genase in presence of legumes suggested that some common plant product may be involved[6,2].

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NUCLEIC ACID CHANGES IN PETUNIA ROOTS AS A RESULT OF PETUNIA MOTTLE VIRUS INFECTION

IN the present communication the result of the effect of petunia mottle virus (PMV) on the nucleic acid content in the roots of petunia has been reported.

Seedlings of petunia raised in autoclaved soil, transplanted to clay pots containing autoclaved mixture of soil : sand : compost (7 : 2 : 1). Leaves of two-week old seedlings were inoculated with (PMV) at 10, 20, 30 and 40 days intervals separately. For inoculation, the usual method of rubbing with carborundum (500 mesh) as an abrasive was adopted. The experiment was carried out in an insect-proof glass house and it was terminated after 10 days of last inoculation. Plants were uprooted, washed and dried (80–90° C) and were ground into a fine powder. Hundred mg of the powder were extracted as described by Srivastava and Ware[1] and the nucleic acids estimated by the method of Scheneider[2] employing Buach and Lomb Spectronic-20 Spectrometer, at 660 nm using RNA and DNA as standards.

It may be observed from Table I, that there was an increase in the RNA content inside the plant roots as compared with the uninoculated control; however,

TABLE I

Nucleic acid contents in the roots of petunia inoculated with Petunia Mottle Virus at different intervals

(Expressed as per cent dry weight)

Nucleic Acids	Inoculation periods (days)				
	0	10	20	30	40
RNA	3·21	5·81	4·60	4·41	4·41
DNA	0·35	0·37	0·40	0·45	0·50
Total	3·56	6·18	5·00	4·86	4·91

Each value is the mean of 6 replicates.

the maximum (81·2%) increase was noted in the plants inoculated 10 days before the harvest and least (37·3%) in the plants inoculated 40 days before harvest. Though the DNA content also showed an increase in the roots as compared to uninoculated (control), maximum increase (42·6%) was observed in plants inoculated 40 days before harvest and minimum increase (5·7%) in the plants inoculated 10 days before harvest.

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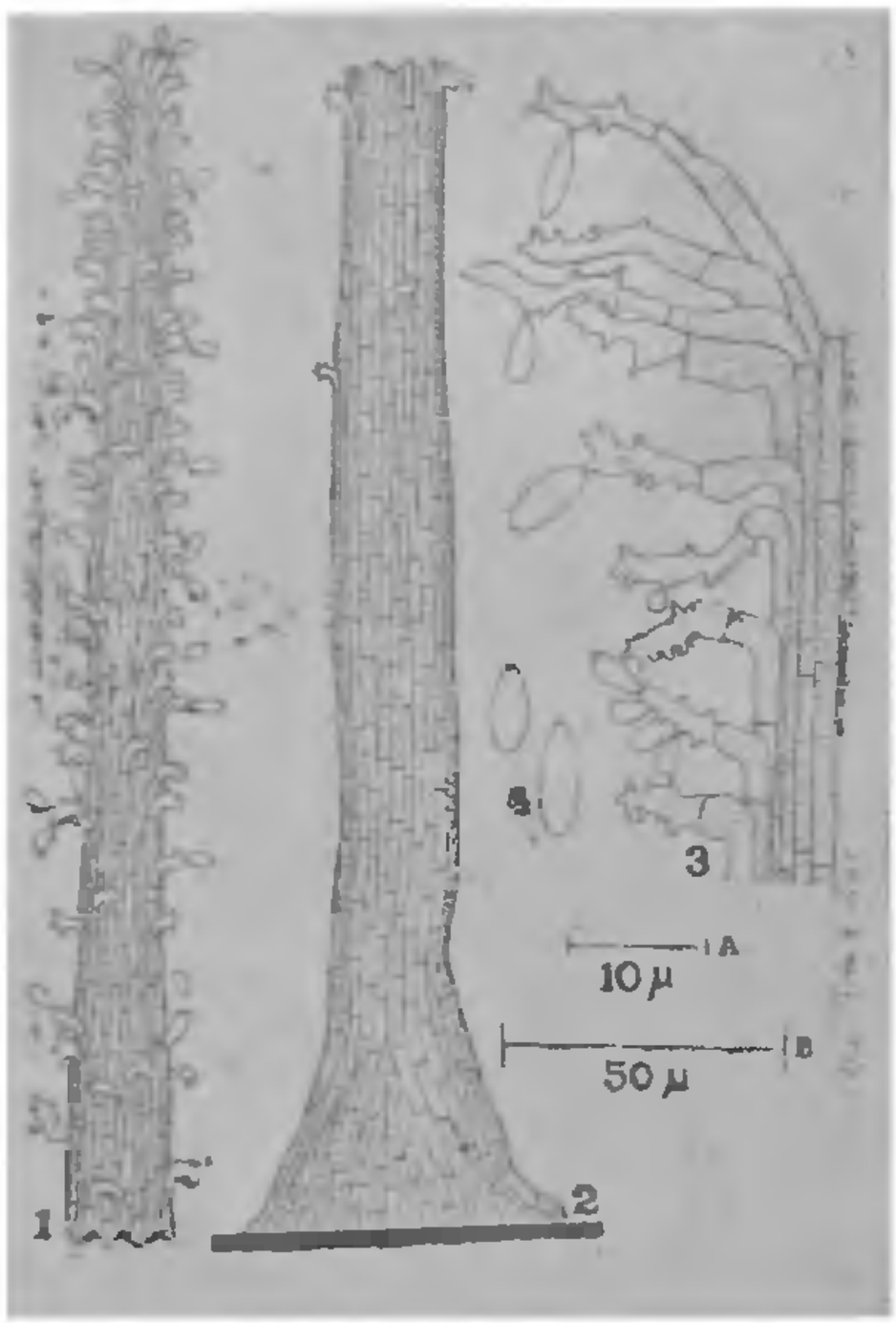
PHAEOISARIA CLEMATIDIS (FUCKEL) HUGHES[1] A NEW RECORD FOR INDIA

IN the course of their studies on mycoflora of District Nimar, the authors collected *Phaeoisaria clematidis*, a dematiaceous hyphomycete on dead twigs of *Bambusa* species, from Asirgarh, Khandwa (M.P.), on 18th October, 1976. The fungus has been previously recorded from Cuba, Europe, Ghana, Java, Malaya, New Guinea, Sabah and Sierra Leone (Ellis)[2]; here it is being presented as a new record for India.

