

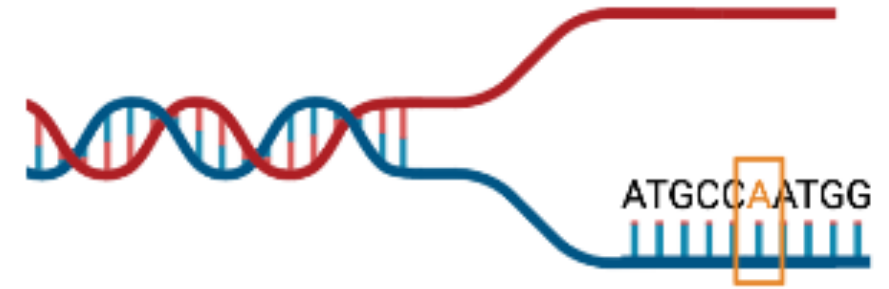
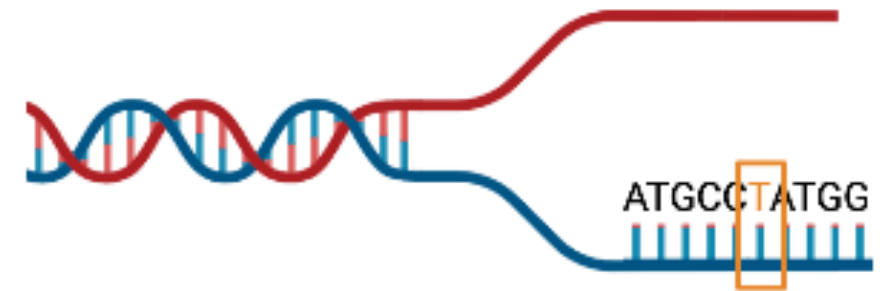


Lizard Phylogeny

SNPs

Single Nucleotide Polymorphism

- a variation in a single nucleotide position



Ancestry

- line of descent : lineage

Phylogenetic Tree

- SNPs used represent “genome”
- Shows evolutionary history
- Equates to ancestry

Adaptation

A structure or function that confers greater ability to survive and reproduce in a particular environment

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Adaptive Radiation

When ancestral species diversifies into many descendant species that occupy different environmental niches

Convergent Evolution

Different groups of organisms can independently evolve similar traits by adapting to similar environments or ecological niches

How are ecomorphs of anole lizards in the Caribbean are examples of both adaptive radiation and convergent evolution?

Adaptive radiation:

The ancestral anoles were dispersed onto different islands. These anoles on the different islands diversified into different species that occupy different ecological

niches:

Parts of the tree

Grasses

Bushes

Convergent evolution:

The anoles on each of these islands evolved independently but similarly because the environments (ecological niches) on each of these islands were similar.

