Ch 23.2 Notes

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Vocab

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Population: A group of individuals of the same species that live in the same area and interbreed, producing fertile offspring

Gene Pool: Consists of all copies of every type of allele at every locus in all members of the population

Hardy-Weinberg Equilibrium: A population that is not evolving, allele and genotype frequencies will remain constant from generation to generation, provided that only Mendelian segregation and recombination of alleles are at work.

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Notes

Hardy-Weinberg equilibrium describes populations that are not evolving

The Hardy-Weinberg equation is used to predict genotype frequencies in a population

There are five factors that can lead to evolution

Gene pools and allele frequencies

The presence of genetic variation DOES NOT GUARANTEE evolution

Population= individuals of the same species in the same area interbreeding=fertile offspring

Gene pool= combined alleles of all the individuals in a population

* Basically all the available DNA you can “pick” from
* Only one allele exists for a locus= fixed
  + All individuals homozygous for that allele

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Factors leading to evolution

Populations NOT in Hardy-Weinberg are evolving

What can lead to evolution? (all the things not allowed for hardy-weinberg to exist)

* Genetic drift
* Gene flow
* Mutation
* Sexual selection
* Natural selection

Why do real populations rarely reach Hardy-Weinberg equilibrium?