Colonies effuse, black, hairy; under a disssecting microscope the upper two-thirds of each synnema

is seen to be covered with a white or pale grey powdery mass of conidia. Mycelium mostly immersed. Stroma, hyphopodia and setae absent. Conidiophores macronematous, synnematous; synnemata brown, upto 2·0 mm*. high but usually less than 1·3 mm. subulate, 7–20 μ thick at the apex, 25–90 μ thick at the base; individual threads 2–3 μ thick, pale to mid brown, smooth, straight or flexuous, splaying out at the apex and along the sides of the two-thirds of each synnema. Conidiogenous cells polyblastic, integrated and terminal or discrete, cylindrical or clavate, hyaline to pale brown, sympodial, usually with numerous cylindrical denticles. Conidia solitary, dry, acropleurogenous, fusiform or narrowly ellipsoidal, hyaline or subhyaline, smooth, non-septate, 4–7–10 × 1·5–2·5–3 μ.



FIGS. 1–4. *Phaeoisaria clematidis*. Figs. 1–2. Upper and lower half of a synnema. Fig. 3. A part of synnema with conidiophores and conidiogenous cells. Fig. 4. Conidia. (Figs. 1–2 to scale B. Figs. 3–4 to scale A.)

The voucher specimen has been deposited in the herbarium of Mycology and Plant Pathology, Department of Botany, Government S.N. College, Khandwa, as No. 48. The authors express their grateful thanks to Dr. S. B. Saxena, University of Saugar and Dr. V. B. Chaudhary, Government S.N. College, Khandwa, for facilities.

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* Measurements by Ellis: Synnemata upto 1·5 mm high, 20–80 μ thick at the base, 8–25 μ at the apex; conidia 4–10 × 1·5–2·5 μ.

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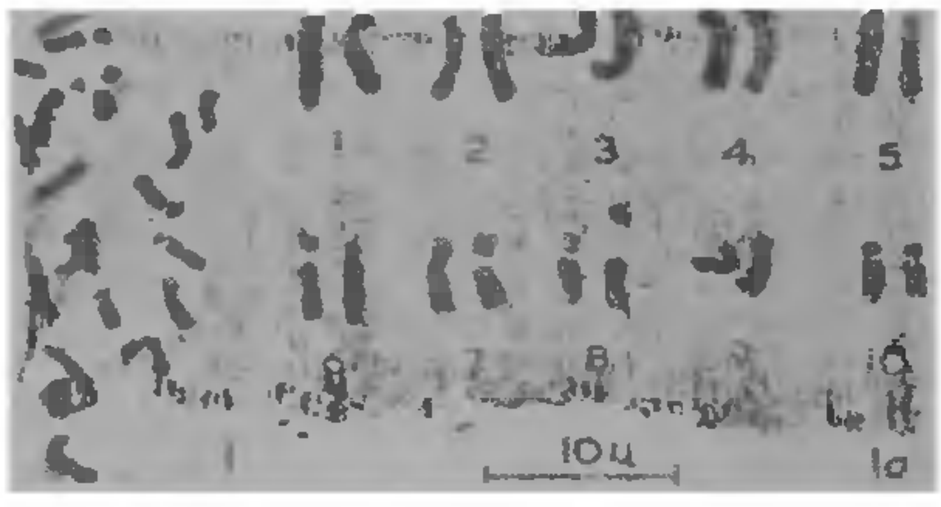
CYTOGENETICS OF AQUATIC ORNAMENTALS

III. Karyology of *Victoria amazonica* Sowerby

THE Amazon waterlily represents a remarkable form of plant life on account of its gigantic floating leaves and copious development of prickles on the surface of its organs. Taxonomists had been calling this *V. regia* for the last so many decades, but is has recently been named *V. amazonica* by Prance and Prance[1]. Cytological findings made so far on the genus *Victoria* confine only to chromosome counts[2–4]. The present note deals with a detailed study of the architecture of the somatic chromosomes of *V. amazonica* in the light of its evolutionary status and inter-relationships with the other members of Nymphaeaceae.

The Plants of *V. amazonica* were introduced in National Botanic Gardens, Lucknow, through seeds which had been obtained in 1975 from Leiden University Garden, Netherlands. Chromosome studies were done from healthy root-tips which were pretreated with 0·002 M 8-hydroxyquinoline for 2½ hr at 8°–12° C, fixed in acetic-ethanol mixture (1 : 3) and finally squashed in aceto-orcein.

Observations, based on twenty metaphasic cells, revealed a constant chromosome number $2n = 20$ (Fig. 1). Total chromatin length of a complement



FIGS. 1 and 1 *a*. Photomicrograph of the somatic metaphase plate and idiogram of *V. amazonica*.

was recorded 88·92 μ, whereas lengths of the individual chromosomes varied between 3·08 μ and 5·39 μ. All the chromosomes could be classified,