

A₁B₁: 8, 9, 11, 12, 14, 2,

A₂B₂: 1, 13, 16, 17,

A₁B₂: 3, 4, 7, 10, 18, 20, 19,

A₂B₁: 5, 6, 15.

Further, the sporophores of *P. bicolor* collected were found to be associated with white rots, confirming the views of Nobles¹, that tetrapolar species cause white rots.

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PORONIA PILEIFORMIS (BERK.) FR.: A NEW RECORD FROM INDIA

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It is extremely difficult to separate *Poronia* from *Xylaria*¹. *Poronia* is delimited from allied xylariace-

ous genera primarily by nail-shaped stromata and coprophilous habit². During various fungal forays of Eastern Himalayas in the past decade, this fungus was encountered on dung from Nongpoh (Meghalaya). It is easily identified by the following characteristics: Stromata branched, elongated, with a distinctly bulbous foot and long, slender, smooth, dark-brown stalk terminated by saucer-shaped expansion; fertile clava 1 cm across, uneven surface due to ostiolar elevations, upper surface flat to convex; ectostroma brownish, somewhat pruinose; entostroma creamy solid, Perithecia globose upto 1.5 cm diam; ostioles black, papillate. Asci 65–85 × 6–7 µm, ascal plug cuboid, J+. Ascospores 7–8.5 × 3.5–4.5 µm, elliptic. Paraphyses upto 4 µm wide (figures 1 a–e). Collection examined: PAN 16262, on dung, Nongpoh (alt. 800 m), Meghalaya, July 13, 1978. Leg. A.M. Narula.

P. pileiformis is a new record for India. Part of this collection has been deposited at the personal herbarium of Prof. J. D. Rogers of Washington State University, USA to whom the authors are thankful for identification. AMN acknowledges the award of fellowship from DST New Delhi.

11 November 1982

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OBSERVATIONS ON THE EGGS AND EMBRYO OF *ICHTHYOPHIS MALABARENSIS* (TAYLOR) (APODA: AMPHIBIA)

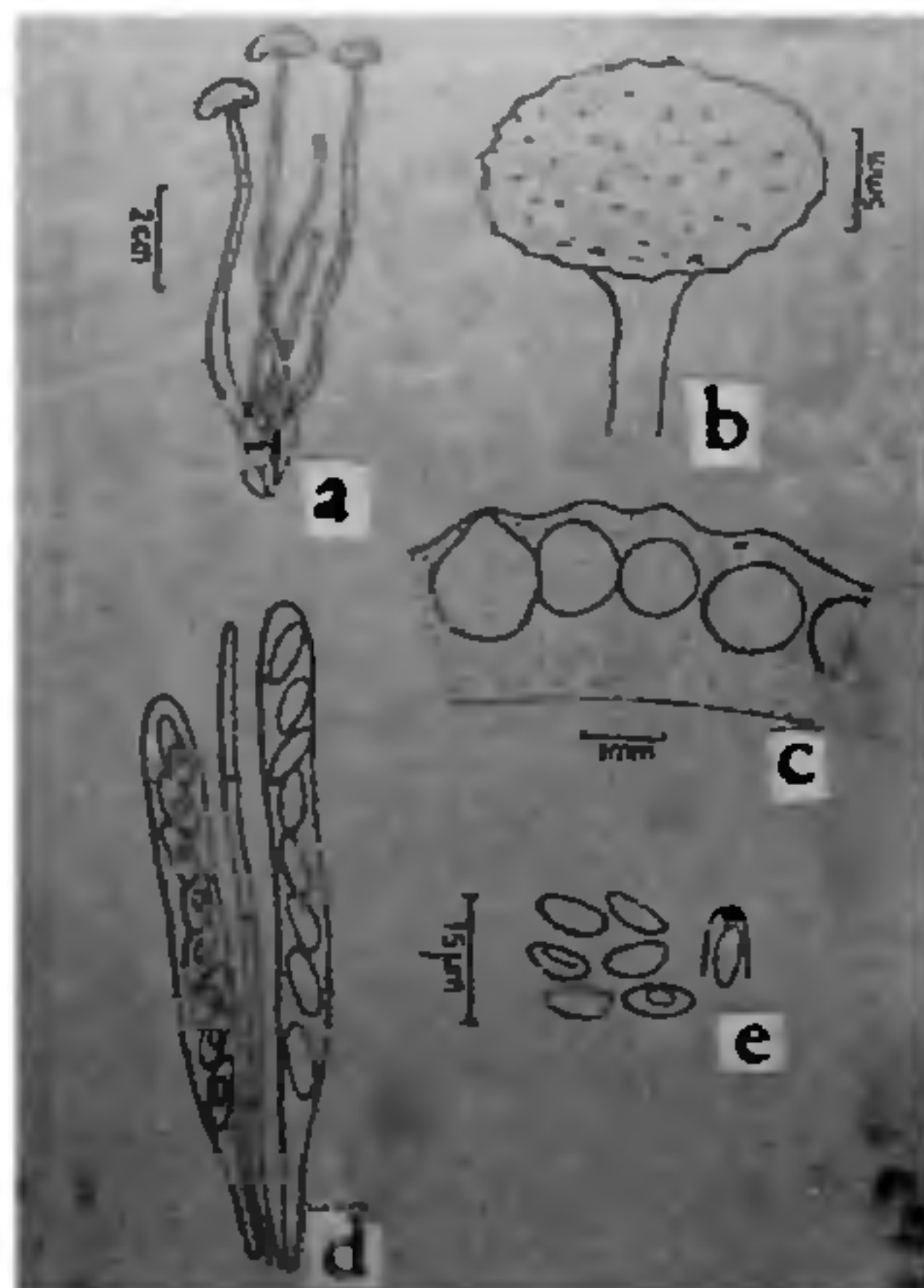
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SOME features of egg laying and reproduction in *Ichthyophis malabarensis* were reported earlier¹. This note presents some new findings.

