Supervisor's statement on the PhD dissertation of Ching-Feng Li

Diversity of mountain forest vegetation in Taiwan

Mr. Ching-Feng Li, MSc, known to most people outside his native Taiwan under the nick-name Woody, started his PhD studies in Botany at Masaryk University already in February 2007, after a one-year study visit at the Department of Botany and Zoology. His personal way to vegetation ecology was not straightforward. He received his MSc degree in Forestry at National Taiwan University, Taipei. Although his MSc thesis was in forest vegetation ecology, after graduation he worked on surveys of birds and mammals at National Pingtung University of Science and Technology. When the ambitious nation-wide project of vegetation mapping in Taiwan started in 2003, Woody was appointed at Faculty of Forestry, National Taiwan University, as a research assistant for vegetation survey. The leaders of this Taiwanese project invited our Vegetation Science Group to share know-how in vegetation survey and after preliminary visits in Taiwan by myself and David Zelený, Woody arrived for a study visit in Brno in 2006, with the aim of exploring the methods of analysis of the large database of forest vegetation plots that was assembled during the project. Maybe he liked the methods of vegetation analysis used in the Vegetation Science Group, maybe he rather liked the atmosphere in the very peculiar Department's building in Řečkovice, or maybe he liked something completely different in the Czech Republic, but no matter what the real reason was, he decided to enroll for a four-year PhD study at Masaryk University, aimed at comprehensive analysis of diversity of mountain forest vegetation in Taiwan, based on the new Taiwan vegetation database.

His PhD project is unique in that he was privileged to work with an extensive and high-quality database prepared by dozens of the best vegetation ecologists and field surveyors in Taiwan. Actually, it is the first comprehensive database of this kind assembled for a subtropical region, and Woody's PhD project is globally the first analysis of a national vegetation-plot database of a subtropical country, moreover using methods of formalized vegetation classification associated with development of a computer expert system for automatic identification of vegetation types.

Woody is a remarkable ecologist with excellent skills and abilities in many respects. He is a dedicated field worker who deeply loves the wild nature of Taiwanese mountains. Those who were not there cannot understand how difficult and often dangerous it is to do vegetation sampling in Taiwanese mountains, with their very steep an often unstable slopes, abundant landslides, frequent typhoons and heavy rainfall, regular fog formation, sudden nightfall, dense stands of *Yushania* bamboo (extremely annoying when wet, i.e. nearly always), dangerous killer bees, Formosan black bears and venomous snakes. Still, Woody is feeling perfectly at home in this environment. Even beyond these unpleasant circumstances, vegetation sampling is very difficult in Taiwanese forests because of high alpha diversity of woody species, many of them very similar to each other and difficult to identify. Still, Woody has an excellent knowledge of all these plants, identifying them with binoculars or climbing up the trees to obtain identifiable pieces of a twig with leaves.

Woody is also highly skilled in ecological data analysis. He routinely works with vegetation databases, GIS, and sophisticated scripts in R. He is extremely meticulous, often spending weeks assessing hundreds and thousands of vegetation plots one by one. He is also great in communicating his research results in oral presentations, which are always very smart,

combining scientific content with a pleasant humor. No wonder that he was given an award for the best student's oral presentation at the Annual Symposium of the International Association for Vegetation Science in South Korea in 2012.

Moreover, he is always very modest, friendly and helpful. All these features make him a very useful member of scientific teams, as documented by his co-authorship of several papers published in high-rank ecological journal such as Ecology, Ecography or Global Ecology and Biogegraphy, which are not included in the thesis.

Still, beyond all these admirable features of Woody's personality, I must mention one feature that I was never happy about. Although Woody works very hard, he always hesitates to finish his presentations and papers unless the ultimate deadline is tomorrow, today, or even yesterday. This is also the reason why the defense of his PhD thesis takes place only in seven years since his study started, one day before the ultimate deadline. His further independent scientific career can be very successful, but to make it really so, and to be able to supervise other people, he absolutely needs to change this last-minute habit.

Concerning Woody's thesis, I personally think it is a great original achievement, but I prefer to leave the evaluation of its scientific contents to the referees, since I am involved as a co-author in all the papers included in the thesis. I just confirm that Woody's contribution to the papers for which he is the first author was dominant. In the case of the paper with Cheng-Tao Lin as the first author, Woody supervised the work on this paper done by Cheng-Tao when he was still a master student, and he significantly contributed also beyond the general supervision.

Last but not least, I would like to thank David Zelený for his constant help and significant contributions to studies done within Woody's PhD thesis, and all the other colleagues in Taiwan who collected the field data, assembled them in a database and established a long-term friendly cooperation with our Vegetation Science Group.

Based on my knowledge of the contents of the PhD thesis of Ching-Feng Li, and taking into account the above mentioned circumstances, I recommend his thesis for defense.

Brno, 19 December 2013

Prof. Dr. Milan Chytrý
supervisor