



MATERIALS TO THE LICHEN BIOTA OF WESTERN POMERANIA (NORTHERN POLAND). PART 4

WIESŁAW FAŁTYNOWICZ

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ABSTRACT. The paper contains information about the locality of 210 lichen species noted in the years 1978–2006 in Western Pomerania (northern Poland). Some of them are very rare in the country or the Polish lowlands, e.g. *Bryoria implexa*, *B. subcana*, *Cladonia incrassata*, *Parmeliopsis hyperopta*, *Umbilicaria polyphylla* and *Xanthoparmelia mougeotii*.

KEY WORDS: lichens, Western Pomerania, northern Poland

INTRODUCTION

This article is a continuation of the series the lichen biota of Western Pomerania (northern Poland; FAŁTYNOWICZ & MIĄDLIKOWSKA 1990, FAŁTYNOWICZ 2018, FAŁTYNOWICZ et al. 2018,) and contains new records on lichens in the study area. Western Pomerania, despite many years of technological research, still hides many surprises, and some areas have not been studied in detail so far.

MATERIALS AND METHODS

The information presented in the article was collected in the years 1978–2006. The data come from field notes and are the result of studies on herbarium materials, collected during numerous lichenological journeys around Western Pomerania. With the consent of the author, I also gave a dozen or so lichen localities collected by Beata Sągin for her doctoral thesis (SĄGIN 1998), as well as several species of ground lichen collected in the heathlands by Ryszard Markowski and I also put their localities in this article. Andrzej Ryś allowed me to publish his locality of *Lobaria pulmonaria* from the “Radunia River Valley” nature reserve.

Lichens nomenclature is based on Polish checklist of KOSSOWSKA & FAŁTYNOWICZ (2016). Threatened categories of lichens in Poland were assigned according to CIEŚLIŃSKI et al. (2006). A list of protected species were prepared on the basis of Regulation of the Minister for Environment in a relation to the protection of fungi species (REGULATION... 2014).

Herbarium materials were deposited in the herbaria of University of Wrocław (WRSL) and University of Gdańsk (UGDA).

Taxa are listed in alphabetical order in the following layout: name of species; substratum; number(s) of locality(ies); and others remarks. The following abbreviations were used: CH – protected species; CR – critically endangered; EN – endangered; VU – vulnerable; c.ap. – with apothecia (*cum apothecium*); WF – Wiesław Fałtynowicz; RM – Ryszard Markowski; BS – Beata Sągin; TS – Tadeusz Sulma.

LIST OF THE LOCALITIES

Abbreviation: Number after abbreviation indicate the date of collecting herbarium specimens or the date of making field notes. In brackets are the numbers of squares according to the ATPOL grid – see CIEŚLIŃSKI & FAŁTYNOWICZ (1993).

1 – Kurowo, WF 1984 (Ac-45); 2 – between Choczewo and Żelazno, WF 1980, 1984 (Ac-45); 3 – Choczewo, 1.5 km to S, WF 1987 (Ac-45); 4 – Ślajkowo, WF 1980 (Ac-45); 5 – Ciekocino, old cemetery, WF 1986 (Ac-45); 6 – Przebędowo Lęborskie, at the railroad crossing, WF 1986 (Ac-45); 7 – Choczewo, 1.5 km to NE, WF 1987 (Ac-46); 8 – Mierzyno, 1.5 km to W, WF 1986 (Ac-46); 9 – Lublewko, 1 km to N, WF 1987 (Ac-46); 10 – Dobre Lake near Mała Piaśnica, next to the road, WF 1978 (Ac-47); 11 – between Werblinia and Zdrada, WF 1987 (Ac-48); 12 – Mechowo, TS 1957 (Ac-48); 13 – Celbowo near Puck, WF 1986 (Ac-48); 14 – Poraj near Wicko, WF 1987 (Ac-53); 15

– Gościęcino, WF 1981, 1987 (Ac-55); 16 – S shore of Salińskie Lake, WF 1980 (Ac-56); 17 – Mała Piasznica, WF 1977 (Ac-57); 18 – Rybno Kaszubskie, WF 1984 (Ac-57); 19 – Zamostne, WF 1984 (Ac-57); 20 – Góra Pomorska, WF 1984 (Ac-57); 21 – Tyłowo, WF 1979 (Ac-58); 22 – Lake Sztobor vicinity, WF 1979 (Ac-58); 23 – Wejherowo, by the road to Krokowa, WF 1979 (Ac-58); 24 – Wejherowo-Nanice, WF 1987 (Ac-58); 25 – Gogolewko near Czarna Dąbrówka, RM 1984 (Ac-82); 26 – Skaławsko, WF 1982 (Ac-93); 27 – “Jar rzeki Raduni” nature reserve, near the wooden bridge, A. Ryś 2011 (Ac-98); 28 – Kieźmark, WF 1983 (Ad-92); 29 – “Wielkie Smogorze” nature reserve, WF 1986 (Ba-27); 30 – Trzebierz, RM 1984 (Ba-52); 31 – Godowo, WF 1986 (Ba-67); 32 – Storkowo near Szczecinek, WF 2003 (Bb-46); 33 – between Brusno and Kocury near Połczyn Zdrój, WF 2006 (Bb-55); 34 – on the Morzysław Lake, WF 1985 (Bb-63); 35 – Rzęsnica, WF 1985 (Bb-72); 36 – Kosobudy, WF 1985 (Bb-72); 37 – Kosobudy, 2 km to SE, WF 1985 (Bb-72); 38 – S shore of the Wilczkowo Lake near Złocieniec, WF 1985 (Bb-73); 39 – Osiek Drawski, WF 1985 (Bb-73); 40 – Złocieniec, W part of town, WF 1985 (Bb-73); 41 – Kosowo near Złocieniec, WF 1985 (Bb-73); 42 – between Stawno and Linowo, WF 1985 (Bb-73); 43 – between Bodowo and Bobrowo, WF 1985 (Bb-73); 44 – Złotniki, WF 1985 (Bb-73); 45 – Kleszczno, WF 1985 (Bb-73); 46 – Siemczyno near Złocieniec, WF 1985 (Bb-74); 47 – burned village Barkniewko near Okonek, WF 1987 (Bb-77); 48 – Okonek, WF 1987 (Bb-78); 49 – Okonek, 5 km to N, WF 1987 (Bb-78); 50 – Stawno, 0.5 km to N, WF 1985 (Bb-83); 51 – between Stawno and Bonino, WF 1985 (Bb-83); 52 – between Świerczyna and Wieloboki, heathland, RM 1985 (BB-84); 53 – Wieloboki, RM 1985 (Bb-85); 54 – Kłębowiec, WF 1985 (Bb-95); 55 – Rudnica, WF 1985 (Bb-96); 56 – Smolno, WF 1985 (Bb-96); 57 – Mędrzechowo near Bytów, WF 1983 (Bc-03); 58 – by the lake Jeleń near Bytów, WF 1983 (Bc-03); 59 – Studzienice, WF 1981 (Bc-13); 60 – Miastko, cemetery, BS 1994 (Bc-20); 61 – by the lake Motowęże, WF 1987 (Bc-25); 62 – by the lake Brzezinko near Raduń, WF 1980 (Bc-25); 63 – S shore of the lake Gołuń, WF 1980 (Bc-26); 64 – “Krwawe Doły” nature reserve, WF 1984 (Bc-26); 65 – Wdzydze Tucholskie, WF 1980 (Bc-26); 66 – Zabrody near Wdzydze Tucholskie, WF 1980 (Bc-26); 67 – Bielsko near Biały Bór, WF 1987 (Bc-30); 68 – Wiele, 2 km to NW, on boulder, WF 1994 (Bc-35); 69 – Świerkówko near Bytów, WF 1987 (Bc-40); 70 – Zimne Zdroje near Czerny, RM 1985 (Bc-47); 71 – railway viaduct near Ocypel, BS 1992 (Bc-49); 72 – Stara Rogoźnica near Charzykowy, WF 1987 (Bc-52); 73 – Człuchów, BS 1994 (Bc-53); 74 – Rosochatka near Śliwice, WF 1986 (Bc-57); 75 – Raciąż, BS 1994 (Bc-66); 76 – Woziwoda, TS 1956 (Bc-65); 77 – Wielkie Gacno, 1 km to NE, RM 1985 (Bc-65); 78 – Trzebucy, 2 km to W, WF 1981 (Bc-67); 79 – Osie, 2 km