In August 1982, when Sringeri (Karnataka, India), and its vicinity were under heavy rains, a large female of *I. malabarensis* was found coiling around a clutch of eggs. The clutch contained 82 eggs, slightly less than the hundred reported earlier for a specimen collected



Figures 1 a–e. *Poronia pileiformis*. a. Stromata general habit b. Surface of stroma enlarged. c. V.S. of stroma showing various regions. d. Asci and paraphyses. e. Ascospores and ascus apex showing ascal plug.



Figure 1. Egg cluster of *I. malabarensis* (Arrows point out the embryos ($\times 1\frac{1}{4}$)).

from the same location¹. In the earlier paper, the authors had discussed the possibilities of *I. malabarensis* laying unfertilized eggs. None of the eggs in the clutch, collected during July 1981, had any visible embryo. On the contrary every egg in the present clutch had a prominent embryo (figure 1).

The egg cluster and the parent were transported to the laboratory where efforts were made to provide conditions simulating the natural ones and attempts were made to maintain the eggs along with the parent. However such efforts were futile, the female desisted from coiling around the clutch. As egg mortality due to fungal attack has been reported in *I. glutinosus*², presently observations on the eggs of *I. malabarensis* were made soon after their transport to the laboratory.

The spherical, yolk laden eggs measured 8.25 ± 0.35 mm in diameter. While the embryo within the egg did not show discernible movements, that the blastodisc always oriented itself to the upper surface of egg when the egg was rotated, suggests that all the embryos were alive and viable. For detailed observation on the embryo, whole mounts were prepared using the Borax-carmin method. The embryo in all the eggs was of a similar stage of development and measured 8 mm in length. It had 21 pairs of somites, a well-

