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‘Dendrobiology’ – an open-access journal of tree biology and ecology

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‘Dendrobiology’ is an open-access journal published by the Institute of Dendrology of the Polish Academy of Sciences. The journal was established in 1955 as ‘Arboretum Kórnickie’ and started with dendrological documentations and phytogeographical articles (Przybylski, 2000). Since that time ‘Arboretum Kórnickie’ published various studies on tree physiology, genetics, propagation, interactions with other organisms, and conservation. In 2000, the journal name changed to ‘Dendrobiology’, which opened it to international collaboration and became the platform for a wide range of articles. ‘Dendrobiology’ started as a local journal, however, since 2007 it has been indexed by Web of Science and published 324 studies until now. The present status of ‘Dendrobiology’, reaching an international audience and increasing impact factor, was achieved by previous editorial boards, who put a lot of effort into improving and maintaining the journal. Thereby we would like to thank prof. Piotr Karolewski, prof. Marian J. Giertych, and all associate editors for their long years of service for ‘Dendrobiology’ and their work which improved the quality of the journal.

‘Dendrobiology’ is open to submissions of studies covering the biology and ecology of trees and shrubs to enhance our understanding of functioning of woody plants in various ecosystems. ‘Dendrobiology’ promotes research across the fields of anatomy, biochemistry, ecophysiology, ecology, molecular biology, morphology, physiology, reproduction or systematics. Potential suitable manuscripts can

cover (but are not limited to) the following aspects: taxonomy and systematics of woody plants; biogeography and population genetics; community ecology of woody plants and dependent communities (e.g. epiphytes, understory vegetation or fungal assemblages); functional ecology of woody plants; impacts of environmental factors on trees and shrubs, including environmental stress, e.g. heavy metals, drought, frost or nutrient shortage; invasion ecology of trees and their assembled organisms; molecular biology of woody plants, including genomics, metabolomics, or proteomics; interactions of woody plants with symbiotic and pathogenic fungi, insects, birds, mammals, or other organisms; reproduction of woody plants (fruit production, pollination, seed storage, germination, seedling growth); silviculture, forestry and forest ecology; phenology of trees and shrubs and their responses to climate change; and other studies related to functioning of trees and shrubs in various environments.

As new editors-in-chief of ‘Dendrobiology’, we would like to continue the mission of the journal to serve as a modern platform for the dissemination of knowledge about trees and shrubs from various parts of the world. Although Authors of ‘Dendrobiology’ articles (2007–2020) represented 46 countries, 50.6% of the studies came from Poland. The next countries were the Czech Republic (10.5%), China (8.0%), Slovakia, and Turkey (both 4.3%). In total, articles with at least one European author compromised 92.0% of all articles, with Asian author

– 20.4%, North American – 4.0%, African – 2.5%, South American – 1.0%, and Australian – 0.3%. Similar uneven representation of biological knowledge from the Global South and North, and underrepresentation of the most biodiverse areas, also occurs in top ecological journals (Nuñez et al., 2019). For that reason, we strongly encourage submissions from underrepresented regions, especially basic studies providing primary data on species diversity, distributions, and life-history traits.

Now, in the age of global environmental changes, the biology and ecology of woody plants require global action and the spread of knowledge. Although some branches of biology have reached a very deep level of detail, basic information about all tree species is still incomplete. Only 17% of plant species have available data about geographical range, functional traits, and genes (Cornwell et al., 2019). Also, knowledge is geographically biased towards the Global North and phylogenetically, towards taxa more important economically. A similar bias towards European taxa is visible in the list of the most frequent words in abstracts and keywords, with pine, spruce, oak, and beech. For that reason, ‘Dendrobiology’ will consider the potential of the submitted manuscript for fulfilling these gaps as one of the criteria of novelty assessment. We believe that the promotion of increasing data coverage by basic studies will bring a deeper understanding of functioning of trees and forests in a changing world. In the age of marginalization of observational studies (Sagarin & Pauchard, 2012), we would like to appreciate these studies, as sources of fundamental advances in biology and ecology.

During the age of journal transformations and uncertain national scientific policies, we aim to maintain equal access to the knowledge about woody plants for all readers around the world. Therefore, all issues will be still freely available to all readers, and authors will not need to pay any article processing charges, which are a barrier for numerous researchers around the world. These two advantages are crucial for authors from institutions that cannot afford high article processing charges, preventing the transfer of knowledge from particular regions of the world. Moreover, it confirms the principle of social justice, allowing for access by everyone to the knowledge produced by public financing.

We would also like to introduce a new methodological series in ‘Dendrobiology’, called ‘Dendrobiology cookbook’, containing articles showing the practical aspects of field studies, with particular emphasis on methods used in research on woody plants. Such articles will provide a literature background and

discussion of trade-offs and potential traps connected with a particular method of data collection. Especially there will be a room for sharing experiences from both successes and mistakes, with a particular highlight of the latter. We believe that scientific publications are biased towards successful experiments, which are the top of the iceberg of the effort put into scientific activities. Moreover, reporting failures can prevent other researchers from repeating them and would allow saving time and resources. All experiences are useful, but mistakes are more didactic, thus ‘Dendrobiology cookbook’ might be a great methodological source for early-career researchers, who are planning their future studies. Also, this series can be a source of templates of studies, providing concepts and hypotheses testable in various environments. ‘Dendrobiology’ will also encourage submission of review articles, providing a comprehensive overview of particular issues regarding the biology or ecology of woody plant species.

In summary, we believe that ‘Dendrobiology’ will offer an attractive opportunity for the dissemination of knowledge about the biology and ecology of trees. We hope that it will be a global platform for exchanging experiences from diverse regions of the world, life strategies, and fields of science. This platform has been and will be free for access, encouraging the spread of knowledge across the world. That way, we invite you to submit papers concerning every aspect of the biology and ecology of woody plants to ‘Dendrobiology’.

References

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