Suillosporium caricis (Basidiomycota, Aphyllophorales), a new species from Estonia

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Suillosporium caricis Kotir. & Saaren. sp. nova is described from Estonia. It grows at bases of living and dying Carex species intermixed with Epithele typhae (Fr.) Pat. The new species is relatively thin, smooth with some hyphal pegs, pale cream-coloured. The hyphal system is monomitic, and cystidial organs are clamped, multi-celled and spores narrowly fusiform, ca. 14–17 × 3.5–4 µm.

Key words: Aphyllophorales, Basidiomycota, Carex, Epithele typhae, Suillosporium caricis

The material studied is preserved in the herbaria H, TAA and/or in the reference herbarium of Heikki Kotiranta (H.K.).

Thirty spores per specimen are measured, and the measurements are made in Cotton Blue (CB) or Melzer’s reagent (IKI). CB– means that the walls of the cells are not stained by Cotton Blue, and CB+ that they are stained, and IKI– that there is no reaction to Melzer’s reagent. The third mounting medium used was 5% potassium hydroxide (KOH).

The following abbreviations are used: $L^*$ = mean spore length, $W^*$ = mean spore width, $Q$ = range of the variation in $L/W$ ratio, $Q^*$ = quotient of the mean spore length and width ($L/W$). None of the measurements derive from spore print.

Suillosporium caricis Kotir. & Saaren., sp. nova (Fig. 1)

Fructificatio resupinata, laevis fasciculis hyphalibus conoideis dispersis; cremeo-alba; systema hypharum monomiticum; hyphae fibulatae; sporae fusiformes, 14–17 × 3.5–4 µm.


Basidiocarp thin, resupinate, smooth or with scattered aculei, porose-reticulate under the lens, pale cream-coloured, margin not differentiated, distinct.
Fig. 1. Suillosporium caricis (from holotype). — A: Section through basidiocarp. — B: Apical part of a hyphal peg. — C: Basidia. — D: Spores.
Hyphal system monomitic, all hyphae clamped, in subiculum parallel to the substrate, covered with small (3–4 µm) rod-like crystals, 3–4 µm wide, thin-walled, faintly CB+. Tramal and subhymenial hyphae richly branched, thin-walled, 3–4 µm wide. Cystidia, or rather central hyphae of aculei, multi-celled, most of the septa clamped, 100–160 µm long, projecting up to 50 µm over the basidia, often originating in the subiculum. Cystidial cells normally 10–20 µm long (up to 45 µm), up to 13 µm wide, apical cells 5.5–7.5 µm wide, thin-walled, (3.3–)3.5–4(–4.2) µm, L* = 14.8 µm, W* = 3.8 µm, Q = 3.6–4.4, Q* = 3.9 (26.VIII.1986 Parmasto, TAA-107697), (12.6–)13.1–17.1(–19.2) × (3–)3.3–4.3 µm, L* = 15.3 µm, W* = 3.8 µm, Q = 3.3–5.3, Q* = 4 (Kotiranta 10131b et al., holotype), with an almost invisible apiculus, thin- to slightly thick-walled, CB+ (faintly), IKI–, KOH hyaline.


The genus Suillosporium is characterized by thin resupinate basidiocarp, monomitic clamped hyphal system, nodose-septate cystidia which are often encrusted, obconical small basidia and subfusiform, weakly cyanophilous, non-dextrinoid, non-amyloid spores (e.g., Eriksson et al. 1984).

The new species does not fit exactly to the genus, mainly because of the basidia, which are clavate, and much larger than in S. cystidiatum (D.P. Rogers) Pouz., the type species of the genus. However, at the moment, we do not know any better place for the new species. The third species in the genus, according to Hjortstam (1998), is S. amygdalisporum Boidin & Gilles.

It is basically similar to S. cystidiatum, but the spores are amygdaliform (Boidin & Gilles 1986). Suillosporium caricis deviates from those two species also in having often larger clamps in cystidia and longer spores with an inconspicuous apiculus. Moreover, the new species grows on Carex-species while other Suillosporium species fruit on dead wood. In both known collections S. caricis grew together with, but well separated from, Epithele typhae, which macroscopically looks very much the same. A few basidial bases bear remnants of old basidia, similar to those seen in some Athelopsis species. Athelopsis bananispora (Boidin & Gilles) Hjortstam has hyphal pegs, but they are sterile (Roberts 1995) like in E. typhae. Also the basidia of Athelopsis species are smaller than in S. caricis. Jaapia argillacea Bres. has somewhat similar basidia and the habitats are also seasonal wet, but its spores are cyanophilous and cystidia quite different.

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References


