Polish Botanical Journal 52(2): 165–170, 2007

NEW LICHENS AND LICHENICOLOUS FUNGI OF THE POLISH SUDETY MOUNTAINS

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Abstract. The paper reports the occurrence of 20 lichen species, including two lichenicolous fungi *Dactylospora saxatilis* (Schaer.) Hafellner and *Tremella hypogymniae* Diederich & M. S. Christ. new to the Polish Sudety Mts. Some, such as *Biatora chrysantha* (Zahlbr.) Printzen, *Leucocarpia biatorella* (Arnold) Vězda and *Phaeophyscia endophoenicea* (Harm.) Moberg, are rare in Poland. All of the reported taxa were found in the eastern Sudety Mts.

Key words: Lichens, distribution, Sudety Mts, Poland

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INTRODUCTION

The Sudety Mts have been a very interesting area for scientists, including lichenologists, for many years. Its numerous mountain ranges, varied geological structure, plant communities and diversification of altitude provide suitable habitat conditions for many rare and interesting lichen taxa. The first references to lichen biota date to the 19th century (e.g., Flotow 1850, 1851; Körber 1855, 1865; Stein 1879, 1889; Eitner 1896, 1901, 1911). In later years, Sudety Mts lichens were mentioned by Tobolewski (1955), Fabiszewski (1968) and Kossowska (1999, 2006).

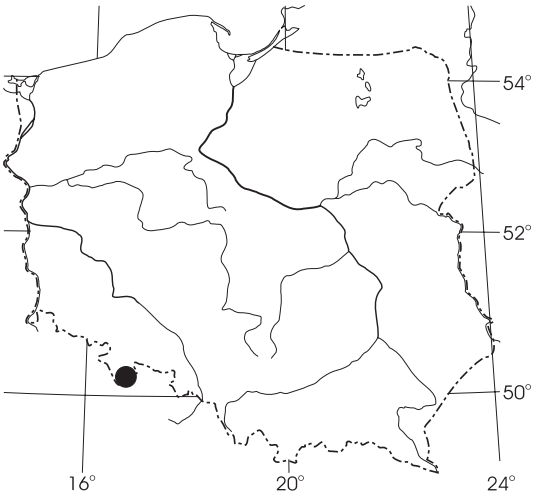

Fig. 1. Location of the study area.

This paper presents new lichens and lichenicolous fungi recorded in the eastern Sudety Mts (Góry Bialskie Mts and Śnieżnik Massif) (Fig. 1). Their distribution in the study area and in Poland is briefly characterized. Some of them, such as *Biatora chrysantha* (Zahlbr.) Printzen, *Leucocarpia biatorella* (Arnold) Vězda and *Phaeophyscia endophoenicea* (Harm.) Moberg, are very rare in Poland. The others are more frequent: *Lecanora leptyrodes* (Nyl.) Degel., *Melanelia disjuncta* (Erichsen) Essl., *Porpidia soredizodes* (Lamy ex Nyl.) J. R. Laundon, and *Trapeliopsis pseudogranulosa* Coppins & P. James.

MATERIAL AND METHODS

The material for the present paper was collected in 2001–2005 and determined using standard methods. Identification of sterile, crustose specimens was supported by TLC analyses of secondary metabolites (Orange *et al*. 2001). Nomenclature follows Fałtynowicz (2003). The distribution of the taxa examined is given in the ATPOL grid square system (Cieśliński & Fałtynowicz 1993). The herbarium material is housed in the Herbarium of

Wrocław University (WRSL) and in my private herbarium (Hb. Szczepańska). In the text the asterisk (*) indicates a lichenicolous fungus.

LIST OF TAXA

Aspicilia simoënsis Räsänen

This species is widespread in Poland (Fałtynowicz 2003).

