

DESCRIPTION OF A NEW SPECIES, *PISODONOPHIS*, *ASSAMENSIS*, A NEW EEL
FROM LOWER ASSAM WITH A KEY TO THE INDIAN OPHICHTHIDAE
(FAMILY : OPHICHTHIDAE / GENUS : PISODONOPHIS)

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INTRODUCTION

During the course of my studies on a fresh lot of fish from Dolu River, Dt. Silchar, Lower Assam, I came across a well preserved eel measuring 21.4 cm. in total length. This specimen after detailed studies revealed to represent a hitherto unknown species belonging to the family *Ophichthidae* and genus *Pisodonophis*. A detailed description of this species along with a revised key to the genus *Pisodonophis* to accommodate it is given in the present paper.

DESCRIPTION

The body extremely elongate, compressed, snake-like, nearly cylindrical, narrowing down to a flattened and pointed tip of tail (Fig. 1). Length of head 11.8 times in total length, $4\frac{1}{4}$ times in the distance between tip of snout and vent, equal to the distance between dorsal fin origin and pectoral fin base. The distance between origin of dorsal fin and pectoral fin base is nearly 5 times in the distance between tip of snout and vent. Mouth terminal, large, cleft of mouth wide—3 times in head length extending beyond the posterior margin of eye orbit. Jawes equal with uniserial rows of pointed teeth (Fig. 2).

Branchiostegal rays closely fused together like fused bands of tapes crossed or overlapped at the centre forming closed chamber like structure (Fig. 3) in a characteristic pattern typically "consistent within Ophichthidae" (Mc Cosker, 1977). Gill-opening small, slit-like, crescent shaped, just above the broad base of pectoral fin. *Dorsal fin low, without spine, commences far behind the base of pectoral fin, continued up to in front of the pointed tip of tail, which is finless ; anal fin low, continuous, also does not extend on to the tip of the caudal ; no pelvic and caudal fins ; pectoral fin somewhat round with broad base, slightly elongated in shape. No scales. Continued longitudinal grooves along the dorsal, lateral and ventral sides of the body. Colour of the body light olive-green dorsally, creamy-white on the sides and below with black spots on the dorsal and lateral sides.*

Diagnostic characters : (1) *Head length* $4\frac{1}{4}$ times in the distance between tip of snout and vent (2) *Length of head equal to the distance between origin of dorsal fin and base of pectoral fin* (3) *Uniserial pointed teeth on the jaws* (4) *The distance between origin of dorsal fin and pectoral fin base nearly 5 times in the distance between tip of*

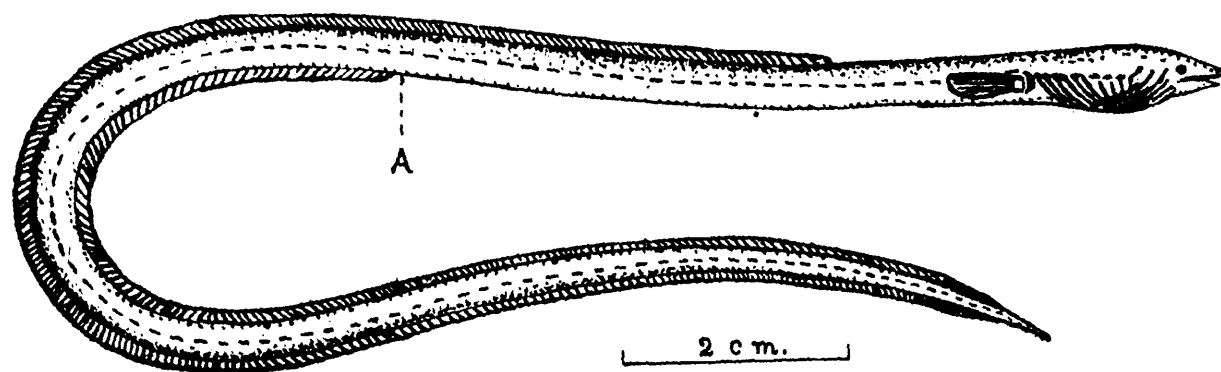


Fig. 1. Lateral view of *Pisodonophis assamensis* Sen, Holotype.

