

First Record of the Sixgill Stingray *Hexatrygon longirostra* from Japan

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A remarkable stingray genus *Hexatrygon* was described by Heemstra and Smith (1980) on the basis of a single specimen collected from South Africa. This genus is characterized by having six gills and has been represented by a single species, *H. bickelli*. Heemstra and Smith (1980) also established the family Hexatrygonidae for this species. Subsequently, Chu and Meng in Zhu et al. (1981) described another species of the genus *H. longirostra* based on two specimens collected off Hong Kong. At the time they overlooked Heemstra and Smith's paper and thus they erected the genus *Hexatreumatobatis* for their species.

An adult specimen of *H. longirostra* was collected from the Okinawa Trough during the survey conducted by the Seikai Regional Fisheries Research Laboratory. This is a fourth specimen of the genus *Hexatrygon*. The specimen is described in some detail in the present paper.

Hexatrygon Heemstra et Smith, 1980

Hexatrygon Heemstra and Smith, 1980: 1 (type species: *Hexatrygon bickelli* Heemstra et Smith, 1980).

Hexatreumatobatis Chu and Meng in Zhu et al., 1981: 111 (type species: *Hexatreumatobatis longirostrum* Chu et Meng, 1981).

Diagnosis. Gill slits 6. Spiracle located far behind eyeball. Snout elongated and translucent.

Key to the species of the genus *Hexatrygon*

- 1a. Snout extremely pointed, like a thin rod (Fig. 1 A). *H. longirostra*
- 1b. Snout not so pointed, like a triangular plate (Fig. 1 B). *H. bickelli*

Hexatrygon longirostra (Chu et Meng, 1981)

(New Japanese name: Mutsuera-ei)

(Fig. 2)

Hexatreumatobatis longirostrum Chu and Meng in Zhu et al., 1981: 111 (description in Chinese; type

locality, 112~114°E; 18.5~21°N, off Hong Kong; 350~1,000 m depth; Aug. 4~18, 1979; cat. 00072).

Material. MTUF (Museum, Tokyo University of Fisheries) 23715, adult male, 907 mm in length, tip of tail behind tail spine missing; 633 mm disk width, collected by otter trawl off Tokara Is., 29°45'N; 127°59'E, 710 m depth, Mar. 20, 1978, collected by junior author.

Description. Methods of counts and measurements generally follow those for the Rajidae proposed by Hubbs and Ishiyama (1968). Tooth rows in transverse 52; tail spine 1; gill slits 6. Measurements expressed in thousandths of disk width: Total length 1,433; disk length 1,184; head length 615; snout length 430; eyeball length 38; interorbital width 90; spiracle length 70; precaudal length 1,107; distance between first gill slits 333; preoral length 464; preanarial length 398; nasal curtain length 35; internarial width 199; mouth width 155; pelvic length 145; clasper length 143; tail spine length (including its base) 99.

Body heart-shaped, thick at its central part and gradually thinning laterally. Snout flexible, extremely elongated, supported laterally by rostral expansion of propterygia. Interorbital wide; anterior fontanelle and frontoparietal fontanelle obvious externally. Spiracle oval, located far behind eyeball. Tip of tail cut off just behind serrated spine due to injury. Claspers well calcified. Nostrils widely separated. Nasal curtain united with ventral surface. Middle portion of nasal curtain united with skin covering anterior margin of mouth by a membrane. Teeth minute, blunt, close-set, and arranged in pavement. No papilla present on lower surface of mouth. No denticle on dorsal or ventral surfaces of body.

Coloration: Dorsal ground color dark brown; white areas along middorsal line, near spiracles, from root of tail to base of spine, and central part of disk caused by abrasion; snout translucent. Ventral ground color whitish, excepting dark coloration of margin of disk, claspers, and posterior part of tail; small, scattered, dark spots on lateral part of lower surface of disk.

Notes: The present specimen agrees fairly well with the description and figure of *Hexatreumatobatis longirostrum* though the posterior part of the tail of the specimen was missing and

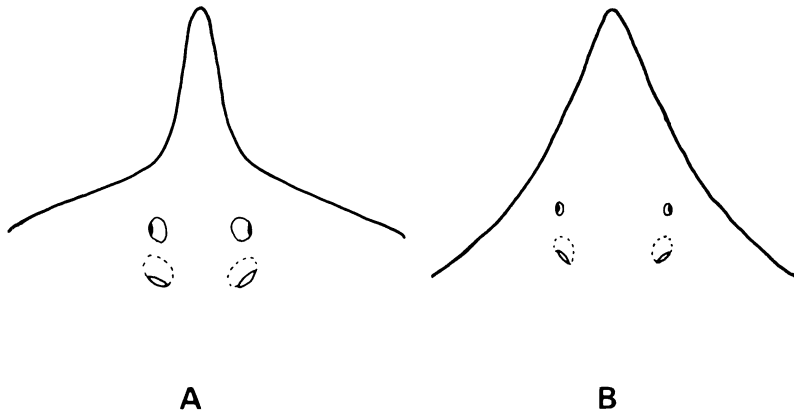


Fig. 1. Rostral region of *Hexatrygon longirostra* (A) and *H. bickelli* (B).

