

the large bivalents being similar in size to the 10 bivalents of the short variety. Both taxa showed perfectly normal meiosis characterized by regular bivalent formation, anaphase separation and formation of normal tetrads. The pollen grains of the tall variety were slightly larger in size. The cytological evidence thus indicates that the tetraploid tall robust taxon is a natural allopolyploid, in the formation of which the diploid short variety could be one of the putative parents. In South India this species exists as a "compilospecies"⁶ in which the diploid form is very restricted and the tetraploid widespread in distribution.

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A NEW SPECIES OF *HYPODERMELLA* FROM MAHARASHTRA

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IN the survey of ascomycetes fungi from the State of Maharashtra dead leaves of *Thuja occidentalis* L were collected from Kamalpur, Chandrapur district forest showing many carbonaceous elongated fruiting bodies with a central longitudinal slit characteristic of Phacidiales. Section through these bodies revealed the presence of stromatic cup-shaped hysterothecia with parallel asci intermingled with swollen tipped paraphyses. On the basis of structure and ascospore characters, with the available literature, the fungus

Table 1 Comparative table of Indian species of *Hypodermella* Tubeu.

Species	Hysterothecia	Asci	Ascospores
1. <i>H. occidentalis</i> sp. nov.	200–300 × 162–260 μ	140–170 × 22–26 μ	30–52 × 8.6–11.5 μ
2. <i>H. rhamnii</i> Ramkr.	—	174–230 × 26–37 μ	56–81 × 11–15 μ

was concluded to be a species of *Hypodermella* Tubeu¹.

Two species of this genus were recorded from all over the world². Only one record of this genus is known from India³.

This interesting but rare fungus has been designated as *H. occidentalis* sp. nov. A comparison of the present material and *H. rhamnii* is given in table 1.

From the above data the present collection differs in respect of morphological characters having bigger asci and ascospores and collected on a hitherto unrecorded host, it is, therefore, offered as a new species.

H. occidentalis sp. nov. (figure 1)

Hysterothecia subhypodermal, minute, black, elongated, elliptic oval, opening by longitudinal cleft. Margins reddish wall membranous, dark brown, pseudoparenchymatous, measuring 200–300 × 162–260 μ. Asci clavate bitunicate, wall thickened at the apex, shortly stalked at the base, 8 spored surrounded by halo like area, internally halo resembling a membranous covering, bitunicate, 140–170 × 22–66 μ, paraphyses unbranched, filamentous with swollen tips, usually longer than the asci but not forming epithecium. Ascospores hyaline, elongated, biocelled, irregularly arranged, slightly curved at the tips, measuring 30–52 × 8.5–11.5 μ. On leaves of *T. occidentalis* L. Kamalpur (district Chandrapur), October 1981, leg. Wangikar and deposited in the Maulana Azad College herbarium MAH No. 1198 (Holotype).

The ascospores were allowed to germinate in sterile water. They germinated within 24 hr in water with swelling in size, giving out a stout germ tube, thus providing their non resisting nature.

