

a) Create a DateLife search query

a1) Assembled a list of species names. This is the list of 6 bird species:

- *Pheucticus tibialis*
- *Rhodothraupis celaeno*
- *Emberiza citrinella*
- *Emberiza leucocephalos*
- ***Emberiza elegans***
- *Platyspiza crassirostris*

a2) Processed species names with TNRS and standardized to the OpenTree Taxonomy v3.3draft1.

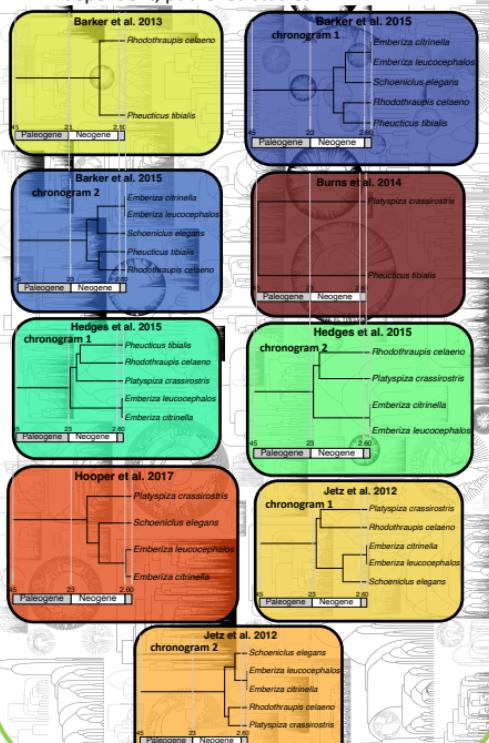
One species name (shown in bold) is a synonym in the standardized taxonomy.

- *Pheucticus tibialis*
- *Rhodothraupis celaeno*
- *Emberiza citrinella*
- *Emberiza leucocephalos*
- ***Schoeniclus elegans***
- *Platyspiza crassirostris*

b) Search DateLife's chronogram database

b1) Searched processed taxon names across 253 chronograms in DateLife's database v0.6.2.

b2) Search resulted in 9 source chronograms from 6 independent, published studies:



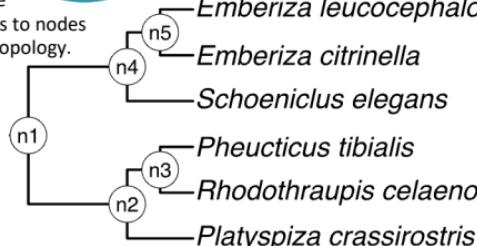
c) Summarize DateLife's search results

c1) Chose a tree topology from OpenTree's synthetic phylogeny v13.4.



OpenTree topology

c2) Congruified source chronogram nodes to nodes of the OpenTree topology. See Table 1.



c3) Get summarized congruified ages per node. See Table 2.

c4) Used summarized ages of congruent nodes to date the chosen tree topology with BLADJ.

Taxon pair node ages from source chronograms

- *Barker et al. 2013*
- *Barker et al. 2015 - chronogram 1*
- *Barker et al. 2015 - chronogram 2*
- *Burns et al. 2014*
- *Hedges et al. 2015 - chronogram 1*
- *Hedges et al. 2015 - chronogram 2*
- *Hooper et al. 2017*
- *Jetz et al. 2012 - chronogram 1*
- *Jetz et al. 2012 - chronogram 2*

Median of node ages
/ Used as calibration
* Not used

