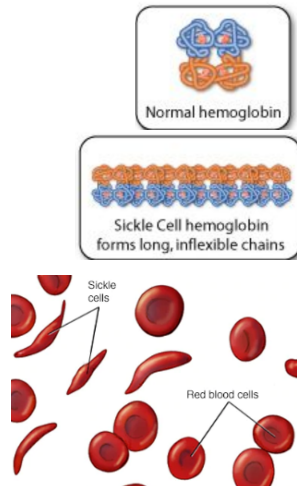


CHAPTER 8 THE ORIGIN OF SPECIES

8.1 NATURAL SELECTION p. 326

Explain how natural selection favours the sickle-cell trait in some African countries.



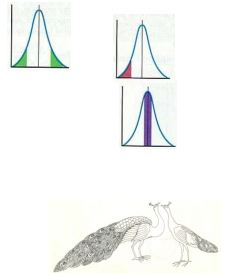
Three Types of Selection Explain each of the following:

Stabilizing Selection

Directional Selection

Disruptive Selection

Additionally, there is Sexual Selection



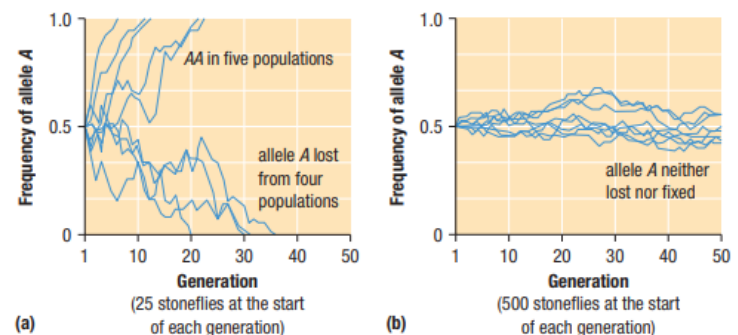
Explain why sexual selection is in check by predation.

Which type of selection led to the following characteristics?

- hollow and very lightweight bones in birds
- hundreds of different but genetically very similar species of fruit flies living in the Hawaiian Islands
- turtles species that have changed little over millions of years
- males of many frog species that call very spring, while females are silent

Genetic Drift

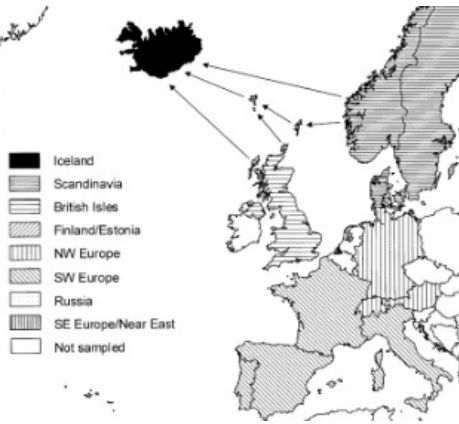
Allele fixation = lost alleles.



Differentiate between two types of genetic drift:
Bottleneck and Founder Effect.

Bottleneck:

Founder's Effect:



The human population of Iceland was founded by a relatively small initial population more than 1000 years ago. Would you expect the genetic diversity of Icelanders to be more or less than the genetic diversity of Canadians? Explain.

p. 335 #1, 2, 4, 6, 7, 8

8.2 SPECIATION p. 336

Speciation always involves isolation. Explain.

Explain the following mechanisms which keep separate species distinct:

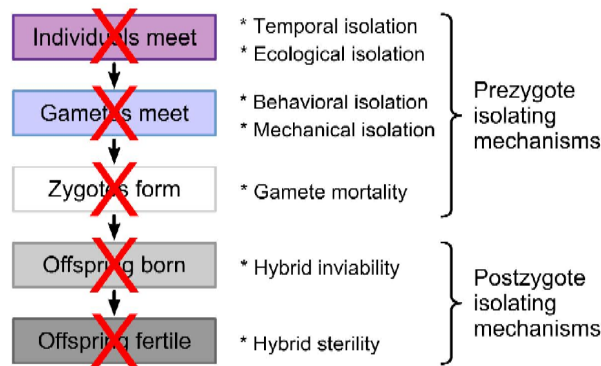
Reproductive isolating mechanism

Prezygotic mechanism

Post zygotic mechanism

Define allopatric speciation.

Define sympatric speciation.



Explain polyploidy and hybrid species.