to NW, WF 1981 (Bc-68); 80 – Tleń, 1.5 km to W, WF 1981 (Bc-68); 81 – Bakowski Młyn, WF 1981 (Bc-69); 82 – near Kwiatki Forestry, WF 1981 (Bc-79); 83 – Wrzosowiska near Cekcyn, WF 1981 (Bc-76); 84 – Szumiąca, WF 1979 (Bc-76); 85 – between Gródek and Kozłowo along Wda river, WF 1996 (Bc-88); 86 – between Przechówko and Świecie, WF 1996 (Bc-98); 87 – Kieźmark, 3 km to S, WF 1983 (Bd-02); 88 – between Bukowiec and Subkowy, WF 1978 (Bd-21); 89 – Opalenie nature reserve, WF 1987, 1998 (Bd-51); 90 – Koźielec, slopes of the Vistula valley, WF 1987 (Bd-61); 91 – “Bielinek nad Odrą” nature reserve, WF 1986 (Ca-30); 92 – Osinów Dolny near Cedynia, WF 1983, 1986 and BS 1995 (Ca-40); 93 – between lakes Chłopek and Duży Chłop, WF 1987 (Ca-48); 94 – Gozdowice, WF 1986 (Ca-51); 95 – Siekierki, WF 1986 and BS 1995 (Ca-51); 96 – W shore of the Marwicko Lake, WF 1987 (Ca-56); 97 – W shore of the Nierzym Lake, WF 1987 (Ca-58); 98 – between lakes Stobno and Wielkie, WF 1987 (Ca-64); 99 – Witnica, 2 km to NNW, WF 1987 (Ca-65); 100 – Bogdaniec, 3 km on W, WF 1986 (Ca-66); 101 – Gorzów Wielkopolski, Słoneczne housing estate, WF 1986, 2005 (Ca-67); 102 – between Olszynka and Pilawa, WF 1985 (Cb-05); 103 – Brodek, WF 1985 (Cb-05); 104 – Ostrowiec, WF 1985 (Cb-06).

LIST OF SPECIES

- Acarospora fuscata* (Nyl.) Arnold – on boulders, exceptionally on concrete: 19, 24, 33, 50, 67, 71, 82, 83, 93.
- Acarospora moenium* (Vain.) Räsänen – on concrete: 75, 103.
- Acarospora veronensis* A. Massal. – on boulders: 67.
- Acrocordia gemmata* (Ach.) A. Massal. – on bark of *Acer*, *Populus* and *Quercus*: 1, 24, 54, 76, 89. VU.
- Alyxoria varia* (Pers.) Ertz & Tehler – on bark of *Fagus*, *Fraxinus*, *Populus* and *Quercus*: 24, 76, 89, 93.
- Amandinea punctata* (Hoffm.) Coppins & Scheidegger – on bark of *Acer*, *Alnus*, *Fraxinus*, *Malus*, *Populus*, *Quercus*, *Salix* and *Tilia*: 2, 5, 6, 9, 14, 15, 18, 19, 24, 28, 31, 33, 34, 37, 43–46, 50, 51, 54–56, 58, 59, 63, 66, 67, 76, 85, 86, 91, 93, 103, 104.
- Anaptychia ciliaris* (L.) Körb. – on bark of *Acer*, *Fraxinus*, *Populus* and *Quercus*, exceptionally on concrete on the tombstone of old cemetery: 1, 4, 9, 11, 18, 19, 22, 24, 54, 55, 58, 59, 71, 72, 76. CH; EN.
- Arthonia radiata* (Pers.) Ach. – on bark of *Carpinus*, *Fagus*, *Fraxinus* and *Sorbus*: 14, 24, 39, 85, 86, 89, 98.
- Arthonia ruana* Massal. – on bark of *Fraxinus*: 85.
- Arthonia spadicea* Leight. – on bark of *Quercus* and *Sorbus*: 14, 16, 39.
- Arthonia vinosa* Leight. – on bark of *Fagus*: 29, 85.
- Aspicilia cinerea* (L.) Körb. – on erratic boulder: 19.
- Athalia holocarpa* (Hoffm.) Arup, Frödén & Søchting – on concrete: 6, 11, 15, 28, 33, 60, 71, 75, 92, 93, 95.

