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INCARA MULTISQUAMATUS GEN. ET SP. NOV. (FAMILY : ELEOTRIDAE) FROM GODAVARI ESTUARY

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Eleotris fusca (Bloch and Schneider) is very common in Godavari estuary and occurs throughout the estuary, particularly in the mangrove creeks in lower reaches. During March 1963 many specimens of this species have been collected and kept aside for further study. A recent examination of these specimens has revealed that one among the lot does not belong to this species, although it closely resembles *E. fusca* externally. This specimen, on detailed examination was found to differ markedly from the known eleotrid genera of the Indo-west pacific (Day 1878, 1889, Fowler 1934, 1935, Günther 1861, Koumans 1953, Smith 1945, Smith 1958) and hence described here as a new genus. Its affinities with closely related genera of the family are discussed at the end.

Incara gen. nov.

Type : *Incara multisquamatus* sp. nov.

Body robust, elongated, anteriorly cylindrical, posteriorly compressed. Head cylindrical. Eyes as long as snout, 1½ diameters apart. Prominent lines of papillae on head, chin and a few on body above pectoral. Pores on snout, interorbital and supraopercular groove. Anterior nostril tubular, posterior a pore. Mouth oblique, lower jaw prominent. Maxilla to anterior fourth of eye. Both jaws with many rows of small teeth, upper jaw with enlarged outer row, two canines in front ; enlarged outer row in lower jaw extend to middle of jaw, each side with two canines at the end and one in front, inner row of enlarged teeth with two canines at either end. Palate edentate. Tongue obtuse. Gill openings to below preopercle margin. Squamation characteristic : opercle with large ctenoid scales, ctenoid scales on body in line behind middle of second dorsal base to upper edge of pectoral base and anal origin to lower edge of pectoral base ; in front round cycloid scales to behind middle of eyes, on preopercle, pectoral base, breast and belly ; oval cycloid scales on caudal fin. Dorsals separate, first dorsal with 6 weak spines, second dorsal 1/9, anal 1/8. Ventrals well separated, caudal shorter than head.

Incara multisquamatus sp. nov.

(Figs. 1 & 2)

Holotype : Total length 62 mm., from Godavari estuary ; deposited in the Zoology Museum, Andhra University, Waltair.

D1 6 ; D2 1+9 ; A 1+8 ; P 16 ; V 1+5 ; C 17 ; L1 62 ; Tr. 20 ; Predorsal scales 42.

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Body robust, elongate, anteriorly cylindrical, posteriorly little compressed; height 6.2 in total and 5.1 in standard lengths. Head cylindrical, profile slightly

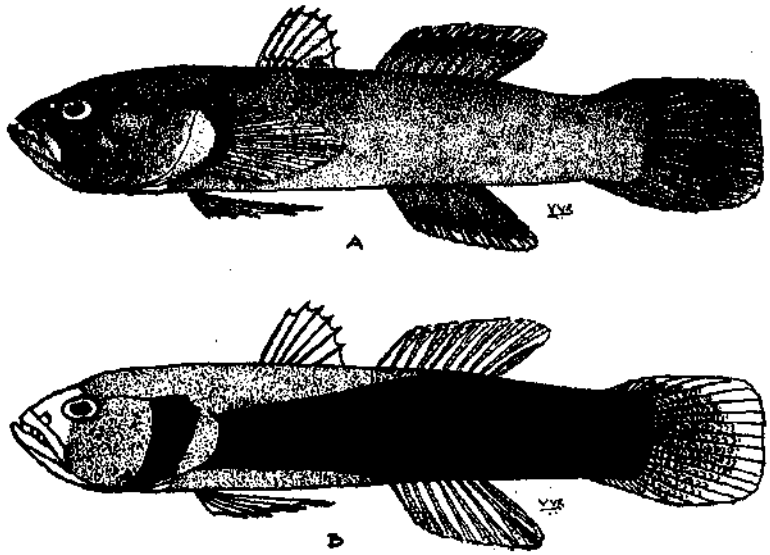

Fig. 1. A *Incara multisquamatus* gen. et. sp. nov., type, 62 mm. total length.
B. The same showing the unique arrangement of ctenoid (black areas) and cycloid (stippled areas) scales on head and body and oval cycloid scales on caudal fin (Pectoral fin omitted to show the scalation anteriorly on body).

concave above eyes, 4.1 in total and 3.4 in standard lengths, height 2/3 in length, same as width. Eye 5 in head, as long as snout, 1½ diameters apart. Head with prominent lines of papillæ as shown in fig. 2. Anterior nostril in a tube, posterior a pore in front of eye. Pores on head : on snout one above the base of anterior nostril, one in front of posterior nostril, two above orbit, one median pore in the interorbital, one slit-like pore behind eye followed by 5 pores in the supraopercular groove, two above preopercle and three above opercle ; one pore in the middle of vertical preopercular margin. Mouth oblique, lower jaw prominent. Maxilla reaches to anterior fourth of eye. In upper jaw many rows of small teeth, outer row enlarged, strong and curved, increase in size posteriorly, a strong recurved canine on each side in front ; lower jaw with many rows of small sharp teeth, outer row enlarged, extends to half the length of jaw, each side with two strong recurved canines at the end and one in front, inner row also enlarged, extends to a little before junction of the jaws, two strong recurved canines at either extremity. Palate edentate. Tongue obtuse. Gill openings to a little before verticle preopercular margin.

