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Ching-Feng Li *alias* Woody (1970–2019) – Silent Peak from Taiwanese mountains

By Milan Chytrý

Sad news spread across the international community of vegetation scientists at the end of November 2019 when Ching-Feng Li (李靜峯), known to most of us as Woody, passed away. A ruthless disease took a good friend from many people and created a gap in vegetation research of East Asia that will be difficult to close. Woody was born on 11 November 1970 in Pingtung, southern Taiwan, and grew up in Taipei. Being born as the fourth child in a busy family with a very active and sociable father, he was given the name Ching-Feng (靜峯), meaning Silent Peak. However, to all his friends in Taiwan, he has been known by the nickname Wu-Mu (五木), which means five trees, a metaphor for a forest. For his international friends, he used the nickname Woody as an English equivalent of Wu-Mu.

Both his official name and nickname perfectly characterized what he liked most: forests and wild nature in the mountains of Taiwan. While most people in Taiwan live in modern cities in the lowlands along the western and northern coast, a larger part of the island is covered by high, rugged, forested mountains. The beauty of these mountains probably led the 16th-century Portuguese sailors to call the island 'Ilha Formosa' (Beautiful Island). Large areas of mountain forests remain unlogged, in places containing very large trees of *Chamaecyparis formosensis, Chamaecyparis obtusa* var. *formosana, Cunninghamia konishii, Taiwania cryptomerioides* and other species.

Experience from mountain hiking in Taiwanese forests led Woody to study forestry at the Department of Forestry, Faculty of Agriculture, National Taiwan University in Taipei (Bachelor studies 1989–1994, Master studies 1994–1997). During his studies, he was influenced mainly by his supervisor, Professor Horn-Jye Su, the author of classical studies on altitudinal zonation of Taiwanese forest vegetation. Woody got excited about vegetation ecology and graduated with the master the-



Woody' unforgettable smile. IAVS Symposium in Mokpo, South Korea, July 2012.

sis "Vegetation succession of the Machilus-Castanopsis zone in the north-western region of Taiwan".

After compulsory military service (1997–1999), Woody was appointed to the Institute of Wildlife Conservation, National Pingtung University of Science and Technology (1999–2003). Forests near Pingtung City are tropical, very different from the subtropical mountain forests occurring over much of the island. Here he could use his excellent knowledge of not only plants and vegetation but also animals, working on seed dispersal by frugivorous birds in a tropical forest, the ecology of mandarin ducks and surveying mammals and birds.

In 2003, the Forestry Bureau of Taiwan initiated an ambitious and well-funded National Vegetation Inventory and Mapping Program, which involved several universities across the island. The aim was to perform detailed vegetation mapping and plot sampling, which would provide baseline information for sustainable use and conservation of Taiwanese forests. The National Vegetation Database of Taiwan was established in the same year. Woody was appointed at the Department of Forestry of National Taiwan University as a Research Assistant for vegetation survey within this program. Here he closely collaborated with Professor Chang-Fu Hsieh and was also influenced by other excellent vegetation ecologists in the project team, especially Professors Sheng-Zehn Yang, Ching-Long Yeh and Tze-Ying Chen.

I first met Woody when I visited Taiwan in 2004 as a member of an international group of experts invited to discuss the concepts and methods of the National Vegetation Inventory and Mapping Program. In 2006, he came for a one-year research visit to our Vegetation Science Group at Masaryk University in Brno, Czech Republic, to work on the development of the National Vegetation Database of Taiwan. Before the end of his internship, he asked me whether I could supervise his PhD project. In this project, he aimed at the synthesis of the diversity of Taiwanese mountain forest vegetation



Woody during field sampling in Wu-Jie, near Puli, Taiwan, October 2013.

based on the National Vegetation Database and his own field experience. I was happy to agree because I knew him as a motivated, hard-working and already quite experienced researcher. He started his PhD studies at Masaryk University in 2007, working in close collaboration with David Zelený, then Scientific Researcher in our group, with whom he developed a lifelong friendship.

Although Woody's main goal was to develop a comprehensive vegetation classification of Taiwanese forests, he was always intrigued by general ecological questions related to these forests. His favourite topics were the effects of the mountain cloud zone on forest vegetation and the patterns of species diversity across elevational gradients, for which Taiwan, with its elevation range from 0 to 3952 m a.s.l., provides a textbook example. He quickly learned techniques for the analysis of large vegetation-plot databases, including GIS analyses and R programming. He used these techniques not only for the analysis of the Taiwanese vegetation dataset but also for teaching several courses of vegetation data analysis in Brno, Rome and Taiwan, mostly co-taught with David Zelený. He was extremely meticulous when analyzing vegetation data, often spending weeks checking hundreds and thousands of vegetation plots one by one.

