a) Creating a DateLife search query

a1) A list of **taxon names** is provided by the user**.** It can contain synonyms and misspellings:

a
B_1
C
D
Ee
F_x

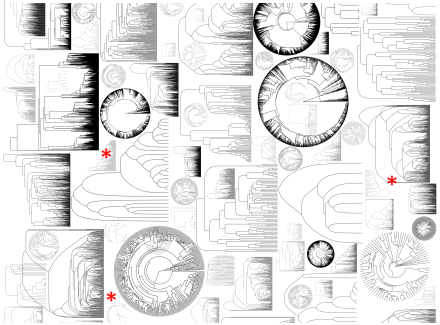
a2) Taxon names are processed using the Taxonomic Name Resolution Service (**TNRS**) and are **standardized** to a taxonomy:

A
B
C
D
E
F

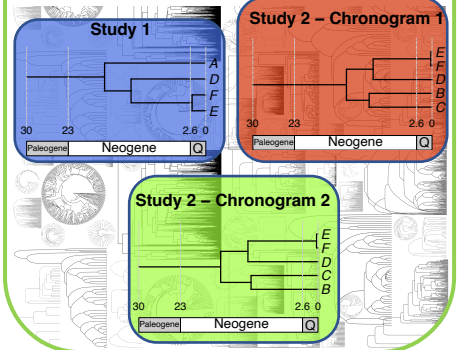
In this example, 4 names are synonyms in the standardized taxonomy, shown in bold.

b) Search DateLife's chronogram database

b1) Processed taxon names are searched in DateLife's chronogram database and identified (*):



b2) Matching chronograms are pruned and saved as **source chronograms:**



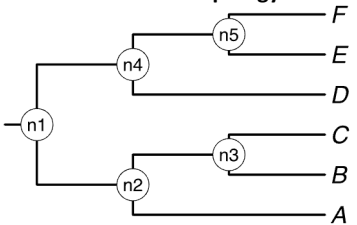
c) Summarizing DateLife's search results

c1) A **tree topology** of the taxa of interest is chosen:

c2) Nodes from source chronogram are **congruified** to nodes in the 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

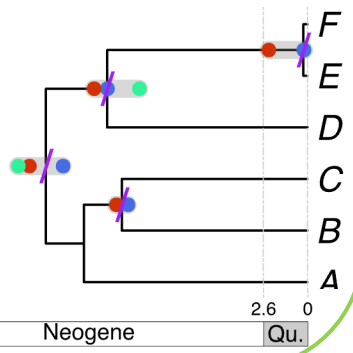
A tree topology



c3) Congruified **node ages** are **summarized** by node:

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) Summary ages of congruent nodes are used as secondary calibrations to **date the tree topology.**