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# DACTYLARIA DIMORPHOSPORA, A NEW SPECIES FROM SOIL

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SUMMARY

A new species of the genus *Dactylaria* Sacc. is described and figured. It differs from all described species by its production of two kinds of conidia.

In October 1969 an analysis was made of the soil mycoflora of an experimental field in Oostelijk Flevoland (the Netherlands). From a plot cropped continuously with potato for 5 years a fungus belonging to the genus *Dactylaria* was isolated. Because of its production of two kinds of conidia it could not be identified with any of the described species.

In August 1972 a second isolate of the same fungus was obtained from the rhizosphere of *Phragmites australis* growing spontaneously in another, recently reclaimed polder area in Zuidelijk Flevoland.

The same fungus was isolated from agricultural soil under wheat crop at Kitzeberg, Germany by W. Gams in May 1963, and again from cultivated soil at Nieuwpoort, Belgium, in April 1964, by G. L. Hennebert, who then considered the species as being new.

**Dactylaria dimorphospora** Veenbaas-Rijks, *spec. nov.*

Coloniae 14 diebus 20 °C ad 28 mm diam., albae vel dilute cremeae; mycelium aerium sparsum, velutinum, ad 2 mm altum in medio, dense zonatum; exsudatum paulum hyalinum; reversum incoloratum vel pallide bubalinum. Mycelium hyalinum, e hyphis septatis 2.0–2.5 μm crassis, nonnumquam inflatis constat. Conidiophora (15–)20–30(–72) × 2–4 μm, lateralia vel terminalia e hyphis aeriis vel submersis oriuntur, recta vel flexuosa, plerumque septata, longitudine variabilia, nonnumquam ramosa, levia, hyalina; cellula terminales conidiogenae sympodialiter elongatae conspicue denticulatae, blastoconidia successive formantes. Conidia duobus modis formantur: a) e cellulis conidiogenis denticulatis oriunda, hyalina, levia, cylindrica, apice rotundata, deorsum attenuata et fere acutata, 1–3(6)–septata, 10–32(–44) × 2.3–3.5 μm; b) e cellulis non differentiatis lateraliter oriunda, brevissime pedicellata, hyalina, levia, globosa, exigue apiculata, 4–5 μm diam.

Typus CBS 256.70 isolatus e solo agresti, Oostelijk Flevoland Polder, Oct. 1969.

Colonies on maize-meal agar growing slowly, attaining a diameter of about 28 mm in 14 days at 20 °C, white or very lightly cream-coloured; aerial mycelium sparse, forming a dense, felt-like turf about 2 mm high at the centre,

