

New and interesting lichenicolous fungi of the Karkonosze Mountains, SW Poland

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Abstract: KOSSOWSKA, M. 2008. New and interesting lichenicolous fungi of the Karkonosze Mountains, SW Poland. – *Herzogia* 21: 229–232.

Records of nine species of lichenicolous fungi and one lichenicolous lichen found in the Karkonosze Mts are presented. *Phaeospora parasitica* and *Lecanora* aff. *gisleriana* are new to Poland and four species, *Carbonea aggregatula*, *C. supersparsa*, *Cecidonia umbonella* and *Endococcus rugulosus* are new to the Sudetes.

Zusammenfassung: KOSSOWSKA, M. 2008. Neue und interessante lichenicole Pilze aus dem Riesengebirge, SW Polen. – *Herzogia* 21: 229–232.

Funde von neun lichenicolen Pilzen und einer lichenicolen Flechte werden vorgestellt. Alle Taxa wurden im Riesengebirge gesammelt. *Phaeospora parasitica* und *Lecanora* aff. *gisleriana* sind neu für Polen. *Carbonea aggregatula*, *C. supersparsa*, *Cecidonia umbonella* und *Endococcus rugulosus* sind neu für die Sudeten.

Key words: Ascomycetes, lichens, biodiversity, Sudety Mountains.

Introduction

During lichenological research on the Karkonosze Mountains, nine interesting species of lichenicolous fungi have been found. One of them, *Phaeospora parasitica*, is recorded from Poland for the first time and a further four taxa are new for the Sudetes. A lichenicolous lichen, *Lecanora* aff. *gisleriana*, is reported from Poland for the first time. Eight of the listed species were found on lichens growing on a basalt vein in Mały Śnieżny Kocioł cirque located in a western part of the main ridge of the Karkonosze Mountains, the remaining two, on slopes of Śnieżka Mt. in an eastern part of the range. The location of sites is shown on Fig. 1 according to the ATPOL grid square system (see CIEŚLIŃSKI & FAŁTYNOWICZ 1993). Specimens have been deposited in the Herbarium of Wrocław University (WRSL).

The species

Carbonea aggregatula (Müll.Arg.) Diederich & Triebel

New to the Sudetes, hitherto known in Poland from the Tatra Mountains only (ALSTRUP & OLECH 1996). Small aggregations of black convex apothecia, the margins of which are soon excluded, occur on the host thallus.

Host – *Lecanora polytropa* (thallus).

SPECIMEN EXAMINED. [Ea-78]: Mały Śnieżny Kocioł cirque – basalt vein, 50°46'59.6"N/15°33'16.6"E, alt. c. 1300 m, on basalt rock, 08.2006, M. Kossowska & W. Fałtynowicz.

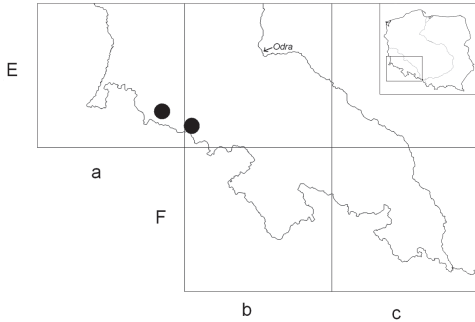


Fig. 1: Location of the given sites according to the ATPOL grid square system.

Carbonea supersparsa (Nyl.) Hertel

Previously known only from one site in Poland, namely the Beskid Niski Mountains (FAŁTYNOWICZ 2003, KUKWA 2005). New to the Sudetes. It differs from *C. aggregatula* by its wider spores and flat apothecia with persistent margins.

Host – *Lecanora polytropa* (thallus).

SPECIMEN EXAMINED. [Ea-78]: Mały Śnieżny Kocioł cirque – basalt vein, 50°46'59.6"N/15°33'16.6"E, alt. c. 1410 m, on basalt rock, 08.2006, M. Kossowska & W. Fałtynowicz.

Cecidonia umbonella (Nyl.) Triebel & Rambold

New to the Sudetes. This is the first locality in Poland outside the Tatra Mountains (see FLAKUS 2007). Easily recognized by characteristic galls (coecidia) formed on a host thallus. Only one species causing gall-like deformations of lichen thalli, i.e. *Cecidonia xenophana* (Körb.) Triebel & Rambold (KÖRBER 1865, STEIN 1879), has previously been reported from the Karkonosze Mountains. It differs from *C. umbonella* by its narrower and thin-walled spores, lower hymenium and by growing on species of *Porpidia* (see TRIEBEL 1989).

Host – *Lecidea lapicida* var. *pantherina* (thallus).

SPECIMEN EXAMINED. [Eb-80]: Śnieżka Mt. – eastern slope, 50°44'18"N/15°44'37"E, alt. 1500 m, on a hornfels stone in a boulder field, 13.08.2004, M. Kossowska.

Cercidospora epipolytropa (Mudd) Arnold

New to the Polish Sudetes, but known from two localities on the Czech side of the Karkonosze Mountains (KOCOURKOVÁ 1999). Previously reported only from a few Polish localities (ALSTRUP & OLECH 1996, KUKWA 2005, KUKWA & CZARNOTA 2006).

Host – *Lecanora polytropa* (apothecia).

SPECIMEN EXAMINED. [Ea-78]: Mały Śnieżny Kocioł cirque – basalt vein, 50°46'59.6"N/15°33'16.6"E, alt. c. 1300 m, on basalt rock, 08.2006, M. Kossowska & W. Fałtynowicz.

