

SYSTEMATIC STATUS OF *SCIAENA BLEEKERI* DAY,
1876 (SCIAENIDAE : PISCES)

By

P. K. TALWAR AND MRS. ASHA JOGLEKAR

Zoological Survey of India, Calcutta

I—INTRODUCTION

Day (1876) erected a new species of *Sciaena* viz., *bleekeri* on the basis of two specimens from Bombay. Jordan and Thompson (1911) treated this species as a synonym of *Sciaena argentatus* (Houttuyn, 1782) and the same course was followed by Fowler (1933), Matsubara (1937), Lin (1938), Munro (1955), and Chu, Lo and Wu (1963). This is evidently the basis for the frequent reference of *Argyrosomus argentatus* (Houttuyn) to India. On the basis of data now extant *Argyrosomus argentatus* is known to occur only in China, Formosa and Japan.

During a survey of the Orissa coast in December, 1966, ten specimens of *Argyrosomus argentatus* were collected. The specimens agree well with Houttuyn's (1782) original description and Fowler's (1933) description of the species. However, on comparison with Day's type of *Sciaena bleekeri* present in the Zoological Survey of India, it was clear that *Sciaena bleekeri* Day is a valid species and not conspecific with *Argyrosomus argentatus* (Houttuyn) as considered by earlier workers.

In support of the above contention of the identity of the two species, *Argyrosomus argentatus* (Houttuyn) and *Argyrosomus bleekeri* (Day), biometric data obtained from specimens of the former species collected from Orissa and the type material of the latter species are presented. Descriptions, synonyms and geographical distribution of the two species are also given. In the light of this data a brief discussion of how the two species have been confused through literature, has also been given. The present communication records *Argyrosomus argentatus* (Houttuyn) for the first time from Indian waters, indicating a wider distribution of the species in the Indo-Pacific.

II—NOTES ON THE SPECIES

***Argyrosomus bleekeri* (Day)**

1876. *Sciaena (Pseudosciaena) bleekeri* Day, *Fish. India* : 185, pl. 45, fig. 4 (Type-locality : Bombay).

1937. *Pseudosciaena indica* Tang, *Amoy. Mar. biol. Bull.*, 2 (2) : 64 (China).
 1937. *Nibea argentata* Matsubara (*néc* Houttuyn) : (*partim*) *J. Imp. Fish. Inst.*, 32 (2) : 44-52.
 1940. *Argyrosomus indicus* : Lin, *J. Hong Kong Fish. Res. Sta.*, 1 (2) : 252, fig. 5.
 1963. *Argyrosomus argentatus* : Chu, Lo and Wu, *Monograph Fishes China, Publ. Shanghai Fish. Inst.* : 62.

Material examined (One syntype).— No. 988, 1 ex., 151 mm., Bombay, ca. 1876, F. Day ; Original of pl. 45, fig. 4.

Description.— D X + I 27. A II 7. P 17. Scales in lateral series 60.

Gill rakers on first arch 5+9, longest raker slightly less than filament and half eye diameter.

Depth of body 26.5 ; length of head 31.1 ; diameter of eye 7.9 ; length of maxilla 12.5 ; length of lower jaw 14.6 ; length of 2nd anal spine 8.6 ; all in percentage of standard length. Diameter of eye 25.5 ; length of snout 25.5 ; interorbital width 19.1 ; length of maxilla 40.4 ; length of 2nd anal spine 27.6 ; in percentage of head length.

Gas-bladder.—Carrot-shaped, Otolithine type with 29 pairs of arborescent appendages.

The other salient characters of this species are given in Day (1876).

Distribution.— Coast of India, China and Japan.

Argyrosomus argentatus (Houttuyn)

1782. *Sparus argentatus* Houttuyn, *Verh. Holland Maatsch. Wet. Haarlem*, 20 : 319 (Type-loc. : Japan).
 1911. *Sciaena argentata* : Jordan and Thompson, *Proc. U. S. natn. Mus.*, 39 : 252.
 1933. *Johnius argentatus* : Fowler, *Bull. U. S. natn. Mus.*, 100, 12 : 394.
 1937. *Pseudosciaena argentatus* : Tang, *Amoy Mar. biol. Bull.*, 2 (2) : 65.
 1937. *Argyrosomus argentatus* : Lin, *Lingnan Sci. J.*, 17 (3) : 368.
 1937. *Nibea argentata* Matsubara : (*partim*), *J. Imp. Fish. Inst.*, 32 (2) : 44-52.
 1940. *Argyrosomus iharae* Lin, *néc.* (Jordan & Metz). *J. Hong Kong Fish. Res. Sta.*, 1 (2) : 253.

Material examined.—F 5783/2, 10 exs., 75-103 mm., Chandipur (Orissa), 6.xii. 1966, P. K. Talwar.

Description.—D X + I 26-29 ; deeply notched ; 4th spine longest. A II 7 ; second spine weak ; base $4\frac{1}{2}$ in dorsal base length ; origin under 11th-12th soft dorsal ray.

