a) Create a DateLife search query

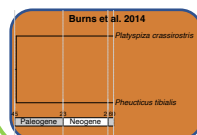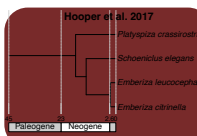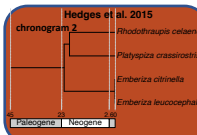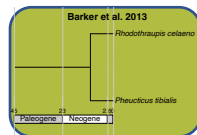**a1)** Assemble a list of species names. This is a list of 6 bird species:

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

a2) Process species names with **TNRS** and **standardize** to the OpenTree taxonomy. One species name (bold) is a synonym in the standardized taxonomy.
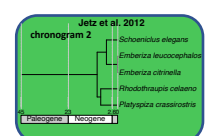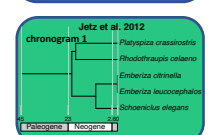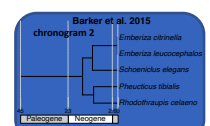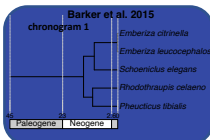
- *Pheucticus tibialis*
- *Rhodothraupis celaeno*
- *Emberiza citrinella*
- *Emberiza leucocephalos*
- ***Schoeniclus elegans***
- *Platyspiza crassirostris*

b) Search DateLife's chronogram database

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

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

Barker et al. 2013

Barker et al. 2015 chronogram 1

Hedges et al. 2015 chronogram 1

Barker et al. 2015 chronogram 2

Hedges et al. 2015 chronogram 2

Jetz et al. 2012 chronogram 1

Hooper et al. 2017

Jetz et al. 2012 chronogram 2

Burns et al. 2014

c) Summarize DateLife's search results

c1) Chose a **tree topology.** We extracted one from OpenTree's synthetic phylogeny.

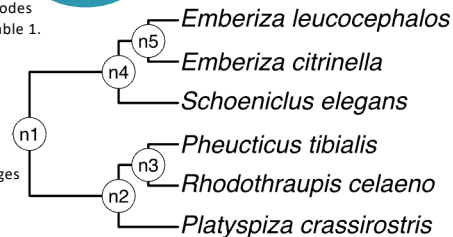**c2) Congruify** source chronogram nodes to nodes of tree topology. See Table 1.

c3) Summarize ages per node. See Table 2.

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

OpenTree topology

Median summary chronogram