NIMBIOS working group overall goal: **Translate the concentration and relative abundance of pollen spectra from insect-pollinated (entomophilous) taxa found in tropical lake sediments and soil samples into useful, independently validated, reliable paleo-temperature and paleo-precipitation parameters.**

Day 1

Breakfast at NIMBIOS 8-9 am
-Welcome from the Director of NIMBIOS
- Group introductions: Each participant presents 3 or 4 slides of what they bring to the table.

Tea/Coffee
-A presentation on the problem that we are trying to solve. Pollen as a climate proxy, pollen representation in modern and fossil records (Mark Bush)

Lunch
-Flowering and pollination biology of tropical trees (Joe Wright)
-Pollen dispersal (Mark Bush)

Tea/Coffee
-Transfer functions (Alex Correa)

5pm Reception

Dinner: Those who want to meet for dinner (location TBA)

Day 2

Breakfast at NIMBIOS 8-9 am
-Data availability: Biotic (Brian Enquist)
: Pollen (Mark Bush)
: Climatic (Crystal McMichael)

Tea/Coffee
-Geolocation and spatial uncertainty

Picnic Lunch
- A decompression activity: walk in Knoxville Urban Wilderness

-pm tea coffee
Round table: What are the component parts of a transfer function? Where can we improve on what exists? What data do we need to be successful?

Dinner: Those who want to meet for dinner (location TBA)

Day 3

Breakfast at NIMBIOS 8-9 am
-Tree distributions (Miles Silman)

Tea/Coffee
-Inverse problems and Bayes (Rob van Woesik)

Lunch
-Round table: Considering analytical approaches (advantages and disadvantages) - Standard models: Standard species distribution models (including logistic regression and Maxent). Alternative models: Generalized additive models; Bayesian, Boosted Regression Trees. Others.

Tea/Coffee
-Ideas session: brain-storming on analytical directions (white board)

Dinner: Those who want to meet for dinner (location TBA)

Day 4

Breakfast at NIMBIOS 8-9 am
-Spin-offs: Geolocation example. Brain-storming on other spinoffs.
-What tangential ideas have we had for interesting sub-projects. What is needed to make those real?

Tea/Coffee
-Case study, to focus the working group

Lunch
-Group: How can we link the spatial studies, at the different scales, to the temporal aspects of pollen deposition?

Tea/Coffee

Dinner: Those who want to meet for dinner (location TBA)

Day 5

Breakfast at NIMBIOS 8-9 am
-Group: Considering spatial and temporal extrapolation and uncertainty
-Preparing for the next phase.

Tea/Coffee
-Homework assignments
-Next meeting scheduling

Lunch **End of workshop**