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CHIRAMENU FLUVIATILIS GEN. ET SP. NOV. (PISCES : GOBIIDAE) FROM GODAVARI ESTUARY

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THE Godavari estuary is inundated by flood waters annually from about the beginning of July to the end of September. The flood starts receding during October when there is a simultaneous influx of sea water into the estuary. From the end of September or early October to middle of November a small translucent gobiid fish, 16 mm. to 26 mm. long, locally called as ' Chiramenu ' appears in the estuary in large quantities. They occur up to and a little beyond Yanam which is about 20 km. from the river mouth. They are caught by the fishermen by dragging a large piece of cloth below the surface of water.

These small fishes can clearly be seen swimming against the down flowing flood waters, close to the banks. Having well developed fins, especially strong pectoral fins they seem to be good swimmers. Although they belong to the family gobiidae in having united pelvic fins with a well developed freanum, it is difficult to assign them to any particular genus at this stage. Many attempts were made during the years 1958 to 1963 to secure adults of this fish and also to rear them in the laboratory, both attempts were not successful. However, recently few maturing specimens (1st stage of maturity) collected during December 1969, from the lower reaches of the estuary were secured. These specimens have definite adult characters which ultimately helped in deciding their systematic position. This small gobiid with interesting characters is described here as new genus and named as *Chiramenu* by which it is locally well known.

Chiramenu gen. nov.

Type : *Chiramenu fluviatilis* sp. nov.

Body slender, elongated, anteriorly cylindrical, posteriorly compressed. Covered with 54-58 ctenoid scales from behind pectoral ; head, nape, breast and pectoral base naked. Eyes smaller than snout. Mouth inferior, upper jaw prominent, fleshy, lower jaw included. Maxilla reaches to anterior margin of orbit. Anterior nostril in a small tube, posterior a pore. A single row of closely set teeth in upper jaw, three rows of teeth in lower jaw, no canines. Palate edentulous. Tongue bilobed. Rows of papillae on head. Gill openings to a little below pectoral base. Dorsal fins separate, first with 6 flexible spines, second 1/10, anal 1/10. Ventrals united, oval, fraenum well developed. Pectoral without free upper rays, no fleshy flaps in the inner shoulder girdle. Caudal emarginate, shorter than head.

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Chiramenu fluviatilis sp. nov.

(Figs. 1 & 2)

Holotype : Total length 21 mm. (Standard length 17 mm.), collected from Gautami Godavari estuary.

Paratypes : Ten specimens, total length 18 mm. to 21 mm. (Standard length 15 mm. to 17 mm.), all collected from Gautami Godavari estuary. All specimens deposited in the Zoology Museum, Andhra University, Waltair.

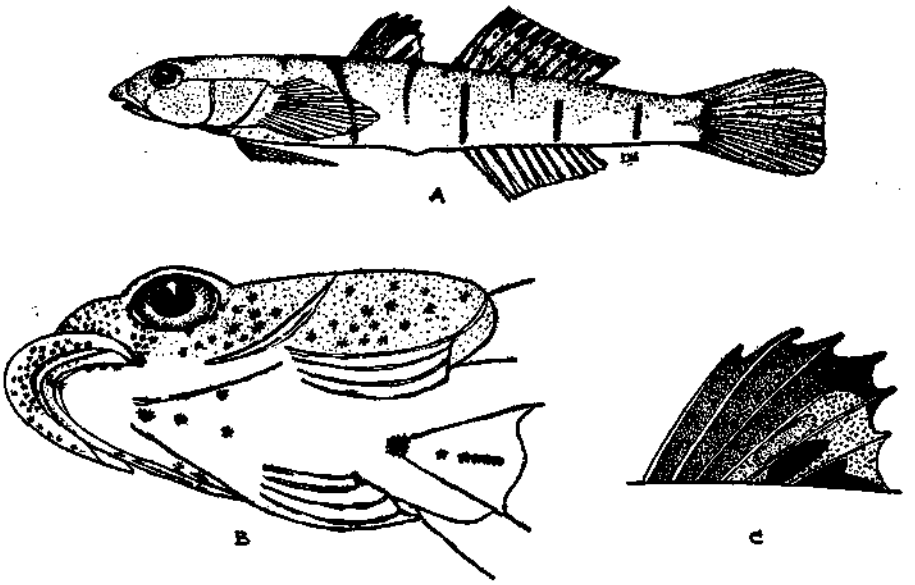

FIG. 1. A. *Chiramenu fluviatilis* gen. *et* sp. nov., type, 21 mm. total length. B. Enlarged view of head showing spatulate upper lip and inferior mouth. C. The colour pattern of first dorsal fin of live specimens.

