

## Notes on two subantarctic pannariaceous lichens

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**Abstract** – It is shown by use of a newly discovered, old photo of the missing type that *Siphulina orphnina* (Hue) C. W. Dodge is identical with *Pannaria caespitosa* P. M. Jørg. The new combination *Pannaria orphnina* (Hue) P. M. Jørg. is made, and the name neotypified. *Parmeliella austroshetlandica* Søchting & Øvstedal is shown to be a species in the small subantarctic genus *Peltularia* R. Sant.(Coccocarpiaceae), and is transferred to that genus.

**Résumé** – Une photo ancienne, récemment découverte, a permis une réévaluation du nom *Siphulina orphnina* (Hue) C. W. Dodge, dont le type est disparu. Il est identifié comme *Pannaria caespitosa* P. M. Jørg. La nouvelle combinaison *Pannaria orphnina* (Hue) P. M. Jørg. est établie, et le nom néotypifié. *Parmeliella austroshetlandica* Søchting & Øvstedal qui a sa vraie place dans le petit genre subantarctique, *Peltularia* R. Sant.(Coccocarpiaceae), y est transféré.

**Pannariaceae / Antarctica / *Siphulina* = *Pannaria* / *Pannaria caespitosa* = *P. orphnina* / *Parmeliella austroshetlandica* = *Peltularia austroshetlandica***

Just after I had finished a major survey of remaining problems and new taxa in the Pannariaceae of the Southern Hemisphere (Jørgensen, 2004), I was made aware of two additional cases in need of further clarification, which will be treated below. The material is that cited, and the methods the same as in that paper.

### ON THE IDENTITY OF *SIPHULINA ORPHNINA* (HUE) C. W. DODGE

The type of *Siphulina orphnina* (Hue) Dodge, the type species of the monospecific genus *Siphulina* (Hue) C.W. Dodge, has been missing for the last 50 years, since it has not been traced after its presumed return to PC. However, recently Rolf Santesson discovered a set of photographs (Fig. 1) sent to him by Ivan Macenzie Lamb with comments dated 22. May 1957. Lamb on this occasion expressed the view that this lichen was not a member of the genus *Siphula* where it was originally included by Hue (1915) in a special section (*Siphulina*), and that it might represent an unrecognized genus in the Pannariaceae. Later Dodge (1963) established this genus, which he, however, did not understand well and placed in the family Heppiaceae. I have not been able to trace any record or treatment of this species after Dodge's own in the Antarctic lichen flora (1973).





Fig. 1. Part of the holotype of *Siphula orphnina*. Photo: I Macenzie Lamb (1957)

When I in the 1970-ies searched for the type, it was nowhere to be found – nor could any of the material cited by Dodge, and the matter was put aside. With this photo, Hue’s description (1915), and our present knowledge of the lichens in the region, it is now possible to identify the name. An important clue is the kind of habitat from which *S. orphnina* is described by Hue (“terre des pierres des éboulis”). In maritime Antarctica there are two species of the Pannariaceae containing *Nostoc* which occur on such scree of cryoturbated soil (Øvstedal & Lewis-Smith, 2001), *Pannaria caespitosa* P. M. Jørg. (Fig. 2) and *Protopannaria austro-orcadensis* (Øvst.) P. M. Jørg. (Fig. 3), both of which may develop the subfruticose structures (Jørgensen, 2000, 2001) which mislead Hue to place his specimen in *Siphula*, to which it is totally unrelated. The description of the spherical, nearly cuboid, spores,  $10-14 \times 9-12 \mu\text{m}$  is strongly indicative of the former; the latter having ellipsoid spores,  $16-18 \times 12-13 \mu\text{m}$ . As the photo reveals flat, large apothecia with dark (in description “fuscoatrato”) discs, there can be no doubt that it represents the species now usually called *Pannaria caespitosa* (Those of *P. austro-orcadensis* are smaller and cupulate). The anatomical description supports this further as the cortex is described as being thick, to  $60 \mu\text{m}$  with thick-walled cells, continuing further inwardly,  $20-40 \mu\text{m}$  (a ‘Scheinrinde’ of dead photobiont cells);



