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Editorial

Vegetation classification: a task of our time

Florian Jansen*, Erwin Bergmeier, Jürgen Dengler, Monika Janišová, Pavel Krestov & Wolfgang Willner

The last year has shown that the importance of vegetation classification and its applications, despite the long history, is still (or again) growing. Nature conservation projects such as the Red List of European Habitats (Rodwell et al. 2013) need sound classifications to assess the endangerment of vegetation types forming our landscapes. A team of European phytosociologists has just completed after more than ten years of intensive work the first detailed expert-based overview of syntaxa in Europe down to the alliance level (Mucina et al. in print). This will certainly trigger many subsequent continent-wide, data-driven revisions of major syntaxa, which are now feasible due to the vegetation-plot data available from the European Vegetation Archive (EVA; Chytrý et al. 2016). To name only two more examples: The Ecological Society of America is planning to publish its second national vegetation classification with then eight hierarchy levels in 2016. China launches the ambitious project "Vegetation of China" that is expected to influence existing classification approaches in Asia. However, also basic science needs sound vegetation classification, e.g. to define the universe of investigation for studies or to make the reaction of vegetation to environmental change traceable. Recently efforts have been made to formulate a common framework of classification rules and procedures to unify the multitude of methodological approaches (De Cáceres et al. 2015). The resulting common terminology will enable us to better communicate commonalities and differences between different classification schools. Within the International Association for Vegetation Science (IAVS) a Vegetation Classification Working Group (VCWG) has been established to strengthen the global network of experts and to advance vegetation classification approaches both at broad and at fine spatial and ecological scales. Given the broad overlap between the aims of the working group and the scope of *Phytocoenologia*, we will closely cooperate with the VCWG, which is introduced by Franklin et al. (2016, this issue). Moreover, all members of the VCWG Steering Committee are now also members of the editorial team of *Phytocoenologia*.

We are happy that the significance of our research field as described in our last Editorial (Bergmeier et al. 2015) is also reflected in the citation index of our journal. The Impact Factor (IF) 2014 for *Phytocoenologia* published by Thomson Reuters in 2015 was 1.74, the highest value ever. This is a more than four-fold increase compared to the IF 2013. In parallel, the ranking of *Phytocoenologia* among all journals in the subject category "Plant Sciences" climbed from 176 (of 199) in the previous year to 77 (of 200) in the latest edition of the *Journal Citation Reports*, which is the largest improvement of all journals in the field. We ensured that from 2015 onwards *Phytocoenologia* is also listed in the subject category "Ecology", reflecting the core of our scope. It will not be possible to repeat such a multiplication, but we hope not to fall behind this level of IF and to ensure that *Phytocoenologia* plays an important role in the development of the research field. As an outlet for seminal contributions about concrete classifications and their application e.g. in mapping or nature conservation but also for methodological issues regarding vegetation classification (e.g. Vymazalová et al. 2016, this issue) we hope to attract both authors and readers from the various vegetation classification schools worldwide.

Outstanding papers of *Phytocoenologia* 2015

In 2015 *Phytocoenologia* published 23 articles in total. In each of the four issues last year, the Editors-in-Charge chose one article of particular importance, which during one year after publication is freely accessible online:

He et al. (2015, issue 1-2) present a detailed study about the tree species *Taiwania cryptomerioides*, a formerly widespread Tertiary relict that is now restricted to Eastern Asia (Myanmar, China, Taiwan). The analyses of forest structure and composition from 46 vegetation plots revealed that *Taiwania cryptomerioides*, despite being one of the tallest (up to 70 m high) and longest-lived (up to 1900 yr) trees of Asia, is completely

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dependent on disturbance (landslides or frequent smaller disturbances). Its young seedlings are light-demanding and cannot grow shaded in the understorey. The study demonstrates that also a relict species from the past relies on either heavy or frequent small natural disturbances.

A combination of transects and phytosociological relevés was used by König & Fried (2015, issue 3) to explore the coastal plant communities on the NE coast of Oman. The mostly halophytic communities populating sites from lagoons to very dry sandy areas harbour a high proportion of C4 species.

A classification of vegetation colonising taluses and screes in the Pamir Alai Mountains of Tajikistan was conducted by Nowak et al. (2014, issue 4). These habitats, due to their high degree of isolation, act as a refuge for many narrowly distributed plant taxa, accommodate species rich plant communities. and show a high variability in terms of species composition and habitat requirements.

The Editors' award for 2015 goes to Massimo Terzi from the National Research Council of Italy for his numerical analysis of the order *Scorzoneretalia villosae*, dry grasslands occurring on the Balkan Peninsula and in North-Eastern Italy (Terzi 2015, issue 1-2). It is an outstanding example of how to analyse and present a higher-rank vegetation type with a comprehensive dataset, a sound methodology, and a thorough discussion of syntaxonomy (including research history), and the ecology and distribution of subtypes.

