



FIGS. 1-3. Transections of comparable laminal parts of the 10th leaf of: Fig. 1. Diploid parent, Fig. 2. Vegetative and Fig. 3. Generative plants ($\times 280$).

parental plants is typically organized (Fig. 1) while in plants derived from the vegetative cell it is sub-differentiated with shorter cells (Fig. 2). Distinction of the two zones in leaves of the Generative plant (Fig. 3) is solely based on topographical characters; the constituent cells of the upper zone (palisade) are conspicuously shorter and their compactness of alignment is disturbed; air-spaces are also evident here and there between groups of palisade cells.

Correlations between foliar histology and physiological process will be discussed in a later publication.

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SOME NEW CUCURBITACEOUS HOSTS OF *BOTRYODIPLODIA*

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IN a RECENT survey of diseases of fruits and vegetables at Gwalior, *Botryodiplodia* was collected from several members of family Cucurbitaceae including *Lagenaria vulgaris* Ser., *Cucurbita maxima* Duchesne., *Citrullus fistulosus* Stocks., *Luffa cylindrica* Roem., *Coccinia indica* W. & A., *Trichosanthes dioica* Roxb., and *Cucumis sativus* L.¹. Out of these first two are the well-known hosts^{2,3} for this fungus while the other five constitute new host records for the country.

Symptoms

The disease generally started from the tip of the fruit, and later covered the entire surface. Light brown water-soaked areas appeared in the beginning, and with the advancement of the disease, fruits shrivelled and became soft. The fruits were covered by mycelium producing pycnidia in abundance (Fig. 1). Infected fruits rotted completely within 3-5 days, however, the disease on *Luffa cylindrica* was slow to develop. The disease was most severe at 25-30°C.

The pathogen was isolated from diseased fruits and identified as *Botryodiplodia theobromae* Pat. Pathogenicity of the fungus was established on fresh, healthy fruits by injury.

The specimen has been deposited at C.M.I., England (I.M.I. No. 247198).

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FIG. 1. Showing symptoms of the diseases on 'A'—*Luffa cylindrica*; 'B'—*Cucumis sativus*; 'C'—*Lagenaria vulgaris*.

for providing necessary facilities and to The Director, C.M.I., England, for helping in the identification of the fungus.

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A NOTE ON THE OCCURRENCE OF *OBERONIA FALCONERI* HOOK. F. AND *O. PACHYPHYLLA* KING AND PANTL. IN KHASI HILLS (MEGHALAYA)

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THE family Orchidaceae has been considered as one of the endangered taxa of the tropical biotas, because of the large scale destruction of the humid tropical forests, its native habitats. The tropical and sub-tropical mountainous tracts in India support a great diversity of orchids, and localities are subjected to intense habitat pressures, threatening several endemic orchidaceous plants. The present paper deals with the distributional records of two epiphytic orchids inhabiting Eastern Himalayas.

Oberonia pachyphylla King and Pantl. was hitherto reported only in Salgurra in Sikkim Himalaya. *O. falconeri* Hooker F. has a wider range of distribution, and is found in moist deciduous forests of the Himalayas, Eastern and Western Ghats, and Chotanagpur plateau^{1,2}. The presence of both the species in open deciduous forests of Nongpho (alt. 650 m) and Umarangdairy (alt. 850 m) is the first record from Khasi hills^{3,4}. These species appear to be restricted to lower elevations, and have not been reported from areas located at higher elevations (1250 to 1700 m). Further, the frequencies of both the taxa even at Nongpho and Umarangdairy are very low, implying that they are endangered at least in Khasi hills—an ideal home for orchids.

To facilitate easy identification of *O. falconeri* and *O. pachyphylla*, concise descriptions are given below:

Oberonia falconeri Hooker F.—Epiphytes. Leaves 3-9 ovate-lanceolate or ensiform, 0.5-3.2 × 0.5-1 cm. Spikes slightly recurved, 3-6.5 cm long (incl. peduncle). Bracts ovate-lanceolate, 1.5 × 0.6 cm.

Flowers orange coloured, 0.2 mm across. Sepals broadly ovate, 1 × 0.5 mm, slightly longer than the corolla. Petals ovate-lanceolate; lip 3-lobed with a 2-fid median lobe, lateral lobes not erose.

Oberonia pachyphylla King and Pantl.—Epiphytes. Leaves 4-8, broadly lanceolate, 0.8-3 × 0.4-1.5 cm. Spikes up to 3.5 cm long (incl. peduncle), curved, with a flattened rachis. Bracts 2 mm long. Flowers brown-yellow, 1.7 mm across. Sepals broadly ovate, 0.4 mm broad. Petals ovate-lanceolate; lip light yellow, with a pit at the base and a crescent-shaped dark coloured band in the centre, 3-lobed with erose lateral lobes and an entire median lobe.

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THE OLFATORY ORGAN IN A FEW INDIAN TELEOSTS

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THE morphology of the olfactory organ has been described by many workers¹⁻⁶, however, no detailed work has been done on Indian teleosts. Only recently a few Indian species have been studied⁸⁻¹⁰. The present authors have studied the functional morphology and histology of the olfactory organs in some freshwater (*Anabas testudineus*, *Colisa fasciatus* and *Nandus nandus*) and marine (*Otolithus argenteus*, *Ephippus orbis* and *Caranx oblongus*) species. The olfactory chamber in each of these species is located in the ethmoidal region and it opens outside by two nasal openings. In *A. testudineus*, *C. fasciatus*, *N. nandus* and *E. orbis*, the anterior nasal pore is in the form of a tube. In *O. argenteus* the tube is absent and in its place a well-demarcated circular rim is present. In *C. oblongus* tube or rim is absent but a poorly developed nasal flap is present in the posterior margin of the anterior pore which deflects water towards the anterior pore. Kapoor and Ojha⁸⁻¹⁰ observed