The Lichenologist **37**(6): 481–483 (2005)
doi:10.1017/S0024282905015392 *Printed in the United Kingdom*

A further new species of *Strigula* from Europe

Emmanuël SÉRUSIAUX, Franz BERGER, Brian J. COPPINS and Claude ROUX

Abstract: *Strigula muscicola* Berger, Coppins, Cl. Roux & Sérus. is described as new to science; it is a muscicolous species with aggregated ascomata and 3-septate ascospores, growing in subalpine habitats in Austria, Norway and Scotland.

Key words: Austria, new species, Norway, Scotland, *Strigula*

Introduction

The monograph of the genus *Strigula* in Europe and Macaronesia, with 23 accepted species, was hardly off the press (Roux & Sérusiaux 2004) when material of a further new species became available. An inconspicuous muscicolous species with aggregate ascomata and 3-septate ascospores has been collected in subalpine habitats of Austria, Norway and Scotland. It is described as new in this paper.

The Species

Strigula muscicola F. Berger, Coppins, Cl. Roux & Sérus. sp. nov.

Alga *Trentepohliae* et ascosporis 3-septatis *Strigulae affini* et *S. jamesii* affinis, sed habito muscicola (non corticola), ascomatibus plus emergentibus et vulgo aggregatis, ascosporis grandioribus differt.

Typus: Österreich, Oberösterreich, Höllengebirge, Feuerkogel, Edltal, culled strip of disused ski lift "Hochschneid", 47°38′N 13°42′E, MTB 8148, 1600 m, on decaying bryophytes over limestone, 19 June 2002, *F. Berger* 16936 (LG—holotypus).

(Fig. 1)

Thallus whitish or whitish grey, continuous and thin, intermingled with moss debris. Photobiont *Trentepohlia*, cells rounded to slightly elongated, bright yellow-green, 15–20 μm diam.

Ascomata globose, black, numerous, hardly immersed in the thallus, rarely simple and then 0·2–0·3 mm in diam., usually aggregated in clusters of 2–4(–8) and forming a rather compact mass up to *c.* 0·8 mm diam., but each with its own ostiole which is usually indistinct or seen as a slightly paler depression. *Involucrellum* well-developed, black, extending almost to the base of the ascomata, and laterally fused when the ascomata are aggregated. *Excipulum* covering most of the hymenium, almost up to the ostiole, pale brown or colourless. *Hamathecium* well-developed, I− and IKI−, made of long, 1·5–2 μm thick paraphysoids, simple or slightly branched and anastomosed at their base. *Asci* longly claviform, with a distinct tholus and an ocular chamber at their tips, I−, 70–82 × 10–12 μm, 8-spored. *Spores* subfusiform, 3-septate, slightly constricted at the septa and slightly tapering towards their proximal ends, (17·5)19–21 × 4·5–6 μm (n=22; all measurements in water).

E. Sérusiaux: Plant Taxonomy & Conservation Biology Unit, University of Liège, Sart Tilman B22, B-4000 Liège, Belgium.
F. Berger: 4794 Kopfing 130, Austria.
B. J. Coppins: Royal Botanic Garden Edinburgh, Edinburgh EH3 5LR, United Kingdom.
C. Roux: CNRS, UPRES A 6616, Laboratoire de botanique et écologie méditerranéenne, Institut méditerranéen d'écologie et de paléoécologie, Faculté des sciences et techniques de Saint-Jérôme, FR-1397 Marseille Cedex 20, France.

