

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

Heikki Kotiranta<sup>1</sup> & Reima Saarenoksa<sup>2</sup>

<sup>1</sup> Finnish Environment Institute, Research Department, P.O. Box 140, FI-00251 Helsinki, Finland (heikki.kotiranta@ymparisto.fi)

<sup>2</sup> Department of Biological and Environmental Sciences, P.O. Box 65 (Viikinkaari 1), FI-00014 University of Helsinki, Finland

Received 26 Aug. 2005, revised version received 17 Jan. 2006, accepted 2 Feb. 2006

Kotiranta, H. & Saarenoksa, R. 2006: *Suillosporium caricis* (Basidiomycota, Aphyllophorales), a new species from Estonia. — *Ann. Bot. Fennici* 43: 298–300.

*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).

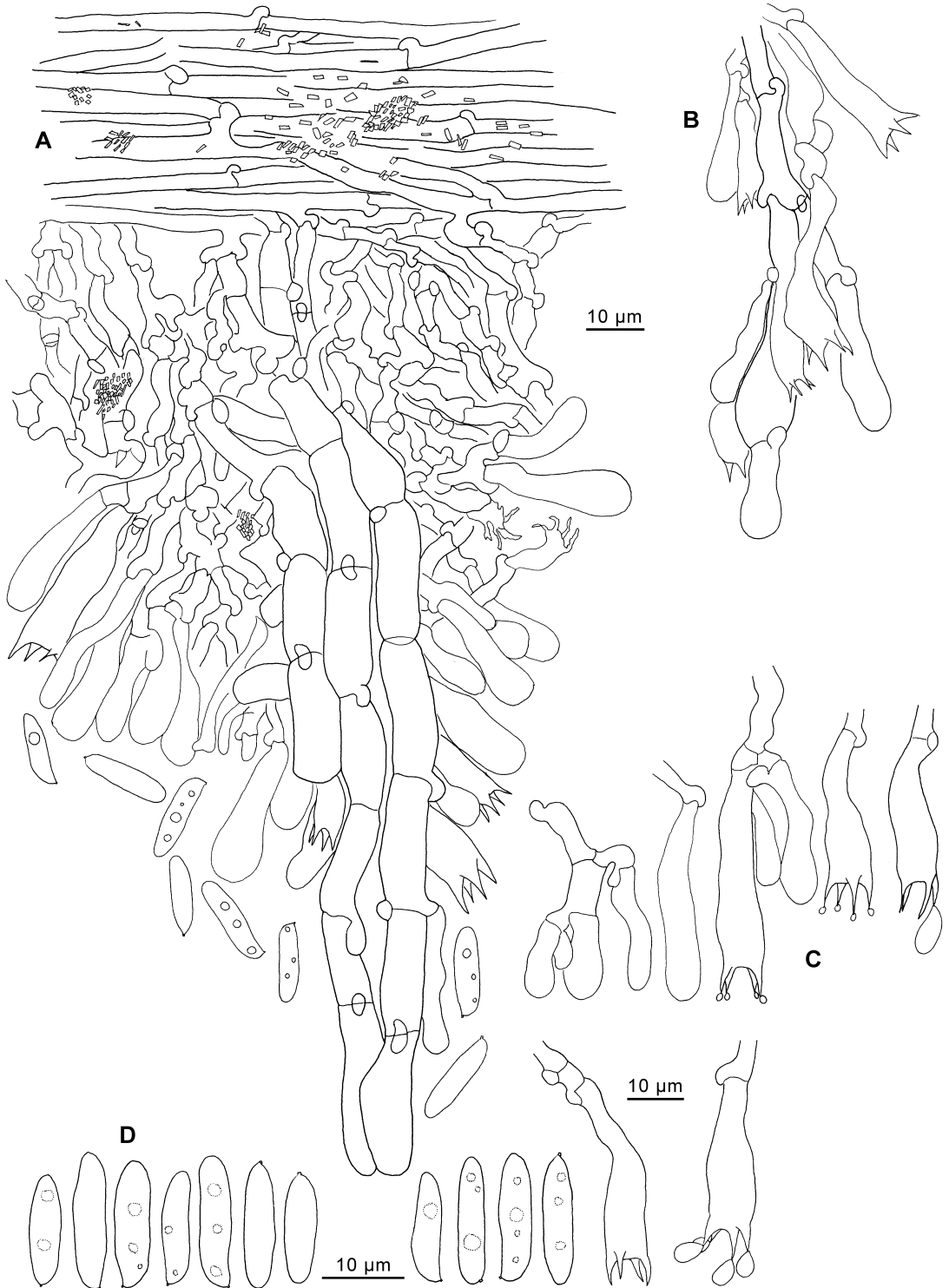
The following abbreviations are used:  $L^*$  = mean spore length,  $W^*$  = mean spore width,  $Q$  = range of the variation in  $L/W$  ratio,  $Q^*$  = quotient of the mean spore length and width ( $L/W$ ). None of the measurements derive from spore print.

