

Topic for a Bachelor or Master Thesis

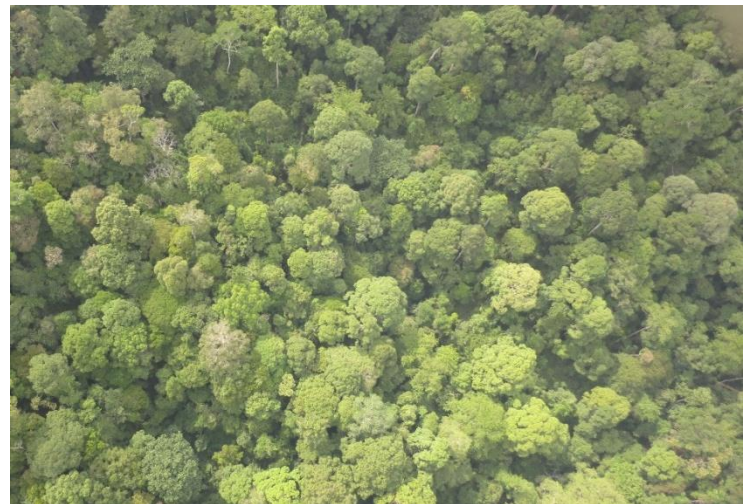
Assessment of large trees in a tropical natural forest

Background: In a prospectively more intensive collaboration with the company “Bornion Timber” (Sabah, Malaysia) we jointly offer the possibility to do the master or bachelor thesis research in the company’s concession area on monitoring and assessment of habitat trees and timber trees.

Scope of the thesis: Scope of the thesis project is the monitoring and assessment of large trees of the forest canopy and emergent layer in tropical forests. Base data and imagery are available. The very specific topic will be defined together with the candidate, bringing together her/his strengths and interests and the company’s interest.

The envisaged potential research components may include

- tree species or species group identification from (available) drone imagery (cm resolution), validated by ground checks: test whether and to what extent a tree species identification is also possible from satellite imagery (m resolution);
- volume functions for large trees, based on terrestrial measurements;
- deriving empirical relationship between crown dimensions and *dbh*;
- validation of field accuracy of geographical tree coordinates, identified from airphotos;
- Economic efficiency of drone technology for preparation of tree position maps



Preferably, field work will be done in a tandem with a Malaysian MSc or BSc candidate.

Requirements: The candidate should be interested and have basic knowledge in remote sensing applications and image analyses, GIS and quantitative methods of forest monitoring.

Good command of English is a must as is good intercultural and communication skills (all of that can very well be trained during the visit at Bornion).

The thesis may be written in German or English. A German thesis must be accompanied by a detailed English executive summary.

Logistics: Bornion offers support in their field facilities. Candidates need to apply for travel grants. If the thesis research is combined with an internship, the Faculty offers travel co-funding.

N.B.: as travelling is currently restricted and nobody can predict when normal travel will be possible again – this topic is not suited for candidates who wish to start their thesis research very soon.

Interested?

Please contact Prof. Dr. Kleinn (ckleinn@gwdg.de).