- Athalia pyracea* (Ach.) Arup, Frödén & Søchting – on bark of *Populus* and *Salix* and on wood: 86, 89, 91.
- Bacidia rubella* (Hoffm.) A Massal. – on bark of *Acer*: 24, 34. VU.
- Baeomyces rufus* (Huds.) Rebert. – on soil in heathlands and on roadside sidewalks in forests: 24, 30, 45, 47, 53, 61, 63, 66, 92, 102.
- Biatora globulosa* (Flörke) Fr. – on bark of *Acer*, *Populus*, *Quercus* and *Salix*: 37–39, 55, 66, 67, 69, 93, 103.
- Bilimbia sabuletorum* (Schreb.) Arnold – on bryophytes growing on concrete: 60.
- Bryoria fuscescens* (Gyeln.) Brodo & D. Hawksw. – on bark of *Acer*, *Betula*, *Fraxinus*, *Pinus*, *Quercus*, *Salix* and on wood: 6, 9–11, 16, 17, 20–22, 26, 34, 39, 49, 50, 55, 59, 64–67, 69, 79, 80, 82. CH; VU. After the regression in the second half of the 20th century, the species is currently spreading and found on numerous new localities (see e.g. FAŁTYNOWICZ 2004).
- Bryoria implexa* (Hoffm.) Brodo & D. Hawksw. – on bark of *Betula*: 66. CH; CR. Currently a very rare and endangered species.
- Bryoria subcana* (Nyl. ex Stizenb.) Brodo & D. Hawksw. – on bark of *Betula*: 78, 80. CH; CR. Currently a very rare and endangered species.
- Buellia aethalea* (Ach.) Th. Fr. – on boulders: 46, 50, 51.
- Buellia griseovirens* (Turner & Borrer ex Sm.) Almb. – on bark of *Acer*, *Betula*, *Carpinus*, *Corylus*, *Fagus*, *Quercus* and *Pinus*: 7, 14, 15, 24, 32, 54.
- Caeruleum heppii* (Naeg.) K. Knudsen & L. Arcadia – on small stones: 67.
- Calicium adpersum* Pers. – on bark of *Quercus*: 99. EN.
- Calicium salicinum* Pers. – on bark of *Quercus*: 56. VU.
- Calicium viride* Pers. – on bark of *Quercus*: 56. VU.
- Calogaya decipiens* (Hoffm.) Arup, Frödén & Søchting – on concrete: 31, 33, 35, 36, 46, 48, 71, 75, 86, 88, 92–95, 99, 103.
- Caloplaca chlorina* (Flot.) Sandst. – on concrete: 75.
- Caloplaca saxicola* (Hoffm.) A. Nordin – on concrete: 31, 33, 54, 91, 92, 95, 99.
- Caloplaca teicholyta* (Ach.) J. Steiner – on concrete: 31, 93.
- Candelaria concolor* (Dicks.) B. Stein s.l. – on bark of *Acer*, *Betula*, *Fraxinus* and *Quercus*, exceptionally on wood: 11, 20, 24, 31, 40, 54, 93, 103, 104.
- Candelariella aurella* (Hoffm.) A. Zahlbr. – on concrete and boulders: 6, 11, 15, 19, 31, 33, 46, 48, 50, 54, 60, 67, 71, 73, 75, 86, 89, 91–93, 95, 102, 103.
- Candelariella coralliza* (Nyl.) H. Magn. – on boulders: 67.
- Candelariella vitellina* (Hoffm.) Müll. Arg. – on boulders, occasionally on bark of *Betula* and *Pinus*: 19, 20, 24, 28, 31, 33, 46, 50, 51, 54, 55, 71, 85, 89, 92, 94, 99, 103.
- Candelariella xanthostigma* (Ach.) Lettau – on bark of *Acer*, *Alnus*, *Betula*, *Fraxinus*, *Malus*, *Populus*, *Quercus*, *Salix* and *Tilia*: 1, 2, 6, 9, 11, 14, 15, 18, 19, 24, 31, 34, 40, 43, 45, 48, 50, 51, 54–56, 58, 59, 64, 66, 72, 76, 85, 86, 89, 90, 103, 104.
- Catillaria erysiboides* (Nyl.) Th. Fr. – on wood: 74. EN.
- Cetraria aculeata* (Schreb.) Fr. – on soil: 25, 30, 42, 47, 49, 55, 56, 61–64, 66, 67, 69, 72, 74, 76, 80, 82, 83, 92, 99, 102, 104.
- Cetraria ericetorum* Opiz. – on soil in heathlands: 25, 47, 56, 61, 62, 69, 80, 82.
- Cetraria islandica* (L.) Ach. – on soil in dry pine forests, swards and heathlands: 25, 47, 48, 61, 62, 69, 78, 80, 82, 84. CH; VU.
- Cetraria pinastri* (Scop.) Ach. – on bark of *Betula* and on wood: 14, 24, 49, 55, 61, 62, 64. CH.
- Cetraria sepincola* (Ehrh.) Ach. – mainly on dead twigs of *Betula*, but also on *Acer*, *Alnus*, *Juniperus*, *Pinus* and on wood: 14, 39, 41, 46, 55, 61–64, 66, 67, 76, 79, 80, 82, 102. CH; EN. Even 40 years ago it was a very common species, especially in the area of Bory Tucholskie (FAŁTYNOWICZ 1980, LIPNICKI 1990), and now it is lost.
- Chaenotheca chrysocephala* (Ach.) Th. Fr. – on bark of *Betula* and *Quercus*: 14, 16, 17, 44, 69, 86, 100.
- Chaenotheca ferruginea* (Turner ex Sm.) Migula – on bark of *Betula*, *Picea*, *Pinus* and on wood: 10, 14, 16, 24, 44, 45, 86, 89.
- Chaenotheca furfuracea* (L.) Tibell – on bark of *Fagus* and *Quercus*: 58, 89, 93.
- Chaenotheca trichialis* (Ach.) Th. Fr. – on bark of *Quercus*: 56, 89.
- Chrysothrix candelaris* (L.) J.R. Laundon – on bark of *Quercus*: 85, 89, 93. CH; CR.
- Circinaria calcarea* (L.) A. Nordin, Savič & Tibell – on concrete: 71, 75, 86, 92, 93, 98.
- Cladonia arbuscula* (Wallr.) Flot. & Ruoss – on soil: 25, 30, 39, 42 (c.ap.), 45, 47–49, 52, 53, 55, 56, 61–67, 70, 72, 74, 76–80, 82–86, 89, 92, 99, 101, 102, 104. CH.
- Cladonia botrytes* (Hagen) Willd. – on the upper surface of pine stumps: 56, 61, 62, 66, 78, 82, 89. EN.
- Cladonia cenotea* (Ach.) Schaer. – on wood, soil, and at the base of the trunks of *Pinus*: 14, 16, 17, 38, 45, 49, 55, 61, 62, 64, 69, 76, 78–80, 82, 85, 97, 98, 102.
- Cladonia cervicornis* (Ach.) Flot. subsp. *verticillata* (Hoffm.) Ahti – on soil: 25, 53, 55, 61, 63, 67, 70, 74, 79, 80, 82, 86, 92, 99, 101, 102.
- Cladonia chlorophaea* (Flörke ex Sommerf.) Spreng. s.l. – on soil, wood, rarely on the bark of *Acer*, *Alnus*, *Betula*, *Fagus* and *Pinus*: 8, 10, 14, 16, 17, 24–26, 30, 31, 34, 37–39, 41, 42, 44–49, 52, 53, 55, 56, 59–67, 69, 70, 72, 74, 76–85, 89, 92, 94, 96–102, 104.
- Cladonia ciliata* (Stirt.) Harm. var. *tenuis* (Flörke) Nimis – on soil: 61, 66, 76, 80, 83, 84. CH.
- Cladonia coccifera* (L.) Willd. – on soil in heathland: 67, 74, 92.
- Cladonia coniocraea* (Flörke) Spreng. – on bark of *Acer*, *Alnus*, *Betula*, *Fagus*, *Pinus*, *Quercus* and on wood: 3,

