

VI. Speciation

A. Allopatric vs. Sympatric or Parapatric Speciation

4 plausible allopatric speciation events

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A. Allopatric vs. Sympatric or Parapatric Speciation

Then what's driving speciation in west and east of Andes?

One plausible allopatric speciation event

VI. Speciation

A. Allopatric vs. Sympatric or Parapatric Speciation

1 plausible allopatric speciation event

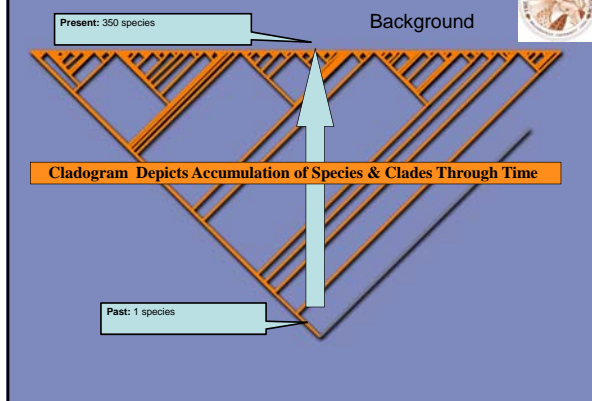
2 plausible sympatric speciation events driven by adaptation to epiphytic habit

VI. Speciation



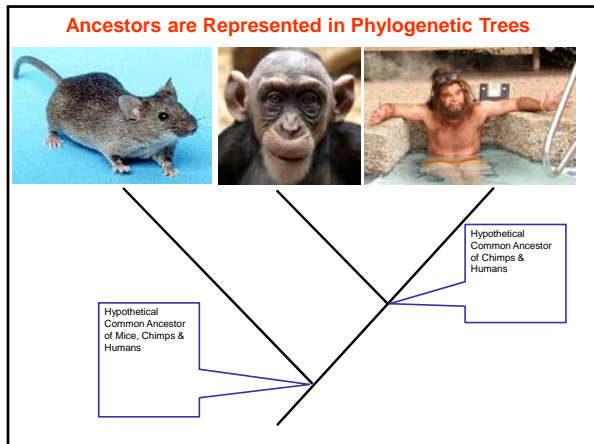
B. Key Innovation (skip)

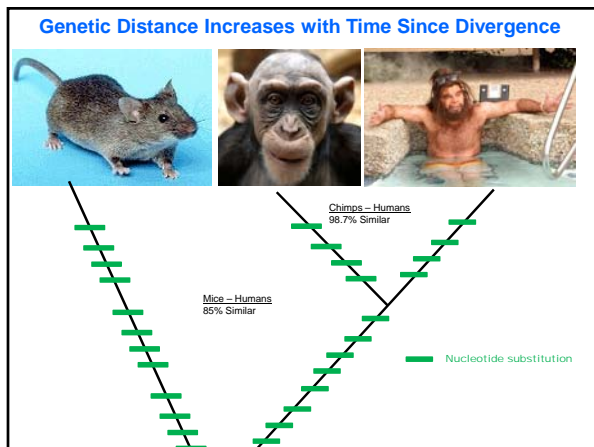
VII. Molecular Dating

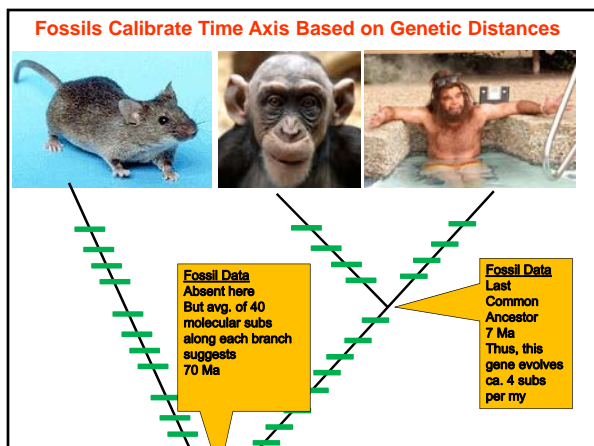


Converting Relative Time into Absolute Time:

An Overview



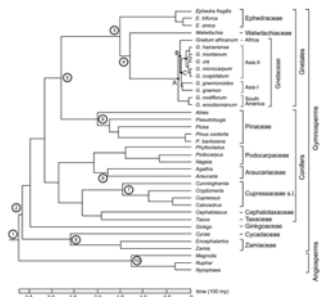




VII. Molecular Dating



A. Age of Clades & Species



Won & Renner (2006)
 10 fossil calibrations
 + Molecular Data to get
 this "Chronogram"

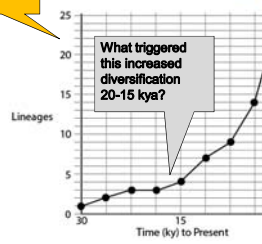
VII. Molecular Dating



B. Tempo & Mode of Speciation

Chronogram

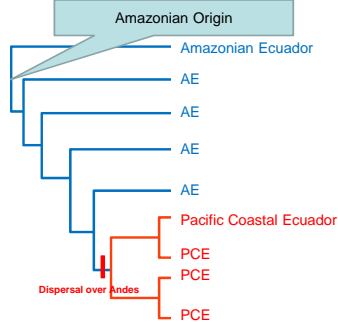
LTT Plot



VIII. Biogeography



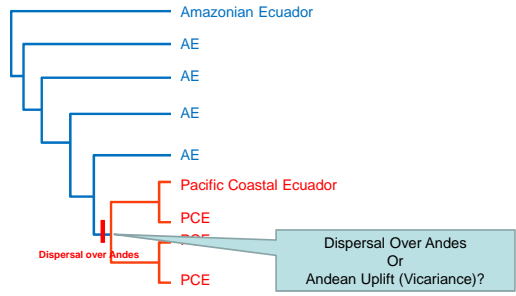
A. Geographic origins



VIII. Biogeography



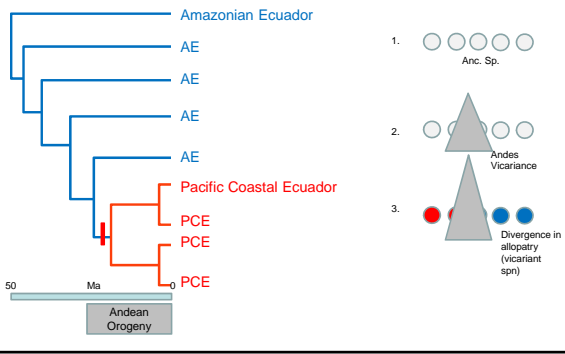
B. Vicariance or Dispersal?



VIII. Biogeography



B. Vicariance or Dispersal?



VIII. Biogeography



Clade age makes a difference in your interpretation

