

## Tilia Protocol

This protocol is designed to walk one through constructing a pollen or phytolith diagram using Tilia [2.0.41]. This protocol will take approximately 30 minutes to produce one Tilia graph. Be sure to save your graph periodically throughout the process.

### GRAPH PREPARATION ~ 2 mins

1. Have the data compiled into an accessible Excel sheet.
2. [Describe how the data must be oriented in order to use in Tilia – e.g., are samples in rows or columns, etc.]

### SETTING UP DOCUMENTS ~ 2 mins

1. Open appropriate Excel file, organized with morphologies listed in rows 1- x, and sample locations in columns 1- y.
2. Open Tilia on a Windows PC (shortcut icon resides on desktop in EA Lab)
3. Click File > New, or click the blank page icon in the top left corner.

### IMPORTING DATA ~ 5 mins

1. Copy and paste morphologies from excel into the Tilia program, into rows 3-x in the B column
2. Input sample locations in columns h-y
3. In row 1, type in numbers 1, 2, 3, ... above the sample locations so that there is a digit above every sample location/filled cell. If one has depth values (to represent a stratigraphic column), enter in the depth of the samples taken and Tilia will represent these at the corresponding “heights” to the value. Otherwise, subsequent numbers will be represented equally vertically spaced.

### MAKING TILIA GRAPH ~ 10 secs

1. Click “Make Diagram” button, located 2<sup>nd</sup> from the far right
2. This will MAKE you save the diagram so save as desired.

### FORMATTING TILIA GRAPH ~ 10-45 mins

1. Use the buttons across the top to change axis labels, fonts, font sizes, to group morphologies into categories, etc.
2. For example: Y Axis labels can be changed from “Standard” to “Sample Names”
3. Use the “Groups” button to bracket morphologies into labeled categories such as “Monocots”, “Dicots”, “Grass Short Cells”, or “Other Microremains”.
4. Use the “Graph Style” button to assign formats in which the data is represented (bars, histograms, etc.)
5. Use the “Font” button to standardize text size

6. Use the “Interactive Text” button to label x-axis as percent or absolute count

#### SAVING TILIA GRAPHS

1. Save the data file as a .tgx file, in order to ensure you can make changes later in time.
2. Export as an .emf file and save where convenient.
3. Open this file on a Mac, use Adobe Illustrator and edit as desired.

#### **Revision History:**

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