Organizational evolution

It was a good experience to start the "new" Phytocoenologia with an international team of eight editors to have a broad platform of opinions and many shoulders to carry the various duties. The need to handle a growing number of incoming manuscripts led us to appoint additional editors from the Editorial Board and to diversify the editor roles from this year onwards into two categories. The *Associate Editors* will handle papers through the peer-review process, and they will make the final decision regarding acceptance or decline. In addition to Skip Walker and Jan Roleček, who decided to concentrate on this essential task, we were lucky to gain three new Associate Editors who widen our expertise both in terms of geographic coverage and habitat types: Zdeňka Lososová (Czech Republic), Cindy Q. Tang (China) and David Roberts (United States). The remaining six Editors-in-Charge will serve from now on as *Chief Editors*. Paper handling will also continue to be one of their main duties, but beyond that they will take care for the journal development and the communication among all people involved in the journal production. Chairmanship will rotate among them from issue to issue to ensure a balance of work load and responsibility. The chair serves as Receiving Editor for all incoming manuscripts and distributes them among the other Chief, Associate and Guest Editors.

We are very happy that we have now five Linguistic Editors who ensure correctness and clarity of the articles and will check every article not written by a native English speaker. These are Amy L. Breen (University of Fairbanks, Alaska), Don Faber-Langendoen (NatureServe Syracuse, US), Andrew Gillison (Center for Biodiversity Management, Australia), Lynda Weekes (University College Dublin, Ireland, Laura Sutcliffe (University of Göttingen, Germany), and Valerie Whitworth (California). It is a great deal of work to check nearly every manuscript after acceptance for linguistic style and wording. A minority of manuscripts submitted to *Phytocoenologia* are from native English speakers, and many authors would have problems to pay for a professional English proof reading service themselves. Moreover, our Linguistic Editors are recognized experts in the field of vegetation science, which adds to their ability as proof readers. Offering such a service is quite unique in the "journal landscape" and hopefully will help to reduce the often reported bias in international journals towards authors from English-speaking countries. We are extremely grateful to these colleagues for their voluntary service!

Permanent sections and special issues

In all issues of 2015 there have been articles within one of our two permanent sections – "Ecoinformatics" (Section Editors: Jürgen Dengler & Florian Jansen) and "Phytosociological Nomenclature" (Section Editors: Erwin Bergmeier & Wolfgang Willner). Together with this issue, *Phytocoenologia* has published five Long Database Reports (Landucci et al. 2015; Peterka et al. 2015; Peyre et al. 2015; Korzeniak 2016; Vassilev et al. 2016) and three Short Database Reports (Thiele et al. 2015; Revermann et al. 2016; Vanselow 2016) about vegetation databases registered in the Global Index of Vegetation Plot Databases (GIVD; Dengler et al. 2011). We believe that these data papers will stimulate the cooperation between database owners to share data for approaching broader-scale scientific questions and at the same time provide a means to give credit to the data originators through citing these publications whenever using data from the respective databases.

Within the section "Phytosociological Nomenclature", a proposal to conserve the established name *Aceretalia pseudoplatani* has been published by Willner (2015). This article was accompanied by a short guideline of how nomenclatural proposals in the field of phytosociological syntaxonomy should be made (Willner et al. 2015b). Another exemplary output of the section is the paper of Willner et al. (2015a), which discusses the nomenclature of several syntaxa of European forest vegetation.

Phytocoenologia aims at the regular production of Special Issues (S.I.'s) on specific topics, for example in co-

operation with IAVS and its subgroups. Currently, three such Special Issues of IAVS Working Groups are in preparation: Together with the Eurasian Dry Grassland Group (EDGG; http://www.edgg.org) a paper collection on "Palaearctic grasslands" (S.I. Editors Monika Janišová, Jürgen Dengler & Wolfgang Willner) will be published. Within the framework of the European Vegetation Survey (EVS; http://www.euroveg.org) a new Special Issue on "Halophytic habitats" (S.I. Editors Erwin Bergmeier & Joop H.J. Schaminée) is in progress. The youngest S.I. is one planned by the Vegetation Classification Working Group (VCWG; https://sites.google.com/site/vegclassmethods), exemplifying different classification approaches in the terminological framework of De Cáceres et al. (2015) and thus providing a 21st century update on the seminal book of Whittaker (1978). The S.I. Editors are Scott B. Franklin, Miquel De Cáceres, Jürgen Dengler, Flavia Landucci, John T. Hunter, Pavel Krestov and David Roberts, see also Franklin (2016, this issue).

Outlook

We believe that this first year of the re-launched *Phytocoenologia* was a successful start of a communication platform that meets the needs of the global community of vegetation scientists in the 21st century. We hope that you, our readers, will continue to submit good papers in the fields of vegetation classification and survey as well as ecoinformatics to our journal. Without your help as authors, readers, and reviewers, and without your constructive feedback, it would not be possible to maintain and further improve the quality of *Phytocoenologia*.

Author contributions

All authors jointly planned, wrote and revised this Editorial under the lead of F.J.

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