

## Short Communication

### Three new combinations in the genus *Fulvophyton* (*Roccellographaceae*, *Arthoniales*)

The genus *Fulvophyton* was introduced by Ertz & Tehler (2011) to accommodate species formerly accepted in *Sclerophyton* by Sparrius (2004), but differing from the generic type by having rounded to ellipsoid, often white pruinose ascomata and a hyaline or pale hypothecium.

Phylogenetic analysis of molecular data provided clear evidence that the two previously recognized but conspecific taxa *Sclerophyton cerei* (Schiman-Czeika) Sipman and *Schismatomma atacamense* Dodge were nested within *Fulvophyton*. *Melampylidium follmannii* C. W. Dodge is considered a synonym of *Sclerophyton cerei* and the correct name for the species will be *Fulvophyton cerei* (Schiman-Czeika) Tehler.

The name *Chiodecton klementii* Follmann is being transferred to *Fulvophyton* and since it takes priority over *F. desertorum* (Sparrius) Ertz & Tehler the correct name for the species will be *Fulvophyton klementii* (Follmann) Tehler.

With these new recombinations *Fulvophyton* currently contains eight species: *Fulvophyton calcicolum*, *F. cerei* (newly combined here), *F. klementii* (newly combined here), *F. murex*, *F. rostratum*, *F. sorediatum* (combination validated here), *F. stalactinum* and *F. subseriale*.

#### ***Fulvophyton cerei* Tehler comb. nov.**

Mycobank No.: MB 817183

*Enterostigma cerei* Schiman-Czeika, *Sydowia* 17: 82 (1964).—*Melampylidium cerei* (Schiman-Czeika) Redon & Follmann, *Philippia* 1: 189 (1972) [as *Melampydidium*].—*Sclerophyton cerei* (Schiman-Czeika) Sipman, *Biblioth. Lichenol.* 106: 304 (2011); type: Chile, Prov. Atacama, Sta. Barbara, Küste, an *Cereus iquiquensis*, 1962, *Follmann* 17728-R (W—holotype, not seen).

*Schismatomma atacamense* Dodge, *Nova Hedwigia* 12: 327 (1966); type: Chile, Atacama Province, Carrizal Bajo, 200 m, on *Trichocereus*, s. ann., *Follmann* 14926

(W—holotype, not seen); *Follmann* 16027 (M-isotype, (scripsit Follmann ISOTYPUS)); *Follmann* 16036 (S-L11132 isotype, (donated as isotype of *Schismatomma atacamense* by J. Redon to A. Tehler 1977)).

*Melampylidium follmannii* C. W. Dodge, *Nova Hedwigia* 12: 330 (1966) [as *Melampydidium*]; type: Chile, Aconcagua Province, Zapallar, on bark of *Pinus radiata*, s. ann., *Follmann* 14926 (W—holotype, not seen).

(Figs 1 & 2)

Redon & Follmann (1972) point out that *Melampylidium cerei* and *Schismatomma atacamense* are synonymous but the types were not listed in a nomenclaturally conventional way to formally acknowledge this. Thus, even though the type material of the former taxon was not studied by the author (AT) for the purposes of this paper, there can be little doubt that it is indeed conspecific with the latter taxon since Follmann himself collected the type material for both.

In contrast to the other species in *Fulvophyton* (Ertz & Tehler 2011), *F. cerei* does not develop aggregated, punctiform or shortly lirellate ascomata but rather entire, undulating or slightly elongated, sessile ascomata similar to those of, for example, *Dirina* or crustose *Roccellina* (Fig. 1). In other respects it agrees morphologically very well with *Fulvophyton*, most notably by the hyaline or pale hypothecium and the ascospores with a distinct gelatinous sheath. Furthermore, molecular data unambiguously place *Fulvophyton cerei* in the *Fulvophyton* clade (Ertz & Tehler 2011) with significant support as sister species to *F. klementii* (recombined below) and successively with significant support as sister species to the generic type *F. stalactinum* (Fig. 2).