D1 6 ; D2 1+10 ; A1 + 10 ; P. 16 ; V1 + 5 ; C 14 ; L1 54-58 ; Ltr 16 ; GR 2.1.6. ; Vert. 26.

Body slender, elongated, anteriorly cylindrical, posteriorly compressed. Dorsal and ventral profiles rather convex. Body depth 5.7-6.2 in standard and 6.8-7.2 in total lengths. Head 4.0-4.4 in standard and 5.0-5.4 in total lengths. Eye 4.3-4.6 in head, about 1/5 diameter apart, slightly shorter than snout. Mouth inferior, upper lip fleshy, expanded forwards, spatulate, lower jaw fitting into upper jaw (fig. 1B). A single row of 50-56 closely set teeth in upper jaw, tips more or less rounded, gradually decrease in size from middle towards sides ; lower jaw with three rows of fine pointed teeth, the outer row much enlarged, inner row extends to half the jaw on each side, no canines. Palate edentulous. Tongue bilobed. Maxilla extends to anterior margin of orbit. Anterior nostril in a small tube, posterior a pore in front of eye. Cheeks prominent ; a pore in the preopercular margin ; papillate rows on head and chin (fig. 2). Supraopercular groove well formed. Gill openings extend slightly below pectoral base. Gill rakers 2.1.6. Vertebrae 26.

Origin of first dorsal about half head length behind gill openings, height a little more than half and base half in head length, spines flexible, 2nd, 3rd and 4th longest. Second dorsal origin a little less than eye length behind first dorsal, about

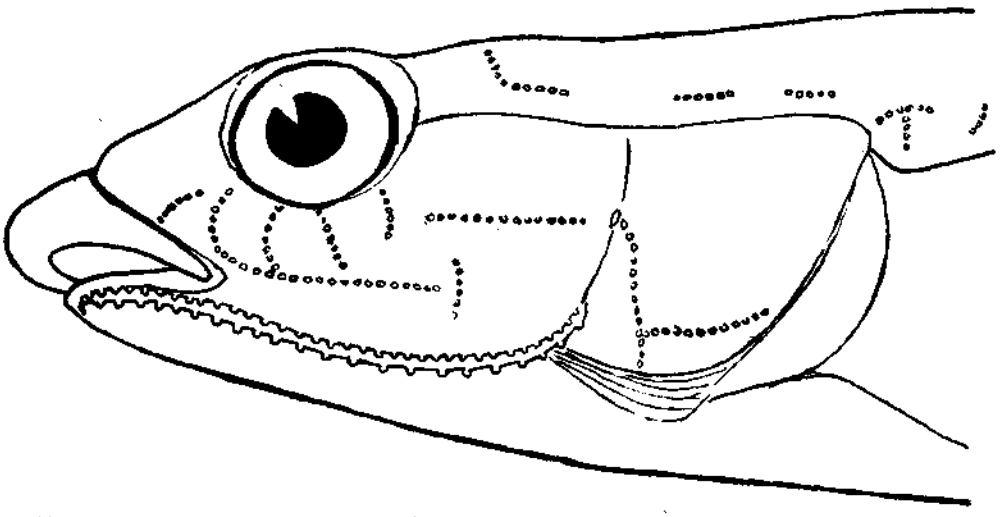

FIG. 2. Enlarged view of head of *C. fluviatilis* showing the arrangement of rows of papillae.

mid-way from hind margin of orbit to caudal base, rays decrease in length posteriorly, height about half and base a little less than head length. Anal origin below 2nd ray of soft dorsal, rays decrease in length posteriorly, height less than half and base about 3/4 in head length. Pectoral fins strong, 3/4 in head length, reaches to below middle of first dorsal. Ventral slightly shorter than pectoral, oval, basal membrane well developed. Caudal emarginate, shorter than head.

