye. A fang on left side (two fangs on right side) of upper jaw near tip of snout, none depressible; two scars of presumably missing fangs on left side and one on right side. A smaller fang on right of lower jaw near symphysis; a scar of pre-

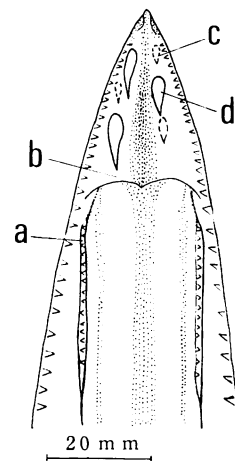


Fig. 3. Inside of upper jaw of *Thyrsitoides marleyi*. a, palatine; b, dermal fold; c, scar of missing fang; d, fang.

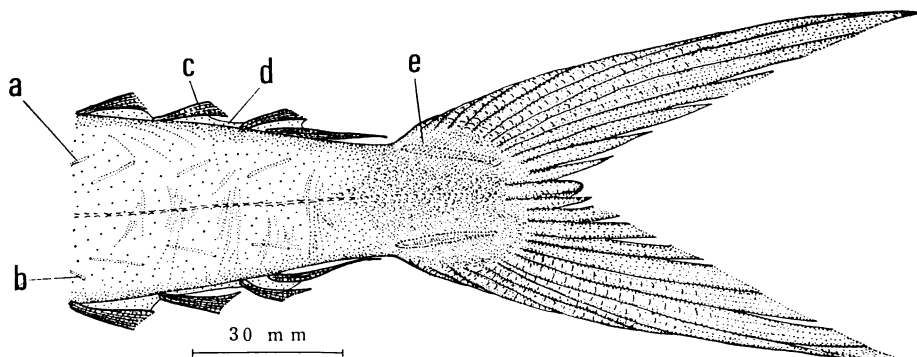


Fig. 4. Tail part of *Thyrsitoides marleyi*. a, epineural; b, epipleural; c, soft dorsal finray; d, fin membrane; e, keel-like process.

sumably missing fang on left side. Compressed caniniform teeth uniserial on each jaw, those of lower jaw (about 18) much larger and more widely spaced than those of upper jaw (about 30). No teeth on vomer and small uniserial teeth on palatines (Fig. 3). Minute teeth irregularly spaced on glossohyal. Gill rakers rudimentary, several fine bifid or trifold spinescent rakers on both upper and lower limbs of first arch, one raker at angle of arch, a little larger and T-shaped; 1 or 2 minute accessory processes frequently interpolated between rakers. Pseudobranchial filaments well developed. Left and right gill membranes not united, free from isthmus. Nostrils wide apart; anterior one small and pore-like, posterior one slit-like. Eye large, situated slightly nearer to hind margin of opercle than to tip of snout. Interorbital having a wide longitudinal furrow in middle. Lateral line inserted above angle of opercle, bifurcating beneath a point slightly behind 4th dorsal spine; upper branch running along base of first dorsal fin to a point beneath 12th dorsal spine; lower branch curved abruptly downward and backward from bifurcation to run along middle of body to base of caudal fin. About 200 scales in upper branch (33 to bifurcation); about 320 scales in lower branch. First dorsal fin inserted above upper angle of opercle; second dorsal spine slightly longer than first, subsequently becoming progressively shorter posteriorly. Second dorsal fin about as large as anal fin preceded by 2 minute spines and inserted beneath base of 4th dorsal soft ray. Posterior dorsal and anal soft rays like finlets,

but with fin membrane between rays (Fig. 4). Pectoral fin subfalcate, originating below interspace of 2nd and 3rd dorsal spines and extending below base of 6th. Pelvic fin well developed, slightly smaller than pectoral fin, inserted fairly well behind pectoral fin. Caudal fin weakly falcated; some sign of a pair of keel-like processes on caudal base (Fig. 4). Epineurals and epipleurals seen through thin skin.

Color in formalin: Body dark brown above, slightly paler below. First dorsal fin membranes between first and fifth spines black, those between sixth and last black above and white below. Tip of caudal fin slightly darkened. Other fins pale.

Remarks. Because this specimen can be considered large enough to migrate into the Sea of Japan from elsewhere and because this is the only record of occurrence of *T. marleyi*, I believe that this species has its spawning grounds and principal populations outside the Sea of Japan. Considering the ichthyofauna of the Sea of Japan, this species could not be a resident. Of course, further consideration of this problem based on adequate data is needed.

Acknowledgments

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Postscript

After I had submitted the manuscript, Prof. Tamotsu Iwai of Kyoto University (personal communication) let me know that there is an unidentified gempylid which seems to be *Thyrsitoides marleyi* in the collection of FAKU. I have examined this specimen, which is surely *T. marleyi* (FAKU cat. no. 25514; ca. 98 cm in total length; caught in a yellowtail set net off Niizaki, western Wakasa Bay, Sea of Japan on January 12, 1956). It is impossible to take the measurements and counts of it, due to considerable damage.

日本海から初記録のナガタチカマス

中村 泉

クロタチカマス類の1稀種ナガタチカマス1個体が1971年5月に、京都府伊根の定置網で漁獲された。本種は従来日本では *Mimasea taeniosoma* Kamohara として知られていたが、研究の結果 *M. taeniosoma* は南アフリカから記載された *Thyrsitoides marleyi* Fowler の異名であるとの結論に達した。ナガタチカマスはこれまでに日本近海の太平洋側で約10個体記録されているが、日本海側からは今回の1個体が初記録である。このこととこの個体が十分な遊泳力を有すると思われる大きさであることを考慮に入れると、この個体は日本海の外から日本海に回遊して来て岸に寄り伊根の定置網に漁獲された可能性が大きい。従って本種の再生産は日本海では行われていないと考えられ、本種は日本海の在来種ではなく過来種と考えるのが妥当であろう。

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