- 8, 10, 14–17, 21, 24, 26, 31, 33, 37, 38, 41, 44, 45, 49, 55, 61, 67, 69, 72, 74, 77, 78, 82, 84–86, 89, 92, 98–102, 104.
- Cladonia cornuta* (L.) Hoffm. – on soil and wood, occasionally on bark of *Betula*: 17, 24, 25, 30, 38, 42, 47, 49, 55, 61–64, 66, 67, 69, 70, 72, 74, 77–85, 92, 98, 102.
- Cladonia crispata* (Ach.) Flot. – on soil: 61, 64.
- Cladonia deformis* (L.) Hoffm. – on soil: 30, 45, 47, 49, 55, 56, 61, 64–70, 74, 77–82, 92, 102, 104.
- Cladonia digitata* (L.) Hoffm. – on wood and on bark of *Alnus*, *Betula*, *Pinus* and *Quercus*: 6, 14, 16, 17, 37–39, 41, 44, 45, 47, 55, 56, 61, 62, 64, 66, 67, 69, 72, 76, 79, 81, 82, 85, 86, 93, 96–99, 100, 102.
- Cladonia fimbriata* (L.) Fr. – on soil, wood, and on bark of *Acer*, *Betula* and *Pinus*: 10, 14, 16, 17, 21, 24, 30, 38, 45, 47, 49, 52, 55, 63, 66, 67, 72, 74, 76–78, 80–82, 85, 86, 89, 91, 97–99.
- Cladonia floerkeana* (Fr.) Flörke – on soil and wood: 14, 25, 30, 38, 42, 45, 47, 49, 55, 61, 62, 64, 66, 67, 69, 70, 74, 82, 92, 97, 102, 104.
- Cladonia foliacea* (Huds.) Willd. – on soil: 25, 80, 92, 100, 101.
- Cladonia furcata* (Huds.) Schrad. – on soil: 25, 30, 39, 42, 45, 47–49, 52, 53, 55, 56, 61–64, 66, 67, 69, 70, 72, 74, 76–80, 82–86, 92, 94, 99–102, 104.
- Cladonia glauca* Flörke – on wood and soil, rarely on bark of *Betula* and *Pinus*: 10, 14, 17, 21, 22, 25, 26, 30, 37, 38, 42, 44, 45, 47–50, 52, 55, 61–65, 67, 69, 70, 72, 74, 76, 77, 79–86, 89, 92, 96, 99, 101, 102, 104.
- Cladonia gracilis* (L.) Willd. – on soil and on wood, exceptionally on bark of *Betula*: 25, 30, 42, 47, 49, 52, 53, 55, 56, 59, 61–67, 69, 70, 72, 74, 76–79, 82–86, 89, 92, 99, 102, 104.
- Cladonia incrustata* Flörke – on wood on peat-bog: 61. CH; EN. Very rare in Poland. Noted from this locality also by KUKWA et al. (2012).
- Cladonia macilenta* Hoffm. – on soil, wood and bark of *Betula* and *Pinus*: 10, 14, 16, 17, 19, 21, 24, 30, 33, 37, 38, 39, 41, 42, 45, 47, 49, 52, 53, 55, 56, 59, 61–67, 69, 70, 72, 74, 77–80, 82, 83, 85, 86, 89, 92, 97–99, 101, 102, 104.
- Cladonia ochrochlora* Flörke – on wood and on bark of *Acer*: 33, 38, 41, 44, 45, 50, 55, 93, 97, 98, 104.
- Cladonia phyllophora* Hoffm. – on soil and wood: 25, 30, 42, 45, 47, 49, 52, 53, 55, 61–64, 66, 67, 70, 72, 74, 76–80, 82, 83, 92, 94, 99–102, 104.
- Cladonia pleurota* (Flörke) Schaerer – on soil: 25, 30, 49, 55, 56, 61, 62, 66, 67, 74, 78, 82, 92, 102.
- Cladonia portentosa* (Dufour) Coem. – on soil: 25, 30, 45, 61, 64, 66, 92. CH.
- Cladonia pyxidata* (L.) Hoffm. – on soil and wood: 37, 38, 45, 47, 49, 53, 55, 61, 64, 67, 76, 80, 82, 92, 101.
- Cladonia rangiferina* (L.) Weber – on soil: 30, 42, 48, 56, 61, 62, 64, 66, 67, 69, 72, 74, 76, 78–80, 82–85, 92, 104. CH.
- Cladonia rangiformis* Hoffm. – on soil: 76, 89, 101.
- Cladonia scabriuscula* (Delise) Nyl. – on soil: 47.
- Cladonia squamosa* (Scop.) Hoffm. – on soil: 39, 61, 92.
- Cladonia stellaris* (Opiz.) Pouzar & Vězda – on soil in dry pine forest: 64. CH; EN.
- Cladonia subulata* (L.) Weber in Wigg. – on soil: 30, 39, 47, 49, 53, 55, 61–63, 66, 67, 69, 70, 74, 76–82, 85, 86, 89, 92, 94, 97, 99, 100.
- Cladonia uncialis* (L.) Wigg. – on soil: 30, 42, 49, 55, 56, 62–67, 69, 70, 74, 76, 79–83, 85, 86, 92, 99, 101, 102.
- Cliostomum griffithii* (Sm.) Coppins – on bark of *Quercus*: 14. VU. Subatlantic species, grows massively in coastal zone, not endangered there, in inland extremely rare (see map in FAŁTYNOWICZ 1992).
- Coenogonium pineti* (Schrad.) Lücking & Lumbsch – on bark of *Quercus*: 39.
- Dibaeis baeomyces* (L.) Rambold & Hertel – on soil in heathland: 52.
- Enchylium tenax* (Sw.) Gray – on soil in xerothermic swards on the slopes by the Vistula and Odra rivers: 90, 101.
- Evernia prunastri* (L.) Ach. – on bark of *Acer*, *Fagus*, *Fraxinus*, *Populus* and *Quercus*, rarely on wood: 1–3, 5, 6, 8–12, 14–24, 29, 31–40, 43–46, 48, 49, 54–56, 58, 59, 63–66, 69, 72, 80, 85, 86, 89, 98, 99, 102–104.
- Flavoplaca citrina* (Hoffm.) Arup, Frödén & Søchting – on concrete: 5, 15, 48, 60, 73, 75, 86.
- Goidanichia ambrosiana* (A. Massal.) Tomas. & Cif. – on concrete: 75. VU.
- Graphis scripta* (L.) Ach. – on bark of *Carpinus*, *Corylus*, *Fagus*, *Quercus* and *Sorbus*: 3, 7, 8, 12, 14, 16, 24, 38, 89.
- Hypocenomyce scalaris* (Ach.) M. Choisy – on wood and on bark of *Acer*, *Alnus*, *Betula*, *Carpinus*, *Fagus*, *Frangula*, *Fraxinus*, *Juniperus*, *Picea*, *Pinus*, *Quercus* and *Tilia*: 3, 6, 7, 11, 16, 20, 24, 29, 31–41, 42(c. ap.), 43–46, 47–49, 50, 51, 54–57, 59–67, 69, 72, 76, 78–81, 82(c. ap.), 83, 85, 86, 89, 91, 96–100, 102–104.
- Hypogymnia farinacea* Zopf – on bark of *Acer*, *Alnus*, *Pinus*, *Populus* and *Quercus*: 44, 55, 61, 69, 72. CH; VU.
- Hypogymnia physodes* (L.) Nyl. – on bark of *Acer*, *Alnus*, *Betula*, *Corylus*, *Fagus*, *Fraxinus*, *Juniperus*, *Ledum*, *Malus*, *Picea*, *Pinus*, *Populus*, *Pyrus*, *Quercus*, *Salix*, *Sorbus* and *Tilia*, on wood, exceptionally on soil and boulders: 2–6, 8, 10, 12, 14–24, 26, 28, 29, 31–51, 54–59, 61–69, 72, 76, 78–83, 85, 86, 88, 89, 91, 93, 96–100, 102–104.
- Hypogymnia tubulosa* (Schaer.) Havaas – on bark of *Acer*, *Betula*, *Fagus*, *Fraxinus*, *Populus*, *Pyrus*, *Quercus*, *Salix* and *Tilia*, exceptionally on boulders: 1, 6, 10, 11, 31, 33, 34, 37, 39, 41, 43, 45, 50, 51, 55, 58, 59, 64, 103. CH.
- Imshaugia aleurites* (Ach.) Fricke Meyer – on wood, on bark of *Pinus* and *Populus*, and on twigs of *Ju-*

