

# Evolution as Genetic Change

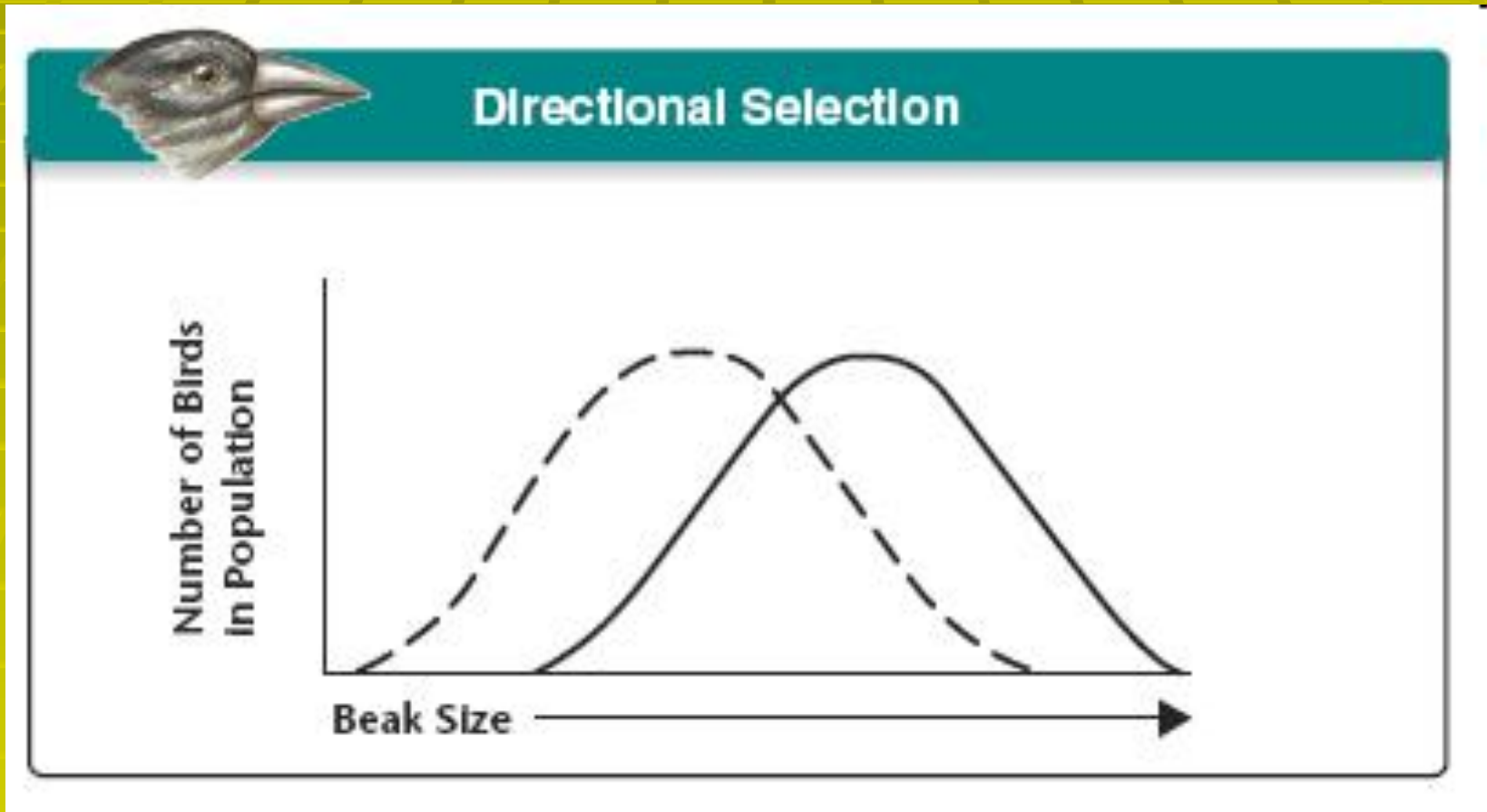
## Essential Questions:

- How does natural selection affect single-gene & polygenic traits?
- What is *genetic drift*?
- What are 5 conditions needed to maintain *genetic equilibrium*?

