

Flora and vegetation of the Czech Republic: introduction to special issue dedicated to the centenary of the Czech Botanical Society

Flóra a vegetace České republiky: zvláštní číslo věnované 100. výročí České botanické společnosti

Milan Chytrý¹, Petr Pyšek^{2,3}, Zdeněk Kaplan² & Jiří Danihelka^{1,2}

¹Department of Botany and Zoology, Masaryk University, Kotlářská 2, CZ-611 37 Brno, Czech Republic, e-mail: chytry@sci.muni.cz, danihel@sci.muni.cz; ²Institute of Botany, Academy of Sciences of the Czech Republic, CZ-252 43 Průhonice, Czech Republic, e-mail: pysek@ibot.cas.cz, kaplan@ibot.cas.cz; ³Department of Ecology, Faculty of Science, Charles University in Prague, Viničná 7, CZ-128 44 Prague, Czech Republic

Czech Botanical Society (Česká botanická společnost, Societas botanica čechica) was founded on 17 June 1912 by a group of Prague botanists and mycologists, which included Eduard Baudyš, Augustin Bayer, Karel Domin, Karel Kavina, Josef Rohlena, František Smotlacha and Josef Velenovský. It was the first purely botanical society both in the Austro-Hungarian Monarchy and Slavic-speaking Europe (Hrouda 2012). After the foundation of Czechoslovakia in 1918, the Society became the Czechoslovak Botanical Society and after the splitting of Czechoslovakia into the Czech Republic and Slovakia in 1993, it returned to its original name. At present, the Society has a membership of 681 consisting of both professionals and non-professionals, with the unifying principle of an interest in field botany.

The Czech (Czechoslovak) Botanical Society has always played a pivotal role in the life of the botanical community in the Czech Republic and former Czechoslovakia. Its membership has included nearly all leading professional botanists in this country and many hobby botanists. Famous personalities, such as Josef Velenovský, Karel Domin, Josef Podpěra, Alois Zlatník, Slavomil Hejný and Josef Holub, were among those serving as the Society's presidents.

The Society organizes regular national botanical conferences and congresses, and occasional international meetings, including the International Phytogeographical Excursions (IPE) in 1928 and 1958. From 1957 onwards, and from 1964 annually, the Society organizes Floristic Summer Schools in different areas of the Czech Republic, and every third year from 1991 onwards also in Slovakia, in cooperation with the Slovak Botanical Society. These are very popular one-week field meetings of professional and hobby botanists, students and primary and secondary school teachers, with the aim to both educate and do research on regional floras (Grulich 2012a).

Another major aim of the Society is to support scientific publications on botanical research relevant to the Czech Republic (Czechoslovakia) and beyond. Soon after its foundation, in 1914, the Society established the journal *Preslia*, named after prominent 19th-century Czech botanists, the brothers Jan Svatopluk Presl (1791–1849) and Karel Bořivoj Presl (1794–1852), authors of *Flora čechica* (1819) and other seminal publications (Krahlůček 2012). Already in the 1920s *Preslia* was well established among the most important central-European botanical journals and has kept this position throughout its history. Besides *Preslia*, the Society published several important monographs, proceedings and

established other journals, mainly focusing on floristic research, but some of them ceased publication for various reasons. Nowadays the Society publishes, in addition to *Preslia*, two well-established journals in Czech: *Zprávy České botanické společnosti* (Bulletin of the Czech Botanical Society; since 1966), which focuses on field research on flora and vegetation in the different regions of the Czech Republic, and *Bryonora* (since 1988), which deals with bryology and lichenology.

