

ON A RECORD OF SHORT-FINNED WORM EEL, *MURAENICHTHYS VERMIFORMIS*, PETERS FROM INDIAN COAST

SHORT-FINNED worm eel, *Muraenichthys vermiformis*, Peters has been previously recorded only from Ceylon coast by Munro¹ and Day². But there is no record of this species from Indian coast.

While undertaking biological collection in intertidal zone of Adatrá (Lat. 22° 27' N., Long. 69° 06' E) and Shivarajpur (Lat. 22° 20' N., Long. 68° 58' E.) on the North-West coast of India, several live specimens of *Muraenichthys vermiformis* (Figs. 1 and 2) were collected. They are deposited in the Museum of Marine Biological Research Station, Port Okha.



FIG. 1

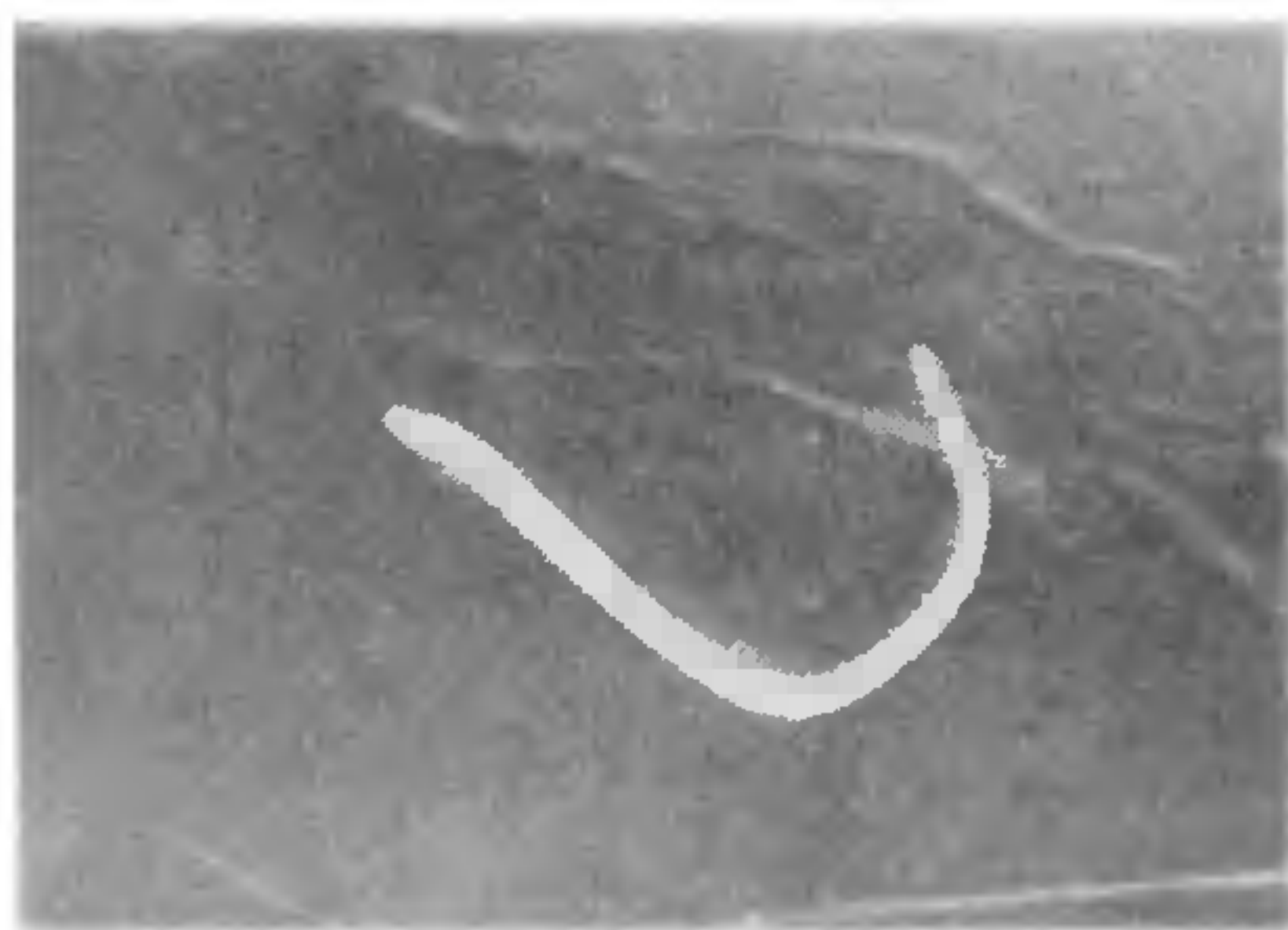


FIG. 2

Description

Body is cylindrical, without scales, ventral fins and pectoral fins are absent. Dorsal fin commences behind the vent. Head is 5.5-6.8 and depth of body 19-24 in total length. Head is 1.6-1.8 in trunk. Head and trunk are 2.2-2.4 in total length. Eyes are 2-2.3 in snout. Angle of the mouth is slightly posterior to the eye. Vomerine teeth are present. Tongue is not free. Nostrils are labial in position. Tip of ail is free,

Colour

Dark ashy along the back, becoming yellow or dirty yellow on the sides and below. Dorsal fin faint ashy while anal fin white.