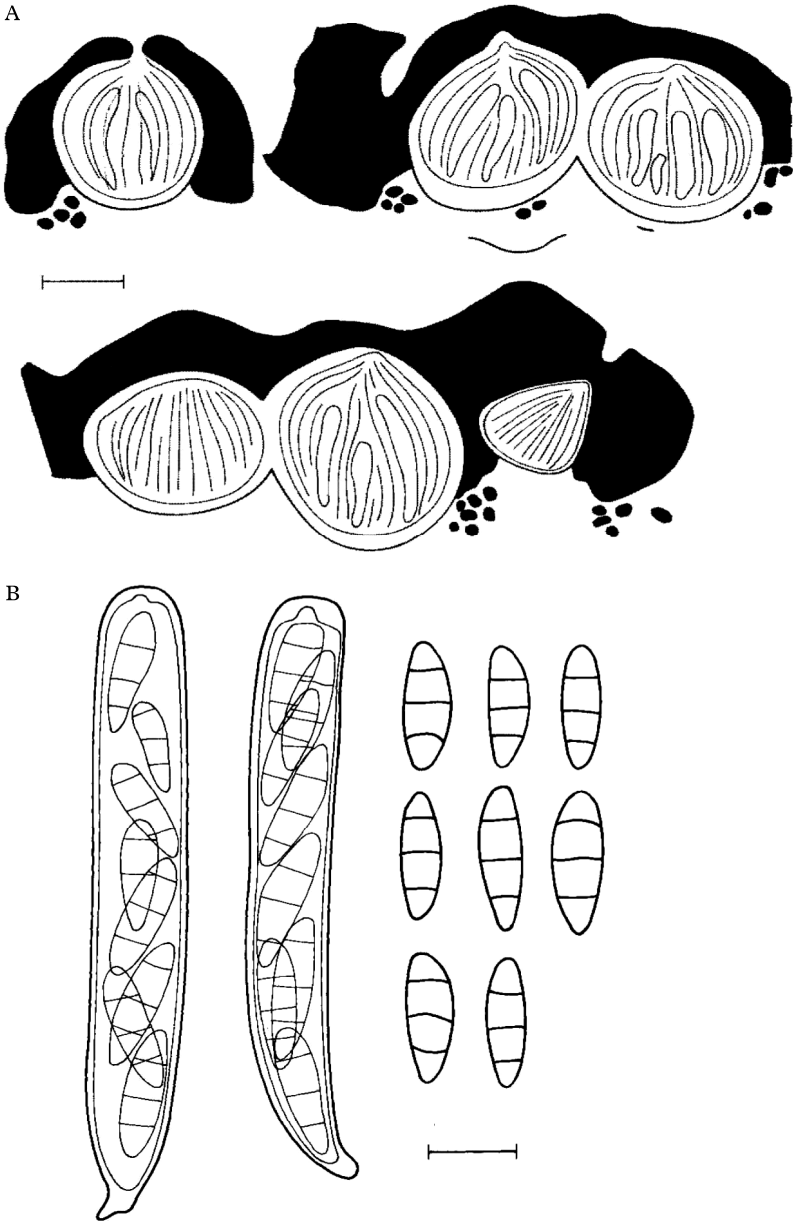

FIG. 1. *Strigula muscicola* (holotype). A, cross section through perithecia, both single and aggregated; B, asci and ascospores. Scales: A=50 μm; B=10 μm.

Pycnidia not observed.

Ecology and distribution. Strigula muscicola is known from three distant localities, in Austria, Norway and Scotland. It seems to be rare, although its small size may explain why it has been overlooked.

The type locality in Austria is a disused ski strip, on a N-exposed slope at 1600 m; it had been cleared of *Pinus mugo* forest in the

https://doi.org/10.1017/S0024282905015392 Published online by Cambridge University Press

1960s and is now slowly recovering, with species such as *Rhododendron hirsutum*, *Dryas octopetala*, *Rhodothamnus chamaecystus*, etc. *Strigula muscicola* was detected in low depressions, mostly in shade because of the inclination and with snow cover for 5–6 months. Accompanying lichen species growing over decaying mosses on the ground included *Agonimia gelatinosa*, *A. tristicula*, *Bilimbia lobulata*, *B. sabuletorum*, *Cladonia pyxidata*, *C. symphycarpa*, *Leptogium intermedium*, *Peltigera leucophlebia*, *Polyblastia sendtneri* and *Toninia rosulata*.

The Norwegian specimen was accompanied by *Biatora subduplex* and *Ochrolechia frigida* f. *lapuënsis*. In the vicinity, other ground-dwelling, crustose lichens on decaying bryophytes and plants included *Biatora cuprea*, *Catillaria contristans*, *Cercidospora decolorella*, *Helocarpon crassipes*, *Lecidella wulfenii*, *Lopadium pezizoideum*, *Micarea incrassata*, *Pertusaria oculata*, *Protomicarea limosa* and *Rinodina mniaraea* var. *mniaraea*.

In Scotland, the species was found growing over bryophytes (*Ctenidium molluscum* and *Plagiochila porelloides*) growing in crevices of a large boulder in the open site of Craig Leek. Other species found in the vicinity included *Acarospora macrospora*, *Adelolechia pilati*, *Arthrorhaphis alpina*, *Caloplaca obliterans*, *Collema undulatum*, *Gyalecta ulmi*, *Lecidella wulfenii*, *Megaspora verrucosa*, *Melanelia stygia*, *Pertusaria amarescens*, *Polyblastia wheldonii*, *Protoparmelia atriseda*, *Rinodina interpolata*, *Sagiolechia protuberans*, *Sarcogyne clavus* and *Umbilicaria hirsuta*.

Discussion

Strigula muscicola belongs to the ''Ensemble 2'' of Roux & Sérusiaux (2004: 63) as it has *Trentepohlia* as photobiont and pluriseptate spores, and more precisely to the *S. affinis* group. It is easily distinguished by its muscicolous habitat, its aggregated, black and prominent ascomata and 3-septate spores. The corticolous *S. affinis* (A. Massal.) R. C. Harris has simple and slightly larger (0·3–0·45 mm diam.) ascomata mostly immersed into the thallus and with the outer part brownish or black, and smaller spores (14·5–19·5 × 4·5–6 μm); the more ubiquitous and closely related *S. jamesii* (Swinscow) R. C. Harris has even smaller ascomata and spores. The recently described *S. confusa* Fryday, Coppins & Common (Fryday & Coppins 2004) is also muscicolous, but has single ascomata immersed in the thallus at young stages and is without an involucrellum, and also very different spores that are muriform and measure 32·5–58 × 11–13 μm. To our knowledge, no other species known from outside Europe could be confused with *S. muscicola*.

Additional specimens examined. **Norway:** *Troms:* Storfjord, mountain range S of Skibotndalen, between Luhcajavri and Stuoraoaivi, *c.* 69°16′N 20°24′E, 680–834 m, on mosses, 2003, *B. J. Coppins* 21479 [Nordic Lichen Society Meeting] (E).—**Great Britain:** *Scotland:* **V.C. 92**, South Aberdeenshire, Braemar, Craig Leek, 37/189.928, 450 m, on mosses in narrow soil crevice on N-side of large boulder in open ground below cliffs, 24 vi 2005, *V. J. Giavarini* (E).

Franz Berger thanks Franz Priemetzhofer for his great companionship during the excursion that led to the discovery of the type collection, and Brian Coppins thanks the Nordisk Lichenologisk Förening for funding his attendance at their meeting in Troms in August 2003.

References

Roux, C. & Sérusiaux, E. (2004) Le genre *Strigula* (Lichens) en Europe et en Macaronésie. *Bibliotheca Lichenologica* **90:** 1–96.

Fryday, A. M. & Coppins, B. J. (2004) A reassessment of the genera *Chromatochlamys* and *Thelenella*, and a new species of *Strigula* from the British Isles. *Lichenologist* **36:** 89–95.

Accepted for publication 26 *July* 2005