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Macentina abscondita, a lichen species new to Poland

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Macetina abscondita Coppins et Vězda [=*Psoroglaena abscondita* (Coppins et Vězda) Hafellner et Türk] was recorded in the city of Olsztyn (NE Poland) as a lichen species new to Poland. The species is most probably quite frequent but is not differentiated in field studies.

Key words: lichens, *Macentina abscondita*, Poland

INTRODUCTION

The genus *Macentina* Vězda, described from Western Africa in 1973 (Vězda 1973), comprises three taxa in Europe: *M. abscondita* Coppins et Vězda, *M. dictyospora* Orange and *M. stigonemoides* Orange (Coppins and Vězda 1977, Orange 1989, Orange 1991). During the lichenological inventory conducted between 2000 and 2002 within the city of Olsztyn (Masurian Lake District, NE Poland), localities of *Macentina abscondita* Coppins et Vězda were recorded. The species, described for the first time from Great Britain (Coppins and Vězda 1977), has not been reported from Poland so far (Fałtynowicz 2003). In more recent publications, it is also included in the genus *Leucocarpia* Vězda (Vězda 1969), as *L. abscondita* (Coppins et Vězda) Hafellner (Hafellner and Maurer 1994). Hafellner and Türk (2001) regarded it as belonging to the genus *Psoroglaena* Arg. Müll., described by Müller (1891), which comprises primarily epiphyllous lichenised fungi known from the Neotropics (Henssen 1995). All of the genera listed belong to the phyllum *Ascomycota* and the family *Verrucariaceae* (Hawksworth et al. 1995, Eriksson 2000). The original taxonomic nomenclature was followed in this publication, and other names were treated as synonyms.