- niperus*: 14, 17, 29, 45, 61–64, 66, 67, 69, 72, 76, 78–80, 82, 83, 85, 90, 99. CH.
- Lecania erysibe* (Ach.) Mudd – on concrete: 75.
- Lecania naegelii* (Hepp) Diederich & van den Boom – on bark of *Populus*: 31.
- Lecanora allophana* (Ach.) Nyl. – on bark of *Fraxinus* and *Populus*: 14, 76.
- Lecanora argentata* (Ach.) Malme – on bark of *Acer*, *Alnus*, *Betula*, *Fagus*, *Fraxinus*, *Populus*, *Quercus*, *Salix* and *Tilia*: 2, 3, 6, 8, 9, 11–16, 18, 19, 24, 29, 33, 34, 37, 43, 45, 50, 55, 58, 59, 63, 66, 72, 78, 86, 89, 102, 103.
- Lecanora carpinea* (L.) Vain. – on bark of *Acer*, *Alnus*, *Betula*, *Carpinus*, *Fraxinus*, *Populus*, *Quercus* and *Salix*: 3, 14, 16, 18, 24, 55, 65, 66, 76, 78, 79, 82, 85, 86, 89, 98, 103.
- Lecanora chlorotera* Nyl. – on bark of *Acer*, *Betula*, *Populus* and *Salix*: 9, 11, 15, 18, 24, 37, 45, 55, 58, 66, 67, 72, 78, 85, 86, 89, 103.
- Lecanora conizaeoides* Nyl. ex Crombie – on wood and on bark of *Acer*, *Alnus*, *Betula*, *Fagus*, *Larix*, *Picea*, *Pinus*, *Populus*, *Quercus*, *Salix* and *Tilia*: 1, 3, 5, 6, 8, 10, 13, 15, 19, 24, 29, 31–34, 37, 38–40, 42, 44–49, 50, 51, 54, 55, 59, 61, 63–67, 69, 72, 76, 78–82, 85, 86, 89–93, 96–99, 100, 102–104.
- Lecanora expallens* Ach. – on bark of *Acer*, *Betula*, *Carpinus*, *Fagus*, *Fraxinus*, *Populus*, *Quercus*, *Salix* and *Tilia*: 3, 5, 6, 8, 9, 11, 14–16, 18, 19, 24, 29, 31, 34, 38, 39, 43–46, 48–50, 56, 66, 67, 69, 72, 85, 86, 89, 93, 97, 102.
- Lecanora glabrata* (Ach.) Malme – on bark of *Acer* and *Fagus*: 3, 89.
- Lecanora intricata* (Ach.) Ach. – on boulders: 33, 50.
- Lecanora intumescens* (Rebent.) Rabenh. – on bark of *Acer* and *Fagus*: 18, 24. EN.
- Lecanora polytropa* (Ehrh.) Rabenh. – on boulders: 19, 31, 33, 46, 50, 51, 67, 85, 89, 92, 94, 99.
- Lecanora pulicaris* (Pers.) Ach. – on bark of *Acer*, *Alnus*, *Betula*, *Corylus*, *Fagus*, *Populus*, *Salix*, *Sorbus*, and on wood: 11, 14–16, 19, 28, 39, 46, 50, 51, 55, 66, 67, 72, 82, 85, 89, 98, 102.
- Lecanora rupicola* (L.) A. Zahlbr. – on boulders: 19.
- Lecanora saligna* (Schrad.) A. Zahlbr. – on wood and on bark of *Acer*, *Fraxinus* and *Quercus*: 6, 31, 39, 54, 55, 85, 89.
- Lecanora subrugosa* Nyl. – on bark of *Populus*: 65.
- Lecanora symmicta* (Ach.) Ach. – on bark of *Acer*, *Pinus*, *Populus* and *Salix* and on wood: 14, 18, 64, 69, 72, 86.
- Lecidea fuscoatra* (L.) Ach. – on boulders: 29, 33, 50, 85.
- Lecidella elaeochroma* (Ach.) M. Choisy – on bark of *Acer*, *Betula*, *Fagus*, *Fraxinus*, *Populus*, *Quercus*, *Salix* and *Sambucus*: 9, 11, 14–16, 18, 24, 33, 37, 51, 55, 59, 66, 72, 76, 78, 85, 86, 89, 103.
- Lecidella stigmatea* (Ach.) Hertel & Leuckert – on concrete: 6, 33, 46, 48, 60, 71, 75, 89, 91–93, 95, 102.
- Lepra albescens* (Huds.) Hafellner – on bark of *Acer*, *Betula*, *Carpinus*, *Fagus*, *Fraxinus*, *Pinus*, *Quercus* and *Sorbus*: 5, 6, 8, 12, 14–16, 24, 32, 45, 56, 67, 69, 93, 98.
- Lepra amara* (Ach.) Hafellner – on bark of *Acer*, *Alnus*, *Betula*, *Carpinus*, *Fagus*, *Fraxinus*, *Populus*, *Quercus* and *Sorbus*: 1–3, 5–12, 14–16, 18–20, 24, 32–34, 37–39, 44, 54, 55, 58, 59, 67, 69, 89, 90, 93, 97, 98, 102, 103.
- Lepraria incana* (L.) Ach. – on bark of *Acer*, *Betula*, *Fagus*, *Fraxinus*, *Malus*, *Quercus* and *Pinus*: 3, 5, 6, 8, 12, 14–18, 24, 49, 57, 61–67, 69, 72, 76–80, 82, 83, 89.
- Lepraria membranacea* (Dicks.) Vain. – on bark of *Acer*, *Carpinus*, *Fagus* and *Quercus*: 14, 15, 24, 89.
- Lobaria pulmonaria* (L.) Hoffm. – on bark of *Acer platanoides*: 27. CH; EN. Noted from this reserve by URBAŃSKI (1930), overlooked during the study of the lichen biota of this reserve (FAŁTYNOWICZ & KRÓLAK 2001). Found in the crown of the maple by ornithologist W. PÓŁTORAK (pers. comm.). Numerous *L. pulmonaria* thalli also grew in 2004 on the old *Ulmus*, which died down and this locality in the reserve no longer exists (A. RYŚ – pers. comm.).
- Massjukiella polycarpa* (Hoffm.) S.Y. Kondr., Fedorenko, S. Stenroos, Kärnefelt, Elix, J.S. Hur & A. Thell – on bark of *Acer*, *Alnus*, *Betula*, *Fagus*, *Fraxinus*, *Malus*, *Pinus*, *Populus*, *Quercus*, *Salix* and *Sambucus*: 1, 2, 9, 14, 18, 19, 24, 28, 33, 50, 54, 55, 57, 59, 61, 63, 65, 66, 82, 85, 86, 87, 89, 90, 97, 104.
- Melanelixia glabratula* (Lamy) O. Blanco et al. – on bark of *Acer*, *Betula*, *Carpinus*, *Cerasus*, *Fagus*, *Fraxinus*, *Malus*, *Quercus*, *Populus*, *Salix* and *Sorbus*: 3, 6, 8, 12, 14–18, 21, 24, 34, 35, 37–39, 44, 45, 49, 51, 55–59, 63, 67, 69, 85, 88, 89, 93, 98, 99, 100.
- Melanelixia subargentifera* (Nyl.) O. Blanco et al. – on bark of *Acer*: 55, 59. CH; VU. Very rarely recorded species, disappearing mainly as a result of massive cutting of roadside trees.
- Melanelixia subaurifera* (Nyl.) O. Blanco et al. – on bark of *Acer*, *Fagus*, *Fraxinus*, *Populus* and *Quercus*: 2, 3, 16, 54, 82. CH.
- Melanohalea elegantula* (Zahlbr.) O. Blanco et al. – on bark of *Fraxinus* and *Quercus*: 14, 33, 98. CH; VU.
- Melanohalea exasperatula* (Nyl.) O. Blanco et al. – on bark of *Acer*, *Fraxinus*, *Populus*, *Salix* and *Tilia*: 2, 5, 6, 9, 10, 14, 15, 18, 19, 24, 33, 36, 37, 40, 45, 46, 48, 50, 54, 55, 59, 65, 66, 72, 85, 90, 104.
- Micarea denigrata* (Fr.) Hedl. – on wood and on bark of *Populus*: 6, 15, 49, 55, 82, 89, 99.
- Micarea prasina* Fr. – on bark of *Malus*, *Populus* and *Quercus*: 57, 67, 82, 85.
- Myriolecis albescens* (Hoffm.) Śliwa et al. – on concrete: 11, 15, 31, 33, 48, 67, 71, 75, 86, 88–93, 103.
- Myriolecis crenulata* (Hook.) Śliwa et al. – on concrete: 28, 75, 95.