The most amazing experience was to join Woody on fieldwork in his ecosystem. I will never forget our trip with Woody, David and two Taiwanese colleagues in the Wanda Valley, a remote area in Central Taiwan. We started in the early morning by crossing a river in a place where the bridge was destroyed by a recent typhoon and buried by alluvial gravel. Then we walked for the whole day on steep and unstable slopes, bypassing numerous hundreds-meter-long landslides, running away from a nest of "killer bees" (Vespa mandarinia, the world's largest hornet) through dense bamboo growth, carefully avoiding patches of the tall grass Miscanthus chinensis, which could be resting places of Formosan black bear (Ursus thibetanus formosanus). We ate our lunch using chopsticks made in situ from the shoots of the local bamboo species with a long name that took me guite some time to remember (Yushania niitakayamensis). After the lunch, we enjoyed a coffee



Woody with David Zelený having a short rest stop during fieldwork in the Wanda Valley, Central Taiwan, October 2007.

from a metal moka pot that Woody always carried with him to the field, no matter that in such mountain terrain, every gram of equipment in the backpack is felt. Then we were rushing to come to a place suitable for camping before dusk, which happens suddenly at this low latitude. We were lucky that there were no heavy rains on this field trip; this is more the exception than the rule in Taiwanese mountains.

I admired Woody's knowledge of plants in the field. The Taiwanese flora contains more than 4300 species, including nearly 600 trees, more than 400 shrubs and about 250 woody lianas. At most sites, forest stands are composed of many tree species growing together. In the mountain cloud zone, most tree species are laurophyllous: unrelated species have very similar simple leaves, stems and crown shapes. Vegetation sampling in such forests is nearly impossible without long-term training. I was astonished to see Woody looking upwards with binoculars, moving through our vegetation plots and identifying one tree individual after another, and then climbing up trees to collect epiphytes or cut identifiable pieces of tree twigs. I at least helped with recording the herbs and soil sampling.

During his stay in Brno, Woody also did a lot of fieldwork in Europe, especially vegetation sampling of Czech forest and grasslands with David Zelený and other colleagues and students of our department. It was always a pleasure to be with him in the field. On one rainy evening during our bus excursion for botany students to France, we had to build tents in a lawn soaked with water. Everybody was wet, it was rather cold, and the mood was not good. We were looking for a place to hide from the rain, when suddenly, Woody appeared with his unforgettable smile with a camping pot full of shrimps, offering us to taste how he prepared them in field conditions. The unexpected delicacy that emerged out of the blue in the middle of misery immediately caused the mood to rise in the group by several orders of magnitude.

For several years, Woody also assisted in teaching the Field Course of Geobotany for Czech and international students at Masaryk University. He mentored MSc and PhD students of vegetation ecology from Taiwan who were coming for study visits to Masaryk University. He was an excellent teacher, with the ability to explain even complicated issues clearly in a simple language. His oral presentations were always brilliant, combining scientific content with pleasant humour. Just one example for all: the sandwich model he used to explain the mid-domain effect in one of his presentations (see a figure below). No wonder that he won the prize for the best oral presentation of a young scientist at the 55th IAVS Symposium in Mokpo, South Korea, in 2012. Woody finished his PhD thesis "Diversity of mountain forest vegetation in Taiwan" in 2013. It contained the new classification system of Taiwan forests, developed based on a careful analysis of the National Vegetation Database of Taiwan, supplemented by an expert system for automatic classification of vegetation plots. The main paper from this thesis (Li et al. 2013, *Applied Vegetation Science*, <u>https://doi.org/10.1111/avsc.12025</u>) is a milestone in vegetation classification in East Asia. After graduation, he stayed at Masaryk University until 2015, working as a Research Assistant and later as Scientific Researcher on different topics including beta diversity of vegetation and ecology of the cloud forest.

In 2015, both Woody and David decided to move to Taiwan and continue their academic careers there, to be closer to the ecosystem they studied. For almost a year, Woody was working as Postdoctoral Research Fellow at the Tsing Hua University in Hsinchu with Professor Anne Chao. Then, in 2017, Woody got a position of Project Assistant Professor and a year later the standard Assistant Professor at his alma mater, School of Forestry and Resource Conservation (previously Department of Forestry) at the National Taiwan University. Here he established the Ecological Restoration Lab and taught dendrology, vegetation ecology and statistics. He frequently organized field excursions, mentored several undergraduate and graduate students, and continued studies of Taiwanese mountain forests. At the same time, he kept active contacts within IAVS, attending its symposia and participating in various discussions. In 2018, he became the Chair of the IAVS Vegetation Classification Working Group. However, the IAVS Symposium in Bozeman, MO, in July 2018, was the last he attended.

In October 2018, Woody was diagnosed with lung cancer. He did not give up and fought bravely with the disease. Undergoing therapy, he kept teaching and organizing field courses until May 2019. He registered for the IAVS Symposium in Bremen in July 2019, but rapid worsening of his health condition did not allow him to come. Then, sad news arrived that his suffering ended on 29 November 2019.

Woody was Silent Peak not only by his name but by his whole personality. He liked people around him, but he never talked too much about himself and his problems; rather he listened to others. He also listened to nature, to trees and other plants, and he learned from them. He was always very modest, friendly, and helpful. But behind his smiling face, there was an outstanding ecologist who made landmark contributions to understanding the ecology of Taiwanese forest vegetation. His soul lives somewhere among the big trees in the cloud belt of Taiwanese mountains.



Woody was an excellent lecturer who was able to explain complicated things using examples from real life. These pictures from one of his presentations illustrate the mid-domain effect as an explanation of the latitudinal gradient in species diversity. The bread represents the bounded domain (the Earth from the South Pole to the North Pole), and food types represent individual species. The ranges of many species overlap near the Equator, creating high diversity in the Tropics. Photos by Woody, assisted by Rui-Han Chien, Cheng-Tao Lin, Guo-Zhang Michael Song and David Zelený (2008).