

LEAF SURFACE IMPRINTING—A NEW, EASY AND CHEAP METHOD

THE present day methods to take the imprints involve the use of mucilage from unripe and ripe fruits^{1,2}, domestic adhesives¹ and silicon rubber plastic³. In the present study a new and easy device for making epidermal imprints by using domestic 'Maida' is described. Maida is a fine wheat flour mainly starchy in nature when tested with iodine. Commercially available 'maida powder' was mixed with adequate amount of distilled water and boiled and continuously stirred so as to make it a semi-liquid paste. The paste was allowed to cool. The paste was then applied uniformly on the surface of the leaf with the help of a camel hair brush. The leaf, on the surface of which the paste has to be applied need not be plucked from the plant, and the surface was cleaned to remove exotic particles with a moist fine clean muslin cloth. The paste applied leaves were kept in the open air on the plant itself for about 10–15 minutes to dry. Drying will depend upon the humidity, wind and temperature also. After the paste has dried up, it was stripped off with utmost care using fine forceps and needles. The film was then mounted with the imprinted surface uppermost on a dry clean glass slide. The coverslip was gently tapped to make the film uniformly flat. Repeated imprints were taken from the same surface of the leaf of a plant without causing any injury either to the leaf or plant. Plants from different groups were tested. The imprints of the leaf surface were examined with normal light microscope using direct illumination. Microphotographs presented were taken with ORWO DK 5 film using yellow filter and incandescent light. The microphotographs (Fig. 1) reveal the satisfactory results of this new

