A NEW SPECIES OF GILMANIELLA FROM THE SOIL OF KUWAIT

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In the course of investigations on the fungal flora of the salt-marsh soils of Kuwait, a *Gilmaniella* species was isolated twice in 1973. Its smooth vegetative mycelium and large conidia with relatively wide germ pores indicated that it is sufficiently different from the only known species in *Gilmaniella*, *G. humicola* Barron (1964), to warrant its description as a new species.

Gilmaniella macrospora Moustafa, *spec. nov.*—Plate 58

Coloniae in agaro PDA dicto 28° C celeriter crescunt, post 7 dies ad 4-5 cm diam, laxe intricatae, velutinae, 2-3 mm altae, primum albae, deinde dilute griseae ad fuscae, margine angusta altae, primum albae, deinde dilute griseae ad fuscae, margine angusta alba circumdatae. Hyphae submersae hyalinae, leves et tenuitunicatae, 2.5–3.7 μm latae; hyphae aeriae hyalinae, deinde dilute pigmentatae, leves, septis crassis, obscuris divisae. Cellulae conidiogenae laterales orthotropicae, vel intercalares e cellulis haud differentiatis oriuntur, hyalinae, deinde obscure rubrobrunneae leves et tenuitunicatae, clavatae vel pyriformes, 7–18 × 5–7 μm;

nonnumquam conidiophora longiora, septata adsunt; cellulae conidiogenae conidia singula ad terna apicalia proferunt. Blastoconidia plerumque singula, raro catenis brevibus connexa, levia, crassitunicata, globosa, (10-)14–18 (22.5) μm diam., vel subglobosa, ovoidea, piriformia vel elongata; porus germinationis in parte superiore, conspicuus, 2.5–3.7 μm diam.; cicatrices basales in conidiis dimissis planae vel prominentes, fuscae, 2–5 μm diam.
Typus CBS 388.75, isolatus e solo halomorphico in Kuwait.

Colonies on potato-dextrose agar at 28° C growing rapidly, reaching a diameter of 4–5 cm in 7 days, consisting of loose-textured, velvety, 2–3 mm high, at first white mycelium, quickly turning into pale grey and finally dark blackish-brown with a white, narrow (less than 2 mm) margin, azonate. Reverse olivaceous-black. Exudate and odour absent. Submerged hyphae hyaline, septate, smooth- and thin-walled, 2.5–3.7 μm wide. Aerial hyphae hyaline at first, becoming subhyaline but remaining smooth-walled, with prominent, thick, dark septa. *Conidiogenous cells* arising laterally at right angles or intercalary from undifferentiated hyphae, scattered, smooth- and thin-walled, hyaline, clavate to pyriform, 7–18×5–7 μm; sometimes septate and elongated conidiophores occurring which are straight or flexuous, cylindrical, 18–42×3.7–5.0 μm; conidiogenous cells mono- or polyblastic, usually forming solitary conidia at the tips, sometimes 2 or 3 conidia arising in the apical region. In mature colonies most of the conidiogenous cells and many other cells of the vegetative mycelium turn dark reddish brown. *Conidia* blastic, mostly solitary, occasionally in short chains of 2–3, dry, smooth- and thick-walled, dark reddish brown, one-celled, spherical (10–) 14–18 (–22.5) μm in diameter, or subspherical, oval, pear-shaped to elongated, 15–22.5 (–27.5)×10–15 μm. Germ pores in the apical region conspicuous, relatively large, 2.5–3.7 μm wide. Basal scars in detached conidia flat or prominent, dark, 2–5 μm wide.

Growth and sporulation of *G. macrospora* on other media such as malt and oatmeal agars is abundant, on Czapek's agar the colonies are very loose-textured with less sporulation.

In *Gilmaniella humicola* Barron the conidia are spherical, mostly 7–10 μm diameter (Barron, 1964) and very rarely reach 15 or 16 μm (Subramanian & Lodha, 1964), whereas in *G. macrospora* they are more variable in shape, and have larger dimensions. Moreover, the vegetative hyphae in *G. humicola* are finely roughened to verrucose while in *G. macrospora* they are smooth and remain so.

References

Barron, G. K. (1964). A new genus of the Hyphomycetes from soil. *In* Mycologia **56**: 514–518.
Ellis, M. B. (1970). Dematiaceous Hyphomycetes. Kew.
Subramanian, C. V. & Lodha, B. C. (1964). Four new coprophilous fungi. *In* Antonie van Leeuwenhoek **30**: 317–330.

Explanation to Plate 58

Figs. A-D. Different types of conidiogenous structures of *Gilmaniella macrospora*, CBS 388.75.