

On a New Species of *Sillago* Cuvier, 1817 (Teleostei : Sillaginidae) from India

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A new species of the family Sillaginidae : *Sillago soringa* is described. The salient characters for distinguishing five related valid species of *Sillago* are given.

Key Words: *Sillago soringa* sp. nov., Description, Swimbladder

Introduction

So far, eight nominal species of sillaginids belonging to three genera (Dutt & Sujatha 1980, McKay 1980) are known from the coastal waters of mainland India. The taxonomy of the widely distributed Indo-West Pacific sillaginids is in a confused state: there are more species than the nominal species so far recorded. Most of the available descriptions of the nominal species are inadequate to clearly identify the many closely-related species which share many common characters, so that misidentifications are common. According to McKay (in litt.), there are at least three new species, apart from the one now being recorded. In the course of a taxonomic study of these warmwater whittings (also called ladyfish), we have now recorded a new species of *Sillago* from the trawl catches off Visakhapatnam (17.42°N, 83.20°E) in the western part of the Bay of Bengal.

The new species is closely related to *Sillago sihama* (Forsskal 1775), *S. vincenti* (McKay 1980) and *S. boutani* (Pellegrin 1905) (the latter not recorded so far from India) and has been apparently confused with them. However, these four species and the other four species of the genus so far known from India can be distinguished on the basis of presence of blotches along flanks, number of rows of scales (cycloid and/or ctenoid) on cheeks, number of dorsal fin rays, number of post-coelomic extensions to swimbladder and number of vertebrae with L-shaped haemal arches, among other characters.

Material and Methods

The new species was encountered among the other species in random samples of sillaginids collected from the catches of minitrawlers (LOA 30+ft) landed at the fish harbour in Visakhapatnam.

Body measurements and meristic data were obtained from specimens preserved in 5% formalin. Standard length (SL) was measured from the tip of the snout to caudal base. In presenting the meristic data and body measurements (latter expressed as percent of SL or HL: head length), the data of the holotype are followed (in parentheses) by the range observed in the four paratypes. The hypural or urostyle is included in vertebral count.

Sillago soringa sp. nov. (figure 1)

Description

Based on holotype measuring 138 mm TL and four paratypes measuring 123–153 mm TL, collected on 4-8-1981 from catches off Visakhapatnam. The holotype (Regd. No. F 7734/2) and paratypes (Regd. No. F 7735/2) have been deposited in the Zoological Survey of India, Calcutta.

D₁ XI; D₂ I, 21; P 16 (15–16); V I, 5; A II, 22; gillrakers 4+1+8 (3–4+1+8–9); lateral line scales 68 (64–68); l. tr. 4/1/10 (3–4/1/9–10); vertebrae 34 (in five specimens), 5–7 with L-shaped haemal arches.

As Percentage of Standard Length : Total length 115.0 (115.0–117.1); body depth 19.2 (17.1–19.2); head length 29.2 (27.6–29.2); snout tip to first dorsal origin 35.0 (33.9–35.0); snout tip to second dorsal origin 57.5 (56.0–58.3); prepectoral length 29.2 (29.2–30.5); pre-ventral length 30.0 (29.9–31.4); preanal length 54.2 (53.8–56.2); first dorsal base 20.8 (20.0–23.6); first dorsal height 16.7 (15.3–16.7); second dorsal base 35.8 (33.9–37.1); second dorsal height 10.8 (10.6–12.4); pectoral length 15.8 (15.2–16.5); pelvic length 15.8 (15.3–16.7); anal base 39.2 (37.1–40.0); anal height 9.2 (8.5–9.8).

As Percentage of Head Length: Head depth 40.0 (39.5–41.2); head width 45.7 (42.1–48.6); preorbital length 34.3 (29.4–36.8); postorbital length 37.1 (36.8–40.0); eye diameter 28.6 (23.5–28.6); interorbital width 20.0 (19.1–21.1); snout length 40.0 (38.240–0).

Body elongate, sub-cylindrical, tapering at anterior end; dorsal profile gently convex, ventral profile less so. Mouth terminal, small; upper jaw slightly projecting. Eyes in middle of head, oval, with adipose eyelid. Teeth villiform, in a band in each jaw; a small patch on vomers; patches of teeth on roof and