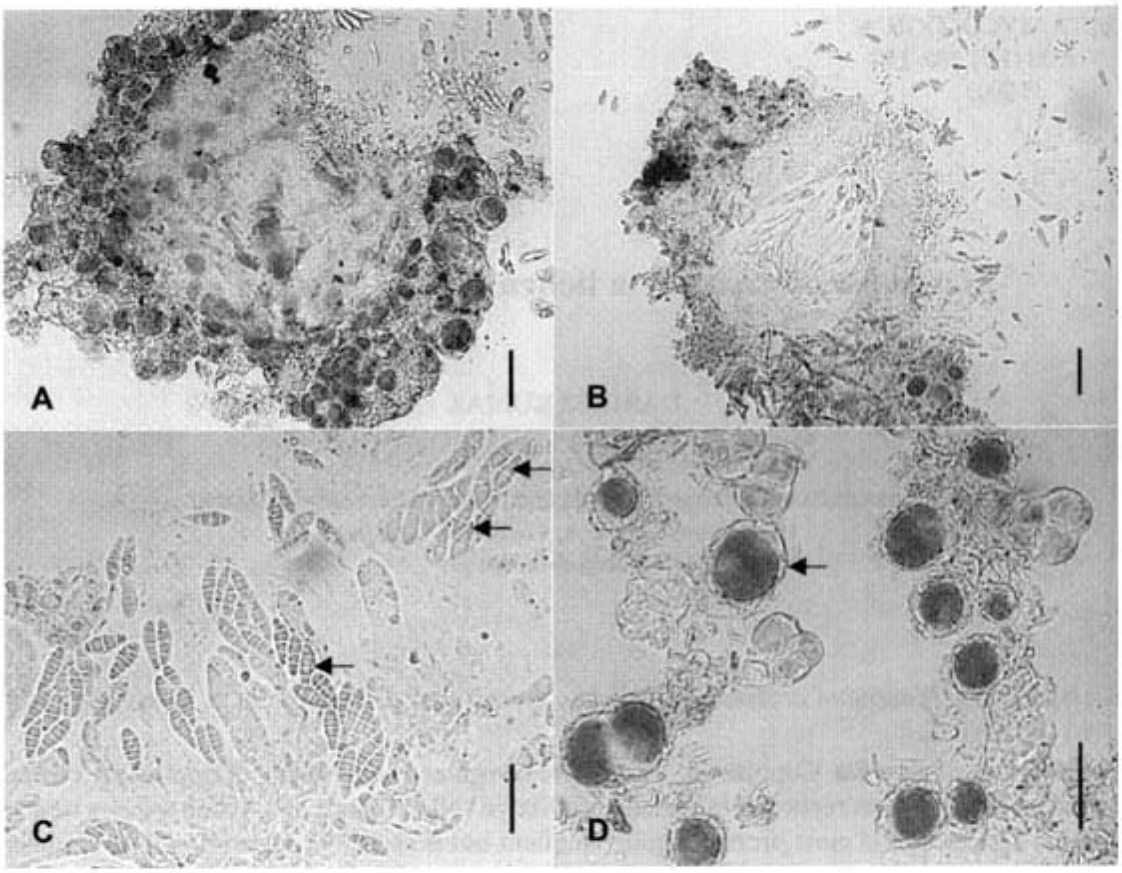

Fig. 1. *Macentina abscondita*. A – perithecium; B – cross-section of a perithecium; C – asci and ascospores; D – photobiont. Scale = 20μm.

DESCRIPTION OF THE SPECIES

Macentina abscondita produces a thin, crustose, epiphloedic, greenish thallus. Perithecia, 80-120 μm diameter, light brown when dry, yellow-orange or almost transparent and hyaline when wet (Fig. 1A). Apothecium walls, 10-12 μm diameter, formed from hyaline or light yellow, elongate cells (Fig. 1B). Asci clavate-cylindrical or sometimes pyriform. Ascospores 12-20 x 3.5-4.5 μm, 2- up to 4-celled (Fig. 1C). Chlorococcoidal photobiont (Fig. 1D) (Purvis et al. 1992).

M. abscondita resembles *M. dictyospora* Orange (Orange 1991) [=*Leucocarpia dictyospora* (Orange) R. Sant.], occurring in Poland and reported as a species new to Poland in a study on the biodiversity of lichens in the Borecka Primeval Forest (Zalewska 2000). *Macentina abscondita* differs from it by slightly smaller perithecia and (2-) 4-celled spores, exclusively with transverse septa. *Macentina abscondita* may also be mistaken for *M. stigonemoides* Orange (1989) [=*Leucocarpia stigonemoides* (Orange) Hafellner et Kalb, *Psoroglaena stigonemoides* (Orange) Henssen, *Psoroglaena stigonemoides* (Orange) Hafellner et Türk], which is characterised by a filamentous thallus that often crumbles into granules similar to soredia. *Macentina stigonemoides* additionally produces bigger (200-380 μm) perithecia and 4-6-celled ascospores (Orange 1989; Orange 1991).

RESULTS AND DISCUSSION

Macentina abscondita was recorded in Olsztyn in eight localities within the entire city (Fig. 2). It occurs in shaded, covered and moist urban forests and moderately exposed habitats (the square in the city centre). All the localities are situated less than 500 m from lakes or watercourses. It was noted on the bark of *Sambucus nigra* (six localities) and *Rhamnus catharicus* (one locality). According to Barkman (1969), the bark of *Sambucus nigra* is eutrophic, characterised by a relatively high water capacity, pH (5.3-7.0) and buffer capacity. When measured, the pH of the bark of this phorophyte in Olsztyn ranged between 6.5 in the localities in the city centre and 6.6 in the localities situated in the outskirts. *Macentina abscondita* most often forms associations, poor in species, with the dominant bryophytes and epiphytic algae (often *Trentepohlia*). *Xanthoria parietina*, *Phaeophyscia nigricans*, *Ph. orbicularis*, *Physcia adscendens*, *Bacidina arnoldiana*, *Micarea prasina*, *Strangospora ochrophora* and *Melanelia fuliginosa* were accompanying lichens.