Habitat

Under the stones and coral boulders lying in sandy/sandy-muddy bottom of mid-littoral zone.

Distribution

Ceylon, North-West coast of India (present record). *M. vermiformis* differs from *Muraenichthys schultzei*, Bleeker by following characters :

- (i) The origin of the dorsal fin behind the vent.
- (ii) Teeth in jaws and on the vomer in a single row.

The authors are thankful to Shri P. Basu, Commissioner of Fisheries, Government of Gujarat, for facilities, and to Professor N. D. Chaya and Shri M. Bhaskaran for guidance and encouragement.

Marine Biological Research Station, N. M. PATEL,
Port Okha 361 350, M. I. PATEL,
January 16, 1978.

1. Munro, I. S. R., *The Marine and Fresh Water Fishes of Ceylon*, Canberra, 1955, 1, 65.
2. Day, F., *Fauna of British India Fishes*, 1889, 1, 663.

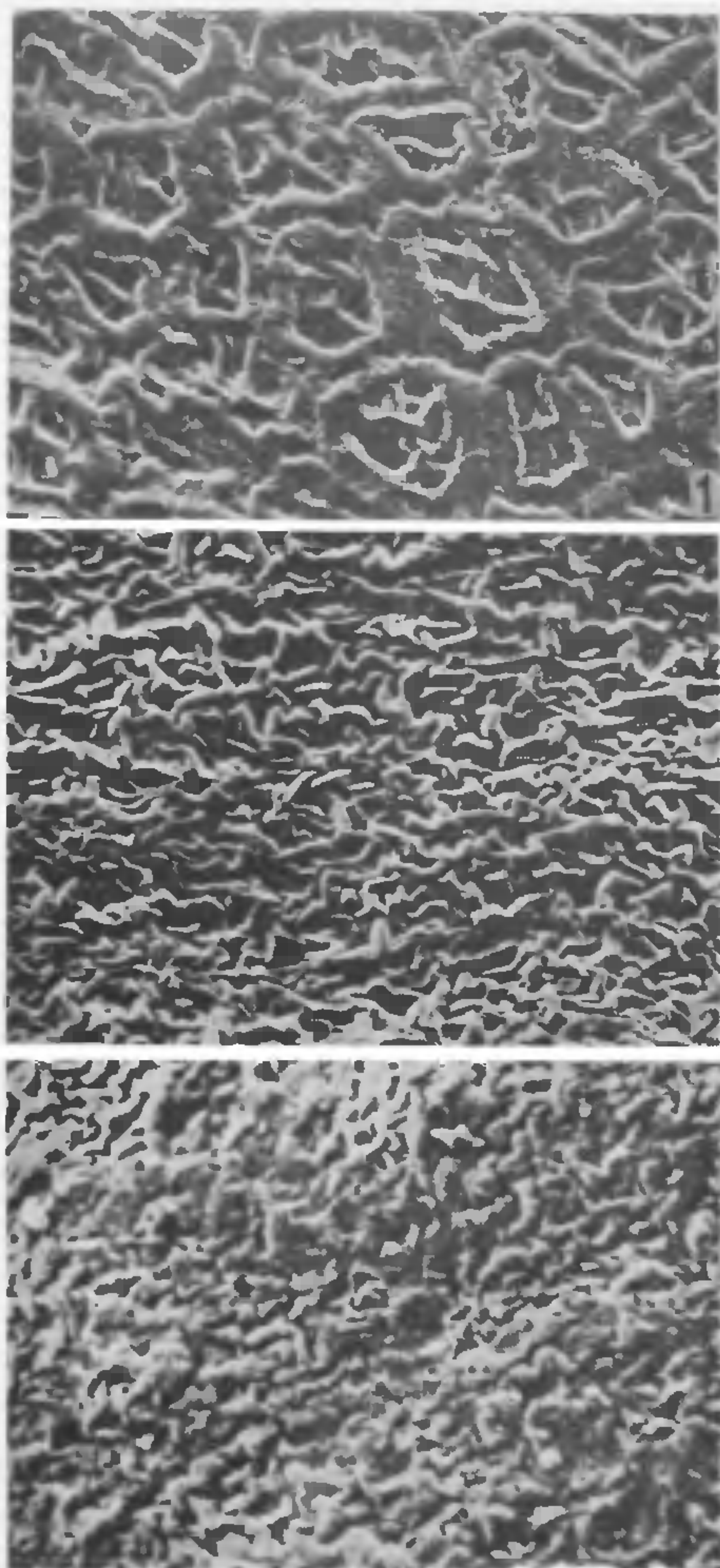
SCANNING ELECTRON MICROSCOPIC STUDIES ON SPERMODERM OF *SESBANIA* SCOP. (LEGUMINOSAE)