The arrangement of cycloid and ctenoid scales on head and body is very characteristic (fig. 1 B) : opercle covered with large ctenoid scales, ctenoid scales on body in line behind middle of second dorsal base to upper edge of pectoral base and origin of anal to lower edge of pectoral base, increase in size posteriorly ; round cycloid scales in front to behind middle of eyes, on preopercle from down anterior third of eye, on breast, belly and pectoral base ; oval cycloid scales on caudal fin in between rays extending to more than half the length in the middle. No scales on other fins.

First dorsal incersion above middle of pectoral, about ⅓ head length behind gill openings, base about ⅓, height about 2/5 in head length, spines weak, 2nd and 3rd

longest. Second dorsal nearer to caudal base than to hinder margin of eye, about one eye diameter behind first dorsal, base $\frac{2}{3}$ in head, height a little more than that of first dorsal, rays increase to 9th. Anal origin below 2nd ray of the soft dorsal, base

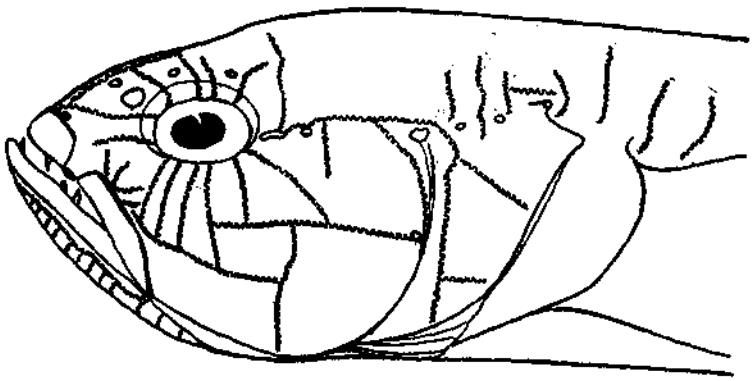

Fig. 2. Enlarged view of head of *I. multisquamatus* showing the arrangement of the lines of papillae and pores.

shorter than the latter, height about $\frac{1}{2}$ in head, rays increase to 8th. Pectoral does not reach soft dorsal, 5/6 in head length. Ventrals well separated, rays increase to 5th, 2/3 in head. Caudal subtruncate, shorter than head.

Head and body muddy brown, the former a little darker. Four bands radiate from eye, one to hinder part of maxilla, two on preopercle and one along supraopercular groove ending in a black spot of about the size of eye above pectoral axil. First dorsal light brown, a light band above base, spines spotted. Second dorsal, anal and caudal with lighter outer edges, spotted, gradually darker from base above, anal darker of the three, rays of second dorsal spotted. Pectoral lighter with a dark band behind base. Ventral pale, rays spotted.

The new genus falls in the group of eleotrid genera having the following characters : Head without bony crests, eyes normally developed, pelvics with 5 soft rays, less than 20 soft rays in dorsal and anal fins, lateral line scales 50 or more, no spine at preopercle angle, palate edentate, several rows of teeth in both jaws. Among the few general possessing these characters, two genera, *Bunaka* Herre (Herre 1927, Koumans 1941) and *Odonteleotris* Gill (Gill 1863, Koumans 1941) are some what closer to the new genus. However, the former has no enlarged rows of teeth or canines either in the upper or lower jaw ; scales ctenoid on body and cycloid on head, nape, breast and pectoral base, no scales on fins. In the latter genus, upper jaw with 2-6 canines in the outer row, inner row behind symphysis with a curved canine ; in lower jaw outer row with 4 canines, inner row enlarged laterally ; cycloid scales on head and body. The new genus can easily be distinguished from the above two genera and other eleotrid genera by its unique scalation and the nature of dentition which in combination gives it a place above *Bunaka* and *Odonteleotris* in the evolutionary sequence.

The generic name *Incara* is an arbitrary combination of letters taken from the name Indian Council of Agricultural Research and the specific name *multisquamatus* indicates the unique differential scalation of head and body with cycloid and ctenoid scales.

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