



Typification of two *Stereocaulon* names (Lecanorales, Ascomycota)

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Abstract

The nomenclature, bibliographic citations and typifications of the names *Stereocaulon botryosum* and *S. condensatum* are discussed. A neotype is designated for *S. condensatum* and the lectotypification of *S. botryosum* is clarified. In addition, the morphological and chemical characteristics of both species and information on exsiccates examined are presented.

Key words: nomenclature, taxonomy

Introduction

The lichen genus *Stereocaulon* Hoffmann (1796: 128) nom. cons. (see Lamb 1959) (Stereocaulaceae, Lecanorales, Ascomycota) traditionally included species with usually dimorphic thalli: primary crustose, which can be granular, areolate or squamulose and secondary fruticose consisting of usually very distinctive pseudopodetia, which are often tall and branched, and bear phyllocladia (or phyllocladoid branchlets), apothecia, in many species also cephalodia and in some soralia. Some species, however, develop only short pseudopodetia or a secondary thallus is lacking (Lamb 1951, 1977; Myllys *et al.* 2005; Högnabba 2006; Oset 2008; Högnabba *et al.* 2014).

The genus has been studied by many authors, but the most remarkable works were published by Lamb (1951, 1977, 1978), who studied the genus worldwide. Lamb (1977) studied numerous type collections and also typified several names, including most taxa occurring in Europe, however with two exceptions, *Stereocaulon botryosum* Acharius (1810: 581) and *S. condensatum* Hoffmann (1796: 130), two terricolous lichens widely distributed in the Northern Hemisphere. The aim of this paper is to clarify the typification of *S. botryosum* and to neotypify *S. condensatum*.

Material & Methods

Specimens were studied from B, BM, BM-ACH, GPN, H, H-ACH, KRAM, KTC, LBL, LOD, POZ, TRN, UGDA, UPS, WA and WRSL, including numerous exsiccatae. Lichen metabolites were analyzed by thin layer chromatography (TLC) in solvent systems A and C (Orange *et al.* 2001).

Results

Stereocaulon botryosum Acharius (1810: 581)

Type:—[Switzerland] ‘Helvetia’, [*Schleicher*] 930 ([first-step] lectotype H-ACH 1768!, designated by Lamb [1977: 207]; [second-step] lectotype H-ACH 1768A!, designated here; isolectotype BM-ACH 773!, left-hand specimen).

Chemistry: As stated by Lamb (1977) the species contains atranorin and porphyritic acid and these substances are present in the original material.

Chemistry: As stated by Lamb (1977) and Oset (2008), the species usually contains atranorin and lobaric acid, but in some collections lobaric acid is lacking (Lamb 1977; Oset 2008). In very few specimens (only known from Poland) atranorin is absent (Oset 2008). In the selected neotype collection atranorin and lobaric acid are present.

Comments: *Stereocaulon condensatum* is characterized by the persistent primary thallus of warty or cylindrical, grey, sometimes bluish, squamulose phyllocladia, the hemispherical, scabrid, brown to black cephalodia containing *Stigonema*, dark brown apothecia present on the basal phyllocladia or on pseudopodetia and the common production of atranorin and lobaric acid. Pseudopodetia are infrequent, simple or sparingly branched, ± tomentose and up to 1(–2) cm tall (Lamb 1977; Dombrovskaya 1996; Oset 2008).

Neither Lamb (1977) nor we could locate the authentic material of *Stereocaulon condensatum* in herbaria where Hoffmann's collections are stored at present and thus it should be considered lost. In such a case, the original illustration could be selected as lectotype, however, Hoffmann (1796) did not publish any illustration of *S. condensatum* in his work. Therefore, a neotypification of this name is required. The species was introduced in Hoffmann's book dealing with German flora, and for this reason we decided to select a specimen distributed in Schade, Stolle & Riehmer, Lichenes Saxonici Exsiccati. This material conforms to the present circumscription of the species presented by Lamb (1977), Dombrovskaya (1996) and Oset (2008).

Selected exsiccatae examined. Asahina, Lich. Japon. Exs. 293 (H). Cummings, Williams & Seymour, Lich. Bor.–Amer. 159 (H). Faltynowicz & Miądlikowska, Lich. Polon. Exs. 13 (B, BM, H, LBL, LOD, UGDA, UPS). Fries, T., Lich. Scand. Rar. Critic. Exs. 64 (BM). Hansen, Lich. Groenl. Exs. 173 (H). Harmand, Lich. Gall. Rar. Exs. 26 (H). Hakulinen, Lichenoth. Fenn. 1082 (H). Krawiec, Lichenoth. Polon. 71 (BM, LBL, TRN, WA, WRSL). Schaerer, Lich. Helvet. Exs. 828 (WA). Magnusson, Lich. Sel. Scand. Exs. 155 (B, BM, H, sub *S. condensatum* var. *condyloideum*). Malme, Lich. Suec. Exs. 486 (H). Nowak, Lich. Polon. Merid. Exs. 59 (BM, BP, H, LBL, LOD, UPS). Suza, Lich. Bohemoslov. 65 (BM, H). Thøgersen, Lich. Norveg. Medit. Exs. 20 (H). Vězda, Lich. Sel. Exs. 143 (BP, H). Vězda, Lich. Sel. Exs. 414 (BM, H).

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