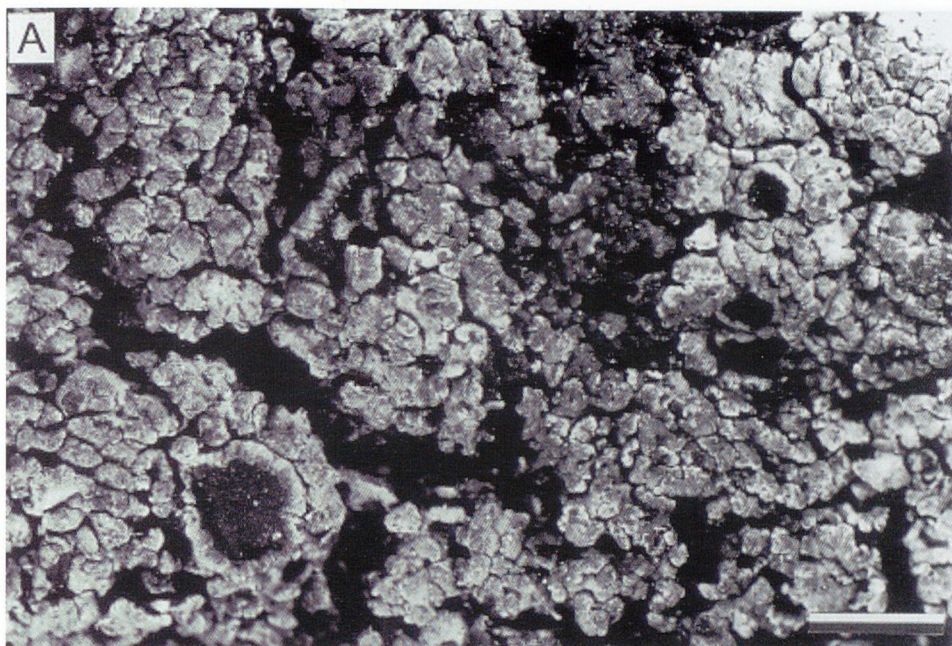


Fig. 2. Part of the holotype of *Pannaria caespitosa*. Photo: J. Berge

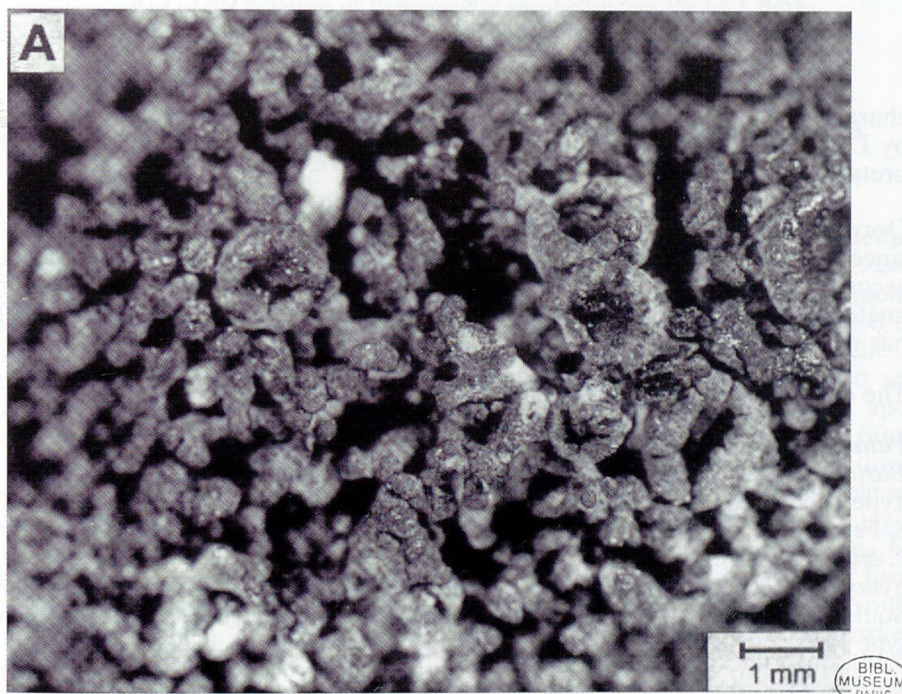


Fig. 3. Part of the holotype of *Protopannaria austro-orcadensis*. Photo: J. Berge



