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NISSLIA EXILIS AND PHYLLACHORA BALANSAE: TWO NEW RECORDS FOR INDIA

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DURING a survey of microfungi the authors collected two ascomycetes hitherto unrecorded from India^{1,2}.

A brief description is given below:

Niesslia exilis (Albertini & Schweinitz ex Fries)
Winter, Robenhorsts Kryptogamen Flora Deutschland
1(2): 196 (1885).

Perithecia globose, superficial, gregarious, minute, brown to dark-brown, 100–120 μm across, covered with radiating, stiff, nonseptate, brown to dark-brown setae, numerous, 60–90 \times 2.5–4.0 μm . Asci cylindrical-clavate, numerous, arise in cluster, unitunicate, hyaline, briefly stipitate, 8-spored, 24–36 \times 4.0–6.5 μm . Ascospores irregularly biseriate, hyaline to very light yellow in cluster, cylindrical to fusoid, 1-septate, smooth, round ends, 5.0–6.5 \times 1.5–2.0 μm (figure 1).

On dead leaves of *Lagerstroemia flos-reginae*, J. N. Agric. Univ. Campus, Jabalpur, India, 30.8.1986, Leg. N. D. Sharma.

The type specimen has been deposited in the Herbarium, CAB International Mycological Institute, Kew, No. 311974.

Niesslia pusilla (Fries) Schroeter, *N. mulleri* Ramachandra Rao and *N. anacardiae* Sathe & Mogarkar was the only three species of *Niesslia* Auerswald apud Gonnermann and Robenhorst recorded from India so far. We collected two species on the same host leaves. The perithecia in *N. mulleri* Ramchandra Rao are pear-shaped with robust, curved and 7–9 setose (figure 2). In the present collection perithecia, asci and ascospores are slightly different³.

Phyllachora balansae Speg. in *Fung. Guar. Pug. I*: 110 (1883); *Syll. Fung. IX.*, 1009, 1891.

Spots black, epiphyllous, separate, distributed all over the leaf, circular, up to 2 mm; stroma black, round, erumpent, amphigenous, generally epiphyllous, scattered 0.5 to 2 mm; 1–4 perithecia in a stroma, perithecia ostiolate, immersed, bowl-shaped, 200 to 600 μm ; asci saccate, briefly stipitate, paraphysate, 1–2-seriate, 8-spored, 40–65 \times 8–16 μm ; ascospores hyaline, subglobose, thick-walled, 5–11 \times 5–9 μm , av. 10 \times 8 μm (figure 3).

On living leaves of *Cedrela toona* Roxb. (Meliaceae), Pachmarhi, India, October, 1968, Leg. N. D. Sharma.

The specimen has been deposited in the Herbarium, CAB International Mycological Institute, Kew, No. 138925.

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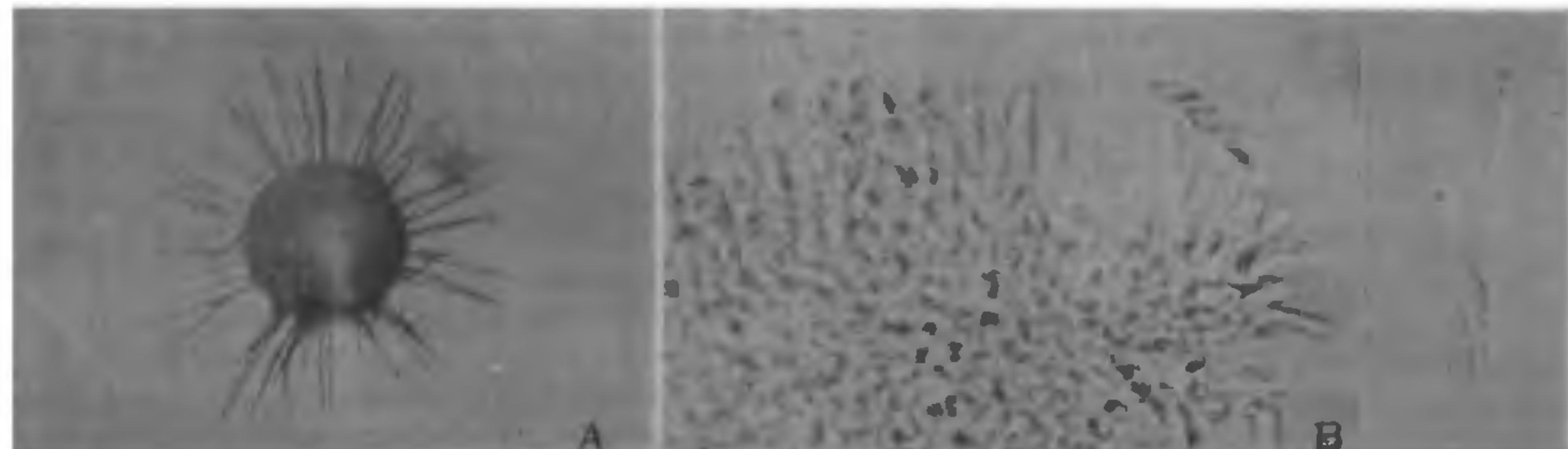


Figure 1. *Niesslia exilis*. A, Perithecium; B, asci.



Figure 2. *Niesslia mulleri*—perithecium.

