

Arthrinium globosum, a new hyphomycetous species

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A new species of Hyphomycetes (Deuteromycotina), *Arthrinium globosum* Koskela, is described from Finland. It resembles most closely *A. sphaerospermum* Fuckel, from which it differs in having larger, more globose conidia with a hyaline rim in side view. *A. globosum* has been obtained only on Cyperaceae.

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Arthrinium globosum Koskela n.sp.

Coloniae compactae, discretae, pulvinatae, rotundatae-vel ovales, atrobrunneae. Mycelium partim superficiale et partim in substrato immersum. Mycelium superficiale ex hyphis ramosis et anastomosantibus septatis, hyalinis vel olivaceo-brunneis, levibus, 2–7 µm crassis compositum. Conidiophora ex cellulis subsphaericis vel lageniformibus, 4–7 × 3–5 µm oriunda, simplicia, erecta vel flexuosa, cylindrica, incolorata, levia, ad 100 µm longa, 3–4 µm crassa, septis transversis brunneis vel atrobrunneis praedita. Conidia globosa vel subsphaerica, levia, a faciebus brunnea, a lateribus hyalinae, 8–10 × 7–9 µm (9.0 × 7.9 µm). Cellulae steriles nullae.

— Typus: Fennia, prov. Oulun Pohjanmaa, Muhos, *Carex cespitosa* L., 7.V.1972 Tauno Ulvinen (OULU).

Colonies compact, discrete, pulvinate, round to oval, dark brown. Mycelium partly superficial, partly buried in the substratum, composed of branched and anastomosing, septate, hyaline to olivaceous brown, smooth-walled hyphae, 2–7 µm thick. Conidiophore mother cells subsphaerical to lageniform, 4–7 × 3–5 µm. Conidiophores simple, straight or flexuous, cylindrical, colourless except for the brown or dark brown, transverse septa, smooth-walled, up to 100 µm long, 3–4 µm, bearing conidia laterally. Conidia globose or almost round, smooth-walled, brown in front view, hyaline in side view, 8–10 × 7–9 µm (9.0 × 7.9 µm). Sterile cells none.

Discussion

The new species resembles *Arthrinium sphaerospermum* Fuckel most closely of all the 21 *Arthrinium*

species known earlier (Ellis 1965, 1976, Gjørnum 1967, Pollack & Benjamin 1969). *A. globosum* differs from that species in having larger, more globose conidia with a hyaline rim in side view (Figs. 1 and 2). The average dimensions of the conidia of *A. sphaerospermum* are 7.1 × 6.1 µm. These species also have different host spectra, *A. globosum* has been obtained only on Cyperaceae and *A. sphaerospermum* mostly on Poaceae and occasionally on Cyperaceae and Juncaceae. Most of the 35 *A. globosum* collections are from central and northern Finland, *Carex cespitosa* serving as host in 60 % of the cases (Koskela & Peura 1983).

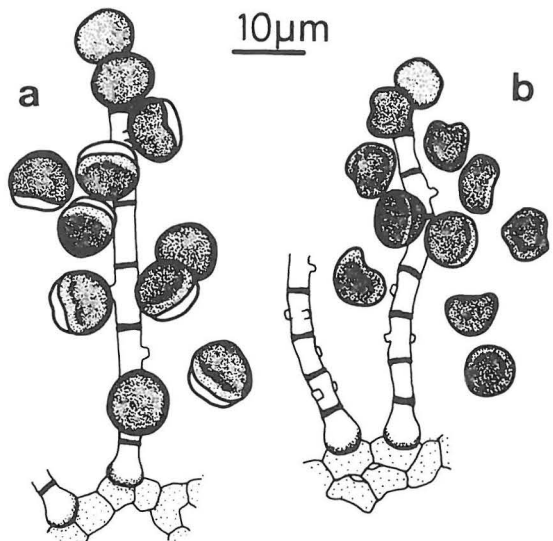
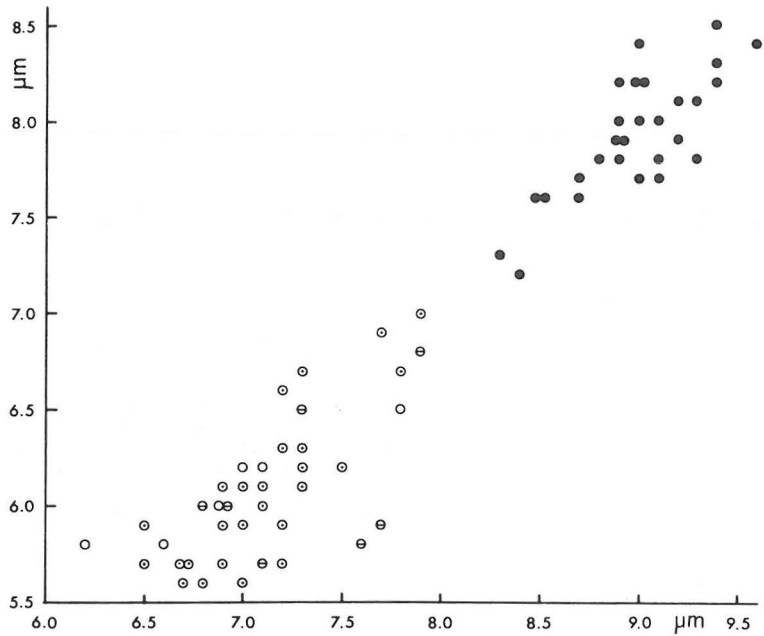


Fig. 1. Conidiophores and conidia of a) *A. globosum*, and b) *A. sphaerospermum*.

Fig. 2. Size of conidia of *Arthrinium globosum* and *A. sphaerospermum*. Each point is based upon measurements of 25 conidia (Koskela & Peura 1983).

- *A. globosum* on Cyperaceae
- *A. sphaerospermum* on Cyperaceae
- ⊙ *A. sphaerospermum* on Poaceae
- ⊖ *A. sphaerospermum* on Juncaceae



References

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