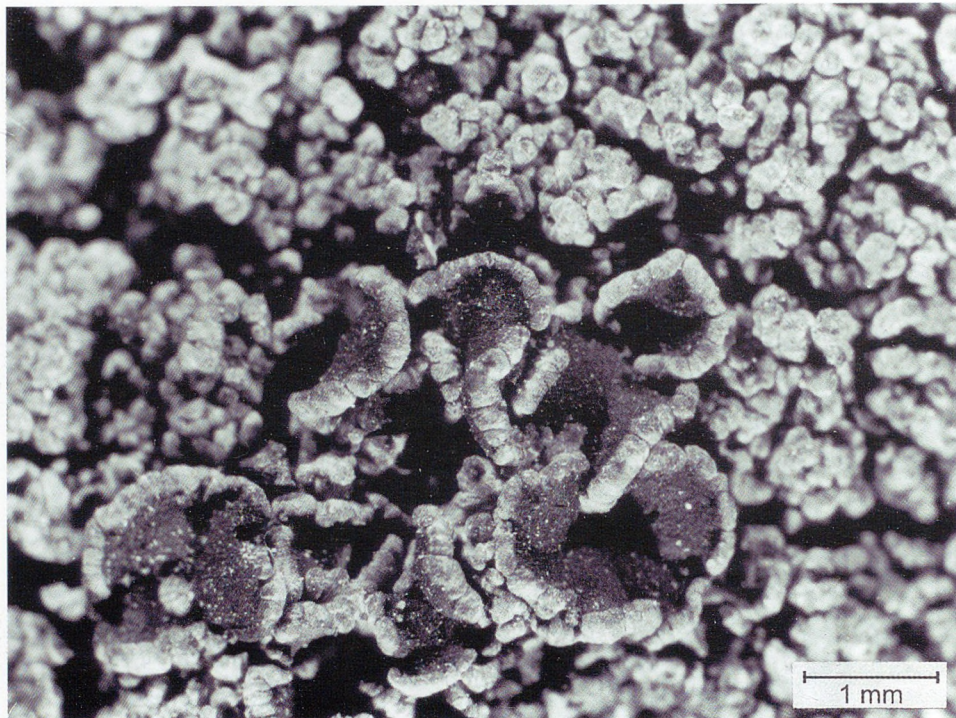


Fig. 4. Part of the neotype of *Siphula*(= *Pannaria*) *orphnina*. Photo: J. Berge

characters which are characteristic for this species. Also two specimens identified by Dodge to *Siphulina orphnina* were now located at FH, confirming this interpretation.

Since this is a local species only found in the west-antarctic region (Jørgensen, 2000), and the name *Pannaria caespitosa* has not been used much since it was described there is no reason to ask for conservation of that name according to Art. 56 of ICBN. Instead I make the necessary combination and designate a neotype originating in the region of description, as an unpublished photo has no nomenclatural status.

The correct nomenclature for this species is accordingly:

***Pannaria orphnina* (Hue) P. M. Jørg., comb. nov.**

*Basionym*: *Siphula orphnina* Hue, 2me Expéd. Antarct. FranV., Lich. : 19 (1915). – Type: South Shetland, Livingston Isl., South Bay, Johnson's Peak, 300-350 m, 8. Febr. 1998, U. Søchting 7833 (BG, neotype, here designated; duplicates at C & UPS, Fig. 4).

*Synonym*: *Pannaria caespitosa* P. M. Jørg., Crypt. Mycol. 22: 67-72 (2001). – Type: South Orkney Is, Signy Isl., Moraine valley, Jan. 1967, R. I. L. Smith (AAS, holotype !).

*Siphula* sect. *Siphulina* Hue (and *Siphulina* (Hue) C. W. Dodge) is accordingly a synonym of *Pannaria* subgen. *Cryopannaria* P. M. Jørg.





