

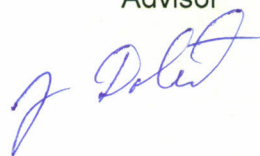
Remarks on the PhD dissertation submitted by Jan Altman:

It is my pleasure to write a letter in support of dissertation submitted by Jan Altman who was my PhD student in years 2010-2014. In 2005 we launched a new project in South Korea and were seeking for motivated student interested in forest ecology and tree-ring science as well as ability to conduct research under harsh environment of humid mountains affected by summer monsoons. Jan fulfilled these demands and soon became a key person in our research, ultimately spending six seasons in Korea. His BSc thesis dealt with the altitudinal and latitudinal changes in mountain-temperate vegetation of mixed-oak forests in southern part of Korean Peninsula using forest relevés collected from 400 to 1500 m elevation in four mountains from Seorak in the north to Halla Volcano in the south. During first expeditions, he found interest in exploring tree growth variation in dominant woody species, based on their annual tree-ring increments. He continued with this topic in his MSc thesis, focusing on unique vegetation gradient of Halla Volcano, Jeju Island, assessing the relationship between environment and species composition, lifeforms spectra, plant diversity, and the spatio-temporal variations in stem dispersion, radial growth, and mode of competition among trees along an altitudinal gradient. After finishing his MSc he enrolled for a PhD at the Department of Botany and he also started working at the Institute of Botany in Trebon. His research turned to forest disturbance ecology using tree-rings. Using a large dataset of oak rings, Jan studied forest response to increasing typhoon activity on the Korean peninsula. He applied the same approach of disturbance reconstruction from tree-rings to disentangle factors shaping the historical growth dynamics of oak standards (i.e. mature trees growing through several coppice cycles) in a former coppice-with-standards in Central Europe. These studies showed a need for a common set of tools for verification, replication and comparison of forest disturbance reconstruction studies. This has led to the development of TRADER (Tree Ring Analysis of Disturbance Events in R), an open-source software package for R that provides an analysis of tree growth history for disturbance reconstructions by a total of 24 published methods. The last research topic that Jan expended during his PhD was to find a link between spatial and temporal aspect of disturbances and their impact on forest regeneration and diversity in a long term. He explored this idea using dataset from temperate forests in northern Japan.

Despite the work on his major tasks, Jan was also engaged in other projects dealing with forest and tree-ring ecology, particularly in lowland oak woods in southeast Czech Republic (co-leader of multidisciplinary project), tropical forests in Cameroon and mountain forest in NW Himalayas. During his PhD study he was supervising several BSc and MSc theses.

Jan Altman has submitted a comprehensive PhD thesis attempting to synthesize different aspects of forest disturbance ecology. The thesis consists generally of two parts. The first is the synthetic part unifying the individual studies (General introduction, Aims of the thesis, Summary of results). The core of the thesis is formed by four standard research reports written in English, i.e. three papers published and one submitted to international journal. In all four research reports Jan is the first author. Taken together, Jan Altman demonstrated his ability to carry out an independent research, to analyze the data, to draw conclusion from the data, and finally, to finish the work by writing a scientific report for an international journal. I have no doubts about the sufficiency of this thesis for obtaining the PhD degree.

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Advisor



November 3, 2014