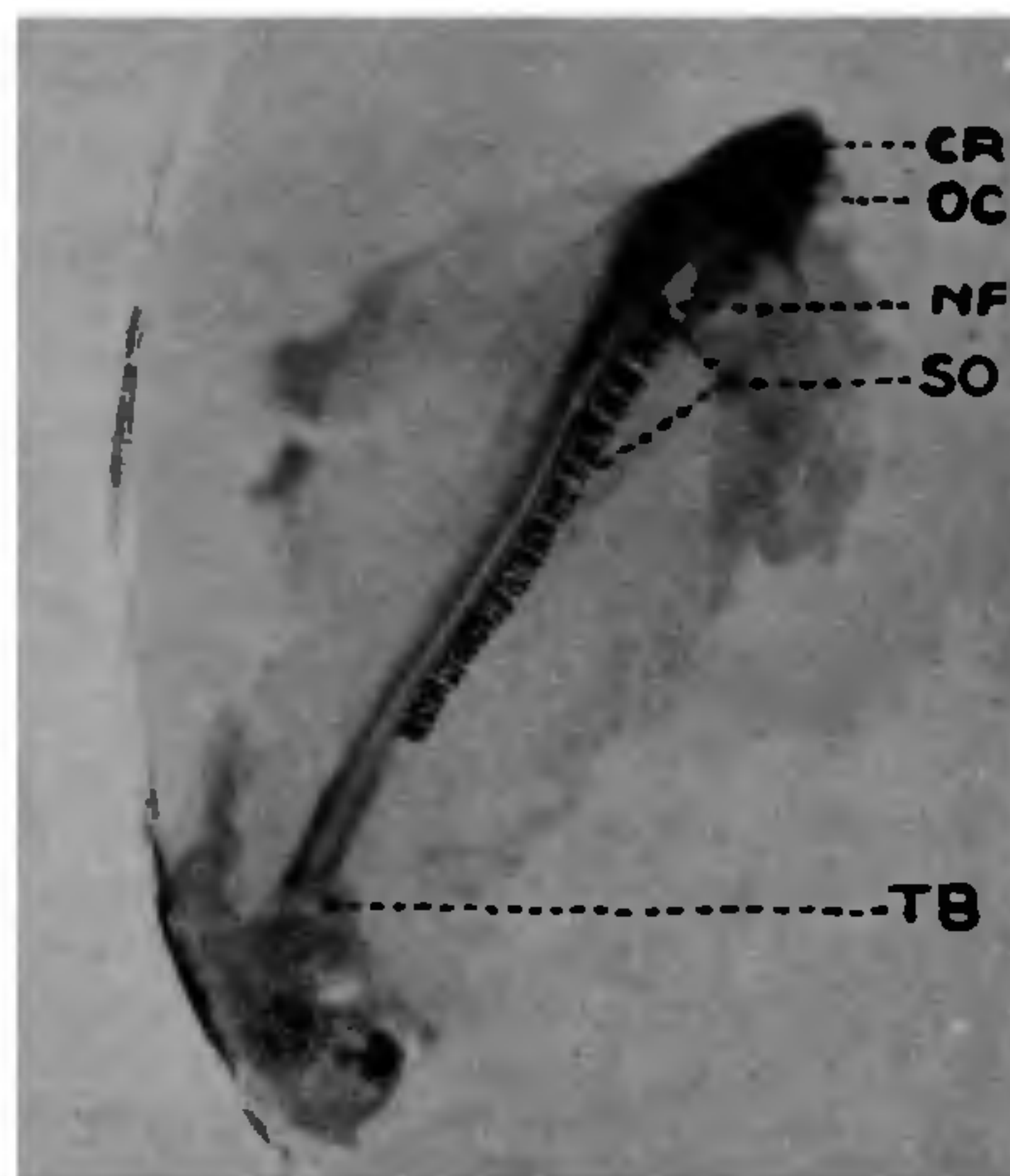


Figure 2. Whole mount of the embryo showing cephalic region (CR), Optic cups (OC), neural fold (NF) somites (SO) and tail bud (TB) ($\times 10$).

differentiated cephalic region, optic vesicles and a tail bud (figure 2).

So far, only 3 specimens of *I. malabarensis* have been collected during the three year (1980-82) extensive survey of the area. The scarcity of adults of the species, despite the large egg number in the clutch, is interesting.

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