

Interesting records of bryophytes from Silesia Province (Poland)

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Abstract: Distributional data for 22 rare bryophytes from Silesia Province are provided. The most interesting plants include *Acaulon muticum* (Hedw.) Müll.Hall., *Helodium blandowii* (F.Weber & D.Mohr) Warnst., *Hygroamblystegium tenax* (Hedw.) Jenn. and *Orthotrichum patens* Brid.

Key words: Bryophytes, hornworts, liverworts, mosses, threatened species, distributional data, Silesia, Poland.

Introduction

Silesia Province is located in southern Poland and covers about 12 334 km², what equals around 3.9% of the total area of Poland. The highest point of Silesia Province, 1542 m above sea level, is on mount Pilsko in the Western Beskidy Mountains, whereas the lower, 173 m, lies in the Odra river valley. Silesia Province belongs to the best bryologically known regions in Poland with over 620 taxa of bryophytes identified (Stebel et al. 2011). The paper presents the localities of rare species, found in the years 1994-2011 in lowland part of the Province.

New localities

List of taxa is arranged alphabetically. The species names follow mainly Ochyra et al. (2003) and Klama (2006a). Threat categories are given according to Schumacker & Martiny (1995) (Europe), Klama (2006b) and Żarnowiec et al. (2004) (Poland) and Stebel et al. (2011) (Silesia Province). For each station the following information is provided: region, ATMOS (Atlas of distribution of mosses in Poland) grid square, habitat, quantity of population, date of observation, comments on occurrence of species in Silesia Province, legal status in Poland and threat category. The specimens were collected by the author of this paper, in other cases collector's name is provided.

Regions: **DGW** – Dolina Górnej Wisły; **GT** – Garb Tarnogórski; **KR** – Kotlina Raciborska; **NW** – Niecka Włoszczowska; **OLP** – Obniżenie Liswarty-Proсны; **PJ** – Pagóry Jaworznickie; **PR** – Płaskowyż Rybnicki; **RP** – Równina Pszczyńska; **WK** – Wyżyna Katowicka.

A LIST OF RECORDS

Acaulon muticum (Hedw.) Müll.Hall. – **WK**: [Fd 51] Mikołów-Fiołkowa Góra, stubble-field, rendzina soil, c. spor., 10 cm² (29 Dec 1994). Temperate species, in Poland reported from many stations, but its current distribution is insufficiently known. In Silesia Province it occurs on scattered stations, recently found only in its northern part (Fojcik 1999; 2010). New to the Wyżyna Katowicka. Threatened in Poland (R) and Silesia Province (VU).

Ctenidium molluscum (Hedw.) Mitt. – **GT**: [Fd 22] Radzionków, Księża Góra, slope in the abandoned limestone quarry, 3 dm² (13 May 2009). Temperate-montane species, in Poland growing mainly in the Carpathians and Sudetes (Ochyra et al. 1985). Frequent in Silesia Province in the Beskidy Mountains (Stebel 2006) and in the Wyżyna Krakowsko-Częstochowska (Fojcik 2010). New to the Garb Tarnogórski.

Dicranum bonjeanii De Not. – **NW**: [Ed 98] Starzyny, wet *Pinus sylvestris* forest, forest section No. 168, 5 m² (9 Aug 2010). Boreal species, vanishing in the whole area of Poland. In Silesia Province very rare, recently reported from the Beskid Śląski (Plášek & Stebel 2002) and Płaskowyż Rybnicki (Stebel 2002). New to the Niecka Włoszczowska. Strictly protected and threatened in Poland (V) and Silesia Province (CR).

Didymodon topiaceus (Brid.) Lisa – **PR**: [Fd 60] Żory-Hańcówka, clay-pit near brick-yard, 1 m² (3 May 1997). Temperate species, known from scattered localities in Poland, but its current distribution is insufficiently known. In Silesia Province very rare species, known from scattered localities. Recently reported from Katowice (Fojcik, Stebel 2001) and Beskid Mały (Stebel 2010). New to the Płaskowyż Rybnicki.

