

Two new species of Pezizales from India

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Two new species from W Himalaya are described, viz. *Melastiza flavida* and *Leucoscypha subimmersa*. A previous report of *Melastiza chateri* from India is incorrect.

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During research on the genera *Melastiza* Boud. and *Leucoscypha* Boud. we have come across two new species, which are described here. Moreover, on reinvestigation it was found that the report of *Melastiza chateri* (W. G. Smith) Boud. from India (Thind & Waraitch 1964) was based on specimens of *M. rubra* (Batra) Maas Geest., which is fairly common in NW Himalaya.

Melastiza flavida Thind & Kaushal, sp. nov. –
Fig. 1 A–C

Holotype: India, Mussoorie, Dhanaulty, on soil, 7.9.1973, Kaushal 2581 (PAN).

Apothecia ad 3 mm diam. gregaria vel congesta, sessilia, discoidea, ordinata, mollia, carnosae; externa superficies subochracea, sensim pilosa; pili subfusci, appressi, ad 7.5 μm in diam.; hyphae affixae ad basim, subhyalinae, tenuitunicatae, ad 13 μm in diam.; margo integer; hymenium flavopallidum, glabrum. Asci 240–280 \times 14–18 μm , octospori, cylindracei, apex obtusus, jodo non caerulescentes. Ascospores 22–27 \times 12–16(–17) μm reticulis inclusis, hyalinae, uniseriatae, ellipsoideae vel late ellipsoideae. Paraphyses ad 4 μm latae infra et 7.5 μm in apicibus clavatis, rectae, septatae, simplices. – Excipulum ectale ad 55 μm crassum, textura angularis, subfuscum, cellae ad 30 \times 15 μm ; excipulum medullare textura dense intricata, hyphis ad 6.5 μm diam; hypothecium indistinctum.

Apothecia up to 3 mm in diam. gregarious to crowded, sessile, discoid, regular, soft, fleshy; external surface ochraceous, minutely pruinose,

with inconspicuous pale brown, appressed hairs, hairs up to 7.5 μm wide; attaching hyphae present towards base, subhyaline, thin-walled, up to 13 μm wide; margin entire; hymenium light yellow, smooth. Asci 240–280 \times 14–18 μm , 8-spored, cylindrical, apices obtuse, 1-. Ascospores 16–18(–19) \times 11–12 μm excluding ornamentation and 22–27 \times 12–16(–17) μm including ornamentation, hyaline, uniseriate, ellipsoid to broadly ellipsoid; ornamentation consisting of rounded warts connected by thick or thin ridges to form a regular or irregular reticulum with meshes up to 5 μm across, warts usually larger at poles (up to 4 μm) than elsewhere (up to 2.5 μm). Paraphyses clavate, up to 4 μm wide below and 7.5 μm at the tip, slender, straight, septate, simple.

Anatomy. Ectal excipulum up to 55 μm thick, textura angularis of somewhat horizontally elongated cells, cell walls of outer few layers pale brown, clothed with a few inconspicuous pale brown appressed hairs (hairs as described above), cells up to 30 \times 15 μm ; medullary excipulum of dense textura intricata, hyphae up to 6.5 μm ; hypothecium indistinct.

This species has a very characteristic spore ornamentation somewhat similar to that of *M. flavorubens* (Rehm) Pflister & Korf, which, however, differs in having much smaller ascospores (14–19 \times 8–9.5 μm including ornamentation).