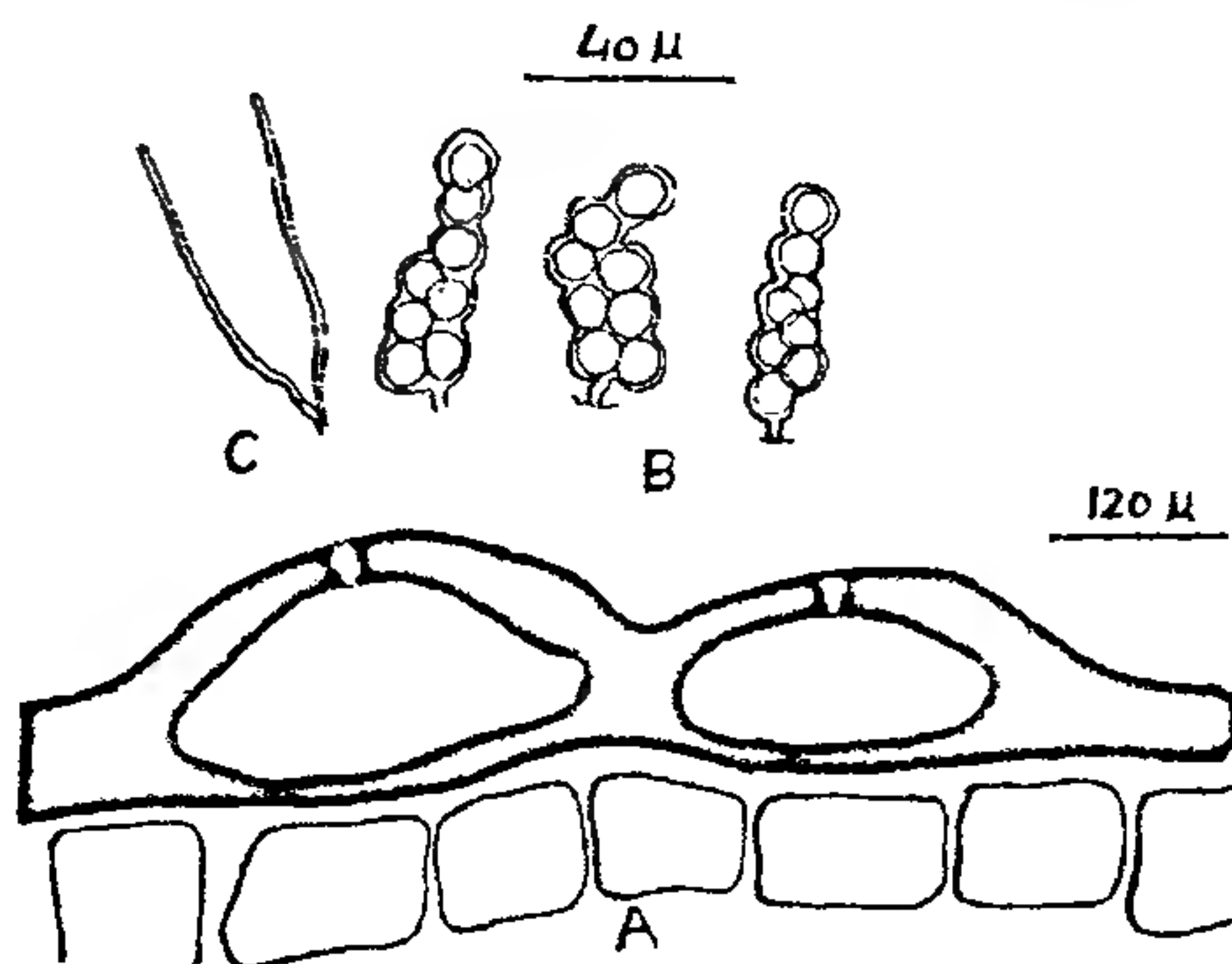


Figure 3. *Phyllachora balansae*. A, V.S. of ascostroma; B, asci with ascospores; C, paraphyses.

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MORPHOLOGICAL AND ECOLOGICAL OBSERVATIONS ON *STIGEOCLONIUM FARCTUM*—CHAETOPHORALES, CHLOROPHYCEAE

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DURING hydrobiological studies of freshwater ponds of Lucknow, the author observed *Stigeoclonium farctum* with enigmatic morphology. It could not therefore be identified for a long time and was thought to be the vegetative thallus of *Coleochaete pseudosoluta* (an oogamous chaetophorean member). Its morphological plasticity and physico-chemical preferences are described here.

S. farctum was found growing epiphytically on submerged macrophytes (*Hydrilla*, *Chara* and *Ceratophyllum*) and submerged discarded polythene sheets. Thallus was heterotrichous, consisting of well-developed prostrate and erect systems. The prostrate system was composed of creeping filaments of restricted growth, giving rise to prostrate lateral filaments in an irregular manner, which rebranched, becoming as long as the main filament. The lateral prostrate filaments were so close to one another that they appeared as a pseudoparenchymatous disk, like the vegetative thallus of another discoid chaetophorean member, *Coleochaete pseudosoluta* (figure 1). The prostrate cells in the central region were more or less angular or isodiametric but somewhat cylindrical towards the periphery. After a few months, some cells of the mature prostrate system started to give rise to erect filament initials, which looked like small beads on the surface of the prostrate thallus (figure 1). Later, these cells developed into short erect filaments (figures 2–8). Again, after a few months, the thallus looked different altogether like *Stigeoclonium*, with an extensively developed erect system with a range of morphological variability, ranging from unbranched to alternately branched, unilaterally branched to dichasially branched filaments (figures 2–14). Branch tips ended bluntly (figures 2, 3, 5, 6 and 7) or in multicellular hairs (figures 4, 8).

Both prostrate system cells (figure 14) and erect system cells (basal) gave rise to rhizoids (figures 10, 12 and 13). Rhizoids developing from terminal cells of the prostrate system could not be observed (cf. ref. 1).

The prostrate system cells in the central region