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New or interesting lichenicolous fungi. 5.* - *Sclerococcum leuckertii* spec. nova (Deuteromycotina)

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Abstract: *Sclerococcum leuckertii* Diederich & P.Scholz spec. nova grows on *Buellia aethalea* in Denmark, Germany and Sweden, and differs from *S. sphaerale* by mainly 2-3-celled, greenish brown, verruculose conidia.

Introduction

The genus *Sclerococcum* Fr., as circumscribed by HAWKSWORTH (1975, 1979), comprises two species of lichenicolous hyphomycetes, forming dark roundish sporodochia in which simple to multicellular conidia are produced. Two additional species have been described by DIEDERICH (1990) and BOQUERAS & DIEDERICH (1993). In this paper, a fifth species is described. All known species are restricted to one host species or genus.

Material and methods

We have studied the material in the private herbaria of P. SCHOLZ and T. LUMBSCH. The specimens from Denmark and Sweden have been communicated by Prof. R. SANTESSON and have not been studied by the authors. Sections through sporodochia have been examined by light microscope in tap water.

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Results and discussion

Sclerococcum leuckertii Diederich & P.Scholz *spec. nova* (Fig. 1)

A *Sclerococco sphaerale* conidiis 2-3(-7)-cellularibus viridi-fuscis verruculosus differt.

Typus: Germany, Sachsen-Anhalt, am östlichen Ortsrand von Klostermansfeld, auf Kupferschiefer der Halde vom Schacht 'Lichtloch 81' (MTB 4434/2), on *Buellia aethalea*, 21 May 1990, P. Scholz (LG - holotypus; B, hb. Scholz, hb. Diederich - isotypi). Isotype material will also be distributed in SANTESSON, Fungi Lichenicoli Exs.

Colonies lichenicolous on *Buellia aethalea*, forming convex, blackish, rounded or elongate sporodochia, 0.1-0.4 mm in diam., often confluent and covering large areas of the host; mycelium immersed in the host thallus. Conidiophores semi-macronematous, not branched, agglomerated in very dense sporodochia, dark greenish brown. Conidiogenous cells monoblastic, integrated, terminal, determinate, ellipsoid. Conidia variable in form, produced in irregular, compact chains, dark greenish brown, 2-3(-7)-celled, 2-celled conidia 10-14 x 7-9 μm , 3-celled conidia 11-15 x 8-13 μm , with a distinctly verruculose surface, individual cells 5-10 μm in diam.

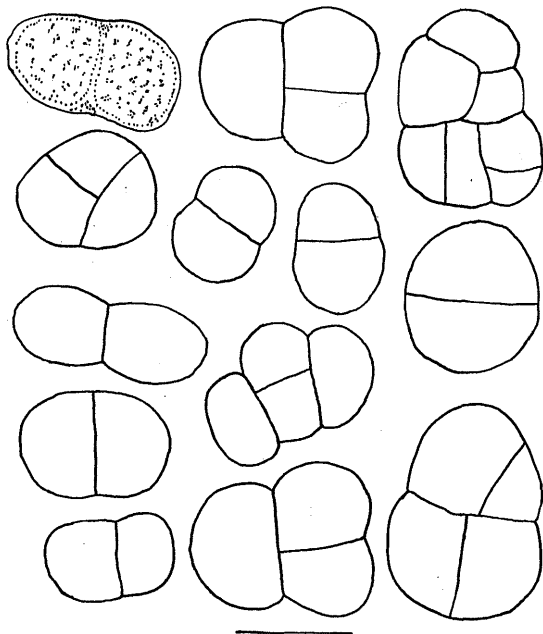


Fig. 1. Conidia of *Sclerococcum leuckertii* (holotypus). Scale bar = 10 μm .

Host: The sporodochia are growing over the thallus and the apothecia of *Buellia aethalea* (Ach.) Th.Fr. As the production of ascospores in attacked apothecia is reduced, and as larger areas of the host tend to be covered by the fungus, it can be considered as a weak parasite.

Distribution: Denmark, Germany and Sweden. It seems not to be rare in regions where the host is common.

Observations: This species is macroscopically similar to *Sclerococcum sphaerale*, a fungus growing on saxicolous *Pertusaria* species (DIEDERICH 1990, HAWKSWORTH 1979). It is easily distinguished from that species by the conidia, which are predominantly 2-3-celled (instead of 2-6-celled), dark greenish brown (instead of dark reddish brown) and distinctly verruculose (easily seen by light microscope).

