Speciation

How are species defined?

Species divergence in allopatry

Species divergence in sympatry

Reuniting

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An ancestral population

Population splits onto different islands and characteristics diverge



Large ground finch



Medium ground finch

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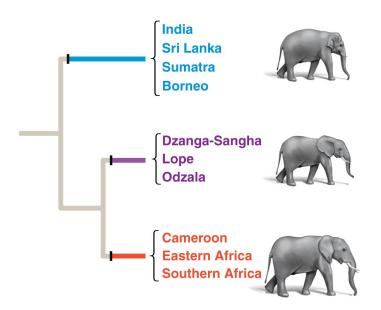
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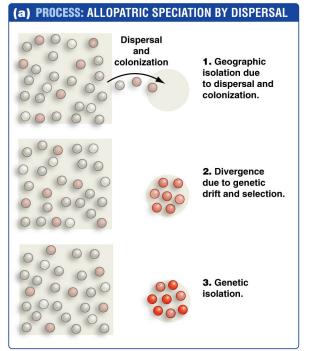
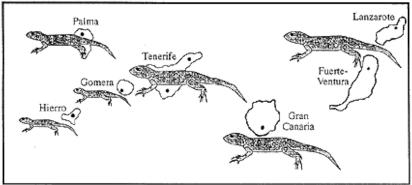


Figure 2. The relative sizes of typical lizards from each population are shown. (Redrawn from Thorpe et al., 1994.)



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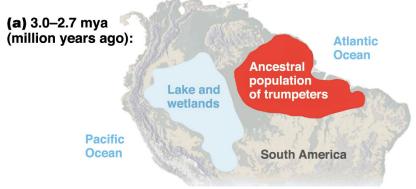
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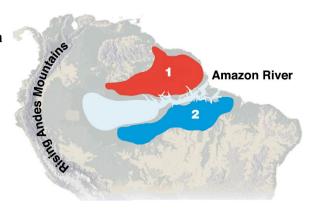
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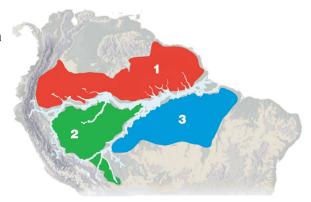
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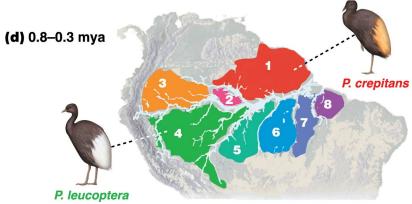


(b) 2.7-2.0 mya



(c) 2.0-1.0 mya





Example: ratites



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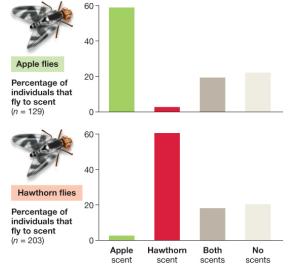


Figure 24.8 Disruptive Selection on Fruit Preference in Flies.

Each fly was tested with four types of scent, one at a time, in a laboratory setting.

SOURCE: Based on data from Dambroski, H. R., C. Linn Jr., S. H. Berlocher, et al. 2005. *Evolution* 59: 1953–1964.

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(a) If chromosome doubling occurs, allopolyploid offspring can be fertile and form new species.

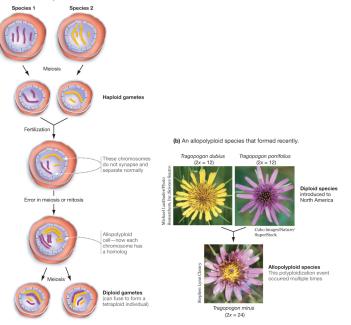


Figure 24.10 Allopolyploids Can Form New Species.



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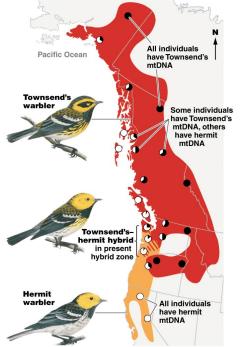
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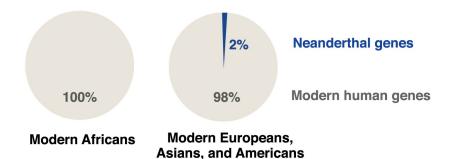
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Source: Prüfer, K., et al. 2014. Nature 505: 43-49. © 2017 Pearson Education Inc.

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