



BOTTOMS-UP

PAPER PROJECT

Preliminary title:

Multi-taxon forestry experiments in Europe – an overview

Target journals: Forest Ecology and Management

Outline:

We plan to publish the Deliverable 1 of the WG3 (Tinya et al. 2020) as a paper. It will give an overview about those experiments that study the response of biodiversity to forest manipulations. The exploration of the relationships between forest biodiversity and management is indispensable for the maintenance of an ecologically sustainable forest management. Multi-taxon studies are necessary since the different groups of organisms respond variously to forestry treatments (Paillet et al. 2010, Sabatini et al. 2016). Description of the ongoing experiments enables cooperation between studies and facilitates the up-scaling of local information on a higher level. We collected the textual descriptions of the experiments, summarized their main information in metadata tables, and evaluate the distribution of the projects between counties, forest types, treatments, taxa, etc. Our aims are

- to introduce the ongoing experiments;
- describe the representativeness of the experiments in Europe according to forest types, manipulation factors, response organism groups, response environmental variables;
- to highlight the overlaps and define potential issues for meta-analyses;
- include the detailed descriptions of the experiments and metadata table as supplementary material;
- to show the knowledge gaps.

References

- Paillet, Y., Berges, L., Hjalten, J., Ódor, P., Avon, C., Bernhardt-Römermann, M., Bijlsma, R-J., De Bruyn, L., Fuhr, M., Grandin, U., Kanka, R., Lundin, L., Luque, S., Magura, T., Matesanz, S., Mészáros, I., Sebastiá, M-T., Schmidt, W., Standovár, T., Tóthmérész, B., Uotila, A., Valladares, F., Vellak, K., Virtanen, R. (2010): Biodiversity differences between managed and unmanaged forests: meta-analysis of species richness in Europe. *Conservation Biology* 24: 101-112. <https://doi.org/10.1111/j.1523-1739.2009.01399.x>
- Sabatini, F. M., Burrascano, S., Azzella, M. M., Barbati, A., De Paulis, S., Di Santo, D., Facioni, L., Giuliarelli, D., Lombardi, F., Maggi, O., Mattioli, W., Parisi, F., Persiani, A., Ravera, S., Blasi, C. (2016): One taxon does not fit all: Herb-layer diversity and stand structural complexity are weak predictors of biodiversity in *Fagus sylvatica* forests. *Ecological Indicators* 69: 126–137. <https://doi.org/10.1016/j.ecolind.2016.04.012>

Tinya, F., Kovács, B., Ódor, P. (2020): Description of the existing forest manipulation experiments. COST Action BOTTOMS-UP – Biodiversity of Temperate Forest Taxa Orienting Management Sustainability by Unifying Perspectives, CA18207, Working Group 3, Deliverable 1.

First/lead author: Flóra Tinya (corresponding)

Last/lead author: Péter Ódor

Core authors from BOTTOMS-UP: Réka Aszalós, Ettore D'Andrea, Gediminas Brazaitis, Sabina Burrascano, Inken Dörfler, Martin M. Gossner, Nathalie Korboulewsky, Bence Kovács, Giorgio Matteucci, Walter Mattioli, Jörg Müller, Björn Nordén, Péter Ódor, Žydrūnas Preikša, Peter Schall, Mariana Ujhazyova, Wolfgang W. Weisser

Core authors outside BOTTOMS-UP: The custodians of the experiments as reported in the Annex 1 of WG3 first deliverable.

Please note that if the outline changes substantially (more than 1 aim is revised substantially), or co-author(s) are added to the above lists the governing board should re-vote on the project.

Further opt-in authors:

According to the BOTTOMS-UP Bylaws any member of the BOTTOMS-UP Consortium can declare his/her interest to become opt-in author.

Persons interested in opt-in authorship can be nominated until ... with e-mail to the first author (and cc: to the BOTTOMS-UP Governing Board), explaining which dataset(s) they represent and preferentially also how they could contribute. Note however that such a nomination only means the option to become co-author. In the end only those persons will be retained as actual co-authors who have made a significant intellectual contribution to the paper during its preparation (in accordance with BOTTOMS-UP Bylaws and compliance to ethics in academy).

Data to be used:

Descriptions of the experiments, metadata tables.

Time line:

Deadline for permission of data usage from custodians: February 2021

Extraction of data from BOTTOMS-UP: April 2021

Data preparation and analysis: July 2021

Raw results to be sent to the wider author team: August 2021

Writing up of the paper (including preparation/optimization of figures): October 2021

Feedback round of co-authors to MS: November 2021

Submission: December 2021

Confirmation:

I confirm that I will adhere to the BOTTOMS-UP Bylaws.

08th December 2020.

Flóra Tinya