

## Supplemental Information:

**S1:** Details on the partitioned Bayesian analyses. Includes tables and figures with detailed information on the partitions schemes employed.

Supplementary File S2.pdf

**S2:** BEAST 1.5.2 input file used in the divergence time estimation under relaxed clock and without a constrain on the *Eigenmannia* split (see Table 4). This file was produced on an Apple Macintosh computer.

Supplementary File S3.xml

**S3:** Chromomycin-DAPI double staining and telomeric sequence detection using FISH.

Supplementary File S3.pdf