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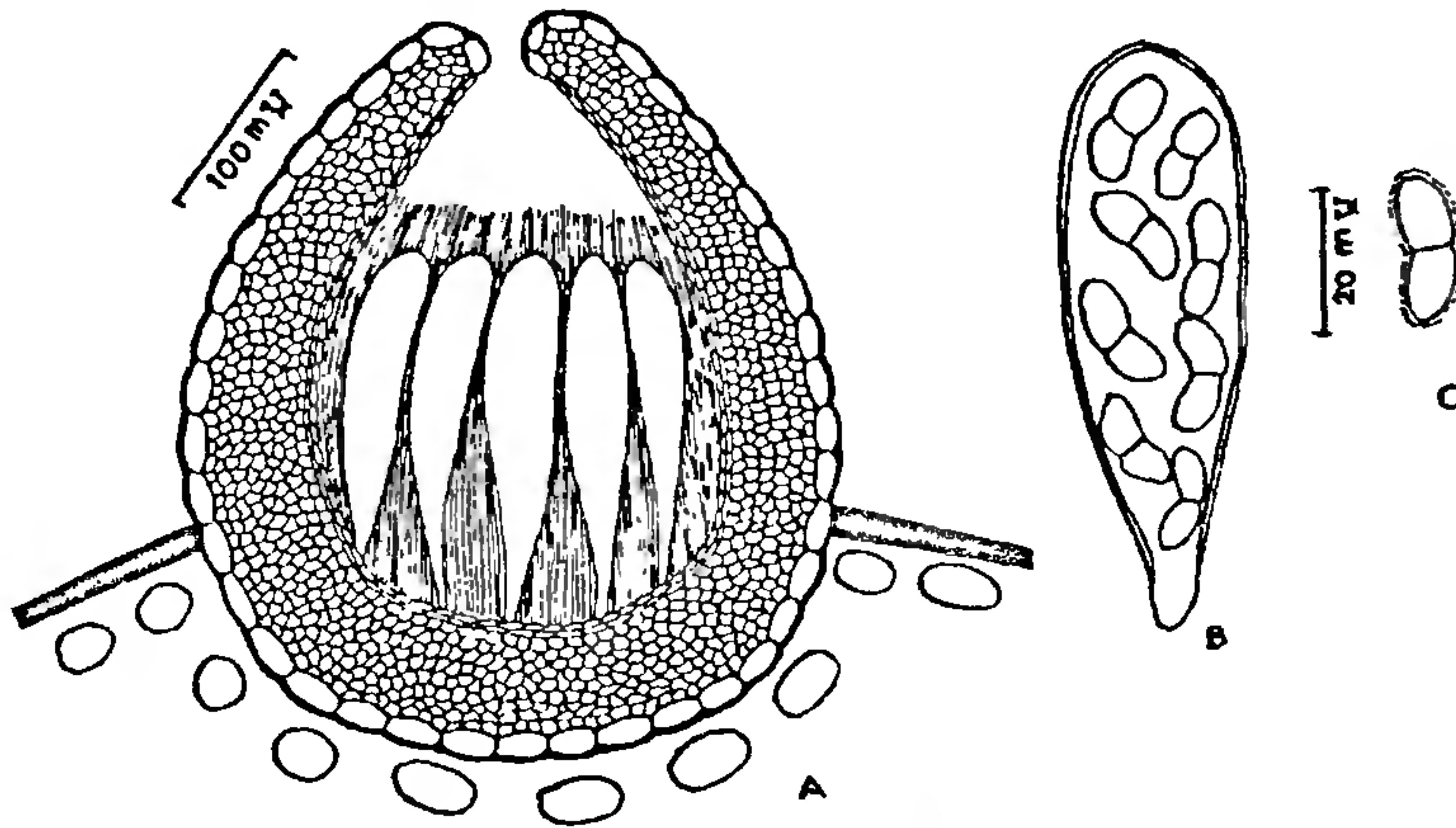


Figure 1A-C. *Hypodermella occidentalae* sp. nov. A. V. S. through hysterothecium, B. Ascus, C. Ascospores.

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SCREENING OF CITRUS GERMPLASM FOR RESISTANCE TO POWDERY MILDEW

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DURING January 1984, powdery mildew (*Oidium tingitaninum* Carter) appeared in a serious form at Citrus Project, Tirupati and it was felt necessary to screen different varieties of germplasm for their resistance to the disease. One hundred and thirty seven varieties maintained in germplasm block were examined under natural conditions and graded into the following 4 categories¹ (figure 1).

1. HS (Highly susceptible) showing numerous lesions on leaves and twigs, almost covered with whitish powdery growth.
2. S (Susceptible) with lesions scattered on the entire leaf area and twigs.



Figures 1-4. 1. Highly susceptible, 2. Susceptible, 3. Moderately susceptible and 4. Resistant.

3. MS (Moderately susceptible) with only a few lesions on the leaves and twigs, Scanty mildew growth.
4. R (Resistant) leaves and twigs free of lesions.

Out of 137 varieties assessed the following 16 were found resistant: 1. Gajanimma [*Citrus moi* (Lush.) Tanaka] 2. Willow leaf sour (*C. deliciosa* Ten), 3. Sweet lime (*C. limmetioides* Tanaka) 4. Satsuma niku (*C. reticulata* Blanco) 5. Pummelo pink (*C. grandis* Osb.) 6. Acidlime [*C. aurantifolia* (Christm)