- Myriolecis dispersa* (Pers.) Śliwa et al. – on concrete: 6, 11, 15, 28, 31, 33, 35, 36, 49, 50, 54, 60, 67, 71, 73, 75, 89–95, 99, 102, 103.
- Myriolecis hagenii* (Ach.) Śliwa et al. – on concrete, wood and on bark of *Acer*, *Betula*, *Pinus*, *Populus* and *Salix*: 18, 24, 31, 34, 43, 48, 50, 54, 55, 58, 67, 75, 91, 95.
- Nephromopsis chlorophylla* (Willd.) Divakar, Crespo & Lumbsch – on bark of *Acer*, *Betula*, *Fraxinus*, *Pyrus* and *Quercus*: 1, 6, 9–11, 16, 17, 20–22, 24, 33, 34, 37, 41, 43, 45, 46, 48, 50, 54–56, 58, 59, 61, 64, 67, 78, 80–82, 90, 103, 104. CH; VU.
- Ochrolechia androgyna* Räsänen – on bark of *Fagus* and *Quercus*: 7, 69. VU.
- Parmelia saxatilis* (L.) Ach. – on bark of *Betula*, *Fagus* and *Quercus*, exceptionally on wood: 33, 44, 45, 93, 98, 99.
- Parmelia submontana* Nádv. ex Hale – on bark of *Carpinus*: 32, 98. CH, VU.
- Parmelia sulcata* Taylor – on bark of deciduous trees and on wood: 1–12, 14, 15–19, 21–24, 28, 32–40, 43–46, 48–51, 54, 55, 57–59, 64–66, 69, 72, 78–80, 82, 85, 86, 89, 90, 93, 98–100, 102–104.
- Parmelina tiliacea* (Hoffm.) Hale – on bark of *Acer*, *Fraxinus* and *Tilia*: 18, 19, 33, 59. CH; VU.
- Parmeliopsis ambigua* (Wulfen in Jacq.) Nyl. – on bark of *Acer*, *Betula*, *Carpinus*, *Fagus*, *Pinus*, *Populus*, *Quercus* and on wood: 3, 14, 17, 32, 33, 37–39, 41, 42, 45, 51, 55, 59, 61–67, 70, 72, 76, 78–83, 85, 86, 93, 96, 98, 99, 102, 104.
- Parmeliopsis hyperopta* (Ach.) Arnold – on bark of *Pinus*: 76. VU. Very rare in the lowlands, frequent only in the mountains (TOBOLEWSKI 1981).
- Peltigera canina* (L.) Willd. – on soil: 17, 55, 63, 66, 78. CH; VU.
- Peltigera didactyla* (With.) Laundon – on soil: 24, 33, 49, 53, 55, 63, 66, 74, 88, 101.
- Peltigera polydactylon* (Neck.) Hoffm. – on soil: 24, 25, 55, 77, 82. CH.
- Peltigera praetextata* (Flörke) Zopf – on soil: 10, 17, 24, 89. CH; VU.
- Peltigera rufescens* (Weiss) Humb. – on soil in dry swards and heathlands: 25, 49, 55, 56, 63, 66, 74, 78.
- Pertusaria coccodes* (Ach.) Nyl. – on bark of *Acer*, *Fagus*, *Fraxinus*, *Quercus*, *Sorbus* and *Tilia*: 3, 6, 7, 9, 11, 14, 16, 18, 34, 38, 46, 89, 90, 93.
- Pertusaria flavida* (DC.) J.R. Laundon – on bark of *Fagus*: 7, 8. EN.
- Pertusaria leioplaca* DC. – on bark of *Fagus* and *Quercus*: 8, 39.
- Pertusaria pertusa* (L.) Tuck. – on bark of *Acer*, *Fagus*, *Fraxinus*, *Quercus* and *Tilia*: 1–3, 5, 6, 8, 9, 11–14, 16, 18, 19, 29, 37, 38, 59, 89. VU.
- Phaeophyscia nigricans* (Flörke) Moberg – on concrete: 48, 71, 75, 93, 95.
- Phaeophyscia orbicularis* (Neck.) Moberg – on concrete and on bark of *Acer*, *Alnus*, *Betula*, *Fraxinus*, *Pinus*, *Populus* and *Sambucus*: 5, 6, 9, 11, 13–15, 17, 18, 21, 24, 28, 31, 33, 36, 40, 45, 46, 48, 50, 54, 56, 58–60, 63, 65, 88, 71, 73, 75, 76, 86, 89, 91–93, 95, 99, 102.
- Phlyctis argena* (Ach.) Flot. – on bark of *Acer*, *Alnus*, *Betula*, *Carpinus*, *Corylus*, *Fagus*, *Fraxinus*, *Malus*, *Quercus*, *Pinus*, *Populus*, *Salix*, *Sorbus* and *Tilia*: 1–6, 9–12, 15, 16, 18, 19, 24, 29, 31, 33–35, 37–39, 43–46, 49, 51, 54–59, 66, 67, 69, 72, 76, 85, 86, 89, 90, 92, 93, 102, 103.
- Physcia adscendens* (Fr.) H. Olivier – on bark of *Acer*, *Alnus*, *Betula*, *Fraxinus*, *Salix*, *Sambucus* and *Tilia*: 1, 5, 6, 9, 11, 15, 18, 19, 23, 24, 28, 31, 33, 40, 43, 45, 50, 54, 55, 59, 60, 63, 66, 69, 71, 72, 75, 85, 86, 93, 95, 102.
- Physcia aipolia* (Ehrh. ex Humb.) Fűrnrrohr – on bark of *Acer*: 15.
- Physcia caesia* (Hoffm.) Fűrnrrohr – on concrete: 31, 36, 40, 46, 54, 71, 75, 88, 89, 92–95, 99, 102, 103.
- Physcia dubia* (Hoffm.) Lettau – on bark of *Acer*, *Aesculus*, *Fraxinus* and *Ulmus*: 17, 22, 23.
- Physcia stellaris* (L.) Nyl. – on bark of *Populus* and *Salix*: 9, 13, 18, 24, 65, 89, 90.
- Physcia tenella* (Scop.) DC. – on bark of *Acer*, *Alnus*, *Betula*, *Fraxinus*, *Malus*, *Pinus*, *Populus*, *Pyrus* and *Salix*, exceptionally on boulder: 1, 6, 10, 11, 13, 14, 15, 17, 18, 21–24, 28, 33–35, 37, 40, 45, 46, 48, 50, 51, 54–59, 63–66, 69, 71, 73–76, 78, 82, 85, 86, 89, 90, 93, 95, 98, 103, 104.
- Physconia distorta* (With.) J.R. Laundon – on bark of *Acer*, *Fraxinus*, *Populus* and *Salix*: 1, 2, 6, 9–11, 14, 15, 17–19, 22–24, 37, 54, 58, 59, 66, 76. EN.
- Physconia enteroxantha* (Nyl.) Poelt – on bark of *Acer*, *Alnus*, *Fraxinus*, *Populus* and *Salix*: 2, 8, 5, 9, 14, 15, 18, 21, 24, 28, 33, 46, 54, 59, 66, 69, 76, 90, 98.
- Physconia grisea* (Lam.) Poelt – on bark of *Acer* and *Fraxinus*: 6, 18, 19, 33, 54, 85.
- Physconia perisidiosa* (Erichsen) Moberg – on bark of *Acer* and *Carpinus*: 24, 44, 54, 89. EN.
- Placidium squamulosum* (Ach.) O. Breuss – on soil in xerothermic swards: 91, 101.
- Placynthiella oligotropha* (Vain.) Coppins & P. James – on wood and soil: 24, 47, 49, 67, 89.
- Placynthiella uliginosa* (Schrad.) Coppins & P. James – on soil and wood, exceptionally on bark of *Betula* and *Fagus*: 7, 14, 25, 30, 37–39, 41, 42, 45, 47, 49, 50, 52–56, 58, 61, 62, 64, 66–69, 72, 74, 78, 79, 82, 83, 89, 91, 92, 94, 97–102, 104.
- Platismatia glauca* (L.) W. Culb. & C. Culb. – on bark of *Acer*, *Betula*, *Carpinus*, *Fagus*, *Pinus*, *Populus* and *Quercus*, occasionally on wood, and on *Juniperus* twigs: 7, 10, 14, 16, 17, 21, 22, 32–34, 37, 39, 42, 43–45, 49, 50, 55–57, 59, 61, 62, 64–67, 69, 72, 76, 78, 80, 82, 85, 93, 98, 99, 102, 104.
- Pleurosticta acetabulum* (Neck.) Elix & Lumbsch – on bark of *Acer*, *Fraxinus*, *Malus*, *Populus*, *Quercus* and

