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 Pheucticus tihialis Barker et al. 2012 • Rhodothraupis celaeno • Emheriza citrinella Emberiza leucocephalos • Emberiza elegans 23 2 8 Platyspiza crassirostris a2) Processed species names with TNRS and standardized to Paleonene I Neonene I the OpenTree taxonomy v3.3draft1. One species name Hedges et al. 2015 (bold) is a synonym in the Paleogene | Neogene | standardized taxonomy. Pheucticus tihialis Paleogene Neogene • Rhodothraupis celaeno • Emheriza citrinella Paleogene | Neogene | • Emberiza leucocephalos ·Schoeniclus elegans Jotz et al. 2012 Platvspiza crassirostris Burns et al. 2014 Paleogene Neogene 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 Emberiza leucocephalos nodes of tree topology. See n5 Table 1 Emberiza citrinella Schoeniclus elegans c3) Summarized ages per node. See Table 2 (n1 Pheucticus tibialis Rhodothraupis celaeno c4) Used summarized Platyspiza crassirostris ages of congruent nodes to date the chosen tree topology with BLADI. Median summary chronogram Taxon pair node ages from studies Median of node ages Emberiza leucocephalos Rorker et al. 2013 Used as calibration Barker et al. 2015 - chronogram 1 Not used Barker et al. 2015 - chronogram 2 Burne 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 Jetz et al. 2012 - chronogram 2 Schoeniclus elegans Pheucticus tibialis Rhodothraupis celaeno Platyspiza crassirostris Paleogene Neogene