Until recently, *Macentina abscondita* had been known exclusively from the British Isles (Coppins and Vězda 1977, Purvis et al. 1992, Hitch 1994). In Central Europe, it was recorded for the first time in Austria (Poelt 1994, Hafellner and Maurer 1994, Hafellner and Türk 2001, Hafellner 2002), and then reported from Germany (Bresinsky et al. 1995, Scholz 2000), Belgium and Luxembourg (van den Boom et al. 1996, Diederich and Serusiaux 2000), Finland (Vitikainen et al. 1997), Holland (Aptroot et al. 1999), the Czech Republic

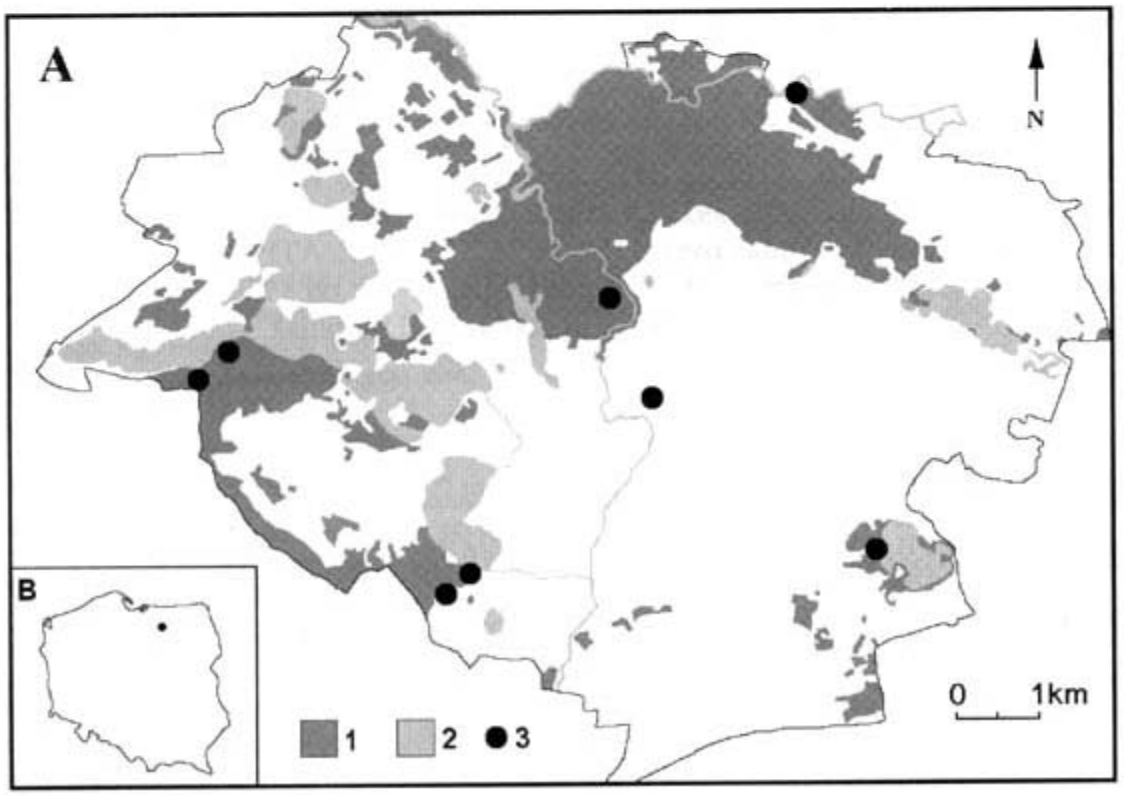

Fig. 2. Distribution of localities of *Macentina abscondita*. A: Olsztyn; 1 – forests; 2 – lakes and rivers; 3 – localities; B – Poland.