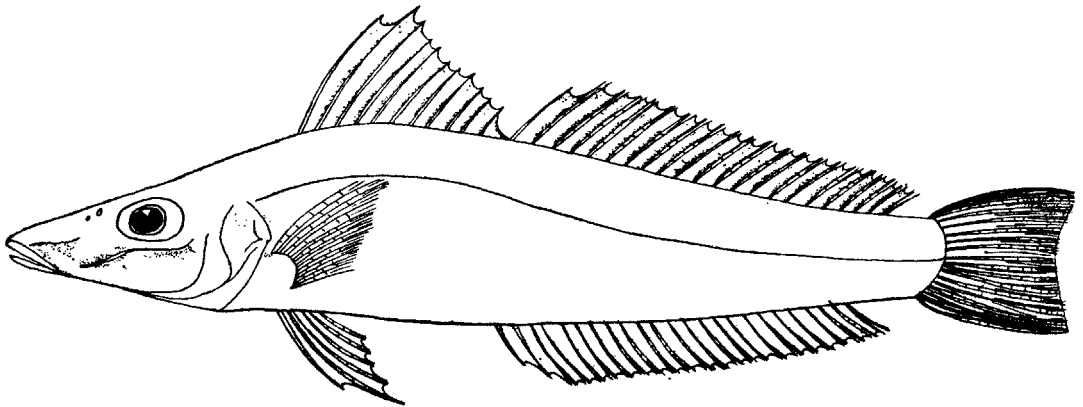


Figure 1 *Sillago soringa* sp. nov., holotype, 138 mm TL, Visakhapatnam (type locality); b, Swimbladder (ventral view) of *S. soringa*

Table 1 Distinguishing characters of the five closely-related species of *Sillago*

Sl No.	Character	<i>S. soringa</i> sp. nov.	<i>S. sihama</i>	<i>S. vincenti</i>	<i>S. boutani</i> *	<i>S. asiatica</i> **
1.	Black dots on flanks below lateral line	absent	minute discrete black dots present	minute discrete black dots present	?	absent
2.	Pigmentation on dorsal fins	membrane of second dorsal with a more or less continuous grey band formed of minute black dots, running parallel to and closer to anterior edge of each ray	as in <i>soringa</i> sp. nov.	membrane of both dorsals (and especially the second) bear distinct dark spots, running parallel to and closer to anterior edge of each spine/ray		absent, but margins finely potted with brown
3.	Swimbladder : a. anterior extensions	a median finger-like extension with a recurved extension on either side	three pairs of extensions, the two inner pairs being directed forward, the outermost pair curved back to run parallel to swimbladder	absent	as in <i>S. soringa</i>	as in <i>S. soringa</i> but recurved extensions longer
	b. number of post-coelomic extensions	one	two	one	one	one
4.	Number of rows of scales above lateral line	three or four	five	five	five	four or five
5.	Number of vertebrae	34	34	34	38	34

* Mr R. J. McKay (in litt.) confirms that *boutani* and *soringa* are distinct

** Based on original description of McKay (in press)

floor of pharynx. Two rows of scales on cheek : upper row cycloid, lower ctenoid. Scales on dorsal side of head ctenoid. Preopercle edge serrate. Gillrakers shorter than gill filaments.

Spinous dorsal with weak spines, height of spinous dorsal less than its length. Caudal emarginate. Body covered with ctenoid scales. Lateral line gently curved up to spinous dorsal, straight thereafter.

Swimbladder

Lanceolate, with a median finger-like extension and a pair of recurved extensions, at anterior end; the swimbladder bears a single tapering postcoelomic extension and a blind tubular duct which arises from the middle of its ventral side, about $4/5$ the distance from its anterior end, to terminate blindly near the vent.

Colour

Dorsal side and upper flanks grey-brown, becoming paler laterally; lower flanks and ventral side milky white. Spinous dorsal with minute discrete black dots on membrane; they are more numerous towards the distal half especially in the anterior half of the fin. In the soft dorsal, running parallel to and close to the anterior edge of each ray, is a more or less continuous grey band. The membrane of anal fin is also provided with minute black dots, but to a lesser extent than the spinous dorsal. Pectorals and ventrals

hyaline with golden tinge. Caudal hyaline, with fine black dots.

Etymology

The specific name is derived from the common name 'soringa' in Telugu, applied by the local fishermen to sillaginids.

Discussion

Sillago soringa sp. nov. resembles *S. sihama*, *S. vincenti* and *S. boutani* and has apparently been confused with them. However, the four species can be distinguished on the basis of the characters given in table 1. It also resembles a new species being described by McKay from the Gulf of Thailand and Taiwan (in press): *S. asiatica*, but can be distinguished from it (table 1) because in the latter, the pair of recurved extensions of swimbladder is longer, extending to almost half of its total length (from description by McKay, in press); further, the postcoelomic part of the swimbladder is relatively shorter in *S. asiatica*.

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References

- Dutt S and Sujatha K 1980 On the seven species of fishes of the family Sillaginidae from Indian waters; *Mahasagar—Bull. natn. Inst. Oceanogr.* 13 371–375
- McKay R J 1980 The fishes of the family Sillaginidae from India with a description of a new species; *J. mar. biol. Ass. India* 18 375–385