

# Fossil-calibrated phylogeny of Onagraceae: patterns of floral and chromosome evolution

William A. Freyman<sup>a,\*</sup>

<sup>a</sup>*Jepson Herbarium and Department of Integrative Biology, University of California, Berkeley*

---

## Abstract

This template helps you to create a properly formatted L<sup>A</sup>T<sub>E</sub>X manuscript.

---

## 1. Introduction

blah blah

## 2. Methods

*Supermatrix.* 1: Downloads GenBank database of the specified GB division  
5 (PLN, MAM, etc) 2: Perform exhaustive all-by-all BLAST comparisons of each  
ingroup and outgroup sequence. 3: Alternatively (much faster) uses a FASTA  
file of guide sequences to define each cluster. Each ingroup/outgroup sequence  
is BLASTed against the guide sequences. 4: Build clusters of sequences: -  
use single-linkage hierarchical clustering algorithm - distance threshold default  
10 BLASTn e-value 1.0e-10 - uses sequence length percent similarity cutoff default  
0.5 - discards clusters that are not phylogenetically informative (i 4 taxa) 5:  
Aligns each cluster of sequences using MUSCLE. 6: Concatenates the clusters  
creating a supermatrix.

*Phylogenetic analysis.* Once the package is properly installed, you can use the  
15 document class *elsarticle* to create a manuscript. Please make sure that your

---

\*Corresponding author

Email address: [freyman@berkeley.edu](mailto:freyman@berkeley.edu) (William A. Freyman)

manuscript follows the guidelines in the Guide for Authors of the relevant journal. It is not necessary to typeset your manuscript in exactly the same way as an article, unless you are submitting to a camera-ready copy (CRC) journal.

Here is a table of the fossil calibrations used....

20 *Chromosome evolution.* The Elsevier article class is based on the standard article class and supports almost all of the functionality of that class. In addition, it features commands and options to format the

- document style
- baselineskip
- 25 • front matter
- keywords and MSC codes
- theorems, definitions and proofs
- labels of enumerations
- citation style and labeling.

### 30 **3. Results**

Here is a table with the mean divergence time estimates including 95% confidence intervals....

The author names and affiliations could be formatted in two ways:

- (1) Group the authors per affiliation.
- 35 (2) Use footnotes to indicate the affiliations.

See the front matter of this document for examples. You are recommended to conform your choice to the journal you are submitting to.





#### 4. Conclusion

There are various bibliography styles available, please see Figure 2. You can  
40 select the style of your choice in the preamble of this document. These styles are  
Elsevier styles based on standard styles like Harvard and Vancouver. Please use  
BibTeX to generate your bibliography and include DOIs whenever available.

Here are two sample references: (Feynman and Vernon Jr., 1963; Dirac,  
1953).

#### 45 References

Dirac, P., 1953. The lorentz transformation and absolute time. *Physica* 19,  
888–896. doi:10.1016/S0031-8914(53)80099-6.

Feynman, R., Vernon Jr., F., 1963. The theory of a general quantum system  
interacting with a linear dissipative system. *Annals of Physics* 24, 118–173.  
50 doi:10.1016/0003-4916(63)90068-X.