The present special issue of *Preslia*, published on the occasion of the centenary of the Czech Botanical Society, summarizes the basic facts and current level of knowledge of the flora and vegetation in the Czech Republic. The papers on the history of the botanical research (Krahulec 2012), and on vegetation (Chytrý 2012) and flora (Kaplan 2012) in the Czech Republic sum up the facts that can be considered as common knowledge of Czech botanists, but have never been summarized in English or another foreign language, or even in Czech. Thus they present a basic introduction to the study of botany in the Czech Republic. Other papers in this special issue provide major updates on Czech flora. Danihelka et al. (2012) present its checklist, which critically reflects the new taxonomic and floristic knowledge accumulated since the publication of the Key to the flora of the Czech Republic (Kubát et al. 2002), which was generally accepted as a standard of species taxonomy and nomenclature in this country over the past decade. Grulich (2012b) updates the Red List of the Czech flora, which replaces the previous Red List and 'Black List' of disappeared taxa (Holub 2000, Holub & Procházka 2000, Procházka 2001). Pyšek et al. (2012b) recently updated the Catalogue of alien plants of the Czech Republic, which appeared in the previous issue of *Preslia* and replaced the first edition published ten years ago (Pyšek et al. 2002). In the present issue, Pyšek et al. (2012a) summarize some information gained from the analysis of the data contained in the new catalogue, review basic patterns in plant invasions and provide fact sheets for neophytes currently considered as invasive in the Czech Republic. Moreover, in the above mentioned new list of the Czech flora (Danihelka et al. 2012) basic information from both the new Red List and the new Catalogue of alien plants is integrated in a user-friendly format of a single table. Last but not least, this special issue also focuses on cryptogams. Kučera et al. (2012) provide a revised checklist and Red List of Czech bryophytes, which replaces previous versions (Kučera & Váňa 2003, 2005). The checklist and Red List of Czech lichens was published recently (Liška et al. 2008) and there is no need for a major update; nevertheless, Liška (2012) summarizes the basic patterns of Czech lichen flora.

Over the last few decades, *Preslia* has published several synthesizing studies on this country's flora and vegetation, that of neighbouring countries and a wider area of central Europe (e.g. Kropáč 2006, Sádlo et al. 2007, Lambdon et al. 2008, Klimešová & Klimeš 2008, Chytrý et al. 2009, Dúbravková et al. 2010, Kaplan 2010, Sekulová et al. 2011, Medvecká et al. 2012, besides those mentioned above). The present issue continues in this tradition, as well as in that of special issues, recently dealing with use of flow cytometry in botanical research (Suda et al. 2010) and clonal growth in plants (Pyšek et al. 2011).

The X-th, jubilee Congress of the Czech Botanical Society, will be held in Prague on 3–7 September 2012. At this Congress it is planned that the invited talks will provide overviews of the current state of botanical research in a way similar to the papers in this issue, offer new perspectives and identify promising avenues of future research. We believe that together with this Congress, this special issue of *Preslia* will not only summarize what has been achieved so far but also stimulate new research.

