



Research Article

FIRST RECORD OF ARABIAN PERCHLET *Chelidoperca occipitalis* Kotthaus, 1973 FROM VISAKHAPATNAM, EAST COAST OF INDIA

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Abstract- 15 specimens (105-120 mm, TL) of the serranid fish Arabian perchlet *Chelidoperca occipitalis* Kotthaus, 1973 were collected from Visakhapatnam fish landing centre, east coast of India. *C. occipitalis* is body pinkish in colour with a dark band along preopercle margin to caudal. Yellowish spots on dorsal, caudal and anal fins. 44-46 lateral line scales are present. The morphological characters along with their body colour patterns are described. This is the first record of the species from Visakhapatnam coastal waters, east coast of India.

Keywords- First record, Arabian Perchlet *Chelidoperca occipitalis*, Visakhapatnam, East coast of India.

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Introduction

The family Serranidae (Perciformes) is one of the largest perciform families with five subfamilies, sixty four genera with 529 valid species [1]. The genus *Chelidoperca* Boulenger, 1895, belonging to the subfamily Serraninae of the family Serranidae, occurs on sand-muddy bottom of the continental shelf and slope in the western Pacific. They are brightly coloured inhabiting in the deeper parts of the reef slopes. These fishes are rather small and peculiarly are taken using trawl nets at depths greater than 100 m [2,1]. The genus *Chelidoperca* has seven nominal species (all the seven species names are currently recognized as valid an eighth nominal species from the Atlantic has been reassigned to the genus *Serranus*, family Serranidae)[3,4]. Two species of *Chelidoperca*, namely *C. investigatoris* and *C. occipitalis* are well-known from the Arabian Sea [5-7]. It differs from its congeners mainly by the number of gill rakers, lateral line scales, occipital width of the interorbital space, caudal fin shape and body colour patterns. This study provides new report of *Chelidoperca occipitalis* from east coast of India.

Materials and Methods

15 Specimens (105-120 mm, TL) of *Chelidoperca occipitalis* Kotthaus, 1973 were collected from the by catch of a commercial deep sea trawl landings from the Visakhapatnam Fisheries Harbour, Andhra Pradesh, east coast of India during April 2016. The colour of the specimens was noted in fresh condition. Skeletons for counting the number of vertebrae [Fig-3] were prepared by boiling fresh specimens and defleshing them. Methodology for taking morphometric and meristic data follows [8]. Measurements were made with calipers. Specimens are preserved in 5% formalin for further study and deposited in the Marine Living Resources Department, Andhra University, and Andhra Pradesh, India.

Results

Systematics

Order : Perciformes (perch-like fishes)

Sub Order: Percoidei

Family: Serranidae (groupers, sea basses)

Sub Family: Serraninae

Genus: *Chelidoperca* Boulenger, 1895

Species: *Chelidoperca occipitalis* Kottaus, 1973

Description: *Chelidoperca occipitalis* Kottaus, 1973 [Arabian perchlet: Fig1&2]

(Meristic and morphometric data are given in [Table 1-2])

Dorsal fin rays X, 10; pectoral fin rays 15-16; pelvic fin rays I, 5; anal fin rays III, 5-6; Caudal fin rays 7-8; Ls 44-46; gill rakers 3+4 – 8-10; vertebrae 23.

Body moderately elongate, quite cylindrical; height of the body between 31/2, length of the head, from the tip of the lower jaw to the tip of the operculum about 21/2 in the total, without caudal; head tending to depression in its anterior partially, broad, deeply with the operculum prolonged; scaly, except on the snout and upper jaw. Snout slightly depressed with rounded shape; a prominent knob on the projecting lower jaw; its extreme length is equal to the major diameter of the eye and is less than its breadth. Orbit moderately large; the upper boarder of the pupil enters to the profile of dorsal; the breadth of the interorbital space is one third the length of the eye; Interorbital gap flat and nostrils are superior.

