

NOTES AND BRIEF ARTICLES

LEUCOSPHERA, A NEW GENUS OF THE PSEUDEUROTIACEAE

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In the course of a study of herbivore dung collected in the Zoological Garden in Delhi, an ascomycete was observed and isolated which could not be accommodated in any known genus. It is therefore described below.

Leucosphaera v. Arx, Mukerji & Singh, *gen. nov.*

Coloniae expansae, albae, mycelio aereo obiectae. Ascomata ex initialibus convolutis oriuntur, pallida, globosa, non ostiolata, pariete molli ex hyphis hyalinis, indistinctis constante circumdata. Asci irregulariter dispositi, clavati, obovati vel globosi, tenuitunicati, evanescentes, 8-spori; ascosporae ellipsoideae vel reniformes, hyalinae, continuae, strato gelatinoso circumdatae. Cellulae conidiogenae cylindricae vel aculeatae, plerumque sympodialiter vel percurrenter elongatae; blastoconidia continua vel septata, hyalina.

Species typica: *Leucosphaera indica* v. Arx & al.

Colonies spreading, white, with aerial mycelium; ascomata developing from coiled initials, light, spherical, non-ostiolate, with a fleshy wall composed of hyaline, indistinct hyphal cells; asci irregularly disposed, clavate, obovate or spherical, thin-walled, evanescent, 8-spored; ascospores ellipsoidal or reniform, hyaline, 1-celled, sheathed; conidiogenous cells cylindrical or tapering, usually sympodially or percurrently elongating; conidia 1-celled or septate, hyaline.

TYPE SPECIES.—*Leucosphaera indica* v. Arx & al.

Leucosphaera indica v. Arx, Mukerji & Singh, *spec. nov.*—Fig. 1.

Coloniae in agar maltoso expansae, in dies 2-3 mm crescentes 24°C, albae, plerumque mycelio aereo denso hyalino partim obiectae. Hyphae fere crassitunicatae, hyalinae, regulariter septatae, 2-3.5 µm latae. Initialia ascomatum in mycelio aereo irregulariter convoluta; ascomata in strato myceliali immersa, globosa vel modice oblata, non ostiolata, hyalina vel roseola, 150-300 µm diam., pariete persistente, fere hyalino, 10-13 µm crasso circumdata, saepe nonnullis hyphis hyalinis obiecta. Asci numerosi, irregulariter dispositi, in hyphis ascogenis acervati, clavati, obovati vel globosi, tenuitunicati,