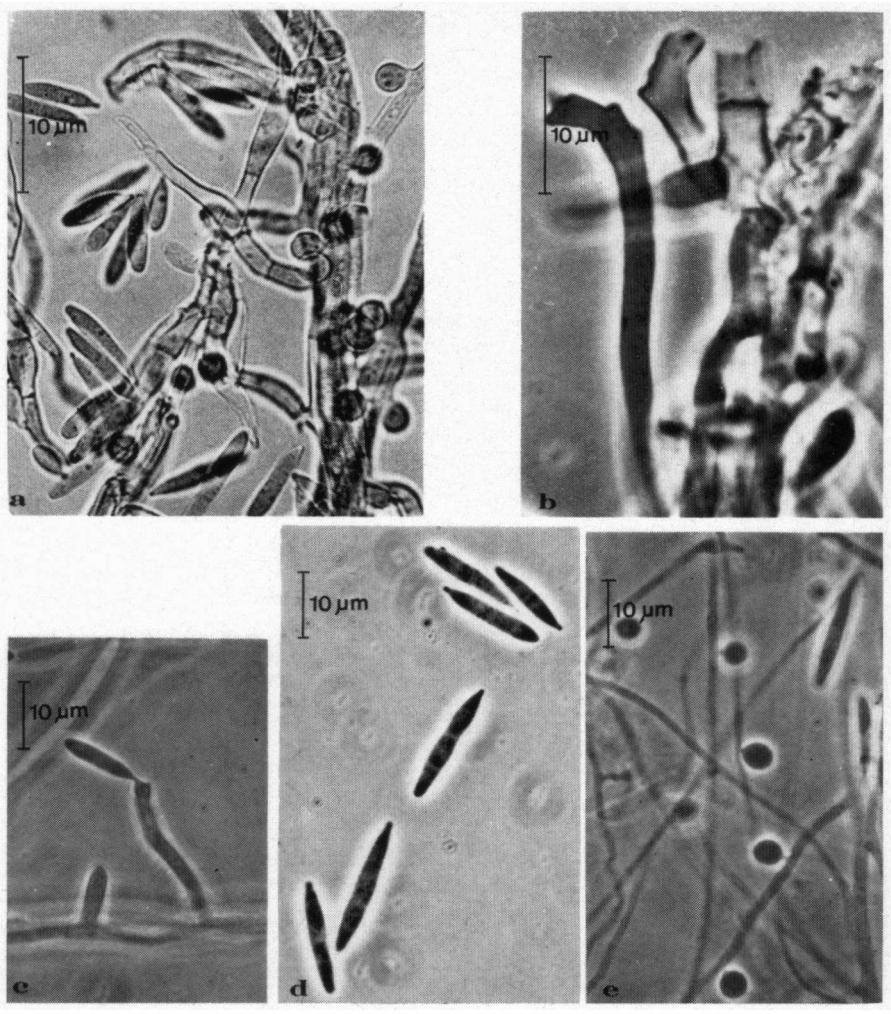


Plate I. *Dactylaria dimorphospora*. a. habit; b. and c. details of conidiophores; d. and e. conidia.

lower towards the margin, increasing with narrow daily zones; margin regular, diffuse. Exudate limited, produced in small colourless droplets. Reverse uncoloured to pale buff. Vegetative mycelium hyaline, septate, 2.0–2.5 µm in diam. with occasional hyphal swellings. Conidiophores (15–)20–30(–72) × 2–4 µm, arising laterally or terminally from aerial or submerged hyphae, straight or flexuous, mostly septate, variable in length, sometimes branched, smooth-walled, hyaline, denticulate at the apical usually integrated conidiogenous cell which elongates sympodially while producing a succession of blastoconidia.

Conidia of two kinds:

a) on the denticulate conidiogenous cells, hyaline, smooth-walled, cylindrical with rounded tip and tapering almost pointed base, 1–3(–6)–septate, 10–32 (–44) × 2.3–3.5 μm.

b) laterally on undifferentiated hyphae on short denticles, hyaline, smooth-walled, globose, slightly apiculate at the base, 4–5 μm in diam.

Type: CBS 256.70 (= IPO 823), isolated from agricultural soil (under potato), Oostelijk Flevoland Polder, the Netherlands, October 1969, J. W. Veenbaas-Rijks.

Other collections:

CBS 641.73 (= IPO 1135), isolated from rhizosphere soil of *Phragmites australis*, Zuidelijk Flevoland Polder, the Netherlands, August 1972, G. M. Tichelaar.

CBS 145.65 (= GLH 6387), isolated from agricultural soil under wheat, Kitzeberg, Germany, May 1963, W. Gams C 355.

CBS 146.65 (= GLH 6496), isolated from agricultural soil under wheat, Kitzeberg, Germany, May 1963, W. Gams C 940.

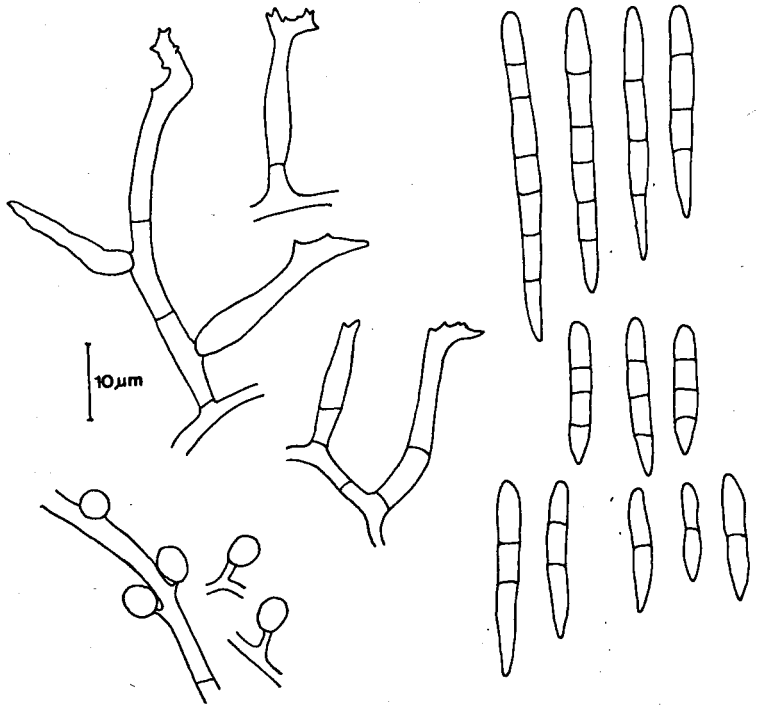


Fig. 1. *Dactylaria dimorphospora*, CBS 256.70. Conidiophores and conidia from 10 days old colony on maize-meal agar.

The fungus shows the characteristics of the species formerly placed in *Diplorhinotrichum* Höhnel (1902) and transferred to *Dactylaria* by Bhatt and Kendrick (1968), i.e. elongated, hyaline, septate conidia borne on conspicuous denticles on a sympodially elongating conidiogenous cell.

It differs from all species described in *Dactylaria* by the presence of a globose type of conidia on undifferentiated hyphae.

ACKNOWLEDGEMENTS

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