References

- Chytrý M. (2012): Vegetation of the Czech Republic: diversity, ecology, history and dynamics. – *Preslia* 84: 427–504.
- Chytrý M., Wild J., Pyšek P., Tichý L., Danihelka J. & Knollová I. (2009): Maps of the level of invasion of the Czech Republic by alien plants. – *Preslia* 81: 187–207.
- Danihelka J., Chrtek J. Jr. & Kaplan Z. (2012): Checklist of vascular plants of the Czech Republic. – *Preslia* 84: 647–811.
- Důbravková D., Chytrý M., Willner W., Illyés E., Janišová M. & Kállayné Szerényi J. (2010): Dry grasslands in the Western Carpathians and the northern Pannonian Basin: a numerical classification. – *Preslia* 82: 165–221.
- Gulich V. (2012a): Floristické kurzy – příležitost k setkávání botaniků [Floristic Summer Schools: meeting opportunity for botanists]. – *Živa* 60: XC–XCI.
- Gulich V. (2012b): Red List of vascular plants of the Czech Republic: 3rd edition. – *Preslia* 84: 631–645.
- Holub J. (2000): Černá listina vymizelých taxonů květeny České republiky a Slovenské republiky [The Black List of taxa disappeared from the floras of the Czech and Slovak Republics]. – *Preslia* 84: 167–186.
- Holub J. & Procházka F. (2000): Red List of vascular plants of the Czech Republic – 2000. – *Preslia* 72: 187–230.
- Hrouda L. (2012): 100 let České botanické společnosti (1912–2012) [100 years of the Czech Botanical Society]. – *Živa* 60: 150–154.
- Kaplan Z. (2010): Hybridization of *Potamogeton* species in the Czech Republic: diversity, distribution, temporal trends and habitat preferences. – *Preslia* 82: 261–287.
- Kaplan Z. (2012): Flora and phytogeography of the Czech Republic. – *Preslia* 84: 505–574.
- Klimešová J. & Klimeš L. (2008): Clonal growth diversity and bud banks of plants in the Czech flora: an evaluation using the CLO-PLA3 database. – *Preslia* 80: 255–275.
- Krahulec F. (2012): History of the studies on the flora and vegetation in the Czech Republic. – *Preslia* 84: 397–426.
- Kropáč Z. (2006): Segetal vegetation in the Czech Republic: synthesis and syntaxonomical revision. – *Preslia* 78: 123–209.
- Kubát K., Hrouda L., Chrtek J. jun., Kaplan Z., Kirschner J. & Štěpánek J. (eds) (2002): Klíč ke květeně České republiky [Key to the flora of the Czech Republic]. – Academia, Praha.
- Kučera J. & Váňa J. (2003): Check- and Red List of bryophytes of the Czech Republic (2003). – *Preslia* 75: 193–222.
- Kučera J. & Váňa J. (2005): Seznam a červený seznam mechorostů České republiky [Check- and Red List of bryophytes of the Czech Republic]. – *Příroda* 23: 1–104.
- Kučera J., Váňa J. & Hradílek Z. (2012): Bryophyte flora of the Czech Republic: updated checklist and Red List (2012) and a brief analysis. – *Preslia* 84: 813–850.
- Lambdon P. W., Pyšek P., Basnou C., Hejda M., Arianoutsou M., Essl F., Jarošík V., Pergl J., Winter M., Anastasiu P., Andriopoulos P., Bazos I., Brundu G., Celesti-Grappo L., Chassot P., Delipetrou P., Josefsson M., Kark S., Klotz S., Kokkoris Y., Kühn I., Marchante H., Perglová I., Pino J., Vilà M., Zikos A., Roy D. & Hulme P. E. (2008): Alien flora of Europe: species diversity, temporal trends, geographical patterns and research needs. – *Preslia* 80: 101–149.
- Liška J. (2012): Lichen flora of the Czech Republic. – *Preslia* 84: 851–862.
- Liška J., Palice Z. & Slavíková Š. (2008): Checklist and Red List of lichens of the Czech Republic. – *Preslia* 80: 151–182.
- Medvecká J., Kliment J., Májecková J., Halada L., Zaliberová M., Gojdičová E., Feráková V. & Jarolímek I. (2012): Inventory of the alien flora of Slovakia. – *Preslia* 84: 257–310.
- Procházka F. (ed.) (2001): Černý a červený seznam cévnatých rostlin České republiky (stav v roce 2000) [Black and Red List of vascular plants of the Czech Republic: state in 2000]. – *Příroda* 18: 1–166.
- Pyšek P., Chytrý M., Pergl J., Sádlo J. & Wild J. (2012a): Plant invasions in the Czech Republic: current state, introduction dynamics, invasive species and invaded habitats. – *Preslia* 84: 575–629.
- Pyšek P., Danihelka J., Sádlo J., Chrtek J. Jr., Chytrý M., Jarošík V., Kaplan Z., Krahulec F., Moravcová L., Pergl J., Štajerová K. & Tichý L. (2012b): Catalogue of alien plants of the Czech Republic (2nd edition): checklist update, taxonomic diversity and invasion patterns. – *Preslia* 84: 155–255.
- Pyšek P., Klimešová J. & Kaplan Z. (eds) (2011): Current topics in clonal plants research. – *Preslia* 83: 275–512.
- Pyšek P., Sádlo J. & Mandák B. (2002): Catalogue of alien plants of the Czech Republic. – *Preslia* 74: 97–186.
- Sádlo J., Chytrý M. & Pyšek P. (2007): Regional species pools of vascular plants in habitats of the Czech Republic. – *Preslia* 79: 303–321.

- Sekulová L., Hájek M., Hájková P., Mikulášková E. & Rozbrojová Z. (2011): Alpine wetlands in the West Carpathians: vegetation survey and vegetation–environment relationships. – *Preslia* 83: 1–24.
- Suda J., Pyšek P. & Kaplan Z. (eds) (2010): Flow cytometry in botanical research. – *Preslia* 82: 1–164.