Endococcus rugulosus Nyl. s.l. – see the comments of KUKWA & CZARNOTA (2006).

New to the Sudetes. At the new locality it parasitizes thalli of various crustose lichens. The examined specimens have dark spores, 12–15 × 7 μm, and are entirely consistent with the description of TRIEBEL (1989).

Hosts – *Aspicilia* sp., *Porpidia macrocarpa*, *Rhizocarpon reductum* (thalli).

SPECIMENS EXAMINED. [Ea-78]: Mały Śnieżny Kocioł cirque – basalt vein, 50°46' 59.6"N/15°33'16.6"E, alt. c. 1300–1400 m, on basalt rock, 08.2006, M. Kossowska & W. Fałtynowicz.

***Lecanora* aff. *gisleriana* Müll.Arg.**

New to Poland. Several apothecia with characteristic red-brown discs and thick, irregularly crenulate thalline margins have been found growing on the thallus of *Lecanora polytropa*. The specimen differs from typical *L. gisleriana* by the presence of a dark blue-green pigment in excipulum (Coppins, pers. comm.). Furthermore, the habitat and host species appear to be untypical: usually *L. gisleriana* parasitizes thalli of lichens growing on metal-rich rocks, such as *L. epanora*, *L. handelii* and *L. subaurea* (HAWKSWORTH & DALBY 1992, WIRTH 1995).

Host – *Lecanora polytropa* (thallus).

SPECIMEN EXAMINED. [Eb-80]: Śnieżka Mt. – eastern slope, 50°44'15"N/15°44'30"E, alt. 1575 m, on a hornfels boulder in a patch of *Carici rigidae*-*Festucetum*, 15.08.2004, M. Kossowska.

***Muellerella erratica* (A.Massal.) Hafellner & V.John**

Syn.: *Microthelia pygmaea* Körb., *Muellerella pygmaea* (Körb.) D.Hawksw. var. *athallina* (Müll.Arg.) Triebel

The species was reported from this locality by KÖRBER (1855); here it has been rediscovered after more than 150 years, being very abundant and parasitizing thalli of various crustose lichens.

Hosts – *Lecidea lapicida*, *Porpidia macrocarpa*, *P. tuberculosa*, sterile lichen (thalli).

SPECIMEN EXAMINED. [Ea-78]: Mały Śnieżny Kocioł cirque – basalt vein, 50°46'59.6"N/15°33'16.6"E, alt. c. 1250–1410 m, on basalt rock and on small basalt pebbles, 08.2006, M. Kossowska & W. Fałtynowicz.

***Muellerella ventosicola* (Mudd) D.Hawksw.**

Reported from Śnieżka Mt. in eastern part of Karkonosze Mountains by KUKWA (2005) and KUKWA & CZARNOTA (2006). Presumably, this is a common species in Karkonosze Mts, infecting thalli of various *Rhizocarpon* species. It differs from *Muellerella erratica* by its distinctly larger perithecia (in the specimen examined – up to 300 µm in diameter) and thick-walled spores.

Host – *Rhizocarpon lavatum* (thallus).

SPECIMEN EXAMINED. [Ea-78]: Mały Śnieżny Kocioł cirque – basalt vein, 50°46'59.6"N/15°33'16.6"E, alt. c. 1250 m, on a small basalt pebble in a rock-fall, 08.2006, M. Kossowska & W. Fałtynowicz.

***Phaeospora parasitica* (Lönnr.) Arnold**

New to Poland, but reported from the Czech part of the Karkonosze Mountains (KOCOURKOVÁ 1999). Specimens examined perfectly match the species description (see VĚZDA 1963). Morphologically the perithecia resemble those of *Muellerella pygmaea*, but differ in having four-celled spores and eight-spored asci.

Hosts – *Lecidea lapicida*, *Rhizocarpon reductum* (thalli).

SPECIMEN EXAMINED. [Ea-78]: Mały Śnieżny Kocioł cirque – basalt vein, 50°46'59.6"N/15°33'16.6"E, alt. c. 1250–1400 m, on basalt rocks and pebbles, 08.2006, M. Kossowska & W. Fałtynowicz.

***Sagediopsis aquatica* (Stein) Triebel**

The report of this species by STEIN (1873) from this locality is confirmed. *Sagediopsis aquatica* is the fungal parasite restricted to *Koerberiella wimmeriana*, a lichen described from the basalt vein in Mały Śnieżny Kocioł cirque by KÖRBER (1855, as *Zeora wimmeriana*). *S. aquatica* is characterized by its small (up to 200 µm in diameter) perithecioid ascomata immersed in a host's thallus and by the narrowly fusiform to acicular, four-celled spores (RAMBOLD et al. 1990).

A second species of the genus *Sagediopsis*, *S. barbara* (Th.Fr.) R.Sant. & Triebel (TRIEBEL 1989) described from the basalt vein in Mały Śnieżny Kocioł cirque, has not been rediscovered.

It differs from *S. aquatica* by its considerably larger, thick-walled perithecia and wider spores; it is also restricted to *Porpidia glaucophaea* (TRIEBEL 1989).

Host – *Koerberiella wimmeriana* (thallus and apothecia).

SPECIMEN EXAMINED. [Ea-78]: Mały Śnieżny Kocioł cirque – basalt vein, 50°46'59.6"N/15°33'16.6"E, alt. c. 1300 m, on basalt rock, 17.08.2006, M. Kossowska & W. Fałtynowicz.

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