

Figure 3A-F. Microstructures of *Gloeophyllum imponens* (Ces.) Teng. A. Generative hypha; B. Skeletal hypha; C. Binding hypha; D. Cystidium; E. Basidium; F. Basidiospores.

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CERCOSPORA LEAF SPOT OF *ERVATAMIA CORONARIA*

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ERVATAMIA CORONARIA Stapf, an ornamental shrub belonging to the family Apocynaceae produces

beautiful white flowers. The plants grown near the mulberry garden in the experimental plot (Mysore) showed characteristic shot-hole symptom and defoliation following complete yellowing of leaves.

Initially several water-soaked lesions appeared on the leaves which subsequently turned black. The infected portion became brittle and separated from the leaf resulting in the shot-hole symptom (figure 1). A greater number of shot-holes on infected leaves led to yellowing, finally the infected leaves detached. Stereo-microscopic examination of the infected tissue revealed dense fascicles of short conidiophores intermixed with whitish hardened masses formed by conidia of *Cercospora moricola* Cooke. The conidiophore and conidial measurements agreed with the observations reported earlier¹.

C. moricola, isolated from infected leaves, was grown on potato dextrose agar medium. The conidial suspension (ca. 1.4×10^2 conidia/ml) was obtained from a 7-day-old culture of the pathogen with sterile distilled water and inoculated to the healthy leaves of *E. coronaria* and mulberry (*Morus indica* L.) plants. The inoculated leaves were covered in moist polythene bags. Symptoms of the disease on *E. coronaria* were as described earlier. In mulberry, the leaf spots were reddish brown initially and later turned black. Severely infected leaves exhibited uprolling and finally dropped off. Sukumar¹ also observed similar symptoms on mulberry leaves. Uninoculated and sterile water inoculated plants, however, did not develop any symptom.

Cercospora moricola, the causal organism of mulberry leaf spot is destructive and the disease is a major constraint in mulberry cultivation. The dis-



Figure 1. Infected leaves of *Ervatamia coronaria* showing shot-hole symptom.

ease is severe particularly in the rainy season²⁻⁴. In addition to defoliation, the pathogen has also been reported to reduce the nutritive quality of mulberry leaves^{2,3}. *E. coronaria* remains infected throughout the year and may play a role as collateral host for the pathogen and spread besides helping in the spread of leaf spot disease in mulberry.

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SOLANUM SPIRALE ROXB.: OCCURRENCE AND CYTOLOGY

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SOLANUM SPIRALE is one of the 19 species of the genus native to the Indian subcontinent. It is a medi-

cinal plant, the root of which is employed as a diuretic and narcotic^{1,2}. This species is limited³⁻⁵ to Assam and Meghalaya to Bangladesh and Burma up to 1170 m. Its occurrence in South India and its cytology are reported here for the first time.

