NEW UNTYPICAL LOCALITIES OF THE ARCTIC-ALPINE LICHEN *PLEOPSIDIUM CHLOROPHANUM* IN CENTRAL EUROPE

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The genus *Pleopsidium* was introduced by Körber (1855) to include the single species *P. flavum*, with two varieties: typical and b. *chlorophanum* (Wahlenb.) Körb. Contemporaries of Körber, and later scientists, regarded the species as a representative of the genus *Acarospora*. The generic name *Pleopsidium* was restored by Hafellner (1993), who confirmed the morphological distinctiveness of several yellow species within *Acarospora* ('*A. chlorophana* group'). The genus includes crustose lichens with yellow, placodioid thalli, lecanorine apothecia and multi-spored asci of a particular structure (*Pleopsidium* type).

Today, the genus *Pleopsidium* includes four species: *P. flavum* (Bellardi) Körb., *P. chlorophanum* (Wahlenb.) Zopf, *P. gobiense* (H. Magn.) Hafellner and *P. discurrens* (Zahlbr.) Obermayer (see Hafellner 1993; Obermayer 1996). The first two species are widely distributed all over the world, while the remaining ones seem to be limited in their distribution to Central Asia, that is, to mountainous areas of the former Soviet Union, China, Tibet and Mongolia. All of them grow on siliceous, usually acid rocks, such as granite, gneiss or schist, sometimes enriched by iron compounds.

Pleopsidium chlorophanum is a bipolar species reported from the Holarctic region as well as from many sites in the Antarctic (Castello & Nimis 1994). In the Northern Hemisphere it has been reported from Arctic areas such as Spitsbergen, Novaya Zemlya and Greenland; from many European countries including Norway, Sweden, Finland, Spain, France, Belgium, Italy, Great Britain, Germany, Switzerland, Austria, the Czech Republic, Poland, Slovakia, Russia, Romania and Bulgaria; from Asia, including Siberia, Central Asia and the Far East; and from the northern part of North America (Golubkova 1988; Hafellner 1993; Knudsen 2005).

The lichen is regarded as a typical arctic-alpine species (see Nimis 1993; Wirth 1995), in lower latitudes occupying sites above the timberline – in subalpine, alpine and nival belts. It grows on insolated and dry places exposed to wind, usually on vertical and overhanging surfaces of siliceous rock (Wirth 1995). In Central Europe the species is frequent in the Alps and is also known from higher locations of the Carpathians (especially the Tatra Mts) and Sudetes (Karkonosze Mts). The literature also gives records of *Pleopsidium chlorophanum* in lower montane localities. The species was reported from single localities in various Central European mountain ranges: Ore Mts (alt. 560 m – Schade 1955; 774 m – Bayerová *et al*. 2004), Bohemian Forest Mts (*ca* 600 m – Vondrák & Palice 2004), Vraní skála Mt. near Prague in the Czech Republic (536 m – Hilitzer 1925), Vogtland in German Saxony (770 m – Schade 1955). It is also reported from Western Europe, including the Ardennes (330 m – Diederich & Sérusiaux 2000), and from the British Isles (*ca* 180 m – Smith 1991; 395 m – Coppins & Coppins 2005). Usually these localities are in places characterized by special habitat conditions with quasi-high-montane features; nevertheless, they seem to suggest a wider ecological spectrum for the species.

During field investigations in 2000 in the lowland part of Lower Silesia (SW Poland), a new locality of *P. chlorophanum* was discovered at

a place not far above sea level (710 m). A dozen or so thalli of the lichen grew on overhanging surfaces of boulders built up of plutonic basic rock, gabbro, in the uppermost part of Ślęża Mt. (German: Zobtenberg) in the Przedgórze Sudeckie foreland (50°51′54.1″N/16°42′31.7″E). The site was insolated, dry, and with a SE exposure. The thalli were in good condition, although only a few bore apothecia.

The next locality was discovered in Lower Silesia in 2003. A small population of the species was found on a slightly overhanging surface in a basic part of an impressive gneiss rock in the Góry Bialskie Mts (Eastern Sudetes; 50°17′32.1″N/16°55′57.8″E), also at quite a low elevation (*ca* 820 m). The site was exposed to the west, quite dry, insolated, and protected against wind by surrounding spruce forest. The population looked young, as all thalli were small and did not produce apothecia but were in good condition, without any signs of necrosis or other damage.

A single occurrence of a species regarded as alpine at an untypically low elevation may be admitted as an exception caused by a particular coincidence of habitat, orographic and historical conditions in a given region. However, the discovery of many similar sites has induced us to assume that the range type of this taxon differs from that hitherto accepted; moreover, the current view of its habitat requirements needs to be revised, with particular emphasis on the oligothermic demands typical for arctic-alpine species. This suggestion should find support if, as we expect, more lowland and submontane localities of *Pleopsidium chlorophanum* are found.

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