Additional specimens (all on *B. aethalea*):

SWEDEN: Västergötland, Göteborg, Vidkärr, 1927 and 1930, *A. H. Magnusson* (UPS); Västergötland, Hemsjö par., Näset, 1931, *A. H. Magnusson* (UPS); Västergötland, V. Frölunda par., Flatås, 1943, *A. H. Magnusson* (UPS); Bohuslän, Harestad par., V. Hammar, 1929, *A. H. Magnusson* (UPS); Bohuslän, Ödsmål par., Hals, 1930, *A. H. Magnusson* (UPS); Bohuslän, Skaftö par., Ögården, 1938, *A. H. Magnusson* (UPS); Bohuslän, Stenkyrka par., Anöd, 1939, *A. H. Magnusson* (UPS); Bohuslän, Tuve par., Skändla, 1953, *A. H. Magnusson* (UPS); Närke, St. Mellösa par., Ytterby, 1889, *P. J. Hellbom* (UPS); Närke, Götlanda par., the island Valen in the lake Hjälmarens, on roofing tiles, 1993, *T. Foucard & A. Nordin* (UPS) (will be distributed in SANTESSON, Fungi Lichenicoli Exs.); Södermanland, Västermo par., the rectory, 1872, *O. G. Blomberg* (UPS).

DENMARK: Bornholm, Allinge-Sandvig Co., Hammaren, Krystalöen, 1984, *R. Santesson* 31781 (UPS); Bornholm, Nexsö Co., Kattesletgård, 1987, *R. Santesson* 31801 (UPS); NW Jutland, Lild, Lild Strand, on siliceous pebble in an old beach ridge among dunes, 1942, *M. S. Christiansen* 8975 (hb. Christiansen).

GERMANY: Nordrhein-Westfalen, Eifel, auf einer Bleibergwerkshalde am Kallmuther Berg östlich Dettel, auf am Boden liegenden Silikatbrocken, 24 July 1993, *P. Scholz* (hb. Scholz); Sachsen-Anhalt, Mansfelder Land, Theodorschacht, NNW von Klostermansfeld, W der F 242 (MTB 4434/2), 27 May 1990, *E. & H. T. Lumbsch* 7735 & *R. & S. Huneck* (hb. Lumbsch, hb. Diederich); Sachsen-Anhalt, NE Mansfeld, Kupferschiefer der Halde vom Schacht 'Freiesleben' (MTB 4334/4), 18 July 1989, *P. Scholz* (hb. Scholz, hb. Diederich); Sachsen-Anhalt, W Großleinungen, Südharzer Zechsteinrand, Kupferschlackenhalde (MTB 4533/1), 9 June 1990, *P. Scholz & R. Türk* (hb. Scholz); Sachsen-Anhalt, zwischen Mansfeld und Klostermansfeld, auf Kupferschiefer der Halde des Theodorschachtes (MTB 4434/2), 2 October 1989, *P. Scholz* (hb. Scholz); Sachsen-Anhalt, NE Hainrode, Südharzer Zechsteinrand, kleine mittelalterliche Kupferschieferhalden (MTB 4433/3), 9 June 1990, *P. Scholz & R. Türk* (hb. Scholz).

Acknowledgements

It is a pleasure for us to dedicate the new species to Prof. Christian LEUCKERT as a sign of recognition of his outstanding contribution to lichenology. We wish to thank Prof. Rolf SANTESSON (Uppsala) for communicating us the list of Scandinavian specimens, Dr Thorsten LUMBSCH (Essen) for an additional German collection and Dr Emmanuël SÉRUSIAUX (Liège) for commenting on the manuscript.

References

- BOQUERAS, M. & DIEDERICH, P. (1993). New or interesting lichenicolous fungi. 3. *Karsteniomyces llimonae* sp. nov. and *Sclerococcum serusiauxii* sp. nov. (Deuteromycotina). *Mycotaxon* **47**, 425-431.
- DIEDERICH, P. (1990). New or interesting lichenicolous fungi. 1. Species from Luxembourg. *Mycotaxon* **37**, 297-330.
- HAWKSWORTH, D. L. (1975). A revision of lichenicolous fungi accepted by Keissler in *Conto-thecium*. *Trans. Br. mycol. Soc.* **65**, 219-228.
- HAWKSWORTH, D. L. (1979). The lichenicolous Hyphomycetes. *Bull. Br. Mus. nat. Hist. (Bot.)* **6**, 183-300.