Bull. Inst. Zool., Academia Sinica **26**(3): 191-194 (1987)

FIRST RECORD OF *SCOMBROPIDAE* (PISCES: PERCOIDEI) FROM TAIWAN

KWANG-TSAO SHAO

Institute of Zoology, Academia Sinica, Taipei 11529, Republic of China

(Received March 6, 1987)
(Revision received March 20, 1987)
(Accepted March 20, 1987)

Kwang-Tsao Shao (1987) First record of Scombropidae (Pisces: Percoidei) from Taiwan. *Bull. Inst. Zool., Academia Sinica* **26**(3): 191-194. The present paper firstly report one new record of fish family Scombropidae from Taiwan. The specimen of *Scombrops boops* was collected from the slope of continental shelf off north-eastern coast of Taiwan at the depth of about 200 meters.

Fishes of the family Scombropidae, commonly called gnomefish, is a small family of Percoidei. It contains only on genus of *Scombrops* and four species in the world (Smith and Heemstra 1986). The geographical distribution of this group of fish is limited. Even the most widely distributed species *Scombrops boops*, it only confined to the waters of the West Pacific ranging from northern Japan to Ryukyu and the West Indian Ocean along the coastal waters of South Africa. It may occur in the waters between the above two regions such as Philippines, South China Sea, and East or Central Indian Ocean but has not yet been reported so far. The present paper that firstly records its distribution can extend downward to Taiwan may suggest this possibility. Scombropids are economical species since it is edible and has large body size. The standard body length is approximately 30 cm for a three year old fish and can grow up to 100 cm for its maximum size. In Japan, the two closely related species of *S. boops* and *S. gilberti* are distributed abundantly. Yasuda *et al.* (1971) was the first one to distinguish these two previouly synonymized species as the two valid species after detailedly compared their meristic and morphometric differences. Accoridng to Okumura *et al.* (1982) and Smith and Heemstra (1986), the junvenile and young of scombropids will migrate to shallow waters during winter or spring seasons but move to deeper water with growth; and the adults inhabit in the deeper rocky areas of 200 to 700 meters. Thus, adults were mostly caught by long-lining, hand lining, and set-net fishing methods.

The family of Scombropidae is characterized by its large mouth; large supramaxilla; a row of large canines on both jaws; median fin scaly, and body covered with deciduous scales. Although this family was sometimes combined with the family Pomatomidae, so called bluefish (Tanaka 1931; Matsubara 1955; Nelson 1984), the morphological, and ecological characters, and distribution, of these two families are quite

1. Paper No. 290 of the Journal Series of the Institute of Zoology, Academia Sinica.

different. *Pomatomus saltatriz*, the only species of Pomatomidae, distributes broadly between 50° of north and south latitutes in the whole world except the East Pacific. And this gamefish species is mostly schooling in much shallower waters in comparison to the almost demersal scombropids. Other morphological characters which can distinguish these two families include dorsal fin ray number (23-28 vs. 13-14); anal fin spine and ray number (II, 23-27 vs. III, 12-13); height of first dorsal fin (low vs. high); and the length of second dorsal fin base (long vs. short). Based on these differences, the author believes that the Scombropidae is an independent family as Masuda *et al.* (1984) and Smith and Heemstra (1986) treated. Thus, the new addition of the species *S. boops* to Taiwan is also a new additional family to the fish fauna of Taiwan though Chen and Yu (1986) has listed the family of Pomatomidae in their book without any reliable basis.

The specimens in the present paper were collected from the slope of continental shelf off northern-east coast of Taiwan at the depth about 200 meters and then landed at Tashi fish market. They are now deposited in the Museum of Institute of Zoology, Academia Sinica. In this report, a brief description, remark and distribution of the species are made.

Family Scombropidae

Genus *Scombrops* Temminck and Schlegel 1845

Scombrops boops (Houttuyn 1782)

Fig. 1

Scparus boops Houtuyn, 1782: 311 (Nagasaki, Japan) (not seen).

Scombrops cheilodipteroides Bleeker, 1854: 6.

Scombrops boops Tanaka, 1931: 25; Yasuda *et al.*, 1971: 118-124; Burgess and Axelrod, 1973: 548; 1974: 1266; Okamura *et al.*, 1982: 229, pl. 154; Masuda *et al.*, 1984: 152, pl. 135-E; Smith and Heemstra, 1986: 563, pl. 52.

Material: One specimen, ASIZP 056120, 505 mm SL., Dec. 24, 1986. Ta-shi, 200 m deep, Longline; 1 specimen, ASIZP 056135, 330 mm SL., Mar. 9, 1987, Ta-shi, 250 m deep.

Diagnosis: D. VIII+I, 12; A. III, 11-12 (1st spine minute); P. 15; LLp. 53-56; L. Tra. 6-7, L. Trb. 12; GR 3-5+11-17. Eye large, eye diameter greater than interorbital width. The proportion of morphometric characters are listed in Table 1. Body compressed with cycloid scales. A row of knife-like, spaced teeth on lateral side of both jaws.

