

A REDESCRIPTION OF *DORYICHTHYS DEOCATA*
(HAM. BUCH.) (PISCES : SYNGNATHIDAE)

By

NIBEDITA SEN

*Eastern Regional Station, Zoological Survey of India,
Shillong*

(With 1 Text-figure)

INTRODUCTION

Seven species of *Doryichthys* Kaup are known from India, Burma and Sri Lanka : *D. cunculus* (Ham.) from estuary that ascends into freshwater zones in rivers of peninsular India ; *D. bleekeri* (Day) from Alwaye river near Cochin, *D. deocata* (Ham.) from rivers of Bengal, Bihar and Assam ; *D. dunckeri* Prashad and Mukherji from Upper Burma ; *D. insularis* Hora from coral reefs in Andamans ; *D. heraldi* Menon from Ponnayar river, Tamil Nadu ; *D. ocellatus* Duncker from Sri Lanka.

Doryichthys deocata (Ham.) was originally described by Hamilton-Buchanon (1822) ; subsequently it has been recorded by Day (1878 & 1889) and Shaw and Shebbeare (1937). Day (*op. cit.*) has mentioned about its distribution in the rivers of Bengal and Bihar. Shaw & Shebbeare (*op. cit.*) described its distribution in Panchenai river in the Terai and small rivers in Borjhar forest (Central Duars) area. Hora (1921) recorded it from Eastern Himalayas below Darjeeling, from the collection of G. E. Shaw. It was first recorded from Assam by K. L. Sehgal (1955) from one specimen in the collection of B. Prashad and S. L. Hora from Darrang District in November 1939. However, a full description of the species has not been given by earlier authors.

In view of the above fact, when an adequate number of specimens of *Doryichthys* were made available from the collections of A. K. Ghosh and party and K. R. Rao and party deposited in the Eastern Regional Station, Zoological Survey of India, a thorough examination of each of the specimen were made by the author. As a result, a number of characters specially in the fin formula, some variations were noticed ; further, a spiny projection on the ventral side near opercular joining, not mentioned in earlier descriptions, has been noted in some specimens. The specimens has now been determined as *deocata* and a redescription of the species is given in the present paper,

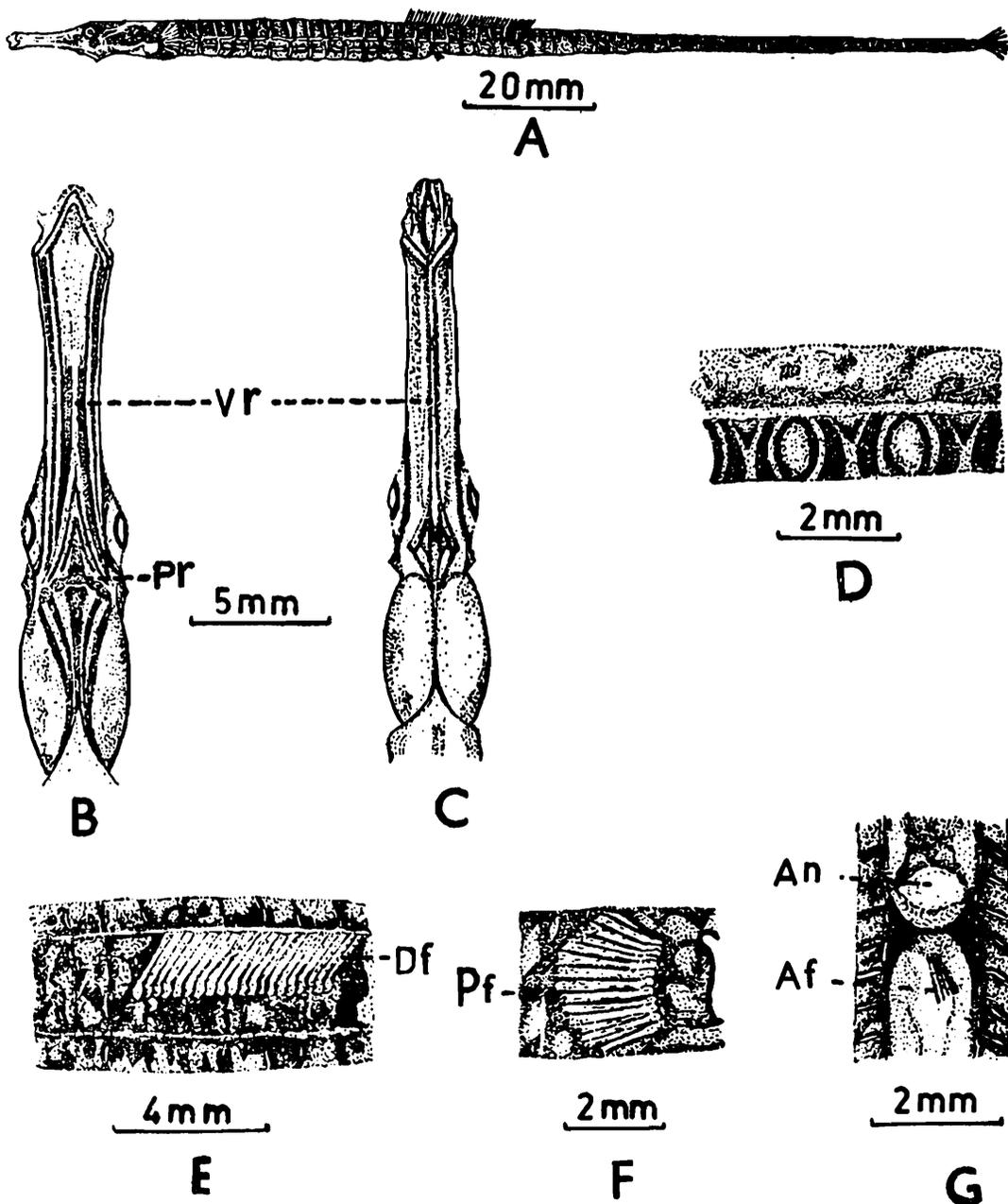
Doryichthys deocata (Ham. Buch.)