EXTENSIVE anatomical and morphological studies on Leguminous seeds are available¹⁻³, yet very little work with scanning electron microscope (SEM) has been accomplished⁴⁻⁶. We report on SEM results on the spermoderm pattern of *Sesbania grandiflora* Pers., *S. aegyptiaca* Pers., and *S. aculeata* Pers.

Dry mature seeds after cleaning were attached to aluminium stub by silver paint and coated with a very thin layer of gold. For uniformity the side just below the hilum in all seeds was scanned in the Cambridge stereoscan-180, at 20 K.V. The voucher specimens were deposited in the Department of Botany, Lucknow University Herbarium.

The three taxa which were investigated show the existence of two types of spermoderm pattern. Spermoderm of *S. grandiflora* (Fig. 1) consists of numerous round or polygonal thickened, raised ridges. Each area encloses within it, a somewhat depressed cross-like structure, sometimes the centrally enclosed structures appear reticulate due to the presence of finer thickened, intersecting lines. *S. aculeata* and *S. aegyptiaca* (Figs. 2 & 3) show rugose type of spermoderm pattern, the seed surface consists of irregular, interwoven ridges and furrows. In *S. aculeata* (Fig. 2)

this pattern is more distinct and the rugae are smooth, while in *S. aegyptiaca* (Fig. 3) the rugae are less distinct and have some deposition, which makes them rough. Presumably, the basic spermoderm pattern does not differ from place to place but the amount of deposition does vary⁵.



FIGS. 1-3. Spermoderm of (1) *Sesbania grandiflora*, (2), *S. aculeata* and (3) *S. aegyptiaca* (All $\times 4500$).

S. grandiflora is a medium sized short lived tree, while *S. aegyptiaca* and *S. aculeata* are shrubs. Our studies show that the spermoderm pattern of

S. aegyptiaca and *S. aculeata* show greater similarity compared to that of *S. grandiflora*, which is totally different. Though all the three are distinct from each other, we believe that these differences in spermoderm pattern are specific and characteristic of each species of plant.

The authors are thankful to Dr. Nityanand, Director, C.D.R.I., Lucknow, for the permission to use the E.M. and to Drs. A. C. Shipston and V. K. Bajpai for their kind help in the use of the instrument.

Department of Botany,
Lucknow University,
Lucknow 226 007,
May 1, 1978.

B. S. TRIVEDI,
G. D. BAGCHI,
USHA BAJPAI.

1. Ambegaokar, K. B., *Ind. J. Agr. Sci.*, 1976, 46, 8.
2. Corner, E. J. H. *Phytomorph.*, 1951, 1, 117.
3. —, *The Seeds of Dicotyledons*, Cambridge University Press, Cambridge, 1976, 1 & 2.
4. Mc Ewen, T. I., Dr nzek, B. L. and Bushuk, W., *Cereal Chem.*, 1974, 51, 750.
5. Sharma, S. K., Babu, C. R., Johri, B. M. and Hepworth, A., *Phytomorph.*, 1977, 27, 106.
6. Wolf, W. J. and Baker, F. L., *Cereal. Sci. Today*, 1972, 17, 124.

TORI LONGITUDINALES AND VALVULA CEREBELLI AS THE BASIS OF IDENTIFICATION IN FISHES

TORI longitudinales arise from the central gray zone of the optic tectum. The two tecta are connected by an intertectal commissure which passes over the tori and some fibres of this commissure may terminate in the mass of tori. The tori hang in the optocoele. The configuration of the tori varies in the species of *Barilius* under report.

Valvula cerebelli is a characteristic feature of bony fishes and assumes a definite configuration at the level where the tractus mesencephalo-cerebellaris posterior establishes a full connection with the granular area of valvula. The molecular valvula by this time has differentiated itself into right and left lateral and a central molecular area surrounded by granular area in a feature characteristic of each species.

Barilius bola (Ham.), *B. vagra* (Ham.) and *B. bendelisis* (Ham.) were examined. In *B. bola*, the tori are partitioned medially by a long narrow zone of the optocoele except at the dorsal end (Fig. 1). The tori abut against the periventricular layer (stratum fibrosum periventriculare). Each torus is a massive structure and the optocoele between the tori and the central molecular valvula is very narrow because of