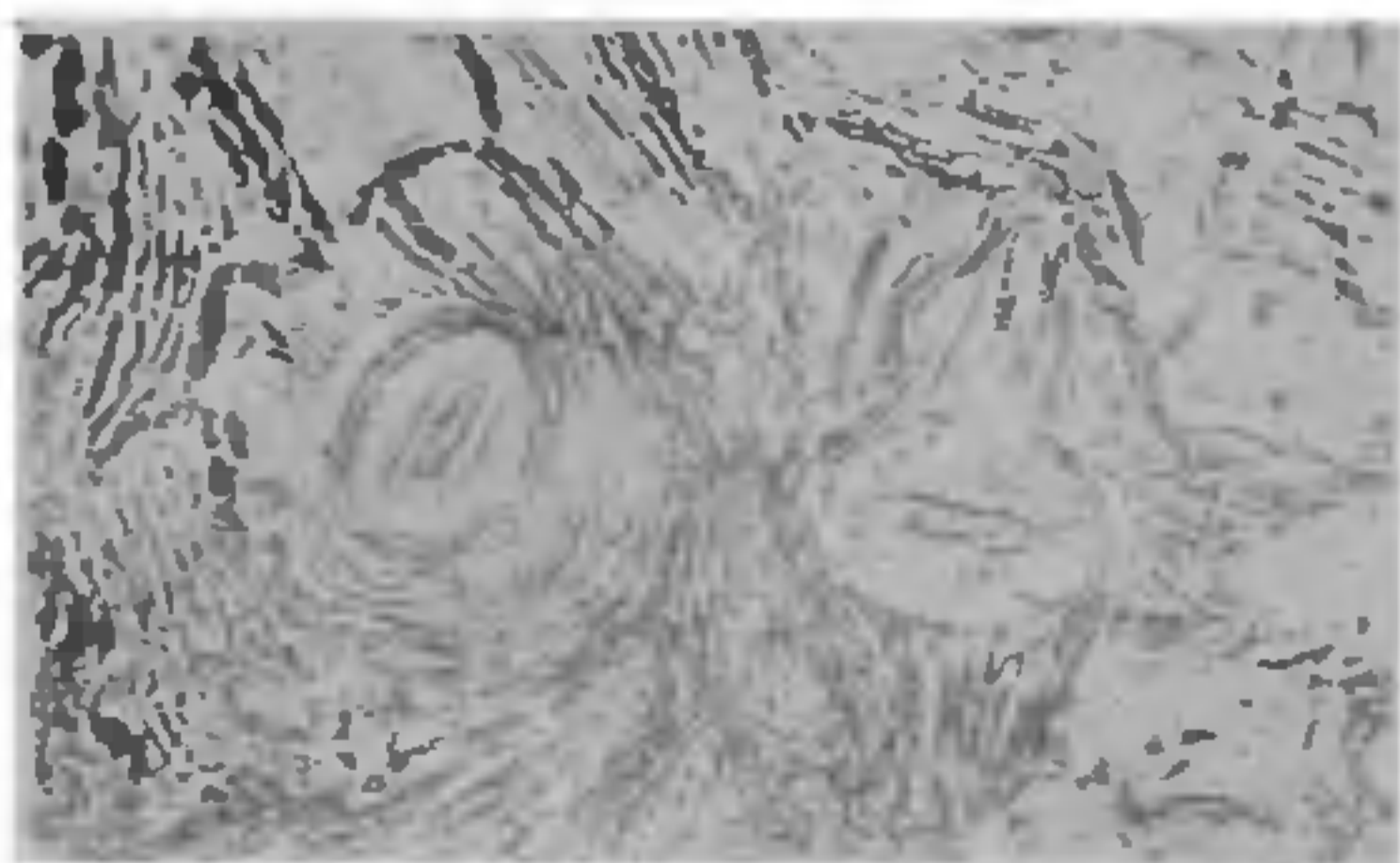


FIG. 1. *Thespesia populnea* Soland., : Imprint of leaf-abaxial surface. Note cuticular striations and stomata, $\times 880$.

method. The method holds good for herbarium specimens also. This method will be useful not only to plant morphologists but also to physiologists as repeated imprints can be taken from the same surface of the leaf of a plant at intervals.

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1. Inamdar, J. A. and Patel, R. C., *J. Microscopy*, 1969, 90, 269.
2. —, — and Bhatt, D. C., *Zt. Wiss. Mikr. Microsc. Technik*, 1970, 70, 140.
3. Janny Groot, *Acta Bot. Neerl.*, 1969, 18, 703.
4. Patel, R. J., *Curr. Sci.*, 1968, 37, 680.

EXILISPORA INDICA SP. NOV. (SPHAERIACEAE)—A NEW GENERIC RECORD TO INDIA

A RARE ascomycetous fungus was collected on the dead stems of *Gymnosporia rothiana* Mont. (Fam. Celastraceae) in the Forests of Bhimashankar, 100 Km away from Poona, in the month of September, 1974. On examination this proved to be an undescribed species of the genus *Exilispora* Tehon and Daniels² (Sphaeriaceae). This genus is monotypic and remained unrepresented in the fungal flora of India so far.

Exilispora indica sp. nov. (Fig. 1).

Perithecia nigra, solitaria, sub-erumpentia, septata, ostiolo-rostrata, periphysata, magnit 172–280 \times 184–260 μ ; rostra 1–5 mm longa; asci cylindricei vel clavati, brevi-stipitati, octospori, aparaphysati, unitunicati, 57–112 \times 5.4–9 μ ; ascosporae sub-hyalinae vel olivaceae, scoleciformae, septatae (9–12), magnit 52–72 \times 3–5 μ .

