




Vás zve na seminář:

## Functional traits of tropical trees

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### Abstrakt

The aim of the study is to predict the growth of tropical trees on the basis of functional traits. The tropics are characterized by their high biodiversity (Myers, 2000). Tropical rain forests are the most diverse of terrestrial ecosystems (Turner, 2004). Many lowland forests contain more than 200 species on 1 ha (Turner, 2004). Functional traits are the characteristics of an organism that are considered relevant to its response to the environment and/or its effects on ecosystem functioning (Díaz et Cabido, 2001). The growth in tropical rainforests was studied by Wright et al. (2010), Poorter et al. (2008), Herault et al. (2011). For this study leaf samples and wood samples were collected in primary tropical forest in Borneo (Ulu Temburong National Park, Brunei) in 2013. Trees are situated on permanent plots (100 x 100 m) which were established in 1991.

Approximately every five years all trees (diameter in breast height > 5 cm) were remeasured. For methodology of collecting samples (wood and leaf) the New handbook for standardised measurement of plant functional traits worldwide (Pérez-Harguindeguy et al., 2013) was used. A partial aim is to get the chemical composition of leaf samples of selected trees. The objective of chemical analyses is to get the content of important chemical elements in the leaves and then get if there is some correlation between the contents of chemical elements (C, H, N, S, K, P, Ca, Mg, Cl and the growth (diameter increment) of the trees. The chemical analysis are carried out in laboratories of Department of Chemistry and Biochemistry. Two machines (CHNS-O analyser and XEPOS) are used for the experiment. The statistical model (structural equation modeling) will be applied for evaluation of results. Observed variables will be functional traits of individuals, diversity of species of surroundings trees and the structure of relief. Independent variables will be diameter increments.

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Budování výzkumných týmů a rozvoj univerzitního vzdělávání výzkumných odborníků pro mikro- a nanotechnologie

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