

Comments to the habilitation thesis submitted by Jan Roleček

Jan Roleček is one of prominent figures in the Czech vegetation ecology with an international reputation. This is confirmed by the submitted habilitation thesis. Among other things, I appreciate the wide geographical scope, the long temporal scale (i.e. Holocene history based on palaeoecological investigations) and the holistic, synthetic view of the studied vegetation which is reflected in the particular papers included into the thesis, as well as in Introduction. Introduction is really very comprehensive and it would be valuable to publish it as a book or booklet *per se*. It provides a nice view into the presence and history of the unique habitat, i.e. dry and semi-dry, extremely species rich Peri-Carpathian grasslands considered by the thesis. I learnt a lot from the text about the grasslands despite I have visited most of them. I think, I now more understand, thanks to the thesis, the spectacular species richness, dynamics, history, and distribution of this grassland type. It should be useful to emphasize here that the grasslands represent species richest plant communities in the World at the scale under ca. 20m². I would also like to mention here that the author communicates very well his results, including those contained in the thesis, to the professional public mainly in the form of lectures. The lecture I recently attended was a suitable supplement to reading this thesis.

There are 15 papers include into the thesis which were published between 2011-2022 mostly in good international journals and Jan Roleček was the first author in about half of them but his important engagement is evident in the rest of them and is clearly stated in the list of included papers on p. 133-138. The papers together provide a comprehensive and balanced view of the studied ecosystem. I do not have any substantial criticism to the thesis, I only raise some small critical remarks or questions:

The author writes “All this is framed by a newly proposed concept of the peri-Carpathian forest-steppe.” I think, it is not a completely new concept, it is only well summarized and more developed, perhaps better formulated and revisited.

In my taste, the text is too much concentrated on phytosociological associations, formal and arbitrary units, and even more on their subtypes. I would personally appreciate more a continualistic view on this vegetation type.

I do not agree with the assessment of the White Carpathians landscape as an entire meadow landscape.

Similarly, the lowlands around the Morava and Váh rivers I would not consider as a “forest-steppe zone” but as a forest zone with extrazonal or azonal occurrence of steppes.

I guess the author will soon make even a broader quantitative synthesis, not only concentrated on classification as in the paper II, including similar grasslands out of the Peri-Carpathian region. The similar types of grasslands are mentioned in Introduction.

Generally, I recommend without any hesitation that the submitted thesis becomes the basis of Jan Roleček's habilitation procedure.

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