(Palice 1999, Vězda and Liška 1999, Halda 2001), Slovakia (Mayrhofer et al. 2001) and Ukraine (Zelenko 2002). It was most frequently noted on the bark of shrubs (*Sambucus nigra*, *S. racemosa*, *Juniperus* and *Coryllus*), and less often of deciduous trees (*Acer pseudoplatanus*, *Ulmus glabra*, *Fagus* and *Sorbus*), on wood and small stones, in exposed and wet places, on road-side trees and ruderal habitats (roadsides, railway embankments).

Macentina abscondita was considered to be a rare or very rare species in its entire known area of occurrence. Due to infrequent records, the species seemed to be potentially threatened. It was even inscribed on red data lists in some countries. In Austria, it was classified as a rare and sensitive lichen (Türk and Hafellner 1999), and in Holland it was considered to be a very rare and sensitive taxon (Aptroot et al. 1998). Numerous localities of the species are reported only by Palice (1999) from the Czech Republic.

The findings to date show that the species has a wide area of occurrence in Europe and a broad ecological scale. It may not have been differentiated in field studies because of its inconspicuous thallus and peculiar habitats. It is hoped that this note will draw attention to the fact that *M. abscondita* may be found in new localities and that it will contribute to the study of its actual distribution.

The herbarial material collected is deposited in the Herbarium of the Department of Mycology at the University of Warmia and Mazury in w Olsztyn (OLTC-L).

Localities:

Poland, Pojezierze Olsztyńskie (*Masurian Lake District*), Olsztyn: Las Miejski, on the Łyna river, 53°47'40"N/20°28'30"E, ATPOL: Be42, 24.11.2002, leg. D. Kubiak; Śródmieście, al. J. Piłsudskiego, 53°46'40"N/20°29'10"E, ATPOL: Be52, 29.01.2003, leg. D. Kubiak; district of Łupsztych, the southern bank of the Ukiel lake, 53°45'50"N/20°24'20"E and 53°46'40"N/20°23'50"E, ATPOL: Be52, 02.02.2002 and 15.09.2002, leg. and det. D. Kubiak (conf. A. Orange); district of Słoneczny Stok, 53°45'10"N/20°26'40"E, ATPOL: Be52, 20.03.2003, leg. D. Kubiak; district of Kortowo, 53°45'20"N/20°27'00"S, ATPOL: Be52, 28.03.2003, leg. D. Kubiak; district of Stare Kiełliny, on the Wadąg river, 53149'00"N/20°30'40"E, ATPOL: Be42, 01.2003, leg. D. Kubiak; district of Kolonia Mazurska, on the Skanda lake, 53°45'30"N/20°31'40"E, ATPOL: Be53, 01.200°3, leg. D. Kubiak.

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Macentina abscondita, gatunek porostu nowy dla Polski

Streszczenie

Rodzaj *Macentina* Vězda obejmuje w Europie trzy gatunki: *M. abscondita* Coppins et Vězda, *M. dictyospora* Orange i *M. stigonemoides* Orange. W Polsce reprezentowany był dotychczas przez jeden gatunek – *M. dictyospora*. Podczas inwentaryzacji lichenologicznej, prowadzonej w latach 2000-2002 na obszarze miasta Olsztyna stwierdzono stanowiska *M. abscondita*. Porost ten odnotowany został na ośmiu stanowiskach, rozmieszczonych w różnych częściach miasta. Występował na korze krzewów (*Sambucus nigra*, *Rhamnus catharicus*) w lasach, na siedliskach ruderalnych oraz na skwerze w centrum miasta.

Poczynione obserwacje pozwalają przypuszczać, że *Macentina abscondita* należy do porostów dość częstych w Polsce. Gatunek ten prawdopodobnie nie był dotychczas wyróżniany ze względu na niepozorną plechę i dość specyficzne, często pomijane przez lichenologów w kraju siedliska.