Ditrichum pusillum (Hedw.) Hampe – **PR**: [Fd 60] Żory-Rowień, northern part, valley of the Ruda river, wet sandy soil in young *Pinus sylvestris*-*Betula pendula* forest, c. spor., 3 dm² (25 May 1997); [Fd 61] Żory-Kleszczów, Kolonia Leśna (Lasoki), wet sandy soil in abandoned sand-pit, c. spor., 3 dm² (14 May 1997). Temperate species, reported from scattered localities in Poland, but its current distribution is poorly known. In

Silesia Province very rare species, recently reported from its northern part (Fojcik 2010) and Beskid Śląski (Stebel 2006). New to the Płaskowyż Rybnicki.

Ephemerum serratum (Hedw.) Hampe var. ***angustifolium*** (Bruch & Schimp.) Bruch & Schimp. Always with sporophytes. – **DGW**: [Fd 81] Ochaby-Baranowice, stubble-field, 0.5 m² (19 Oct 1997); **KR**: [Fc 47] Ruda (Kuznia Raciborska commune), north-western part, at margin of *Zea mays* cultivation near Odra river, 1 m² (29 Sep 2008); [Fc 67] Racibórz-Studzienna, eastern part, stubble-field, 0.5 m² (26 Oct 2008); [Fc 67] Racibórz-Sudół, eastern part, stubble-field near gravel-pit, 1 m² (26 Oct 2008); **WK**: [Fd 51] Mikołów-Fiołkowa Góra, stubble-field, rendzina soil, 1 m² (29 Dec 1994). Suboceanic moss, probably frequent in Poland. In Silesia Province rare, but recently reported from some regions, for example Beskid Śląski (Stebel 2006), Kotlina Żywiecka (Stebel 2008) and Beskid Mały (Stebel 2010). New to the Wyżyna Katowicka. Threatened in Poland (R).

Helodium blandowii (F. Weber & D. Mohr) Warnst. – **GT**: [Fd 23] Rogoźnik-Siemonia, wet place in young *Pinus sylvestris* forest and bank of a small stream in abandoned sand-pit (leg. A. Szymczyk, 15 Jul 1998 & 20 Aug 1998). Subarctic moss known from many localities in Poland, but a lot of them do not exist yet (Ochyra et al. 1988). In Silesia Province recently reported only for a few times, for example from Poręba (Jędrzejko 1990), Olza and Wodzisław Śląski-Olszyny (Stebel 1997) and Katowice-Ochojec (Fojcik, Stebel 2001). Strictly protected and threatened in Poland (E) and Silesia Province (CR).

Homalia trichomanoides (Hedw.) Schimp. – **GT**: [Fd 21] Repty, bark of *Fagus sylvatica* near the Drama river in old park, c. spor., 0.5 m² (17 Feb 2002). Temperate species occurring infrequently on the whole area of Poland. In Silesia Province rare and overwhelming majority of its localities is concentrated in Wyżyna Krakowsko-Częstochowska Upland (Fojcik 2010) and Beskidy Mountains (Stebel 2006). New to the Garb Tarnogórski. Strictly protected in Poland.

Hygroamblystegium tenax (Hedw.) Jenn. – **DGW**: [Fd 81] Chybie-Żabieniec, western part, concrete in a small stream, 2 dm² (20 Apr 1997). Temperate species rare in Poland, but its distribution is insufficiently known. In Silesia Province reported from few localities in Wyżyna Krakowsko-Częstochowska (Fojcik 2010) and Kotlina Żywiecka (Stebel 2008). Strictly protected and threatened in Poland (R).

Hypnum pratense Spruce – **PR**: [Fd 60] Żory-Rowień, brown-moss fen community *Carici-Agrostietum caninae* near the Kłokocinka stream, 3 dm² (25 May 1997). North-subcontinental moss, in Poland occurring in scattered localities. In Silesia Province very rare, recently reported from Płaskowyż Rybnicki (Stebel 1997) and Beskidy Mountains (Stebel 2006; Stebel, Vončina 2011). Strictly protected and threatened in Poland (E) and Silesia Province (CR).

