

# LEAF VENATION NETWORKS OF BORNEAN TREES: IMAGES AND HAND-TRACED SEGMENTATIONS

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## Study Description

Leaf venation networks play a key role in resource transport for plants. The accompanying data paper provides high-resolution images of the venation networks of several hundred southeast Asian tree species collected from Malaysian Borneo. The images are paired to a range of trait and environmental data and are supplemented by hand tracings, yielding a dataset of several hundred million hand-classified pixels. The dataset may be useful for ecophysiology, systematics, and machine learning.

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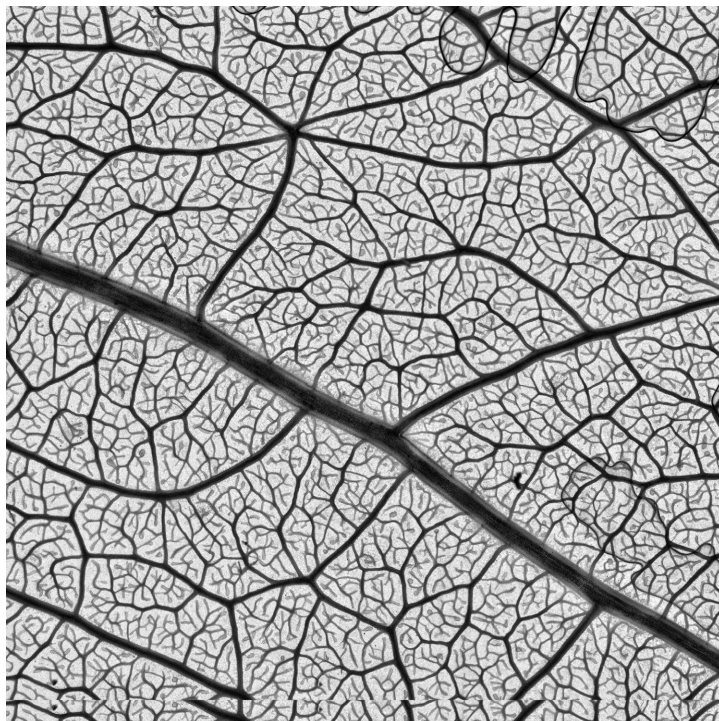


Photo 1: A brightfield image of a chemically cleared leaf of *Mallotus miquelianus*. These images have been hand-traced to capture their venation networks. Over seven hundred such images, plus tracings, are available in the dataset. Photo credit: Miguel Jodra.



Photo 2: Leaves for this project were sampled by tree-climbers from the canopy of trees in a range of forested sites. Here, a team member carries a cut branch back to a field laboratory, where the sample is measured for gas exchange and reflectance as part of a broader trait measurement campaign. These samples are then carried out of the forest and prepared for further laboratory analyses. Photo credit: Benjamin Blonder.



Photo 3: The project was carried out a range of sites in Sabah, Malaysia, as a collaboration between national and international teams. Here, team members are selecting healthy leaves from a cut branch and pressing them flat for later venation and stoichiometric analyses. Photo credit: Benjamin Blonder.

These photographs illustrate the article “Leaf venation networks of Bornean trees: images and hand-traced segmentations” by Benjamin Blonder, Sabine Both, Miguel Jodra, Noreen Majalap, David Burslem, Yit Arn Teh, and Yadvinder Malhi published in *Ecology*. <https://doi.org/10.1002/ecy.2844>