As pointed out by Sipman (2011), two other species described as *Melampylidium* by Dodge (1966) should probably be referred

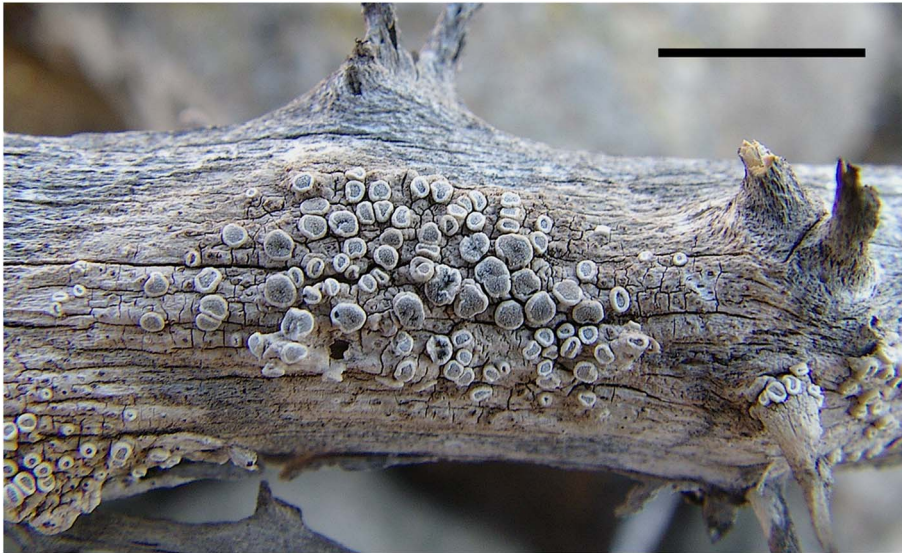


FIG. 1. *Fulvophyton cerei*. Chile, Atacama Prov., Taltal, 30 km N of town, 25°20'–203'S 70°26'–740'W, 2009, Tehler 9909, (S-F206060). Scale = 5 mm. In colour online.

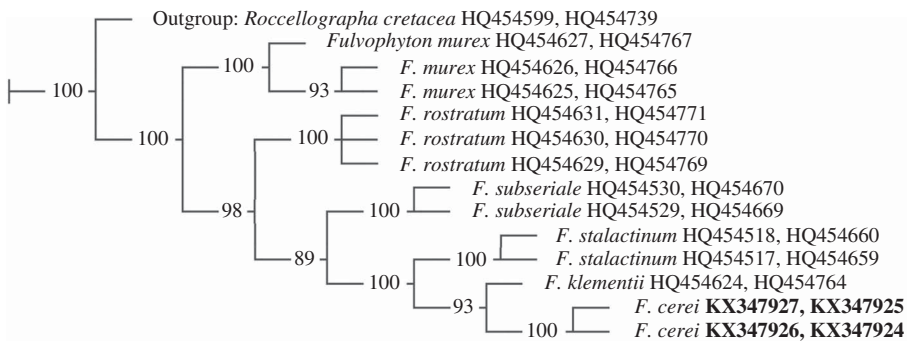


FIG. 2. Parsimony jackknife tree showing the proposed phylogenetic relationships among 13 specimens representing 6 species of *Fulvophyton* based on nuLSU and *RPB2* data analyzed in TNT (Goloboff *et al.* 2003, 2008). Parsimony jackknife frequencies are plotted at nodes. GenBank Accession numbers act as specimen and sequence identifiers indicating nuLSU and *RPB2* respectively. New sequences for *Fulvophyton cerei* are in bold.

to the newly combined *Fulvophyton cerei*, formerly *Sclerophyton cerei*, viz. *M. follmannii* C. W. Dodge and *M. chilenum* C. W. Dodge. On the basis of the protologue this is most certainly correct for *Melampylidium follmannii* which is now synonymized with *Fulvophyton*. However, the protologue for *M. chilenum* indicates that it is not conspecific with *F. cerei*, most importantly because Dodge (1966) refers to it as a terricolous species growing on soil, in contrast to *Fulvophyton cerei* which is known

only as corticolous or lignicolous. Furthermore, the conidia of *Melampylidium chilenum* are described as short (6 µm) and bacilliform, whereas *Fulvophyton cerei* develops long (15–20 µm) filiform conidia.

See Sipman (2011) for further nomenclatural and taxonomic notes on *Fulvophyton cerei* (*Sclerophyton cerei*).