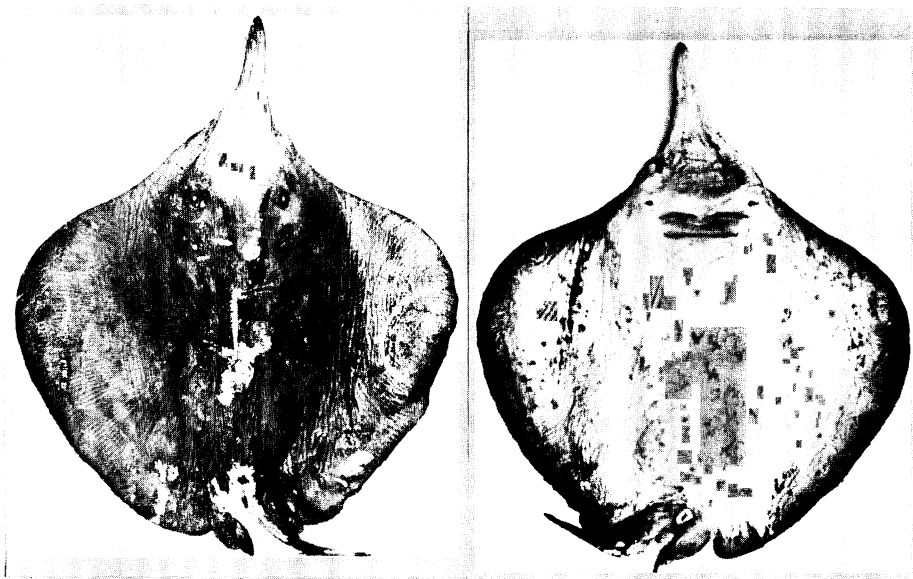


Fig. 2. Dorsal and ventral views of *Hexatrygon longirostra*, MTUF 23715, adult male, 633 mm in disk width.

could not be examined. After comparing the descriptions of the two monotypic genera *Hexatrygon* and *Hexatrematobatis*, it became clear that there was no reason to separate these two genera. *Hexatrematobatis* is thus considered a junior synonym of the genus *Hexatrygon*. *Hexatrygon bickelli* and *H. longirostra* are distinguishable by the configuration of the snout (see above key and Fig. 1).

Heemstra and Smith (1980) proposed the suborder Hexatrygonoidei in the order Myliobatiformes on the basis of *H. bickelli*, which has

specialized characters such as six gills, spiracles located far behind eyeball, elongate translucent snout, and no supraorbital crests on cranium. Chu and Meng in Zhu et al. (1981) proposed the order Hexatrematobatiformes on the basis of the present species. We here follow Heemstra and Smith (1980), who reviewed the classification of the batoid fishes using cladistic analysis.

Acknowledgments

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Literature cited

- Heemstra, P. C. and M. M. Smith. 1980. Hexatrygonidae, a new family of stingrays (Myliobatiformes: Batoidea) from South Africa, with comments on the classification of batoid fishes. Ichthyol. Bull., J. L. B. Smith Inst. Ichthyol., Rhodes Univ., (43): 1~17.
- Hubbs, C. L. and R. Ishiyama. 1968. Methods for the taxonomic study and description of skates (Rajidae). Copeia, 1968 (3): 483~491.
- Zhu, Y., Q. Meng, A. Hu and S. Li. 1981. Description of four new species, a new genus and a new family of elasmobranchiate fishes from deep sea of the South China Sea. Ocean. Limn. Sinica, 12 (2): 103~116. (In Chinese with English summary).
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日本初記録のムツエラエイ (新称)

石原 元・岸田周三

西海区水産研究所の沖縄舟状海盆トロール調査において、6対の鰓孔を持つエイが採集された。この標本は Chu and Meng in Zhu et al. (1981) が南シナ海から報告した1科1属1種の *Hexatrematobatis longirostrum* の記載によく一致するので、この種に同定し、和名をムツエラエイとした。本種は Heemstra and Smith (1980) が南アフリカから報告した1科1属1種の *Hexatrygon bickelli* と酷似しており、genus *Hexatrematobatis* は genus *Hexatrygon* の junior synonym と考えられる。両種は吻部の形状によって区別される。

Heemstra and Smith (1980) は *H. bickelli* の鰓孔が6対あること、噴水孔が眼球よりずっと後方に位置すること、吻部が前方に突出することなどの特化形質をもとに、Myliobatiformesトビエイ目、*Hexatrygon-oidei* ムツエラエイ亜目を提唱しているが、著者らもこれに従う。

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