Orthotrichum pallens Brid. – **PR**: [Fd 61] Woszczyce, bark of wayside *Populus* sp. near 'Szybiarz' rest centre, c. spor., 2 cm² (22 Aug 2007). Subboreal-montane species, infrequent in Poland. In Silesia Province very rare, but recently the number of its localities has increased. Lately reported from the Beskidy Mountains (Stebel 2006, 2008, 2010).

O. patens Brid. – **WK**: [Fd 42] Katowice-Ligota, bark of wayside *Acer negundo* near Śląska Street, c. spor., 3 cm² (16 Sep 2009); **RP**: [Fd 62] Kobiór, bark of the wayside *Populus* sp. near the Kobiór-Studzienice road, c. spor., 1 cm² (13 Jun 2010). Situation of this subcontinental species is similar to *O. pallens*. Recently reported from the Beskidy Mountains (Stebel 2006, 2008, 2010). Threatened in Europe (T) and Poland (R).

O. stramineum Brid. – **WK**: [Fd 43] Katowice-Muchowiec, Katowicki Park Leśny, bark of *Salix alba* „Tristis”, c. spor., 1 cm² (16 Sep 2009). Situation of this suboceanic species is similar to *O. pallens*. Recently reported from the Wyżyna Krakowsko-Częstochowska (Fojcik 2010) and the Beskidy Mountains (Stebel 2006, 2008, 2010). Threatened in Poland (V).

O. striatum Hedw. – **WK**: [Fd 42] Katowice-Ligota, Studencka Street, *Acer negundo*, c. spor., 1 cm² (16 Sep 2009); [Fd 43] Katowice-Muchowiec, Katowicki Park Leśny, *Salix alba* „Tristis”, c. spor., 3 cm² (16 Sep 2009). Situation of this suboceanic species is similar to *O. pallens*. Recently reported from the Beskidy Mountains (Stebel 2006, 2008, 2010). Threatened in Poland (V).

Phaeoceros carolinianus (Michx.) Prosk. – **DGW**: [Fd 82] Zabrzeg-Ochodza, stubble field, c. spor., 3 dm² (11 Oct 1996); **PR**: [Fc 68] Pszów-Kalwaria, stubble-field near Sikorskiego Street, c. spor., 5 cm² (1 Nov 1996). South-temperate hornwort, reported from many localities from Poland, but its current distribution is unknown. In Silesia Province rare, recently reported from the Beskid Żywiecko-Orawski (Klama 1996), Kotlina Żywiecka and Beskid Mały (Stebel & Stebel 1998) and Kotlina Raciborska and Dolina Wisły (Stebel 1997). New to the Płaskowyż Rybnicki. Threatened in Silesia Province (VU).

Pogonatum nanum (Hedw.) P. Beauv. – **PR**: [Fc 68] Łańce, at margin of Las Życzański, grassland, c. spor., 2 m² (31 May 2008); [Fc 69] Rybnik-Okrzeszyniec, in young *Betula pendula* forest, c. spor., 2 dm² (11 Aug 2002). Temperate species, infrequent in Poland. Very rare in Silesia Province, recently reported from Płaskowyż Rybnicki (Stebel 1997), Wyżyna Wieluńska (Fojcik 1999) and Beskid Śląski (Stebel 2006).

Porella platyphylla (L.) Pfeiff. – **RP**: [Fd 72] Pszczyna-Poręba, bark of *Quercus robur* near fish-pond east of Narutowicza Street, 5 dm² (13 Jul 2005). West-temperate species, at present in Poland frequent only in

calcareous areas. In Silesia Province frequent only on limestone rock outcrops in the Wyżyna Krakowsko-Częstochowska, recently reported also from the Beskid Żywiecko-Orawski (Klama 1996), Beskid Śląski (Plášek & Stebel 2002) and Kotlina Żywiecka (Stebel & Wilczek 2000; Nejfeld & Stebel 2007). New to the Równina Pszczyńska. Threatened in Poland (E).