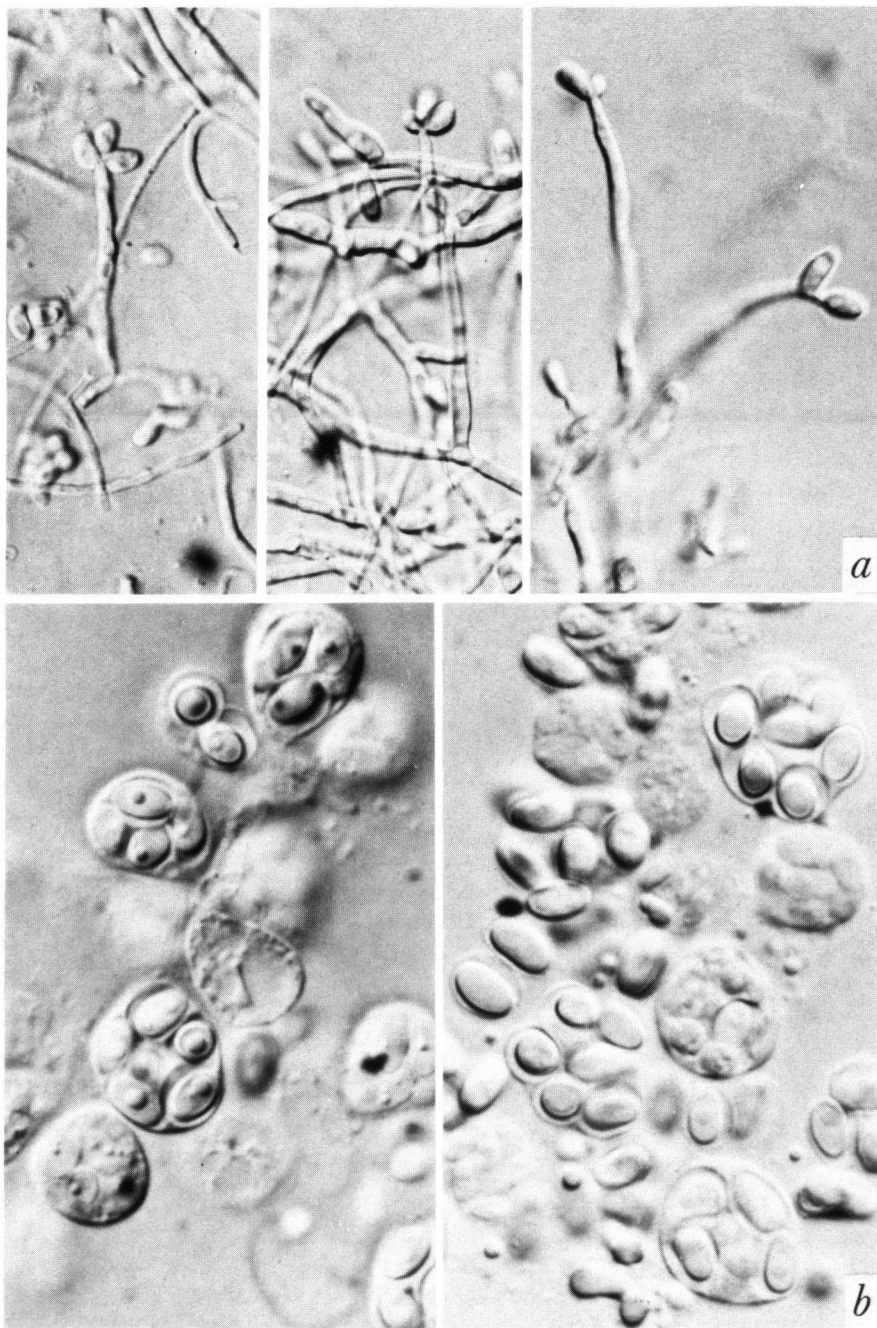


Fig. 1. *Leucosphaera indica*. — a. Hyphae, conidiogenous cells, and conidia ($\times 750$). — b. Asci and ascospores ($\times 1200$).

evanescentes, 8-spore, 10–13 μm diam.; ascosporae ellipsoideae vel reniformes, fere crassitunicatae, strato gelatinoso 1–1.5 μm crasso circumdatae, leves vel tenuiter striatae, hyalinae vel aggregatae flavidae ad roseae, poro germinationis carentes, 6–7 \times 3–4 μm . Cellulae conidiogenae saepe aggregatae in hyphis vegetativis, 10–25 \times 2.0–3.5 μm ; conidia ellipsoidea, obovata, cylindrica vel clavata, continua vel raro septata, rotundata vel deorsum modice truncata, hyalina, 5–16 \times 3–5 μm .

Typus: CBS 123.78, isolatus e fimo antilopae Nilgai dictae in horto zoologico Delhiensi, 28 Apr. 1977.

Colonies on malt agar expanding, with a daily growth rate of 2–3 mm at 24°C, usually white, often forming dense patches of aerial, hyaline mycelium; hyphae rather thick-walled, hyaline, regularly septate, 2–3.5 μm broad; ascomatal initials developing on the aerial hyphae and forming irregular coils; ascomata imbedded in the mycelial mat, spherical or slightly oblate, non-ostiolate, colourless or slightly pink, 150–300 μm , ascomatal wall fleshy, persistent, nearly colourless, 10–13 μm thick, composed of indistinct, 5–8 μm sized hyphal cells, often covered with some hyaline hyphae; asci numerous, irregularly disposed, formed in brushes on ascogenous hyphae, clavate, obovate or spherical, thin-walled, evanescent, 8-spored, 10–13 μm wide; ascospores ellipsoidal or reniform, rather thick-walled, with a 1–1.5 μm broad sheath, smooth or finely striate, hyaline, yellow to pink en masse, without germ pore, 6–7 \times 3–4 μm ; conidiogenous cells often in clusters on the aerial hyphae, cylindrical or tapering, sympodially or percurrently elongating, 10–25 \times 2–3.5 μm ; conidia ellipsoidal, obovate, cylindrical or clavate, 1-celled or rarely septate, rounded or slightly truncate at the base, hyaline, 5–16 \times 3–5 μm , leaving rather distinct scars after release.

TYPE.—CBS 123.78, isolated from dung of nilgai, (short-horned, Indian antelope), collected in Delhi Zoo, 28 April 1977.

The teleomorph alone was observed on the dung and it was only present in fresh isolates. The anamorph was observed in subcultures of the fungus, usually together with the teleomorph.

The genus *Leucosphaera* has to be classified in the family Pseudeurotiaceae sensu Malloch & Cain (1970). The anamorph is rather similar to that of some *Pseudeurotium* species, but there is no generic name available. The genus *Pseudeurotium* van Beyma differs from *Leucosphaera* by having dark ascomata with a wall composed of distinct, pigmented cells and by the pigmented and unshathed ascospores. The only genus classified in Pseudeurotiaceae with light ascomata is *Emericellopsis* van Beyma characterized by pigmented ascospores with wing-like appendages and by a phialidic, *Acremonium*-like conidial state (Gams, 1971).

Among the ostiolate Pyrenomycetes (Sphaeriales, including Hypocreales), the only genus comparable to *Leucosphaera* is *Sphaeronaemella* Karst. The coprophilous species, *S. fimicola* Marchal, has particularly similar ascospores, but the *Gabarnaudia* anamorph is again phialidic (Cain & Weresub, 1957; Samson, 1974).

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