

## a) Creating a DateLife search query

a1) User provides a list of **taxon names**, as a character string or as a tree:

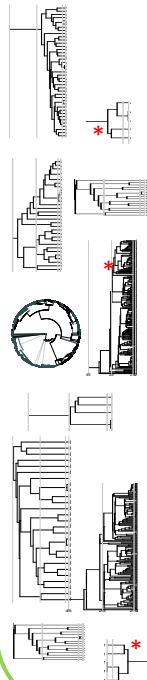
*a*  
*B<sub>1</sub>*  
*C*  
*D*  
*Ee*  
*F<sub>x</sub>*

a2) Process taxon names with **TNRS** and **standardize** to a taxonomy. In this example, 4 names are synonyms in the standardized taxonomy (**bold**):

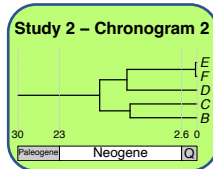
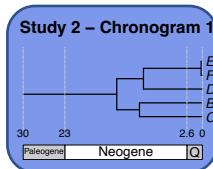
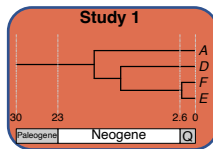
**A**  
**B**  
*C*  
*D*  
*E*  
**F**

## b) Searching DateLife's chronogram database

b1) Search **processed taxon names** in chronogram database and identify (\*).

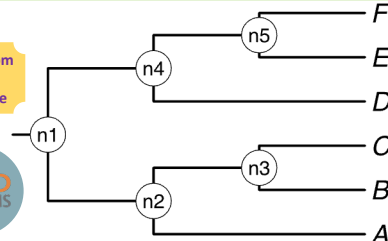


b2) Prune matching chronograms and save as **source chronograms**.



## c) Summarizing DateLife's search results

c1) Choose a **tree topology**.



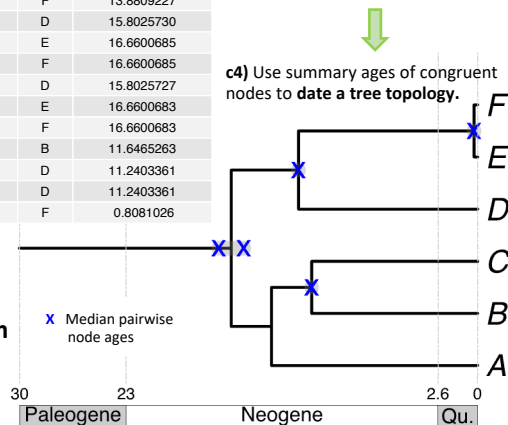
c2) **Congruify** source chronogram nodes to nodes of tree topology.

	Node Name	taxonA	taxonB	Median Pairwise Age
1	n1	A	D	15.5959128
2	n1	A	E	13.8809227
3	n1	A	F	13.8809227
4	n1	B	D	15.8025730
5	n1	B	E	16.6600685
6	n1	B	F	16.6600685
7	n1	C	D	15.8025727
8	n1	C	E	16.6600683
9	n1	C	F	16.6600683
10	n3	C	B	11.6465263
11	n4	E	D	11.2403361
12	n4	F	D	11.2403361
13	n5	E	F	0.8081026

c3) **Summarize congruified node ages.**

Node Name	Min.	Median	Max.	SD
n1	15.31607	15.31607	16.94996	0.8169463
n3	10.86999	10.86999	10.86999	NA
n4	11.73176	11.73176	11.73176	0.0000000
n5	0.24093	0.24093	0.24093	NA

**Median summary chronogram**



c4) Use summary ages of congruent nodes to **date a tree topology**.