SPECIMENS EXAMINED. SUDETY MTS. Fb 38 – Góry Bialskie Mts: yellow hiking trail from Goszów village to Przełęcz Dział pass, alt. 808 m, on siliceous rock, 25 May 2004, *leg. K. Szczepańska* (WRSL 2357); Fb 56 – Śnieżnik Massif: blue hiking trail in Jodłów village, alt. 740 m, on siliceous rock, 29 Aug. 2003, *leg. K. Szczepańska* (WRSL 2802); Fb 56 – Śnieżnik Massif: Jodłów village, alt. 640 m, on siliceous rock, 21 Aug. 2003, *leg. K. Szczepańska* (Hb. Szczepańska 455).

Biatora chrysantha (Zahlbr.) Printzen

This species is known only from the Polish Carpathian Mts. It was found in the Beskid Mały Mts (Nowak 1965), Beskid Żywiecki Mts (Nowak 1998), Bieszczady Zachodnie Mts (Kościelniak & Kiszka 2003; Kościelniak 2004) and Gorce Mts (Czarnota 2002).

SPECIMEN EXAMINED. SUDETY MTS. Fb 48 – Góry Bialskie Mts: green hiking trail from Przełęcz Płoszczyna pass to Rude Krzyże Mt., alt. 950 m, on mosses on bark of *Acer pseudoplatanus*, 28 May 2004, *leg. K. Szczepańska* (Hb. Szczepańska 474).

Cladonia rei Schaer.

This species is widespread in Poland (Fałtynowicz 2003).

SPECIMEN EXAMINED. SUDETY MTS. Fb 47 – Śnieżnik Massif: Jaworek village, alt. 800 m, on soil, 23 Aug. 2003, *leg. K. Szczepańska* (WRSL 2324); Fb 57 – Śnieżnik Massif: yellow hiking trail from Potoczek village to Trójmorski Wierch Mt., alt. 650 m, on soil, 23 June 2003, *leg. K. Szczepańska* (Hb. Szczepańska 364).

****Dactylospora saxatilis*** (Schaer.) Hafellner

This species has only a few stations in the Polish Carpathian Mts. It was found in the Tatra Mts (Alstrup & Olech 1992; Flakus 2006), Gorce Mts (Czarnota 2000), Beskid Wyspowy Mts, Beskid Sądecki Mts and Pieniny Mts (Bielczyk 2003).

SPECIMEN EXAMINED. SUDETY MTS. Fb 46 – Śnieżnik Massif: yellow hiking trail from Międzygórze village to Igliczna Mt., alt. 700 m, on thalli of *Trapelia placodioides* on siliceous rock, 12 Oct. 2002, *leg. K. Szczepańska* (Hb. Szczepańska 501).

Fuscidea pusilla Tønsberg

This species is widespread in Poland (Fałtynowicz 2003).

SPECIMEN EXAMINED. SUDETY MTS. Fb 47 – Śnieżnik Massif: Śnieżna Polana glade, by Międzygórze village, on bark of *Acer pseudoplatanus*, alt. 860 m, 12 Oct. 2002, *leg. K. Szczepańska* (Hb. Szczepańska 371).

Lecania inundata (Hepp *ex* Körb.) M. Mayrhofer

This species is rather rare in Poland and widespread only in the Polish Carpathian Mts (Bielczyk 2003; Fałtynowicz 2003; Kościelniak 2004).

SPECIMENS EXAMINED. SUDETY MTS. Fb 57 – Śnieżnik Massif: Jodłów village, alt. 750 m, on asbestos-cement roofing tile, 3 Feb. 2002, *leg. K. Szczepańska* (WRSL 2324); Fb 57 – Śnieżnik Massif: Jodłów village, alt. 750 m, on asbestos-cement roofing tile, 23 June 2003, *leg. K. Szczepańska* (Hb. Szczepańska 365).

Lecanora leptyrodes (Nyl.) Degel.

This lichen is known from many stations throughout Poland (Fałtynowicz 2003).

SPECIMEN EXAMINED. SUDETY MTS. Fb 47 – Śnieżnik Massif: Dolina Nowinki valley, alt. 750 m, on bark of *Acer pseudoplatanus*, 22 Aug. 2003, *leg. K. Szczepańska* (Hb. Szczepańska 488).

