

Faurelina indica spec. nov.

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Abstract. — Two cultures, isolated from dung collected in India are described as *Faurelina indica*. This species differs from *F. fimigena* LOCQUIN-LINARD, the type species of the genus, by the formation of 2-celled arthroconidia and slightly smaller ascospores.

Description

Two cultures of a fungus, isolated from goat and cow dung collected in Nainital, Delhi, India, were tentatively described and identified by von ARX (1978) as *Leuconeurospora elongata* UDAGAWA & FURUYA (1973). This species was transferred to the genus *Faurelina* LOCQUIN-LINARD (1975). *F. fimigena* LOCQUIN-LINARD, the type species of the genus, differs from the two isolates by slightly larger, more thick-walled ascospores and particularly by the absence of an anamorph with 2-celled arthroconidia. A subculture of the type (CBS 352.78) and a part of the dried holotype (PC) were examined.

The type specimen of *Leuconeurospora elongata* proved to be very poor; only some remnants of wall structures and a number of ascospores could be found in the two available permanent slides. No cultures were received and no conidia are described.

The two isolates from India should therefore be described as a new species:

Faurelina indica v. ARX, MUKERJI & SINGH spec. nov. — Fig. 1

Coloniae in agar farina avenacea confecto in dies 1–1.5 mm crescent 25° C, cito obscure brunneae, mycelio aërio irregulariter tomentoso; hyphae vegetativae crassitunicatae, hyalinae vel dilute brunneae, plerumque 4–15 µm crassae, sed saepe e cellulis inflatis, ad 25 µm crassis constantes; arthroconidia in tomentis aëriis, praecipue ex hyphis angustioribus oriunda, cylindrica vel modice inflata, uni- ad bicellularia, hyalina, utrinque truncata, dilapsa marginem prominentem retinentia, 15–30 × 4–6 µm; blastoconidia ex arthroconidiis ipsis vel e pedicellis plus minusve longis oriunda, clavata, basi truncata, hyalina, 3–5 × 1.5–2.5 µm. Ascomata deorsum immersa, semiglobosa, pustulata, sursum rotundata, levia, 180–250 µm diam., 170–300 µm alta, non-ostiolata; paries deorsum pallidus, sursum viridis ad niger, e cellulis elongatis, verticaliter seriatis, 5–7 µm latis, crassitunicatis, incrustatis constans; asci catenati,

fasciculati, in successione basipetali formati, globosi, clavati, ellipsoidei vel irregulares, fere tenuitunicati, 8-sporei, $12-18 \times 8-12 \mu\text{m}$; ascospores fusiformes vel rhomboideae, dilute brunneae, paucis sulcis et intumescentiis longitudinalibus ornamentatae, poris germinationis carentes, $6-8 \times 4.0-5.5 \mu\text{m}$. Typus CBS 126.78, isolatus e fimo caprino, Nainital prope Delhi in India, lectus a N. SINGH, 1978.

Colonies on oatmeal agar with a daily growth rate of 1–1.5 mm at 25°C, soon becoming dark brown, with irregular tufts of aerial mycelium; vegetative hyphae thick-walled, hyaline or light brown, usually 4–15 μm thick, often composed of swollen, up to 25 μm thick cells; arthroconidia in aerial tufts, mainly formed on thinner, aerial hyphae, cylindrical or slightly swollen, 1- to 2-celled, hyaline, with truncate ends, separating from each other by disjunctive struc-

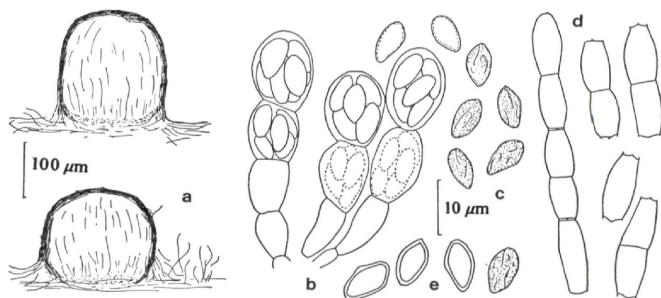


Fig. 1. *Faurelina indica* (type): a. ascomata. — b. asci. — c. ascospores. — d. arthroconidia. — e. ascospores of *Faurelina fimigena*

tures, $15-30 \times 4-6 \mu\text{m}$; blastoconidia mainly formed on arthroconidia either directly or on shorter or longer stalks, clavate, with a truncate base, hyaline, $3-5 \times 1.5-2.5 \mu\text{m}$; ascomata immersed at the base, hemispherical or pustulate, rounded above, smooth, 180–250 μm in diam, 170–300 μm high, non-ostiolate; wall of the ascomata at base light; in the superficial parts green to black, composed of vertical rows of elongated, 5–7 μm broad, thick-walled, encrusted hyphal cells; asci in fasciculate chains (vertical rows), formed in basipetal succession, spherical, clavate, ellipsoidal or irregular in shape, rather thin-walled, 8-spored, $12-18 \times 8-12 \mu\text{m}$; ascospores fusiform-navicular or rhomboidal, light brown, with some furrows, finely striated by irregular, usually longitudinal thickenings of the wall, without germ pores, $6-8 \times 4-5.5 \mu\text{m}$.

Type specimen: CBS 126.78. isolated from goat dung, Nainital, Delhi, India, collected by N. SINGH, 1978.

Second strain: CBS 301.78, isolated from cow dung at the same locality.

The classification of the genera *Fauvelina* and *Leuconeurospora* in the Microascaceae is not satisfactory (UDAGAWA & FURUYA, 1973; von ARX, 1978).

The two genera differ from typical Microascaceae by having ornamented ascospores without germ pores and by the structure of the ascomata wall. In *Fauvelina* the wall is composed of vertical rows of thick-walled cells, in *Leuconeurospora* it is cephalothecoid (composed of plates of radiating cells). Typical Microascaceae have smooth ascospores with one or two germ pores. *Fauvelina* may be rather close to *Neurospora* SHEAR & DODGE, which is characterized by elongate, striate ascospores (with apical germ pores) and an anamorph with 1-celled, cylindrical arthroconidia. Similar arthroconidia have also been observed by von ARX (1973, 1978) in some species of the genera *Petriellidium* MALLOCH and *Pithoascus* v. ARX. No generic name is available for the anamorph of *Fauvelina indica*, but it is close to *Arthrographis* COCHET ex SIGLER & CARMICHAEL with 1-celled, slightly swollen arthroconidia.

The ascospores of *Leuconeurospora pulcherrima* have an ornamentation, similar to that of the ascospores in *Sphaerodes* CLEM. and intermediate with cephalothecoid ascomata exist (von ARX, 1981). In this group of Ascomycetes anamorphs are mostly absent or are phialidic spermatial states when present.

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