Phacographa protoparmeliae new to northern Europe from arctic Russia

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Phacographa protoparmeliae Hafellner is reported new to northern Europe from the Murmansk Region, arctic Russia.

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As part of my ongoing studies of the non-yellow species of Rhizocarpon, I obtained loans of collections of the genus from various European herbaria. One of the collections from H (collected by Veli Räsänen from Arctic Russia in 1938) was annotated as R. submodestum (Vain.) Vain. but was lichenicolous on Protoparmelia badia and clearly was not that species. I assumed it to be a lichenicolous species of Rhizocarpon and, as it did not correspond to any species in the key of Poelt (1990), I suspected that it was undescribed. However, as it was not relevant to my area of study at that time, it was put to one side. When, several years later, I finally took a closer look at the specimen, I quickly realized that it was not a species of Rhizocarpon, but had the internal apothecial characteristics of a species of Opegrapha. A search through the literature and discussion with colleagues led me to the recently described genus and species Phacographa protoparmeliae Hafellner (2009), the protologue of which corresponded with the Räsänen collection in every respect.

As Hafellner reported his new species from only Austria and Spain, this new report is a considerable range extension and so I publish it here along with a brief description and images of the species to complement those give by Hafellner (2009).

Phacographa protoparmeliae Hafellner

Thallus not apparent; lichenicolous on Protoparmelia badia (Fig. 1A). Apothecia dark brown, lecideine, in clustered groups, 1.5–2.0 mm across, of (2–)6–12 individual apothecia (Fig. 1B), on thallus and apothecia of Protoparmelia badia; orbicular, 0.4–0.6 mm diam., but often distorted by compression from other apothecia; proper margin black, persistent slightly raised, 0.1 mm across; disc dark brown, rough. Hymenium KI+ blue, 120–140 µm tall, paraphysoids relatively thick (1.5–2.0 µm) branched and anastomosing, widening at tips to 5 µm with a dark brown cap; epihymenium dark brown (K+ olivaceous-brown; Atra-brown). Hypothecium dark brown (K+ olivaceous-brown; Atra-brown). Asci cylindrical, 60 × 15–20 µm; tholus KI+ pale blue with a darker staining apical tube (Fig. 1D); ascus wall KI–, contents KI+ orange; ascospores 3-septate, 22–25 × 6–7(–8) µm (Fig. 1C), hyaline becoming covered with fuscous-brown granules (K+ olivaceous-brown; Atra-brown); epispore KI–. Exciple dark brown
Figure 1. *Phacographis protoparmeliae* (Räsänen s.n.). A. Thallus with apothecia. B. Apothecia. C. Ascospore in K. D. Ascus in KI. Bars: A = 2 mm. B = 1 mm. C & D = 10 µm.
Placographa protoparmeliae in arctic Russia

(K+ olivaceous-brown; Atra-brown). Conidio-mata not observed.

Remarks: Hafellner (2009) revised the opegraphoid species with discoid ascomata and included them in either Phacothecium or the newly erected genus Phacographa. He also provided a discussion of the generic concepts in that group and a key to the species, and this should be consulted for further information. In the most recent Outline of the Ascomycota (Lumbsch & Huhndorf 2010) Phacographa was included in the Roccellaceae, but a recent systematic revision of the Arthoniales (Ertz & Tehler 2010) has resurrected the family Opegraphaceae. Although Ertz & Tehler (2010) did not include Phacographa in their study they did mention that is had “affinities to Opegrapha” and so Phacographa should clearly be included in the Opegraphaceae.

Specimen examined: Russia. Murmansk Region: Petsamo, Karapleka, [69.23869°N, 29.44095°E], ad saxa ventosa, 5.VIII.1938, Räsänen (H).

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References