(Text-fig. 1)

Syngnathus deocata Hamilton-Buchanan, 1822, *Fish. Ganges* : 363.*Doryichthys deocata* Day, 1878, *Fish. India* : 680.

D. 30-37, P. 17-21, A. 2-3, C. 7-10, Osseous ring. 16+31-32, Subdorsal ring 6-9.

Body elongated, nearly as high as broad. In present specimens body length varies from 85 mm to 155 mm. Trunk hexagonal, tail



Text-fig. 1. *Doryichthys deocata* (Ham. Buch.) A—Male, B—Ventral side of snout having projection, C—Ventral side of snout without projection, D—Colouration showing “Y” pattern in female, E—Dorsal fin, F—Pectoral fin, G—Anal portion.

Af—Anal fin, An—Anus, Df—Dorsal fin, Pf—Pectoral fin, Pr—Projection, Vr—Ventral ridge.

tetragonal. Head length 7.1 to 8.7 in total length. Snout 1.6. to 2.0, eye diameter 6.0 to 10.0, in head length. Eye situated near to opercular margin than to tip of snout. Shields striated, striations prominent on upper surface, shield margins fairly prominent, intermedial shields not so prominent. Inferior cristae of trunk and tail discontinuous, median cristae of trunk and inferior cristae of tail continuous. A projection may be sometimes present on ventral surface near opercular joining just behind eyes. Tail longer than headlength and trunk. Dorsal fin less in height than depth of the body. Length of dorsal base 7.7 to 12.9, pectoral length 42.0 to 64.8, anal length 68.5 to 123.0, caudal length 24.0 to 32.5 in total length. Each fin ray of dorsal, pectoral and anal having an elevation at its base, as a result of which whole of the fin base shows elevation (Text-fig, 1 E, F). Anal fin situated in a groove just behind the anus. (Text-fig. 1G).

Body colouration varies in male and female. In specimens preserved in 5% formalin, male is brownish black whereas female is brownish above and each segment of abdominal region ornamented with a "Y" pattern, outlined by alternate dark and light brown stripes in light brown ground colour (Text-fig. 1 D).

NOTE

The only information on the biology of the species is that it swims in an upright position and the male carries the eggs (Shaw & Shebbeare, 1937). During the faunistic surveys in Manas Wildlife Sanctuary, the first specimen was caught on the muddy banks of a small stream, which passes through uneven alluvial soil which is mostly sandy. At most places the stream was covered with aquatic vegetation. After the first specimen, several more specimens were collected from slow moving streams by using cast net. It would appear to prefer slow moving streams with plenty of aquatic vegetation at the bottom.

Material Examined : (i) 11 ♂♂, 11 ♀♀ Phura river (Kamrup Dist.) 12. i. 74, Coll. A. K. Ghosh, (ii) 3 ♂♂, 3 ♀♀, Marahakowa river (Kamrup Dist.) 15. xii. 74, Coll. K. R. Rao.

DISCUSSION

Some variations are noticed in the snout region of different specimens. Specimens with ventral projection exhibit an interrupted ventral groove and the anterior region appears somewhat blunt (Text-fig. 1B) but the specimens without ventral projection show a continuous longitudinal thin ventral groove and anterior region appears somewhat conical (Text-fig. 1C).

Males could be externally identified by the presence of egg pouch on the abdomen ; eggs in the egg pouch could be seen from outside and could be counted. In immature specimen eggs could not be seen in the egg pouch.

Doryichthys deocata (Ham. Buch.) also appears to be closely allied to *D. dunckeri* Prashad and Mukherji (1929) recorded from Upper Burma and *D. insularis* Hora (1925) recorded from Andamans, in their fin formula.

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SUMMARY

Doryichthys deocata (Ham. Buch.) (Solenichthys : Syngnathidae : Pisces) has been described in detail, with illustrations, based on a series of specimens collected around Manas Wild Life Sanctuary, Assam, and its morphological relationship with *D. cunculus* (Ham.), *D. bleekeri* (Day), *D. dunckeri* Prashad and Mukh. and *D. insularis* Hora has been discussed.

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