Mouth large, slightly oblique, posterior margin of maxilla reaching to a vertical through at posterior margin of the eye; maxilla posteriorly expanded, with long, low; jaws strong; upper lip with row of tiny papillae on ventral margin, lower lip with edge of papillae on medial half, posterior part of the side of jaw lip thickening; upper jaw with row of enlarged canines slightly arched and directed anteriorly on each side of the symphysis, narrow un toothed gap at symphysis, enlarged canines flanked medially by a patch of small pointed teeth with inner row consisting of two huge directed posteriorly fangs almost its reaches to the teeth of vomers, teeth pointed, narrower band its extends posterior part along length of jaw to separate; lower jaw with row of about 8 enlarged curved fangs directed antero dorsally, flanked mesially by band of small conical teeth extending posteriorly to gape; inverted V shape band of teeth present on vomer with 3 or 4 rows of sharp

tipped conical teeth present, small 2 or 3 rows of palatine teeth present; tongue very small, slightly narrow with pointed; three flat spines present on opercle, 2 of them prominent, first spine slightly longer than remaining of spines; upper edge serrated.

Body with ctenoid scales; lateral line slightly arched over pectoral fin then gradually descending, ending at middle of caudal fin base. Small cycloid scales on basal quarter of caudal and pectoral fins;; maxilla, snout devoid of scales; maxilla truncate posteriorly, with rounded corners; eight series on the cheek. Preopercle with mixture of cycloid scales and ctenoid scales.

Dorsal fin originating at the rear point of opercle; fin continuous, first dorsal spine small; the fourth and fifth spines the greatest and one fourth longer than the eye; the rays slightly increasing in length in the ninth, which is less than two thirds of the maximum body height and shorter than the corresponding anal ray. Caudal fin emarginated, with the superior lobe longer. Ventrals sub angular, the second ray almost as long as the pectoral fin length.

Colouration:

Body pinkish-orange in colour with a prominent dark stripe running from opercular spine to base of caudal fin. Head pinkish with conspicuous yellow spots on nape, small yellow streak from beneath middle of eye across cheek; underside of head, throat, chest and abdomen pale white; snout pinkish orange; maxillaries pinkish anteriorly with posterior half white with dusky streak positioned centrally near dorsal edge; tip of lower jaw pinkish with small black spot on either side of symphysis, remainder of jaw white; yellowish orange area between eyes and on top of head, scales on top of head and on body above LL to about middle of soft dorsal fin pinkish yellow with narrow posterior black borders; eight to nine broad, irregular pink and yellow bars alternating with broader pinkish white interspaces on dorsal three-fourths of body, first bar beneath middle of spinous dorsal fin, caudal fin with dark bar present; pectoral-fin base white, small slight yellowish blotch on bases of pectoral rays, pelvic fins white with light yellow stripe along

middle rays; spinous dorsal fin light pinkish- yellow with small light yellowish orange spots on bases of spines followed by yellow spots and blotches on middle of fin, distal margin dusky; anal fin last ray with six yellow spots and remaining rays distal end with yellowish. Caudal fin pale white with small yellow spots outlined with white on bases of middle rays.

Discussion

In the present study the number of lateral line scales 44-46 (15 specimens 105-120mm TL) but [7] described from a 12 specimens collected from south-western India and reported 44 Lls only. *Chelidoperca occipitalis* differs from *Chelidoperca investigatories*, *pleurospilus* in the absence of blackish bands. *Chelidoperca occipitalis* can be distinguished from all other species of the genus by its unique colour pattern, numerous small yellow spots on dorsal, caudal and anal fins on the caudal fin, shape of the caudal fin, and preopercular serration. There has been no published record on *Chelidoperca occipitalis* from east coast of India since its report. Our specimens well agreement with the descriptions of [7]. *C. occipitalis* and *C. pleurospilus* are closely related species its distinct diagnostic colour patterns and having dark blotches on the body [9], according [10] described closer examination shows variation in colour from description on both two species *C. occipitalis* and *C. pleurospilus*. They also very in colour from other members of the genus in being orange red, bright red, yellow with pinkish, purple or pale white with conspicuous spots or stripes on the body and fins. *C. occipitalis* is probably the most rare species of the genus from Indian waters but small numbers are occasionally sold at a market. The meristic count of this species generally agree with the description of [7] except for the number of lateral line scales, rays of anal, pelvic and caudal fin rays [Table-1]. Morphometric data of *C. occipitalis* represented in the catches off Visakhapatnam is given in [Table-2]. In [Table-3] compared with different characters are given. The species has a wide distribution in the western Pacific and Indo Pacific region. For *C. occipitalis* report from east coast of India forms a considerable extension of its known distribution range.