- Salix*: 1, 2, 4–6, 9, 14, 15, 48, 19, 24, 33, 36, 37, 40, 43, 45, 46, 50, 54, 55, 57–59, 65, 66, 90, 93. CH; EN.
- Polycauliona candelaria* (L.) Frödén, Arup & Söchting – on bark of *Acer*, *Alnus*, *Fraxinus*, *Malus*, *Populus*, *Pyrus*, *Salix* and *Tilia*, exceptionally on boulder and wood: 1, 19, 33, 35, 36, 40, 43, 46, 54, 57, 59, 63, 66, 76, 82, 86.
- Porina aenea* (Wallr.) A. Zahlbr. – on bark of *Carpinus*, *Corylus*, *Fagus*, *Fraxinus* and *Tilia*: 24, 85, 86, 89, 90, 98.
- Porpidia cinereoatra* (Ach.) Hertel & Knoph – on boulders: 104.
- Porpidia crustulata* (Ach.) Hertel & Knoph – on boulders and small stones in dry places: 3, 33, 61, 66, 67, 85.
- Porpidia soredizodes* (Lamy ex Nyl.) J.R. Laundon – on boulders: 3.
- Porpidia tuberculosa* (Sm.) Hertel & Knoph – on boulders: 19, 33, 93.
- Protoparmeliopsis muralis* (Schreb.) M. Choisy – on concrete, occasionally on bark of *Fraxinus* and *Tilia*: 19, 33, 48, 50, 51, 54, 68, 71, 75, 91–93, 95, 99, 103.
- Pseudevernia furfuracea* (L.) Zopf – on bark of *Acer*, *Alnus*, *Betula*, *Fagus*, *Fraxinus*, *Pinus*, *Populus*, *Pyrus*, *Quercus* and *Tilia*, rarely on wood, and on *Juniperus* twigs: 1–3, 6, 9–11, 16, 17, 19–22, 29, 31–37, 39, 45, 46, 49, 50, 51, 54, 55, 57–59, 61–67, 69, 72, 76, 78–83, 85, 40–43.
- Psilolechia lucida* (Ach.) Choisy – on boulders: 33.
- Pyrenula nitida* (Weigel) Ach. – on bark of *Carpinus* and *Fagus*: 12, 24, 29, 89. VU.
- Psilolechia lucida* (Ach.) Choisy – on boulders: 17.
- Pycnothelia papillaria* (Ehrh.) Dufour – on soil in heathland: 74. EN.
- Ramalina farinacea* (L.) Ach. – on bark of *Acer*, *Alnus*, *Fagus*, *Fraxinus*, *Populus*, *Quercus*, *Salix* and *Tilia*: 1, 2, 7–10, 14, 15, 17–19, 21–24, 31–33, 34 (c.ap.), 37, 40, 44–46, 54–56, 58, 59, 63, 66, 69, 72, 76, 78, 85, 89, 98, 103. CH; VU.
- Ramalina fastigiata* (Pers.) Ach. – on bark of *Acer*, *Fraxinus*, *Populus*, *Quercus* and *Tilia*: 1, 2, 4–6, 9–11, 14, 15, 17–19, 21, 22, 24, 32, 33, 46, 48, 54–56, 87. CH; EN.
- Ramalina fraxinea* (L.) Ach. – on bark of *Acer*, *Fraxinus*, *Populus*, *Salix* and *Tilia*: 1, 2, 4–6, 9–11, 14, 15, 17–19, 21, 22, 24, 31–34, 37, 40, 43, 46, 54, 58, 59, 65, 66, 72. CH; EN.
- Ramalina obtusata* (Arnold) Bitter – on bark of *Quercus*: 5. CH; EN.
- Ramalina pollinaria* (Westr.) Ach. – on bark of *Populus*: 31. CH; VU.
- Rhizocarpon distinctum* Th. Fr. – on boulders: 50, 55, 99.
- Rhizocarpon geographicum* (L.) DC. – on boulders: 33.
- Rinodina oleae* Bagl. – on concrete and bricks: 31, 75, 95.
- Rufoplaca arenaria* (Pers.) Arup, Söchting & Frödén – on concrete: 75, 86, 91, 95.
- Rusavskia elegans* (Link.) S.Y. Kondr. & Kärnefelt – on concrete: 95.
- Sarcogyne regularis* Kőrb. – on concrete: 75.
- Scoliciosporum chlorococcum* (Graeve ex Stemham.) Vězda – on bark of *Acer*, *Alnus*, *Betula*, *Carpinus*, *Fagus*, *Fraxinus*, *Pinus*, *Populus*, *Quercus* and *Tilia*, and on wood: 3, 8, 11, 14, 15, 24, 29, 34, 38, 44–46, 49, 55, 59, 63, 64, 66, 67, 82, 85, 89, 99, 104.
- Scoliciosporum umbrinum* (Ach.) Arnold – on boulders: 50, 55, 99.
- Stereocaulon condensatum* Hoffm. – on soil in heathlands: 61, 67 (c.ap.), 74, 76, 82, 102 (c.ap.). CH; VU.
- Strangospora pinicola* (Massal.) Kőrb. – on wood and on bark of *Acer*: 18, 54.
- Thelocarpon laureri* (Schrad.) Coppins & P. James – on boulders: 33, 46, 67, 90.
- Trapelia coarctata* (Sm.) M. Choisy – on small stones: 49.
- Trapelia glebulosa* (Sm.) J.R. Laundon – on concrete: 71.
- Trapelia obtegens* (Th. Fr.) Hertel – on boulders: 19.
- Trapeliopsis flexuosa* (Fr.) Coppins & P. James – on wood and on bark of *Betula*: 3, 33, 47, 56, 67, 69, 76, 79, 80, 82 (c.ap.), 83, 89, 91, 97, 99.
- Trapeliopsis granulosa* (Hoffm.) Lumbsch – on soil and on wood, exceptionally on bark of *Betula*, *Fagus*, *Pinus* and *Populus*: 3, 14, 24, 30, 31, 33, 37–39, 45, 47, 49, 55, 56, 59, 61–67, 69, 72, 74, 76, 78–80, 82, 83, 85, 89, 92–94, 96, 97, 102, 104.
- Umbilicaria polyphylla* (L.) Baumg. – on boulders: 51.
- Usnea dasopoga* (Ach.) Röhl. – on bark of *Betula* and *Fraxinus*: 10, 17, 21, 22, 32, 61, 64, 65, 83. CH; VU.
- Usnea hirta* (L.) Weber ex F.H. Wigg. – on bark of *Acer*, *Betula*, *Fraxinus*, *Quercus*, *Pinus* and *Tilia*: 1, 6, 10, 11, 14, 17, 20–22, 32, 34, 40, 43, 45, 54, 61, 63–66, 69, 76, 78–80, 82, 88, 103. CH; VU.
- Usnea subfloridana* Stirton – on bark of *Betula* and *Fraxinus*: 10, 16, 17, 21, 22, 32, 64, 65. CH; EN.
- Varicellaria hemisphaerica* (Flk.) Schmitt & Lumbsch – on bark of *Fagus*: 83, 97. VU.
- Verrucaria nigrescens* Pers. – on concrete: 31, 94, 95.
- Xanthoparmelia conspersa* (Ach.) Hale – on boulders: 33, 39, 50, 85, 99.
- Xanthoparmelia loxodes* (Nyl.) O. Blanco et al. – on boulders: 17, 31, 33, 83, 89, 99.
- Xanthoparmelia mougeotii* (Schaer.) Hale – on boulders: 33, 68; VU. Very rare subatlantic taxon.
- Xanthoria parietina* (L.) Th. Fr. – on concrete and on bark of *Acer*, *Betula*, *Fagus*, *Fraxinus*, *Malus*, *Populus*, *Salix*, *Sambucus* and *Tilia*: 1–3, 5–7, 9–11, 13, 14, 17–19, 21–24, 28, 31, 33–37, 40, 42, 45, 46, 48, 54, 55, 57–59, 65, 67, 69, 71–73, 75, 76, 78, 85, 86, 89, 90, 93, 102–104.

RESULTS AND DISCUSSION

The presented list of lichens contains 210 species, many of which are rare in the country. Particularly noteworthy are the taxa with the critically endangered (CR) and endangered (EN) categories in Poland (CIEŚLIŃSKI et al. 2006) – 3 and 17, respectively. CR category is for: *Bryoria implexa*, *B. subcana* and *Chrysothrix candelaris*; for the latter species, the risk category is definitely overstated. EN category is for: *Anaptychia ciliaris*, *Calicium adpersum*, *Catillaria erysioides*, *Cetraria sepincola*, *Cladonia botrytes*, *C. incrassata*, *C. stellaris*, *Lecanora intumescens*, *Lobaria pulmonaria*, *Pertusaria flavida*, *Physconia distorta*, *Ph. perisidiosa*, *Pycnothelia papillaria*, *Ramalina fastigiata*, *T. fraxinea*, *R. obtusata* and *Usnea subfloridana*. Twenty five species with vulnerable category (VU) were also found on this area. As many as 36 species from the presented list are under legal protection in Poland. On the country scale, most of these species are indeed highly threatened or dying, but in Western Pomerania their situation is not so tragic. Numerous lichens that were endangered in the 20th century have appeared in new localities in recent years and this process of recolonization is progressing quite quickly (e.g. FAŁTYNOWICZ 2004). This optimistic phenomenon is observed in most regions of Poland (e.g. SZCZEPAŃSKA & SZCZEPAŃSKI 2006, GROCHOWSKI 2007, 2014, CZARNOTA 2013, SMOCZYK 2013, FAŁTYNOWICZ & KOSSOWSKA 2014).