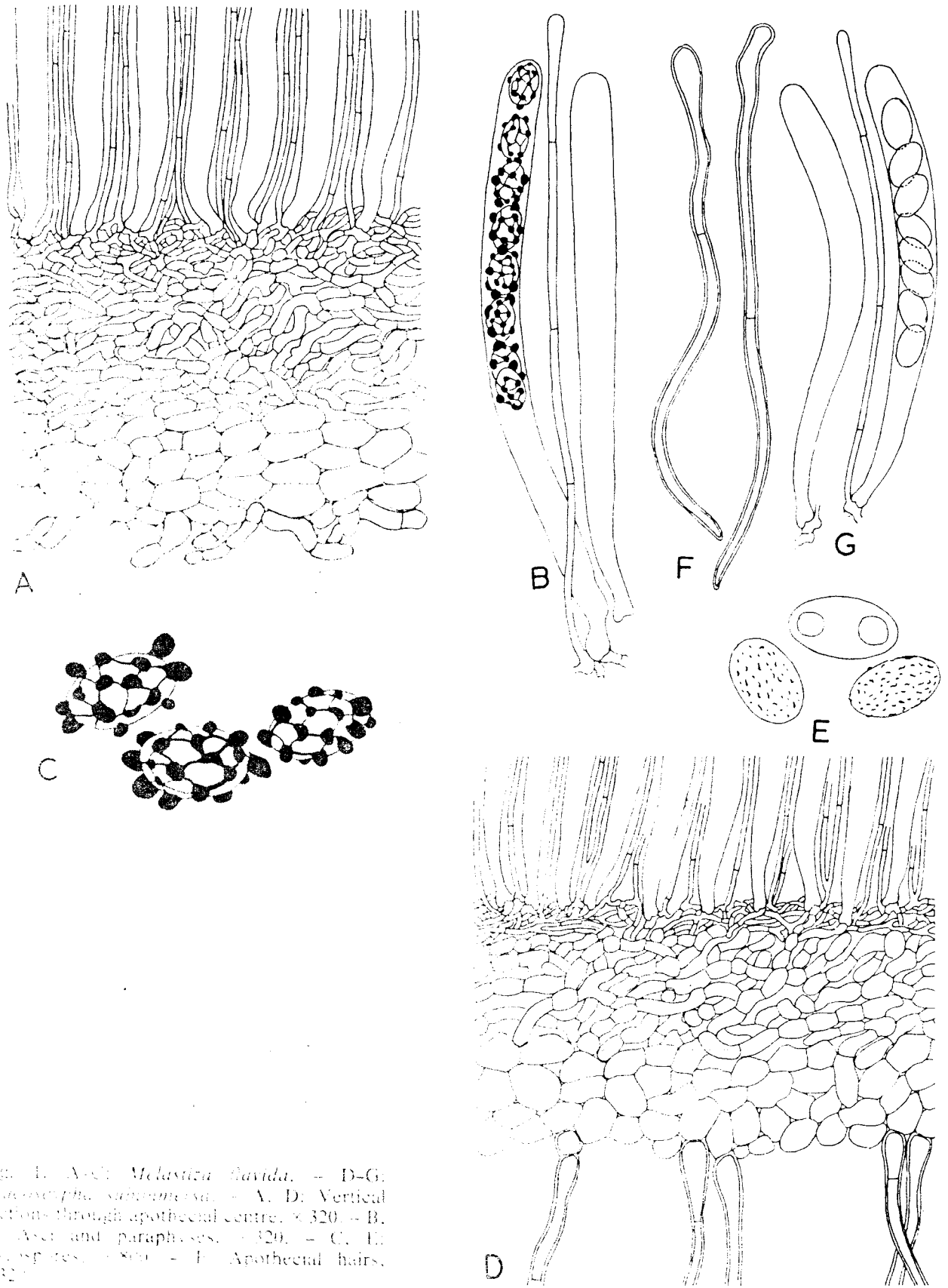


Fig. 1. A-C: *Melastiza flavida*. - D-G: *L. acrocephala subramensis*. - A, D: Vertical sections through apothecial centre, $\times 320$. - B, G: Asci and paraphyses, $\times 320$. - C, E: Ascospores, $\times 800$. - F: Apothecial hairs, $\times 320$.

larger apothecia (3–6 mm) and a different colour of the hymenium (grey-red with a pinkish tinge).

***Leucoscypha subimmersa* Thind & Kaushal, sp. nov. – Fig. 1 D–G**

Holotype: India, Dehra Dun, on soil in tropical forest, 10.9.1973, Kaushal 2583 (PAN).

Apothecia ad 2.5 mm diam, sparsa vel gregaria, sessilia, subimmersa, initio clausum, denique patellatum, discus discoideus; externa superficies subfusca, extra strigosa, pili ad $350(-500) \times 6 \mu\text{m}$, hyalini, recti vel subrecti, parce septati, crassitunicati, tunica ad $1.5 \mu\text{m}$ crassa, basis simplex vel parce bulbosa, apices obtusi; margo integer, fimbriatus capillis; hymenium flavopallidum. Asci $175-210 \times 10.5-16.5 \mu\text{m}$, octospori, cylindracei, jodo non caerulescentes. Ascosporeae $15-20 \times 10-13(-15) \mu\text{m}$, ample ellipsoideae, uniseriatae, hyalinae, verrucosae, biguttulatae. Paraphyses ad $2 \mu\text{m}$ amplae infra et ad $3.5(-5) \mu\text{m}$ in apicibus, parce septatae, simplices vel furcatae infra. – Excipulum ectale ad $60 \mu\text{m}$ crassum, textura angularis, cellulis $30 \times 17 \mu\text{m}$; excipulum medullare ad $65 \mu\text{m}$ crassum; textura intricata, hyphis ad $9 \mu\text{m}$ amplae; hypothecium ad $12 \mu\text{m}$ crassum; textura dense intricata.

Apothecia up to 2.5 mm in diameter, scattered to gregarious, sessile, somewhat immersed in soil, closed at first, later opening, shallowly cupulate, soft, fleshy; external surface light brown, densely hairy; hairs up to $350(-500) \times 6 \mu\text{m}$, hyaline, flexuous or straight, denser and forming a fringe around the margin, sparsely septate, thick-walled, wall up to $1.5 \mu\text{m}$ thick, basal cell simple or slightly swollen, apex obtuse; margin entire, fringed with hairs; hymenium pale yellow, fading on drying. Asci $175-210 \times 10.5-16.5$

μm , 8-spored, cylindrical, apex obtuse, base narrow, 1-. Ascospores $15-20 \times 10-13(-15) \mu\text{m}$, broadly ellipsoid, rarely subglobose, uniseriate, hyaline, warted, biguttulate. Paraphyses up to $2.0 \mu\text{m}$ wide below, up to $3.5(-5) \mu\text{m}$ apically, slender, straight, sparsely septate, simple or branched below.

Anatomy. Ectal excipulum up to $60 \mu\text{m}$ thick, textura angularis of irregular cells, cells $30 \times 17 \mu\text{m}$, thin-walled; medullary excipulum to $65 \mu\text{m}$ thick, textura intricata of compactly arranged, short-celled hyphae, hyphae up to $9 \mu\text{m}$ wide; hypothecium very narrow, up to $12 \mu\text{m}$ thick, of dense textura intricata.

Leucoscypha subimmersa has small, pale yellow apothecia somewhat immersed on bare soil, and minutely warted, broadly ellipsoid ascospores. In spore ornamentation it is close to *L. alpestris* (Sommerf.) Eckbl. which, however, differs in having much smaller ascospores ($13-16 \times 7.5-9 \mu\text{m}$), bright orange apothecia, and finally 4-spored asci. It grows in the leaf axils of *Tetraplo-*

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