Table-1 Meristic characters of *Chelidoperca occipitalis* as compiled by different authors

Author	D	A	V	P	C	LLS	Gill rakers	Vertebrae
Bineesh et al., (2014)	X,10	III,6	1,5	15	7	44	3+5-8+4	23
Present data (2016)	X,10	III,5-6	1,5	15	7-8	44-46	3+5-8+4	23

Table-2 Morphometric data of *Chelidoperca occipitalis* Kotthaus, 1973. (Measurements expressed in % SL and HL) from Visakhapatnam, Andhra Pradesh coast, India

	(105-120 mm, TL) N =15 Min-Max	Standard deviation- Standard error
Total length (mm)	126.3-132.7	2.69-1.90
Standard length (mm)	75.9-79.1	1.62-1.14
Body depth	26.3-28.0	0.86-0.50
Body width	19.5-20.0	0.24-0.17
Pre dorsal distance	43.1-47.5	2.00-0.55
Pre pectoral distance	43.1-47.5	2.20-1.55
Pre anal distance	71.5-74.3	1.40-0.99
Pre ventral distance	41.0-43.9	1.42-1.00
Dorsal fin base	44.2-48.7	2.28-1.61
Anal fin base	13.6-14.6	0.47-0.33
Pectoral fin base	7.31-8.42	0.55-0.39
1 st dorsal spine height	4.21-6.09	0.94-0.66
3 rd dorsal spine height	11.5-13.9	1.00-0.05
4 th dorsal spine height	12.3- 14.6	0.9-0.03
1 st dorsal fin ray length	13.6-14.6	9.47-0.33
Last dorsal fin ray length	20.7-24.2	1.72-1.22
1 st anal spine height	4.87-5.26	0.19-0.13
2 nd anal spine height	8.42-8.53	0.57-0.04
3 rd anal spine height	9.47-10.9	0.75-0.53
Anal fin ray length	18.9-19.5	0.28-0.19
Pectoral fin length	27.3-28.0	0.34-0.24
Pelvic fin length	21.9-24.2	1.12-0.79
Pelvic spine height	9.75-10.5	0.38-0.27
Head length	46.3-50.0	1.84-1.30
Head depth	41.4-43.1	0.85-0.60
Head width	53.5-54.5	0.44-0.31
Pre orbital distance	12.1-13.6	0.72-0.50

Post orbital distance	28.6-32.5	1.54-0.31
Inter orbital distance	4.8-6.8	0.97-0.68
Snout length	7.3-9.0	0.88-0.62
Eye diameter	7.31-11.3	0.92-0.12
Upper jaw length	17.0-18.18	0.55-0.39
Lower jaw length	14.6-15.9	0.63-0.45
Maxillary width	9.7-11.3	0.80-0.56

Table-3 Comparison of Morphometric data of *Chelidoperca occipitalis* Kotthaus, 1973 from different regions in India

Authors/Morphometric characters	Kollam, South west coast of India [7] Min- Max (std)	Visakhapatnam coast, east coast of India (2016) Min- Max (Std)*
Standard length	110-128 (---)	75.9-79.1 (0.62)
Body depth/SL	23.5-25.5 (0.7)	26.3-28.0 (0.86)
Head length/SL	41.4-44.7 (1.00)	46.3-50.0 (1.84)
1st dorsal spine height	3.6-5.9 (0.9)	4.21-6.09 (0.94)
Pectoral length/SL	21.6-25.7 (1.4)	27.3-28.0 (0.34)
Interorbital distance	2.9-4.3 (0.4)	4.8-6.8 (0.9)
Snout length	8.9-10.9 (0.7)	7.3-9.0 (0.88)

*standard deviation



Fig-1 *Chelidoperca occipitalis* 120.0 mm, TL Visakhapatnam, east coast of India



Fig-2 *Chelidoperca occipitalis*, dorsal view of head

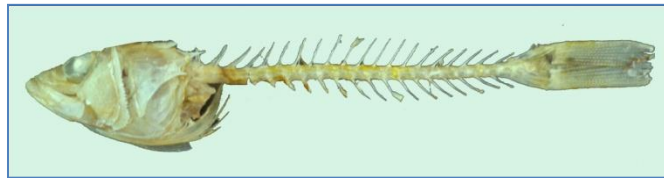


Fig-3 *Chelidoperca occipitalis*, view of vertebrae

Remark

Chelidoperca occipitalis is rare collections from Visakhapatnam coastal waters, east coast of India. It is mainly caught with deep water Priacanthidae, Serranidae and Pinguipedidae fish species in the by catches of deep sea trawl fishery.

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