Ctenoid scales on body in line behind pectoral base to behind first dorsal base dorsally and front of anal base ventrally, no scales in front ; head, nape, breast and pectoral base naked. Scales increase in size posteriorly.

Colour translucent with black spots on head and body ; top of head, snout, cheeks, upper third of body slightly darker. Eyes orange. A dark band from below eye to corner of mouth. Sides of body with 5 narrow vertical bands, 1st oblique, below 1st dorsal, 2nd slightly curved, behind 6th dorsal spine, 3rd and 4th below 2nd dorsal, 5th on caudal peduncle, the last four bands fully extend from dorsal to ventral sides in some specimens, few short bands from dorsal surface, base of caudal slightly darker, scales with black borders. First dorsal spotted black before 4th spine, lighter behind, an oval orange blotch between 4th and 5th spines, an oval black blotch between 5th and 6th spines, a black blotch in the lower half behind 6th spine, the lighter area around these blotches scattered with blue iridiophores (Fig. 1 C). Second dorsal with a black free margin and four oblique bands. Caudal dusky; anal, ventral and pectoral colourless. In preserved specimens the orange blotch on 1st dorsal turns white and blue iridiophores disappear.

This small fish differs from all other gobioid fishes (Day 1878, 1889 ; Herre 1934, 1940 ; Koumans 1941, 1953 ; Smith 1959, 1960 ; Visweswara Rao—MS) except the genus *Oxyurichthys* Bleeker in the possession of a single row of teeth in

upper jaw. However, these two genera can easily be distinguished by the following characters :

	Oxyurichthys	*Chiramenu*
1.	Caudal fin pointed and longer than head.	Caudal fin emarginate and shorter than head.
2.	Low crest on nape.	No crest on nape.
3.	Scales on nape and breast.	No scales on nape and breast.
4.	Dorsal fin rays 1+12.	Dorsal fin rays 1+10.
5.	Anal fin rays 1+13-14.	Anal fin rays 1+10.
6.	Pectoral fin rays 20-23.	Pectoral fin rays 16.
7.	Mouth terminal, lower jaw prominent.	Mouth inferior, upper jaw prominent.
8.	Teeth in upper jaw strong and caninoid.	Teeth in upper jaw delicate, not caninoid.
9.	Tongue rounded.	Tongue bilobed.

In view of the above differences a new genus *Chiramenu* has been erected to accommodate this gobiid fish.

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REFERENCES

DAY, F. 1878. *The Fishes of India*, London.

———. 1889. *The Fauna of British India* (Fishes), London, **2**.

HERRE, A. 1934. A new goby from Singapore Island, *Bull. Raffles Mus.*, **9** : 85-86.

———. 1940. Notes on fishes in the Zoological Museum of Stanford University, VII. New and rare Philippine gobies from Herre 1936-1937 Oriental Expedition, and in the collection of the Bureau of Science. *Philippine J. Sci.*, **72** : 357-369, Pls. 1-6.

KOUMANS, F. P. 1941. Gobioid fishes of India. *Mem. Indian Mus.*, **10**.

———. 1953. *The Fishes of the Indo-Australian Archipelago*. Leiden, **10**.

SMITH, J. L. B. 1959. Gobioid fishes of the families Gobiidae, Periophthalmidae, Trypauchenidae, Taenioididae, and Kraemeriidae of the Western Indian Ocean. *Ichthyol. Bull. Rhodes Univ.* No. 13.

———. 1960. Fishes of the family Gobiidae in South Africa. *Ibid.* No. 18.

VISWESWARA RAO, V. New gobioids from Godavari estuary. *J. Zool. Soc. India* (in press).

———. *Waitea buchnani* sp. nov. (Family : Gobiidae) from Godavari estuary. *J. Bombay Nat. Hist. Soc.* (in press).