Lecidella flavosorediata (Vězda) Hertel & Leuckert

This lichen is known from many stations throughout Poland (Fałtynowicz 2003).

SPECIMENS EXAMINED. SUDETY MTS. Fb 38 – Góry Bialskie Mts: Nowy Gierałtów village, alt. 700 m, on bark of *Acer pseudoplatanus*, 27 July 2003, *leg. K. Szczepańska* (WRSL 2507); Fb 38 – Góry Bialskie: Stary Gierałtów village, alt. 600 m, on bark of *Fraxinus*

excelsior, 27 July 2003, *leg. K. Szczepańska* (WRSL 2864); Fb 38 – Góry Bialskie: red hiking trail from Stary Gierałtów village to Czernica Mt., alt. 680 m, on bark of *Acer platanoides*, 28 July 2003, *leg. K. Szczepańska* (Hb. Szczepańska 512).

Leucocarpia biatorella (Arnold) Vězda

This lichen taxon is very rare in Poland. It is known only from the Wyżyna Śląsko-Krakowska upland (J. Kiszka, unpublished) and the Polish Carpathian Mts. It was found in the Beskid Żywiecki Mts (Olech 1999) and Tatra Mts (Olech 1977, 1983, 1985, 1999; Alstrup & Olech 1992).

SPECIMEN EXAMINED. SUDETY MTS. Fb 47 – Śnieżnik Massif: Droga nad Lejami trail, Wielki Lej, alt. 850 m, on wood, 27 May 2004, *leg. K. Szczepańska* (Hb. Szczepańska 496).

Melanelia disjuncta (Erichsen) Essl.

This lichen is known from many stations throughout Poland (Fałtynowicz 2003).

SPECIMENS EXAMINED. SUDETY MTS. Fb 38 – Góry Bialskie Mts: 'Trzy Siostry' group of rocks, alt. 820 m, on siliceous rock, 7 Aug. 2003, *leg. K. Szczepańska* (WRSL 2887); Fb 47 – Śnieżnik Massif: Dolina Szklarynki valley, alt. 600 m, on siliceous rock, 25 Aug. 2003, *leg. K. Szczepańska* (WRSL 2008).

Pertusaria pupillaris (Nyl.) Th. Fr.

This lichen is known from many stations throughout Poland (Fałtynowicz 2003).

SPECIMENS EXAMINED. SUDETY MTS. Fb 48 – Góry Bialskie Mts: green hiking trail from Przełęcz Płoszczyna pass to Rude Krzyże Mt., alt. 950 m, on bark of *Fagus sylvatica*, 28 May 2004, *leg. K. Szczepańska* (WRSL 167); Fb 48 – Góry Bialskie: Dukt nad Spławami trail, by Puszcza Śnieżnej Białki Nature Reserve, alt. 1000 m, on bark of *Acer pseudoplatanus*, 31 July 2003, *leg. K. Szczepańska* (Hb. Szczepańska 367); Fb 48 – Góry Bialskie: Dolina Bielawki valley, Czarnobielski Dukt trail, alt. 817 m, on bark of *Acer pseudoplatanus*, 29 May 2004, *leg. K. Szczepańska* (Hb. Szczepańska 476); Fb 47 – Śnieżnik Massif: Droga nad Lejami trail, Wielki Lej, alt. 850 m, on bark of *Acer pseudoplatanus*, 27 May 2004, *leg. K. Szczepańska* (WRSL 262); Fb 47 – Śnieżnik Massif: trail below Żmijowiec ridge, alt. 1030 m, on bark of *Acer pseudoplatanus*, 7 July 2003, *leg. K. Szczepańska* (WRSL 1141); Fb 47 – Śnieżnik Massif: Dolina Cisowego Rozdożu valley, alt. 780 m, on bark of *Acer pseudoplatanus*, 16 May 2004, *leg. K. Szczepańska* (WRSL 1190); Fb 47 – Śnieżnik Massif: blue hiking trail from Międzygórze village to Śnieżnik Kłodzki Mt., alt. 830 m, on bark of *Acer pseudoplatanus*, 16 Apr. 2003, *leg. K. Szczepańska* (WRSL 2326); Fb 47 – Śnieżnik Massif: trail around Młyńsko Mt., alt. 820 m, on bark of *Acer pseudoplatanus,* 26 May 2004, *leg. K. Szczepańska* (WRSL 2816).

