

NEOTOMA(TILIA)/OCTOPUS and Pollen Data Analysis Online Workshop

Hosted by the ARC Centre of Excellence for Australian Biodiversity and Heritage (CABAH)

Dates: 13th July to 17th July (~3hr sessions each day).

Coordinator: Professor Simon Haberle. Facilitators: Professor Eric Grimm, Professor Jessica Blois, Dr. Henry Munack, Dr. Tibi Codilean

Description

This workshop will be delivered over five days and will comprise a series of morning and afternoon sessions. This workshop will provide training, discussion and decision making on the current and future state of palaeoecological data management in Australia – with a focus on using the global NEOTOMA Database. We are very fortunate to be able to invite Prof Eric Grimm and Prof Jessica Blois to this event and they will be providing expert advice and training in TILIA, NEOTOMA and in using the R package for palaeoecological data analysis. We will also be using this time to explore the future of palaeoecological data management in Australia with the guidance from CABAH database experts Dr Henry Munack and Dr Tibi Codilean (building an Australian palaeoecological database that integrates with NEOTOMA - OCTOPUS).

This workshop is open to all interested academic staff, students and practitioners who produce or are engaged with palaeoecological data (focus on pollen and charcoal datasets, but others also welcome). The workshop is sponsored by CABAH so there is no registration fee. Anyone interested in attending should register with their details using the registration link on this Eventbrite page.

General topics addressed in this workshop will be:

- The use of the Tilia program for managing, analyzing, and graphing pollen and other stratigraphic or paleo data
- Using the Neotoma Paleocology Database for your data sets
- The potential for data analysis (using R) through NEOTOMA (e.g. using the R package and API to retrieve datasets; CONISS cluster analysis; and creating a pollen diagram using R and more)
- Prioritisation and approach to uploading Australian (and regional) datasets into NEOTOMA/OCTOPUS.

Outline of Course Content (may be subject to change) Day 1:

- Morning: Introduction to the Neotoma Paleocology Database and Tilia. Entering data and metadata. (Jessica and Eric)
- Afternoon: Uploading publications, contacts, and taxa. Participants prepare datasets for uploading to Neotoma, either their own datasets or demonstration datasets provided. (Eric and Jessica) Day 2:
- Morning: Geochronological data and age models. Constructing age models using Bacon and clam. Participants prepare datasets for uploading to Neotoma. (Eric and Jessica)
- Afternoon: Spillover from morning, R data analysis demo/practice (Eric and Jessica) Day 3: (split into 2 groups):
- Ongoing experience with uploading data into NEOTOMA plus troubleshooting day. (Eric and Jessica) Day 4: OCTOPUS and Pollen Survey
- Introduction to Indo-Pac
- Introduction to OCTOPUS
- Pollen survey results and discussion Day 5: Indo-Pac and Future
- Strategy and development

Requirements

Participants should have administrative rights to install new software on their own laptop. Software will be made available to participants before the workshop for participants to install. Ideally, R should be installed in advance of the workshop. Prior knowledge of R is not needed. Tilia is a Windows program, and laptops must be running Windows. If a participant has a Mac, it must be configured to run Windows either through e.g. Parallels or by booting to Windows, and the participant must know how to run and install Windows programs in advance. Participants are encouraged to bring their own data to work with throughout the workshop (example data will be made available).

Learning Outcomes

On completion of the workshop, participants will be able to:

- Perform pollen analysis and produce pollen diagrams using the software package TILIA
- Use the NEOTOMA Paleoecology Database for palaeoecological data sets
- Use the R package to retrieve datasets in NEOTOMA, run CONISS cluster analysis and creating a pollen diagram using R
- Gain a greater understanding of how to develop a community lead database through networking and consensus

Registration page: <https://www.eventbrite.com.au/e/neotomatiliaoctopus-and-pollen-data-analysis-registration-98975946721>