Pterigynandrum filiforme Hedw. – **WK**: [Fd 51] Mikołów-Fiołkowa Góra, bark of *Fraxinus excelsior* (29 Dec 1994). Boreal-montane species, in Poland occurring mainly in the Carpathians and Sudetes. In Silesia Province frequent in the Beskidy Mountains (Stebel 2006), rare in its lowland part. New to the Wyżyna Katowicka.

Riccardia latifrons (Lindb.) Lindb. – **OLP**: [Ed 81] Cisy w Łebkach Nature Reserve, rotten logs in wet *Pinus sylvestris*-*Picea abies* forest, 3 dm² (leg. A. Stebel & J. B. Parusel, 18 Aug 2002); **PJ**: [Fd 54] Chełm Śląski-Błędów, northern part, rotten stump in mixed forest, 10 cm² (6 Aug 2007). Subboreal-montane species, occurring on the whole area of Poland (Szwejkowski & Koźlicka 1980). Very rare and threatened in Silesia Province (VU), recently reported only from Beskid Żywiecko-Orawski (Klama 1996). New to the Obniżenie Liswarty-Prosny and Pagóry Jaworznickie.

Syntrichia latifolia (Hartm.) Huebener – Always with gemmae. **DGW**: [Fd 82] Burzej-Skrzyżowanie, concrete wall, 2 m² (7 Mar 1999); [Fd 82] Czechowice-Dziedzice, west of railway station, concrete wall, 0.5 m² (11 Oct 1996); [Fd 82] Zabrzeg-Ochodza, concrete wall, 1 m² (11 Oct 1996); **KR**: [Fd 67] Nieboczowy, near rest centre 'Rusałka', bark of *Populus* sp., 3 cm² (26 Oct 2008); **WK**: [Fd 42] Katowice-Ligota, Studencka Street, bark of *Populus* sp., 2 cm² (16 Sept 2009). Temperate species, in Poland growing mainly in the western part. Strictly protected and threatened in Poland (R). In Silesia Province known from several stations in the Kotlina Raciborska and Kotlina Oświęcimska (Stebel 1997), Beskid Śląski (Plášek & Stebel 2002) and Pogórze Śląskie (Stebel 2009a). New to the Wyżyna Katowicka.

Ulota bruchii Brid. – **KR**: [Fd 67] Nieboczowy, near rest centre 'Rusałka', bark of *Populus* sp., 1 cm² (26 Oct 2008); **PR**: [Fd 61] Woszczyce, 'Szybiarz' rest centre, bark of wayside *Populus* sp., 3 cm² (22 Aug 2007); **WK**: [Fd 53] Katowice-Murcki, near Płone Bagno, bark of wayside *Quercus robur*, c. spor., 3 cm² (24 Sep 2010). North-suboceanic species, known mainly from southern and western part of the country. Strictly protected and threatened in Poland (V). Very rare in Silesia Province, but in the recent years the number of its localities, like in others part of Poland, has increased (Stebel 2008, 2009b, 2010, Fojcik 2010). New to the Płaskowyż Rybnicki and Kotlina Raciborska.

U. crispa (Hedw.) Brid. – **WK**: [Fd 41] Mikołów-Borowa Wieś, north-eastern part, near 'Halemba' rest centre, bark of *Populus* sp. near fish-pond, 2 cm² (9 Aug 2007); [Fd 42] Chorzów, place called 'Uroczyisko Buczyńa', bark of *Acer pseudoplatanus*, c. spor., 4 cm² (10 Apr 2011). Temperate species, growing in the whole country. Strictly protected and threatened in Poland (V). In Silesia Province its situation is the same as in case of *U. bruchii*.

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