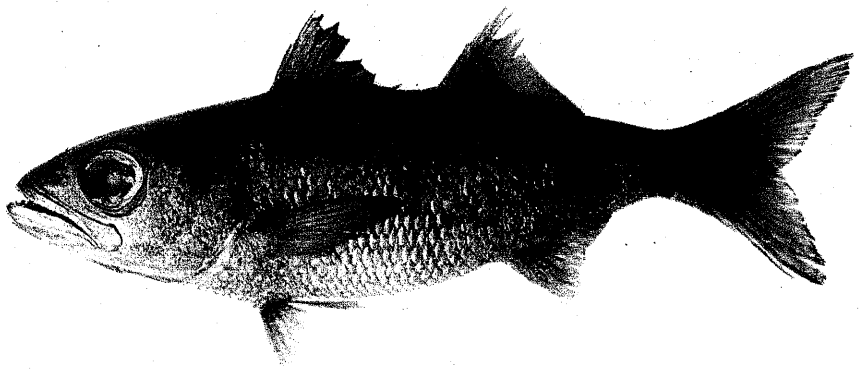

Fig. 1. *Scombrops boops* ASIZP 056120, 505 mm SL.

TABLE 1
Meristic comparison of the specimens of *S. boops* in the present paper with the study results of the two species of *S. boops* and *S. gilberti* in Yasuda *et al.* (1971)

Characters	ASIZP 056120	ASIZP 056135	*S. boops*	*S. gilberti*
DF 1st	VIII	VIII	VIII-IX	VIII-IX
2nd	I, 12	I, 12	I, 12-14	I, 12-13
AF	III, 11	III, 12	III, 11-13	III, 11-13
PF	15	15	15-17	16-17
G. R.	5+17	3+11	2-5+12-17	1-2+9-13
L. l.	53	56	50-57	59-70
L. tr. above	7	6	6-9	8-9
below	12	11	10-15	14-17
SL/HL	2.89	2.99	2.53-3.07	2.79-3.17
SL/BD	3.26	3.66	2.86-4.03	2.71-3.98
HL/C. P. D.	3.69	3.52	3.00-3.75	3.20-3.77
HL/intor.	3.91	3.88	3.14-4.20	3.39-4.59
HL/SnL	3.33	3.61	3.14-3.92	3.29-3.86
HL/ED	3.61	3.06	3.00-4.47	3.42-4.15

Small teeth on vomer, palatine, and tongue. Body blackish dorsally, paler ventrally.

Distribution: From South Hokkaido to Ryukyu of Japan, South Korea, East China Sea, and South Africa from Cape to Delagon Bay.

Remarks: The present species resembles *S. gilberti* (Jordan and Snyder), but distinguishable by having lower counts of lateral line scales, transverse scales and higher counts of gill rakers.

Acknowledgements: The author wish to thank Drs. S. C. Shen, and Y. S. Liang of the Department of Zoology, National Taiwan University and S. C. Lee of the Institute of Zoology, Academia sinica for the loan of literatures. Thanks is also extend to J. P. Chen and L. W. Chen for their technical assistance.

REFERENCES

BLEEKER, P. (1845) Nieuwe nalezingen op de ichthyologie van Japan. *Verh. Bat. Gen.* **26**: 1-132.

BURGESS, W. and H. R. AXELROD (1973) *Pacific marine fishes* 2. T. F. H. Publ. Inc. Ltd., N. J. 548pp.

BURGESS, W. and H. R. AXELROD (1974) *Pacific marine fishes* 5. T. F. H. Publ. Inc. Ltd. N. J. 1266pp.

CHEN, J. T. F. and M. J. YU (1986) *A synopsis of the vertebrates of Taiwan.* (revised and enlarged 3rd edition). Commercial Book Co., Taipei. 1092pp.

MASUDA, H. K., K. AMAOKA, C. ARAGA, T. UYENO and T. YOSHINO (1984) *The fishes of the Japanese Archipelago.* Tokai Univ. Press. 437pp.

MATSUBARA, K. (1955) *Fish. morphology and hierarchy.* 3 vols. Ishizaki Shoten, Tokyo. 1605pp. (in Japanese).

NELSON, J. (1984) *Fishes of the world* (2nd ed.). John Wiley and Sons, Inc., New York. 523pp.

OKAMURA, O., K. AMAOKA and F. MITANI, (eds) (1982) *Fishes of the Kyushu-Palau Ridge and Tosa Bay.* Japan Fish. Reso. Conserv. Assoc., Tokyo. 435pp.

SMITH, M. M. and P. C. HEEMSTRA (1986) *Smiths' sea fishes*, Smith Inst. of Ichthyology, Grahamstown.

TANAKA, S. (1931) On the distribution of fishes in Japanese waters. *J. Fac. Sci., Imp. Univ. Tokyo, Sec.* 4, *Zool.* **3**(1): 1-90.

TEMMINCK, C. and H. SCHLEGEL (1845) *Fauna Japonica, Pisces.* Leiden. 323pp.

YASUDA, F., K. MOCHIZUKI, M. KAWAJIRI and Y. NOSE (1971) On the meristic and morphometric differences between *Scombrops boops* and *S. gilberti. Japan J. Ichthyol.* **18**(3): 118-124.

臺灣新記錄之鯧科魚類

邵 廣 昭

本文首次報導臺灣新發現之鯧科（Scombropidae）魚類，*Scombrops boops* 牛眼鯧（擬稱）。本報告所描述之標本係採自於臺灣東北大陸棚斜坡約兩百公尺之海域。