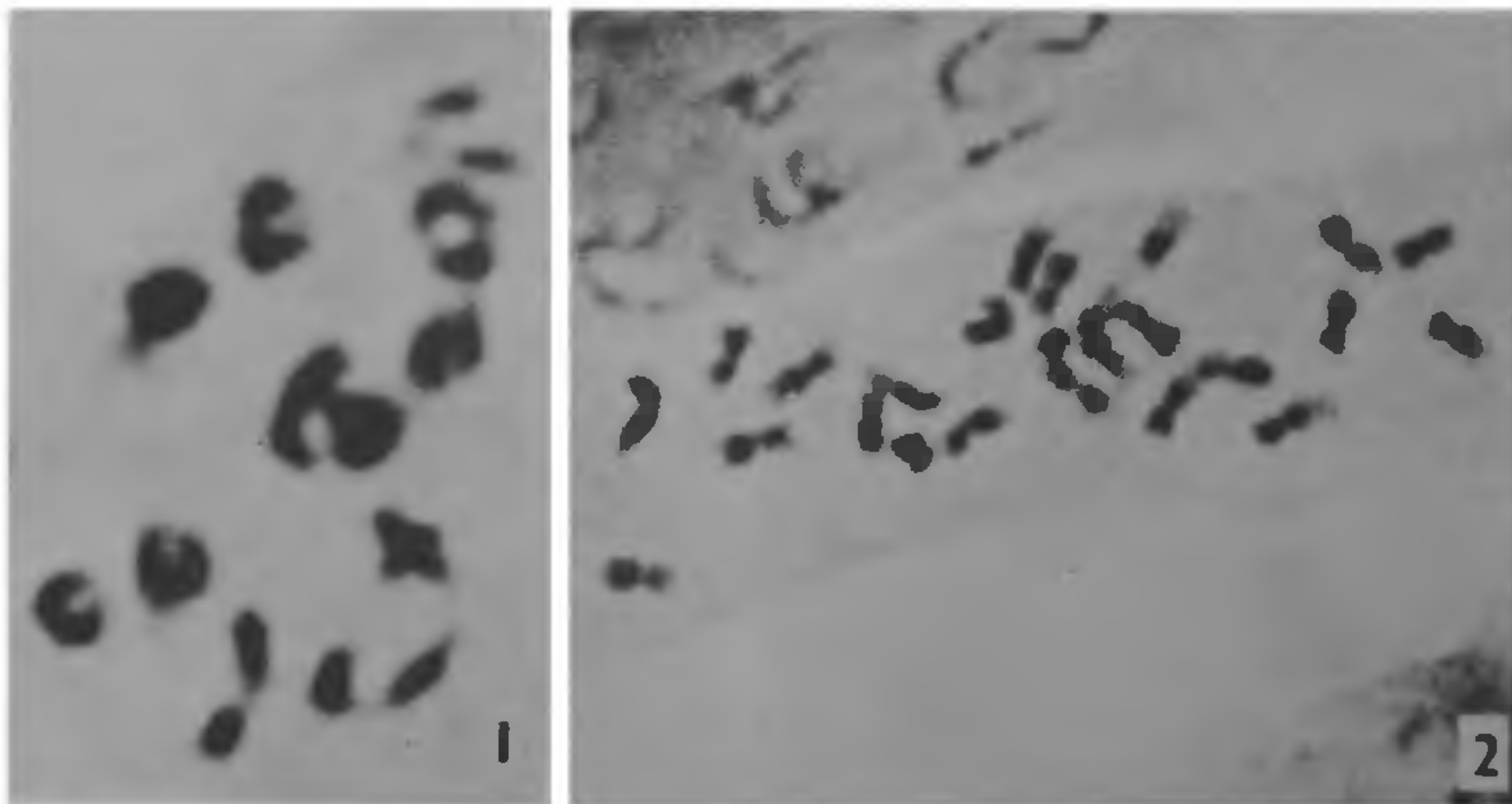
Solanum spirale Roxb., Hort. Beng. 16. 1814 (normen) and Fl. Ind., ed. Carvey, 1: 566. 1832; C.B. Clarke in Hooker f., Fl. Brit. India 4: 230. 1883; Prain, Bengal Plants 2: 745. 1903. Deb, in the biology and taxonomy of the Solanaceae 87. 1979.

An unarmed shrub 1–1.5 m. Leaves elliptically lanceolate, 3.5–8 cm, glabrous; petiole 1 cm. Inflorescence raceme, many-flowered, extra-axillary; pedicel 1–2 cm. Calyx cupular; lobes 5, acute. Corolla white, 1 cm across; lobes 5, oblanceolate. Stamens 5; anthers oblong, 2 mm. Ovary 2 mm; style 3 mm, stigma capitate. Berry 1 cm across; seeds discoid, 2 mm across, smooth.

S. spirale was collected from Ootacamund, Nilgiris at about 2200 m. Flowers in dense spiral racemes. Berries small, glossy yellow.

Cytological studies on *S. spirale* showed that the PMCs have 12 bivalents (figure 1). The root tip cells showed 24 chromosomes (figure 2) of which one pair was of the *sm* type and the rest, *m* types. Three pairs of *m* chromosomes showed heterochromatin in the long arms. The chromosomes varied from 1.3 μ m to 2.7 μ m in length.

Most of the *Solanum* species native to India are widely distributed and also occurs in other countries. Based on a floristic survey and well-authenticated



Figures 1 and 2. ($\times 3100$) 1. PMC of *Solanum spirale* with 12 bivalents, and 2. Mitotic metaphase of *S. spirale* with 24 chromosomes.