Scales in lateral series 49-52.

Gill rakers on first arch 6 + 14 ; lanceolate, longest raker $\frac{1}{2}$ eye diameter, equals or slightly longer than filaments.

Depth of body 26.2-30.6 ; length of head 32.5-36.5 ; diameter of eye 8.8-11.2 ; length of maxilla 15.5-17.6 ; length of lower jaw 16.5-18.8 ; length of 2nd anal spine 8.7-10.7 ; all in percentage of standard length. Diameter of eye 24.2-32.2 ; length of snout 24.2-30.8 ; interorbital width 28.6-30.8 ; length of maxilla 45.7-50.0 ; length of 2nd anal spine 25.7-30.8 ; in percentage of head length.

Body oblong, compressed. Mouth terminal, oblique ; mandible slightly protruding. Maxilla reaches to hind edge of pupil.

Pores.—Four pores on snout ; three pairs of pores on mandibular symphysis, the anterior pair inconspicuous.

Scales.—Cycloid or weakly ctenoid on head and anterior half of body ; ctenoid on posterior half.

Teeth.—Villiform in narrow bands ; outer row of upper jaw enlarged, curved ; inner row of mandibles slightly enlarged.

Gas-bladder.—Carrot-shaped, Otolithine type with 22-23 pairs of arborescent diverticula.

Colour in alcohol.—Back brown, sides silvery. Spinous dorsal black, soft dorsal and caudal dusky ; soft dorsal with narrow white stripe. Other fins whitish. Opercle with dark blotch. Pectoral axil dusky.

Distribution.—East coast of India, China, Taiwan and Japan.

III—DISCUSSION

The original description of *Sciaena bleekeri* Day was derived from two specimens collected from Bombay. The larger syntype (Reg. No. 988) which Day figured has a dorsal fin formula X + I 27, a weak 2nd anal spine and an Otolithine type of gas-bladder. The smaller syntype (No. 968) has a dorsal fin formula X + I 24, a moderately strong 2nd anal spine and a simple gas-bladder with a pair of short simple appendages at the anterior end below the septum transversum. Day (1876) did not designate types, but nevertheless he appears to have attached more importance to those specimens which he figured on which his original descriptions were based. The authors are of the opinion that the figured syntype of *Sciaena bleekeri* Day should be designated as the lectotype. The smaller syntype is being studied to determine its status and generic affiliation.

Tang (1937) while treating the species under *Pseudosciaena* Bleeker proposed a substitute name *Pseudosciaena indica* for *Sciaena bleekeri* Day, 1876 since the specific name is preoccupied by *Pseudo-*

sciaena bleekeri (Steindachner, 1866). As we are not able to determine the specific identity from the original description and we are unable to examine the type, our conclusion is based on Fowler (1933) that *Pseudotolithus bleekeri* Steindachner, 1866 is closely related to *Corvina axillaris* Cuvier, 1830 and apparently belongs to the same species. But, should it be proved that Steindachner's (1866) use of the name *bleekeri* has priority, its proper disposition becomes a matter of importance. For the present it may be taken to be what it practically is ; representing an "unidentifiable" species.

Fowler (1933) was the first worker to give the gill raker count of *Argyrosomus argentatus* as 6 + 14-15. Matsubara (1937) who examined a series of specimens from China and Japan gave the gill raker count as 13-19, but mostly 14-18. Lin (1940) gave 5 + 10 for *A. indicus* (= *A. bleekeri*) and 7 + 12 for *A. iharae* (= *A. argentatus*). Munro (1955) obviously followed Fowler (*l.c.*) and gave 6 + 14-15 for *A. argentatus*. Chu *et al.* (1963), however, gave 5 + 10 for *A. argentatus*. The type of *Sciaena bleekeri* has a gill raker count 5 + 9 on the first gill arch. From this it is clear that *Argyrosomus bleekeri* (Day) is not conspecific with *Argyrosomus argentatus* (Houttuyn) and differs from the latter chiefly in the lesser number of gill rakers, 5 + 9-10 versus 6-7 + 14-15. This data clearly suggests that Matsubara's (1937) material represents a composite of both the species and Chu *et al.* (*l.c.*) were dealing with *A. bleekeri* (Day).

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V—SUMMARY

Sciaena bleekeri was first described by Day (1876) on the basis of two specimens from Bombay. Jordan and Thompson (1911) synonymised this species under *Sciaena argentatus* (Houttuyn) and the same course was followed by subsequent workers. This was evidently the basis for the frequent reference of *Argyrosomus argentatus* (Houttuyn) to India.

In the present paper it is shown that *Sciaena bleekeri* Day is a distinct species and not conspecific with *Argyrosomus argentatus* (Houttuyn). *A. argentatus* is recorded for the first time from Indian waters, indicating a wider distribution of the species in the Indo-Pacific.

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