a) Create a DateLife b) Search DateLife's chronogram database search query b1) Searched processed h2) Search resulted in 9 a1) Assembled a list of species taxon names across 253 source chronograms names This is the list of 6 hird chronograms in from 6 independent. snecies. Datel ife's database nublished studies: vn 6 2 Barker et al. 2012 Pheucticus tihialis Rhodothraupis celaeno • Emheriza citrinella Emberiza leucocephalos 23 2 8 • Emberiza eleaans Platvspiza crassirostris Paleonene I Neonene I a2) Processed species names with TNRS and standardized to Hedges et al. 2015 Paleogene | Neogene | the OpenTree taxonomy v3.3draft1. One species name (bold) is a synonym in the standardized taxonomy. Paleogene Neogene Paleogene | Neogene | Pheucticus tihialis Rhodothraupis celaeno • Emberiza citrinella Emberiza leucocephalos Schoeniclus elegans Burns et al. 2014 Paleogene Neogene Platyspiza crassirostris Paleogene Neogene

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 Emberiza leucocephalos of tree topology. See Table 1 Emberiza citrinella Schoeniclus elegans c3) Get summarized n1 congruified ages per Pheucticus tibialis node See Table 2 Rhodothraupis celaeno Platyspiza crassirostris c4) Used summarized ages of congruent nodes to date the chosen tree topology with BLADJ. Median summary chronogram Emberiza leucocephalos Taxon pair node ages from studies Median of node area Barker et al. 2012 Llead se calibration Barker et al. 2015 - chronogram 1 Barker et al. 2015 - chronogram 2 Burns et al. 2014 Hedges et al. 2015 - chronogram Emberiza citrinella Hedges et al. 2015 - chronogram 2 Hooper et al. 2017 Jetz et al. 2012 - chronogram 1 letz et al. 2012 - chronogram 2 Schoeniclus elegans Pheucticus tibialis Rhodothraupis celaeno Platvspiza crassirostris Paleogene Neogene