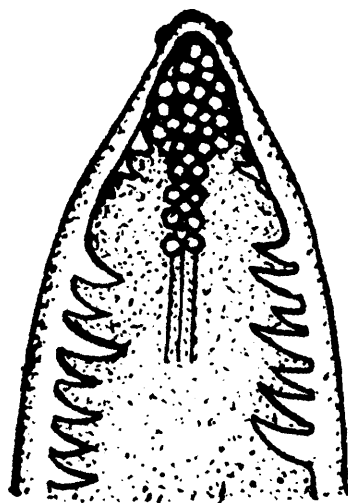


Fig. 2

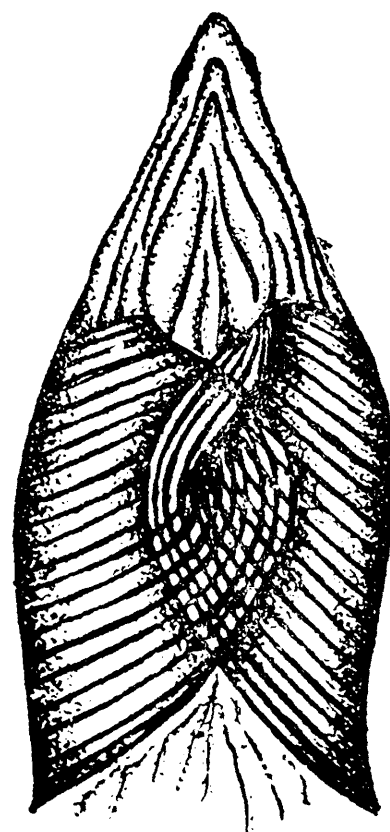


Fig. 3

Fig. 2. Arrangement of teeth on jaws and vomer in *Pisodonophis assamensis* Sen
 Fig. 3. Ventral side of head—showing branchiostegal rays broadly crossed or overlapped along the ventral midline in a characteristic pattern.

snout and vent. (5) Origin of dorsal fin *more behind* the pectoral fin base.

Affinity : Altogether three valid Indian species under the genus *Pisodonophis* viz., (1) *Pisodonophis boro* (Hamilton) (2) *Pisodonophis chilkenis* (Chaudhuri) (3) *Pisodonophis cancrivorous* (Richardson) have been so far described from Indian waters (Jayaram, 1981, and Talwar & Kacker, 1984). After detailed taxonomic studies it has been found that the *P. assamensis* significantly differs from all the predescribed Indian species mentioned above. It sharply differs with the *P. cancrivorous* in the position of the origin of dorsal fin, which is far behind the base of pectoral fin (*versus*, more or less commencing *above* the base of pectoral fin); it sharply differs with *P. chilkenis* in head length, which is $4\frac{1}{4}$ times in the distance between tip of snout and vent (*versus*, 5-5.5 times); with its nearest relative *P. boro*, it however, resembles in many characters,— profiles of head and body, colourations etc. but sharply differs with the following basic characters (*viz.*, (1) Head length $4\frac{1}{4}$ times in the distance between tip of snout and vent (*versus*, 3.5 to 4 times); (2) Length of head *equal* to the distance between origin of dorsal fin and base of pectoral fin (*versus*, length of head greater in the distance between origin of dorsal fin and base of pectoral fin); (3) *Uniserial* rows of pointed teeth on the jaws (*versus*, grannular in patches and in several smaller rows); (4) Distance between origin of dorsal fin and base of pectoral fin nearly 5 times (*versus*, $6\frac{1}{2}$ to 7 times); (5) origin of dorsal fin *more behind* the base of pectoral fin (*versus*, slightly nearer to the pectoral fin base).

Material : Holotype, Regd. No. F F 2159.

Total length 21.4 cm. Loc. Dolu River at Barakhola, Dt. Silchar, L. Assam. Date of Coll. 17th June, 1984. Coll. T. Chanda.

**Key to the Indian Ophichthidae (Genus :
Pisodonophis)**

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|---|-----|--|
| 1. Dorsal fin commencing more or less above the base of pectoral fin. | ... | <i>P. cancrivorous</i> (Richardson) |
| — Dorsal fin commencing behind the base of pectoral fin | ... | 2 |
| 2. Head length 5-5.5 times in the distance between tip of snout and vent | ... | <i>P. chilkenis</i> Chaudhuri |
| — Head length 3.5 to 4 times in the distance between tip of snout and vent; teeth grannular or sharply pointed, length of head equal or greater than the distance between dorsal fin origin and pectoral fin base | ... | 3 |
| 3. Teeth grannular; length of head greater than the distance between dorsal fin origin and pectoral fin base | | <i>P. boro</i> (Hamilton) |
| — Sharply pointed teeth on the jaws; length of head equal to the distance between dorsal fin origin and pectoral fin base; head length $4\frac{1}{4}$ times in the distance between tip of snout and vent; | ... | <i>P. assamensis</i> Sen |

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