

Acta Biologica Plantarum Agriensis 5(1): 32 (2017) DOI:10.21406/abpa.2017.5.1.32
ISSN 2061-6716 (Print), 2063-6725 (Online) 4th CC Abstract
<http://abpa.ektf.hu/> Lecture

DISTRIBUTION AND HABITAT PREFERENCE OF *BUXBAUMIA* HEDW. SPECIES IN HUNGARY

A magyarországi *Buxbaumia* Hedw. fajok elterjedése és élőhelyi preferenciája

Judit DEME¹, Peter ERZBERGER², Dániel KOVÁCS³, Kornél BARÁTH⁴, István LANTOS⁵, Gábor MAGOS⁵, József NAGY⁶, Katalin NAGY¹, Zoltán NAGY⁷, Csaba NÉMETH⁸, Péter ÓDOR⁹, Beáta PAPP¹⁰, István Zsolt TÓTH¹¹ & János CSIKY¹

¹University of Pécs, Faculty of Sciences, Institute of Biology, Department of Ecology; ²D-10823 Berlin, Belziger Str. 37, Germany; ³H-2422 Mezőfalva, Fehérvári út 41., Hungary; ⁴Department of Biology, Savaria Campus, Eötvös Loránd University; ⁵Bükk National Park Directorate; ⁶Szent István University, Faculty of Horticultural Science, Department of Botany; ⁷Cereal Research Non-profit Ltd.; ⁸MTA Centre for Ecological Research, Institute of Ecology and Botany, GINOP Sustainable Ecosystems Group; ⁹MTA Centre for Ecological Research, Institute of Ecology and Botany; ¹⁰Hungarian Natural History Museum; ¹¹Duna-Dráva National Park Directorate; e-mail: hiddenit92@gmail.com

The genus *Buxbaumia* includes two species (*B. aphylla* and *B. viridis*) in Hungary. Both of them were thought to be rare and threatened: *B. aphylla* was rated as Vulnerable (VU), while *B. viridis* as Endangered (EN) on the national Red List. The latter is a Natura 2000 species and protected by law in the country.

The aims of the research were to summarize the historical and actual distribution of these taxa and to reveal their habitat preference, population size and phenology in Hungary. During systematic surveys from 2014 to 2017, we have checked previously known localities and similar habitats in several Hungarian landscapes. In almost every newly discovered stand, phytocoenological relevés were taken in 1 m² plots. We recorded here the number, state and maximal density (plant/1 dm²) of the individuals (sporophytes or setae), and listed the presence of co-occurring species. The cover values of moss layer, bare surfaces and organic debris were estimated; the exposure and the inclination were measured.

We have found some formerly known and many more newly discovered populations of *Buxbaumia* species. Although *B. viridis* is usually considered to be an epixylic bryophyte, both species occurred mostly on soil, on steep, north-facing slopes, in stands of acidophilous communities. However, *B. aphylla* was more common in drier acidophytic oak forests, while *B. viridis* preferred acidophytic beech forests. In both cases, the most frequent (fr.≥50%) co-occurring mosses were *Dicranella heteromalla*, *Dicranum scoparium*, *Hypnum cupressiforme* and *Polytrichum formosum*. According to the observed habitat preference and using MÉTA maps, we presume further potential occurrences of shield-mosses in Hungary, mainly in hilly regions. Since more than 1600 individuals and 160 (usually stable) stands of both taxa were discovered recently in the country, we suggest that their threat status should be lowered to Near Threatened (NT) in the next Bryophyte Red List of Hungary. Whereas the characteristics of *B. aphylla* are similar to those reported in the literature, our results on the habitat preference of *B. viridis* greatly differ from the Hungarian and international published accounts. Our new observations will be relevant for the protection of *B. viridis* in the future.