

a) Create a DateLife search query

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

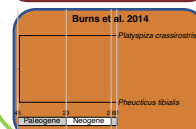
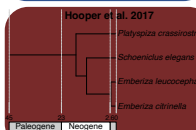
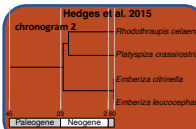
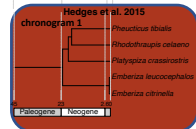
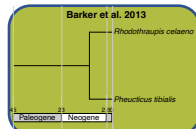
- *Pheucticus tibialis*
- *Rhodothraupis celaeno*
- *Emberiza citrinella*
- *Emberiza leucocephalos*
- ***Emberiza elegans***
- *Platypsiza crassirostris*

a2) Processed species names with **TNRS** and **standardized** to the OpenTree taxonomy v3.3draft1. One species name (bold) is a synonym in the standardized taxonomy.

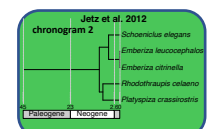
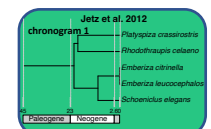
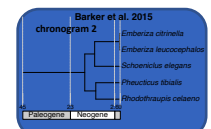
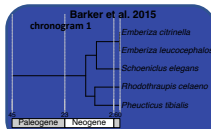
- *Pheucticus tibialis*
- *Rhodothraupis celaeno*
- *Emberiza citrinella*
- *Emberiza leucocephalos*
- ***Schoeniclus elegans***
- *Platypsiza crassirostris*

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.

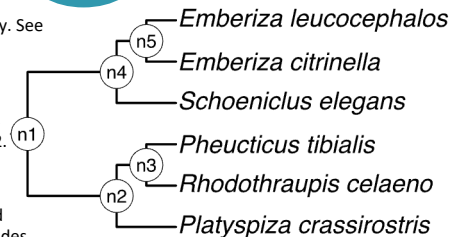
c2) **Congruified** source chronogram nodes to nodes of tree topology. See Table 1.

c3) **Summarized** ages per node. See Table 2.

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



OpenTree topology



Median summary chronogram

- Taxon pair node ages from studies
- 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