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

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

HOLOTYPE: Estonia. Tartumaa, Järvelja, at bases of living *Carex acuta* in moist ditch on roadside, 58°16'N, 27°E, 13.X.1991 Kotiranta 10131b, Parmasto & Karadelev (holotype H; isotypes GB, H.K.).

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  $\mu\text{m}$ ) rod-like crystals, 3–4  $\mu\text{m}$  wide, thin-walled, faintly CB+. Tramal and subhymenial hyphae richly branched, thin-walled, 3–4  $\mu\text{m}$  wide. Cystidia, or rather central hyphae of aculei, multi-celled, most of the septa clamped, 100–160  $\mu\text{m}$  long, projecting up to 50  $\mu\text{m}$  over the basidia, often originating in the subiculum. Cystidial cells normally 10–20  $\mu\text{m}$  long (up to 45  $\mu\text{m}$ ), up to 13  $\mu\text{m}$  wide, apical cells 5.5–7.5  $\mu\text{m}$  wide, thin-walled. Basidia clavate, basally clamped, (23–)27–37(–48)  $\times$  7–8(–9)  $\mu\text{m}$ , with four, up to 6  $\mu\text{m}$  long and basally 2  $\mu\text{m}$  wide sterigmata. Spores fusiform or narrowly fusiform, sometimes slightly sigmoid, (13.1–)13.6–16.8(–17.5)  $\times$  (3.3–)3.5–4(–4.2)  $\mu\text{m}$ ,  $L^* = 14.8 \mu\text{m}$ ,  $W^* = 3.8 \mu\text{m}$ ,  $Q = 3.6\text{--}4.4$ ,  $Q^* = 3.9$  (26.VIII.1986 Parmasto, TAA-107697), (12.6–)13.1–17.1(–19.2)  $\times$  (3–)3.3–4.3  $\mu\text{m}$ ,  $L^* = 15.3 \mu\text{m}$ ,  $W^* = 3.8 \mu\text{m}$ ,  $Q = 3.3\text{--}5.3$ ,  $Q^* = 4$  (Kotiranta 10131b et al., holotype), with an almost invisible apiculus, thin- to slightly thick-walled, CB+ (faintly), IKI–, KOH hyaline.

ADDITIONAL SPECIMEN EXAMINED (paratype): — **Estonia**. Approximately the same place as holotype, at bases of *Carex vesicaria* together with *Epithele typhae*, 26.VIII.1986 Parmasto (TAA-107697).

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.

## Acknowledgements

Erast Parmasto (Tartu) is warmly thanked for giving the opportunity to collect in good company in Estonia and for sending material from TAA. Kurt Hjortstam (Gothenburg) gave valuable advice and Teuvo Ahti (Helsinki) helped us with the Latin diagnosis.

## References

- Boidin, J. & Gilles, G. 1986: Basidiomycètes Aphyllophorales de l'Île de la Réunion 5. Famille des Ceratobasidiaceae Martin et genre *Suillosporium* Pouzar. — *Bull. Soc. Myc. France* 102: 305–314.
- Eriksson, J., Hjortstam, K. & Ryvardeen, L. 1984: *The Corticiaceae of North Europe 7. Schizopora to Suillosporium*. — Fungiflora, Oslo.
- Hjortstam, K. 1998 (1997): A checklist to genera and species of corticioid fungi (Basidiomycotina, Aphyllophorales). — *Windahlia* 23: 1–54.
- Roberts, P. 1995: Interesting and unusual corticioid fungi from Slapton, Devon 3. — *Mycologist* 9: 161–164.