Currently, about 600 species of lichens are known from Western Pomerania (FAŁTYNOWICZ 1992). In some parts of this area there was no lichenological research or they were random, an example is the Darżlubaska Primeval Forest and the central part of the region, between Człuchów and Stargard. Some habitats are poorly penetrated, for example the bottoms and valleys of rivers and streams. In my opinion, the number of lichen species in Western Pomerania is about 750.

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REFERENCES

- CIEŚLIŃSKI S. (2003): Atlas rozmieszczenia porostów (Lichenes) w Polsce północno-wschodniej. Phytocoenosis, Supplementum Cartographiae Geobotanicae 15: 1–426.
- CIEŚLIŃSKI S., CZYZEWSKA K., FABISZEWSKI J. (2006): Red list of the lichens in Poland. In: Z. Mirek, K. Zarzycki, W. Wojewoda, Z. Szelağ (eds). Red list of plants and fungi in Poland. W. Szafer Institute of Botany, Polish Academy of Sciences, Kraków: 71–89.
- CIEŚLIŃSKI S., FAŁTYNOWICZ W. (eds) (1993): Atlas of the geographical distribution of lichens in Poland. 1. W. Szafer Institute of Botany, Polish Academy of Sciences, Kraków.
- CZARNOTA P. (2013): *Lobaria pulmonaria* w Gorcach – dynamika populacji, perspektywy zachowania gatunku. In: A. Biedunkiewicz, M. Dynowska (eds). Interdyscyplinarne i aplikacyjne znaczenie nauk botanicznych. Streszczenia wystąpień ustnych i plakatów 56. Zjazdu Polskiego Towarzystwa Botanicznego. Olsztyn, 24–30 czerwca 2013. Wydawnictwo Mantis, Olsztyn: 58–59.
- FAŁTYNOWICZ W. (1980): Porosty północno-zachodniej części Borów Tucholskich. Fragmenta Floristica et Geobotanica 26(1): 81–102.
- FAŁTYNOWICZ W. (1992) The lichens of Western Pomerania (NW Poland). An ecogeographical study. Polish Botanical Studies 4: 1–182.
- FAŁTYNOWICZ W. (2004): Lichen recolonization – optimistic trend in state of the environment. In: M. Kejna, J. Uscka (eds). Integrated Monitoring of Natural Environment. Functioning and monitoring of geocosystems in condition of anthropopressure. Biblioteka Monitoringu Środowiska, Wydawnictwo UMK, Toruń: 321–325.
- FAŁTYNOWICZ W. (2018): Materials to the lichen biota of Western Pomerania (northern Poland). Part 3. Lichens along the shore of the Baltic Sea. Steciana 22(4): 143–152.
- FAŁTYNOWICZ W., KOSSOWSKA M. (2014): Klęska ekologiczna a porosty w Karkonoszach i Górach Izerskich. In: R. Knapik (ed.). 25 lat po klęsce ekologicznej w Karkonoszach i Górach Izerskich – obawy a rzeczywistość. Wydawnictwo KPN, Jelenia Góra: 91–96.
- FAŁTYNOWICZ W., KRÓLAK D. (2001): Porosty rezerwatu „Jar Rzeki Raduni” na Pojezierzu Kaszubskim (północna Polska). Acta Botanica Cassubica 2: 133–141.
- FAŁTYNOWICZ W., MIĄDLIKOWSKA J. (1990): Materiały do flory porostów Pomorza Zachodniego (północna Polska). Acta Mycologica 26(2): 45–64.
- FAŁTYNOWICZ W., WINKOWSKA-GRZEŚKOWIAK A., KUKWA M. (2018): Materials to the lichen biota of Western Pomerania (northern Poland). Part 2. Steciana 22(2): 41–49.
- GROCHOWSKI P. (2007): Porosty z rodziny *Usneaceae* gminy Prabuty. In: E. Kępczyńska, J. Kępczyński (eds). Botanika w Polsce – sukcesy, problemy,

- perspektywy. Streszczenia referatów referatów plakatów. 54 Zjazd Polskiego Towarzystwa Botanicznego, Szczecin, 3–8 września 2007. Oficyna IN PLUS, Wołczkowo k. Szczecina.
- GROCHOWSKI P. (2014): Nowe stanowiska *Flavoparmelia caperata* (L.) Hale w północno-zachodniej części Polski. In: P. Czarnota (ed.). Praktyczne i poznawcze wyzwania współczesnej lichenologii. XXVIII Zjazd Lichenologów Polskich, 7–11 wrzesień 2014, Ochotnica Dolna, Gorce. Streszczenia referatów i posterów. Ochrona Beskidów Zachodnich 5: 90–91.
- KOSSOWSKA M., FAŁTYNOWICZ W. (2016): The lichens of Poland. A fourth checklist. Acta Botanica Silesiaca. Monographiae 8: 1–122.
- KUKWA M., KOWALEWSKA A., ŚLIWA L., CZARNOTA P., CZYZEWSKA K., FLAKUS A., KUBIAK D., WILK K., DIMOS-ZYCH M., KOLANKO K., SZYMCZYK R., LIPNICKI L., ADAMSKA, E., BIELEC D., GUZOW-KRZEMIŃSKA B., GRUSZKA W., HACHUŁKA M., JABŁOŃSKA A., OSET M., KISZKA J., KOZIK J., LEŚNIAŃSKI G., LAZARUS M. (2012): Porosty i grzyby naporostowe Wdzydzkiego Parku Krajobrazowego (Pomorze Gdańskie, N Polska). Acta Botanica Cassubica 11: 75–103.
- LIPNICKI L. (1990): Porosty Borów Tucholskich. Acta Mycologica 26(1): 119–175.
- REGULATION of the Minister for Environment in relation to the protection of fungi species. – Rozporządzenie Ministra Środowiska w sprawie ochrony gatunkowej grzybów z dnia 16 października 2014 r. (2014). Dziennik Ustaw RP, poz. 1408.
- RUTKOWSKI P. (1993): Flora i ekologia porostów rezerwatu „Jar Rzeki Reknicy” na Pojezierzu Kaszubskim. Parki Narodowe i Rezerwaty Przyrody 12(4): 29–40.
- SĄGIN B. (1998): Lichens of anthropogenic calcareous substrates in northern Poland. Typescript. PhD thesis. Department of Biology, University of Gdańsk.
- SMOCZYK M. (2013): Mąkla rozłożysta *Evernia divaricata* (L.) Ach. i inne zagrożone makroporosty epifityczne w dolinie górnej Bystrzycy Dusznickiej (Sudety Środkowe). Przegląd Przyrodniczy 24(2): 49–62.
- SZCZEPAŃSKA K., SZCZEPAŃSKI A. (2006): Porosty z rodzaju *Bryoria* w Karkonoszach. Fragmenta Floristica et Geobotanica, Series Polonica 13(1): 191–195.
- TOBOLEWSKI Z. (1981): Porosty (*Lichenes*). 7. Atlas rozmieszczenia roślin zarodnikowych w Polsce. Ser. 3. PWN, Warszawa–Poznań.
- URBAŃSKI J. (1930): Wycieczka w dolinę Raduni. (Projekt rezerwatu pod Babim Dołem). Wydawnictwo Okręgowego Komitetu Ochrony Przyrody na Wielkopolskę i Pomorze, Poznań: 25–32.