Phaeophyscia endophoenicea (Harm.) Moberg

This species is rather rare and has scattered localities mainly in the Polish Carpathian Mts (Bielczyk 2003; Fałtynowicz 2003; Kościelniak 2004).

SPECIMEN EXAMINED. SUDETY MTS. Fb 46 – Śnieżnik Massif: Międzygórze village, alt. 540 m, on bark of *Fagus sylvatica*, 27 Aug. 2003, *leg. K. Szczepańska* (Hb. Szczepańska 498).

Physconia detersa (Nyl.) Poelt

This lichen has scattered localities throughout Poland (Fałtynowicz 2003).

SPECIMEN EXAMINED. SUDETY MTS. Fb 46 – Śnieżnik Massif: Międzygórze village, alt. 560 m, on bark of *Acer platanoides*, 23 Aug. 2003, *leg. K. Szczepańska* (Hb. Szczepańska 489).

Porina leptalea (Durieu & Mont.) A. L. Sm.

This species is not very frequent in Poland. It has scattered localities in the Polish Carpathian Mts. It was found in the Beskid Mały Mts (Nowak 1974), Pogórze Rożnowskie foothills (Kozik 1977), Tatra Mts (Alstrup & Olech 1992), Gorce Mts (Czarnota 2000), Pieniny Mts (Kiszka 2000), Góry Sanocko-Turczańskie Mts (Kiszka & Piórecki 1992) and Bieszczady Mts (Kiszka & Kościelniak 2001; Kościelniak 2004).

SPECIMENS EXAMINED. SUDETY MTS. Fb 37 – Śnieżnik Massif: trail above Dolina Białej Wody valley, alt. 850 m, on bark of *Acer pseudoplatanus*, 26 June 2004, *leg. K. Szczepańska* (WRSL 1468); Fb 47 – Śnieżnik Massif: Dolina Bogoryi valley, alt. 700 m, on bark of *Acer pseudoplatanus*, 27 Aug. 2003, *leg. K. Szczepańska* (WRSL 2169); Fb 47 – Śnieżnik Massif: Dolina Nowinki valley, alt. 800 m, on bark of *Acer pseudoplatanus*,

22 Aug. 2003, *leg. K. Szczepańska* (WRSL 2854); Fb 37 – Śnieżnik Massif: Dolina Równicy valley, alt. 490 m, on bark of *Acer pseudoplatanus*, 26 June 2004, *leg. K. Szczepańska* (WRSL 2893).

Porpidia soredizodes (Lamy ex Nyl.) J. R. Laundon

This lichen is known from many stations throughout Poland (Fałtynowicz 2003).

SPECIMENS EXAMINED. SUDETY MTS. Fb 56 – Śnieżnik Massif: Jodłów village, alt. 740 m, on siliceous rock, 29 Aug. 2003, *leg. K. Szczepańska* (WRSL 887); Fb 56 – Śnieżnik Massif: Jodłów village, alt. 620 m, on sandstone pillar, by the road, 21 Aug. 2003, *leg. K. Szczepańska* (Hb. Szczepańska 265).

Pycnora sorophora (Vain.) Hafellner

This lichen has scattered localities throughout Poland (Fałtynowicz 2003).

SPECIMENS EXAMINED. SUDETY MTS. Fb 56 – Śnieżnik Massif: Potoczek village, alt. 600 m, on wood, 20 Aug. 2003, *leg. K. Szczepańska* (WRSL 2863); Fb 57 – Śnieżnik Massif: Potoczek village, alt. 700 m, on bark of *Fraxinus excelsior*, 26 Aug. 2003, *leg. K. Szczepańska* (Hb. Szczepańska 511).

Steinia geophana (Nyl.) B. Stein

This species has scattered localities throughout Poland (Fałtynowicz 1993, 2003).