Fig. 5. Part of the holotype of *Parmeliella austroshetlandica*. Photo: J. Berge

#### ON THE IDENTITY OF *PARMELIELLA AUSTROSHETLANDICA* ØVSTEDAL & SØCHTING

This recently described species (Fig. 5) was by the authors (Øvstedal, Søchting & Sancho, 2004) claimed to be closely related to *Parmeliella neozelandica* (C.W. Dodge) D. Galloway & P. James, a species which has also been included in *Degelia* (Jørgensen & Galloway, 1992: 314), and is now best regarded as a *Steinera* (Jørgensen, 2003), because of its clearly cococarpoiid apothecia. A study of material of *P. austroshetlandica* confirmed that its apothecia also are cococarpioid (Henssen, 1963: 63). This can even be seen in the lens, the apothecia push forward through the cortex with no visible proper margin, often being surrounded by thalline element, giving the impression of having lecanoroid apothecia, particularly when they are young. In the microscope the characteristic cushion of shortcelled hyphae (remnants of the formative layer ('Bildungsschicht')) are easily seen underneath the subhymenium (Fig. 6). Actually it is most closely related to *Peltularia fuegensis* Henssen & P. M. Jørg. (Henssen & Jørgensen, 2001), a saxicolous species also known from South Shetland, from which it differs mainly in thallus characters, that of *P. austroshetlandica* being more crustose with a different upper cortex of compressed, thick-walled cells, and are not fastened in singular points to the substrate. Accordingly I transfer it to *Peltularia*:



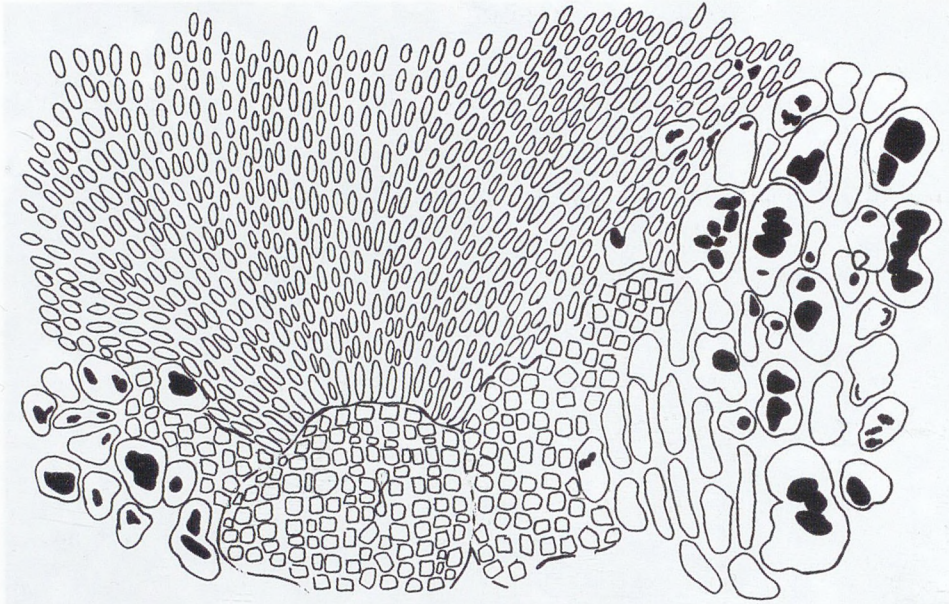


Fig. 6. Detail of section of apothecium in *P. austroshetlandica*, showing the basal, small-cellular cushion. Drawn by B. Ingvarstsen from photo of microscopic section.

***Peltularia austroshetlandica* (Søchting & Øvstedal) P. M. Jørg., comb. nov.**  
*Parmeliella austroshetlandica* Søchting & Øvstedal, *Bibl. Lich.* 88: 641 (2004).

– Type: South Shetland, Livingston Isl., South Bay, Caleta Española, lower slopes of Mt. Reina Sofia, 100m alt., 30 Jan. 1998, U. Søchting 7765 (C, holotype!).

This is a most interesting addition to the small, subantarctic genus *Peltularia*, which now is known to contain three species in the South American sector, and one in the New Zealand (*P. crassa* P. M. Jørg. & D. Galloway from Campbell and Macquarie Islands, see Jørgensen & Galloway, 1984). This genus which for long was only known from the foliose, umbilicate types pecies, now also contain nearly crustose species and appears to be very closely related to another subantarctic genus, *Steinera* Zahlbr., which is basically crustose with cracking, radiating lobes and apothecia with a distinct proper exciple, formed in a different way than in *Peltularia* (Henssen & James, 1982).

**Acknowledgements.** I am particularly indebted to Rolf Santesson for providing Lamb's photo of *Siphulina orphnina*, and to Tor Tønberg and Bruno Dennetière for having made a renewed search for the type at PC. S. LaGreca, D.O. Øvstedal, and U. Søchting are thanked for providing specimens, as well as J. Berge and B. Ingvarstsen for technical assistance.