*Additional material examined. Chile: Prov. Coquimbo:* La Serena, just north of La Serena at the tip of Bahía de

Coquimbo, 1977, *Tehler* 2804 (S-L50987); 22 km N La Serena, on seaward slope, alt. 50 m, 29°43'S, 71°20'W, 2001, *Tehler* 8385 (S-L28662); 30 km N of La Serena, 3 km S Los Hornos, on seaward slope, alt. 160 m, 29°40'S, 71°19'W, 2001, *Tehler* 8401 (S-L28669); Los Hornos 3 km S town, c. 30 km N of La Serena, 29°37.942'S 71°17.570'W, 2009, *Tehler* 9891 (S-F206056). *Prov. Atacama*: Taltal 30 km N of town, 25°20.203'S 70°26.740'W, 2009, *Tehler* 9909 (S-F206060), *Tehler* 9910 (S-F206061).

**Fulvophyton klementii (Follmann)  
Tehler comb. nov.**

Mycobank No.: MB 817184

*Chiodecton klementii* Follmann, *Nova Hedvigia* **14**: 227 (1967).—*Sclerophyton klementii* (Follmann) Sipman, *Biblioth. Lichenol.* **106**: 304 (2011); type: Chile, Desertum Atacama, Mons Moreno prope Antofagasta, 450 m, SW-SO, ad truncos *Eulychniae iquiquensis*, s. ann. *Follmann* 14813 (W—holotype, not seen).

*Sclerophyton desertorum* Sparrius, *Biblioth. Lichenol.* **89**: 69 (2004).—*Fulvophyton desertorum* (Sparrius) Ertz & Tehler, *Fungal Diversity* **49**: 54 (2011); type: Chile, Antofagasta Prov., Cerro Moreno a few km W of Juan Lopez, on the southern part of Peninsula de Mejillones N of Antofagasta, alt. 250–700 m, 2001-11-27, *Anders Tehler* 8445 (holotype, S-L28713).

(Fig. 2)

See Sipman (2011) for nomenclatural notes concerning the Follmann type specimens.

**Fulvophyton sorediatum (Sparrius, P. James & M. A. Allen) Tehler & van den Boom comb. nov.**

Mycobank No.: MB 819860

*Sclerophytonomyces circumscriptus* var. *sorediatum* Sparrius, P. James & M. A. Allen [as

'*Sclerophytonomyces*'], *Lichenologist* **37**: 285 (2005).—*Peterjamesia sorediata* (Sparrius, P. James & M. A. Allen) D. Hawksw., *Lichenologist* **38**: 189 (2006).—*Roccellographa sorediata* (Sparrius, P. James & M. A. Allen) Coppins & Fryday, in Fryday & Coppins, *Lichenologist* **44**: 734 (2012).—*Fulvophyton sorediatum* (Sparrius, P. James & M. A. Allen) van den Boom. [as 'sorediata'], in van den Boom & Giralt, *Sydowia* **64**: 152 (2012) nom. inval. (Art. 41.5).

REFERENCES

- Dodge, C. (1966) New lichens from Chile, I. *Nova Hedvigia. Zeitschrift für Kryptogamenkunde* **12**: 307–352.
- Ertz, D. & Tehler, A. (2011) The phylogeny of *Arthomiales* (Pezizomycotina) inferred from nucLSU and *RPB2* sequences. *Fungal Diversity* **49**: 47–71.
- Goloboff, P. A., Farris, J. S. & Nixon, K. C. (2003) *TNT: Tree Analysis Using New Technology. Program and documentation*. Available at: <http://www.lillo.org.ar/phylogeny/tnt>.
- Goloboff, P. A., Farris, J. S. & Nixon, K. C. (2008) TNT, a free program for phylogenetic analysis. *Cladistics* **24**: 774–786.
- Redon, J. & Follmann, G. (1972) Beobachtungen zur Verbreitung chilenischer Flechten VI. *Philippia* **1**: 186–193.
- Sipman, H. J. M. (2011) New and notable species of *Enterographa*, *Niebla*, and *Sclerophyton* s. lat. from coastal Chile. *Bibliotheca Lichenologica* **106**: 297–308.
- Sparrius, L. B. (2004) A monograph of *Enterographa* and *Sclerophyton*. *Bibliotheca Lichenologica* **89**: 1–141.

**Anders Tehler**

A. Tehler: Naturhistoriska riksmuseet, Enheten för botanik, Box 50007, S-104 05 Stockholm, Sweden. Email: anders.tehler@nrm.se