SPECIMEN EXAMINED. SUDETY MTS. Fb 47 – Śnieżnik Massif: Janowa Góra village, alt. 830 m, on soil, 21 Sept. 2003, *leg. K. Szczepańska* (WRSL 1594).

Trapeliopsis aeneofusca (Flörke) Coppins & P. James

This species is not very frequent in Poland. It is known only from the Polish Carpathian Mts. It was found in the Beskid Mały Mts (Nowak 1974), Pogórze Ciężkowickie foothills (Kozik 1977), Pogórze Przemyskie foothills (Kiszka & Piórecki 1991), Tatra Mts (Alstrup & Olech 1992; Bielczyk 1999), Beskid Sądecki Mts (Śliwa 1998) and Bieszczady Mts (Kiszka & Kościelniak 2001).

SPECIMENS EXAMINED. SUDETY MTS. Fb 38 – Góry Bialskie Mts: yellow hiking trail from Goszów village to Przełęcz Dział pass, alt. 900 m, on soil, 25 May 2004, *leg. K. Szczepańska* (Hb. Szczepańska 422); Fb 47 – Śnieżnik Massif: yellow hiking trail from Hala Śnieżnicka glade to Dolina Kleśnicy valley, alt. 1100 m, on soil, 27 June 2004, *leg. K. Szczepańska* (WRSL 161); Fb 47 – Śnieżnik Massif: Janowa Góra village, alt. 830 m, on soil, 21 Sept. 2003, *leg. K. Szczepańska* (WRSL 1593).

Trapeliopsis pseudogranulosa Coppins & P. James

This lichen species is widespread throughout Poland (Fałtynowicz 2003).

SPECIMENS EXAMINED. SUDETY MTS. Fb 48 – Góry Bialskie Mts: trail below Skalna Mt., by the Nowa Morawa Nature Reserve, alt. 730 m, on soil and plant debris, 28 May 2004, *leg. K. Szczepańska* (WRSL 122, 123); Fb 48 – Góry Bialskie: Bialski Dukt trail, Bukowy Stok slope, alt. 900 m, on mosses, 1 Aug. 2003, *leg. K. Szczepańska* (WRSL 932, 965); Fb 38 – Góry Bialskie: Stara Droga Kresowa track, alt. 710 m, on wood, 2 Aug. 2003, *leg. K. Szczepańska* (Hb. Szczepańska 199); Fb 47 – Śnieżnik Massif: Dolina Szklarynki valley, alt. 600 m, on soil, 25 Aug. 2003, *leg. K. Szczepańska* (WRSL 1718); Fb 47 – Śnieżnik Massif: Dolina Kleśnicy valley, alt. 700 m, on mosses, 30 Aug. 2001, *leg. K. Szczepańska* (WRSL 2085); Fb 47 – Śnieżnik Massif: Dolina Nowinki valley, alt. 800 m, on wood, 22 Aug. 2003, *leg. K. Szczepańska* (WRSL 134); Fb 56 – Śnieżnik Massif: blue hiking trail from Szklarnia village to Jodłów village, alt. 650 m, on mosses, 23 June 2004, *leg. K. Szczepańska* (WRSL 298).

****Tremella hypogymniae*** Diederich & M. S. Christ.

This species is not very frequent, but it has scattered localities throughout Poland (Fałtynowicz 2003).

SPECIMEN EXAMINED. SUDETY MTS. Fb 47 – Śnieżnik Massif: Dolina Kleśnicy valley, alt. 800 m, on thalli of *Hypogymnia physodes* on bark of *Acer pseudoplatanus*, 18 Oct. 2005, *leg. K. Szczepańska* (WRSL 4826).

ACKNOWLEDGEMENTS. I am grateful to Professor Wiesław Fałtynowicz for revising my identifications, Dr. Martin Kukwa for determining *Biatora chrysantha, Fuscidea pusilla, Lecidella flavosorediata* and *Pycnora sorophora* by thin layer chromatography, and the anonymous reviewers for valuable remarks on the manuscript.

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Received 15 January 2007