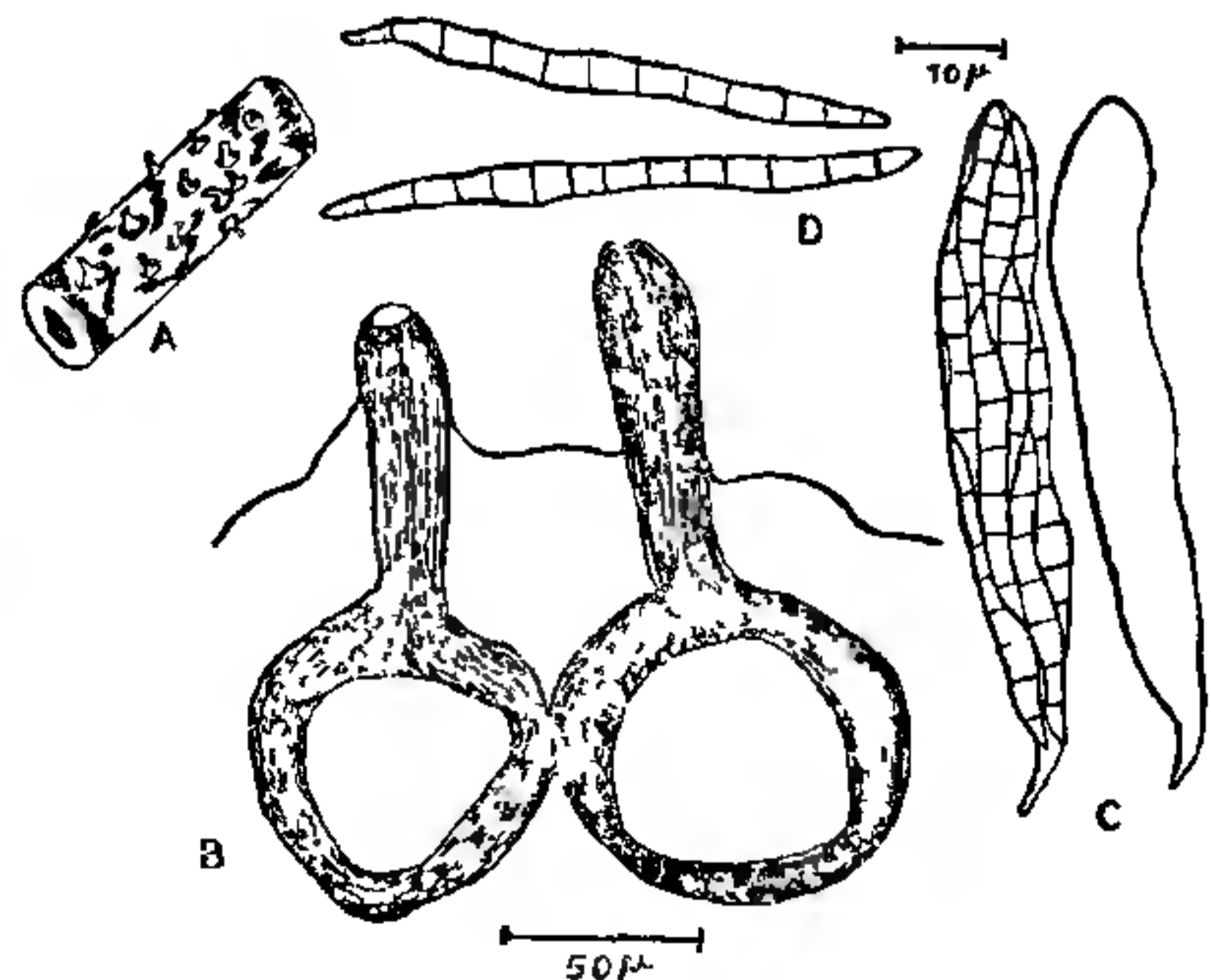


FIG. 1. *Exilispora indica* sp. nov. A, Habit; B, Perithecia (V. S); C, Asci; D, Ascospores.

Matrix: In caules *Gymnosporia rothiana* Mont. Legit. A.W.S. ad Bhimashankar (30-9-1974); No. AMH 2667 (Holotypus).

The present collection differed significantly from the type species, viz., *Exilispora plurisepta* Teh. and Dan.², in gross-morphology, dimensions of perithecia, asci and ascospores besides being collected on a new host. Although the genus *Exilispora* closely resembles the genus *Ophiobolus* Reiss.¹, it differs from it in having significantly long beaked perithecia and phaeo-scolecosporous ascospores.

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1. Ainsworth, G. C., Sparrow, F. K. and Sussman, A. S., *The Fungi*, Academic Press, New York and London, 1973, 4 A, 621.
2. Tehon, L. R. and Daniels, E. Y., *Mycologia*, 1927, 19, 110.

VIVIPARY IN *LIVISTONA CHINENSIS* R. Br.

In Monocotyledons, habitual vivipary has so far been described only in *Pectinella antarctica* Black, a marine member of Potamojetonaceae. It also occurs as a rarity in *Melocanna bambusoides* of Graminae. Since there are no published reports of vivipary in palms an account of viviparous seedlings in *Livistona chinensis* is given here.

On 22nd July 1975, a number of fruits of *L. chinensis* in germinated stage were noticed while they were still attached to the fruitiferous axis (Fig. 1). In these fruits, radicular portion of the



FIG. 1

embryo was peeping out through the fleshy green epicarp. The fruitiferous axis was sprayed with an insecticide to avoid ant attack and was loosely covered with moist thin muslin cloth to provide

sufficient moisture. Observations were made until 10th August and the results noted.

Nearly 79% fruits got abscised when the seedlings were ranging from 1 to 1.5 cm in length. Only in exceptional cases the seedlings could grow upto 4.5 cm when the fruits were attached to the tree (Fig. 2). In none of the seedlings the plumule could be seen emerging from the cotyledonary sheath. The radicle also did not elongate much.



FIG. 2

In the normal course, the mature fruits of *Livistona chinensis* get abscised when the epicarp turns to deep black colour. In a few cases they remain attached until the pericarp completely dries up. The mature fresh fruits when placed in soil germinate only when the pericarp is partially or completely decayed. This process takes two to six weeks depending upon the season. The relative humidity during these days was ranging from 73 to 98%. The precocious germination of fruits reported here might be due to high humidity of the atmosphere.

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1. Staf, O., "On the fruit of *Melocanna bambusoides*, Trino, an endospermless, viviparous genus of Bambuseae," *Trans. Linn. Soc. Lond. Bot., Ser. II*, 1904, 6, 401.