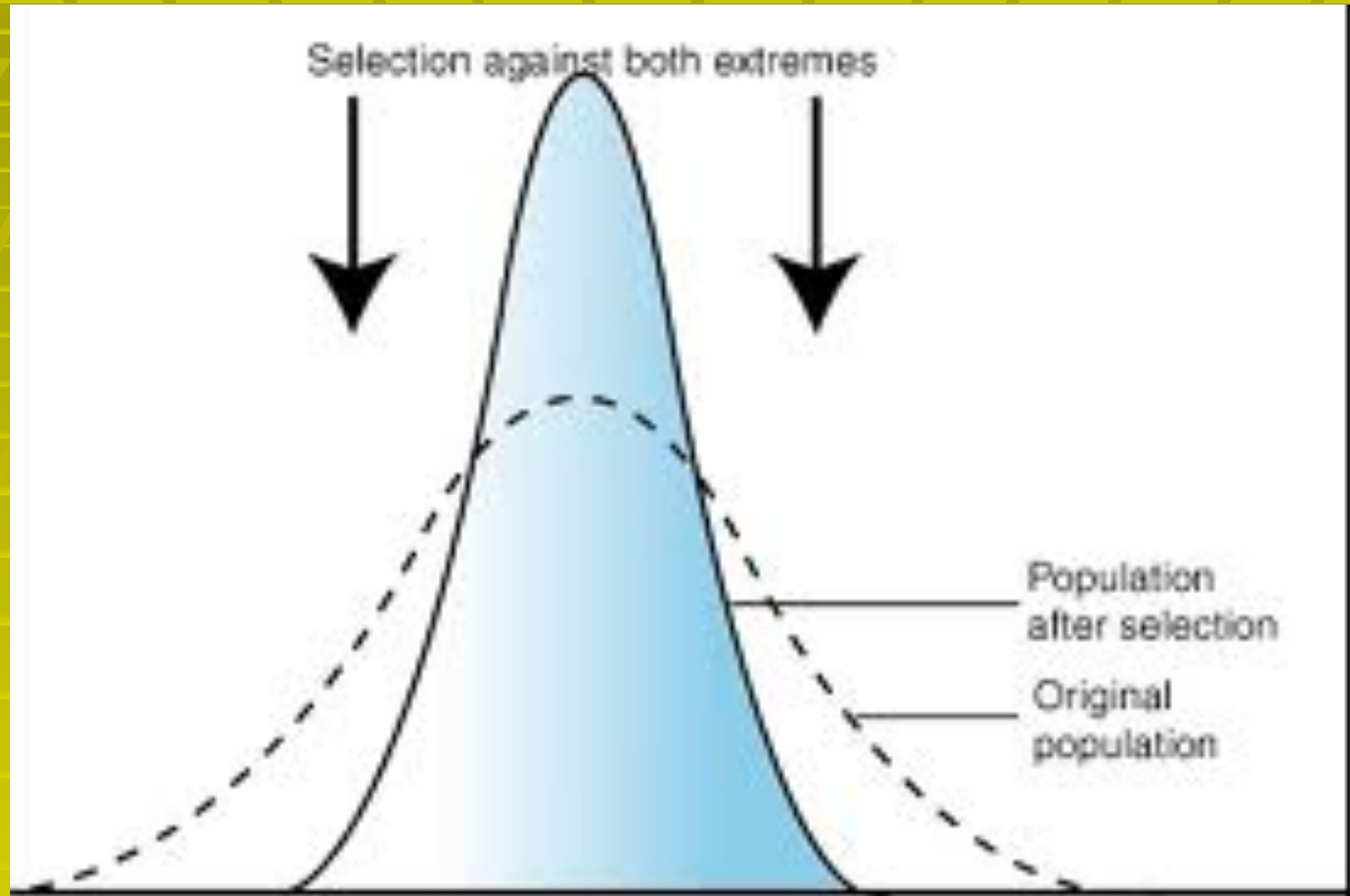
- Natural selection on single-gene traits



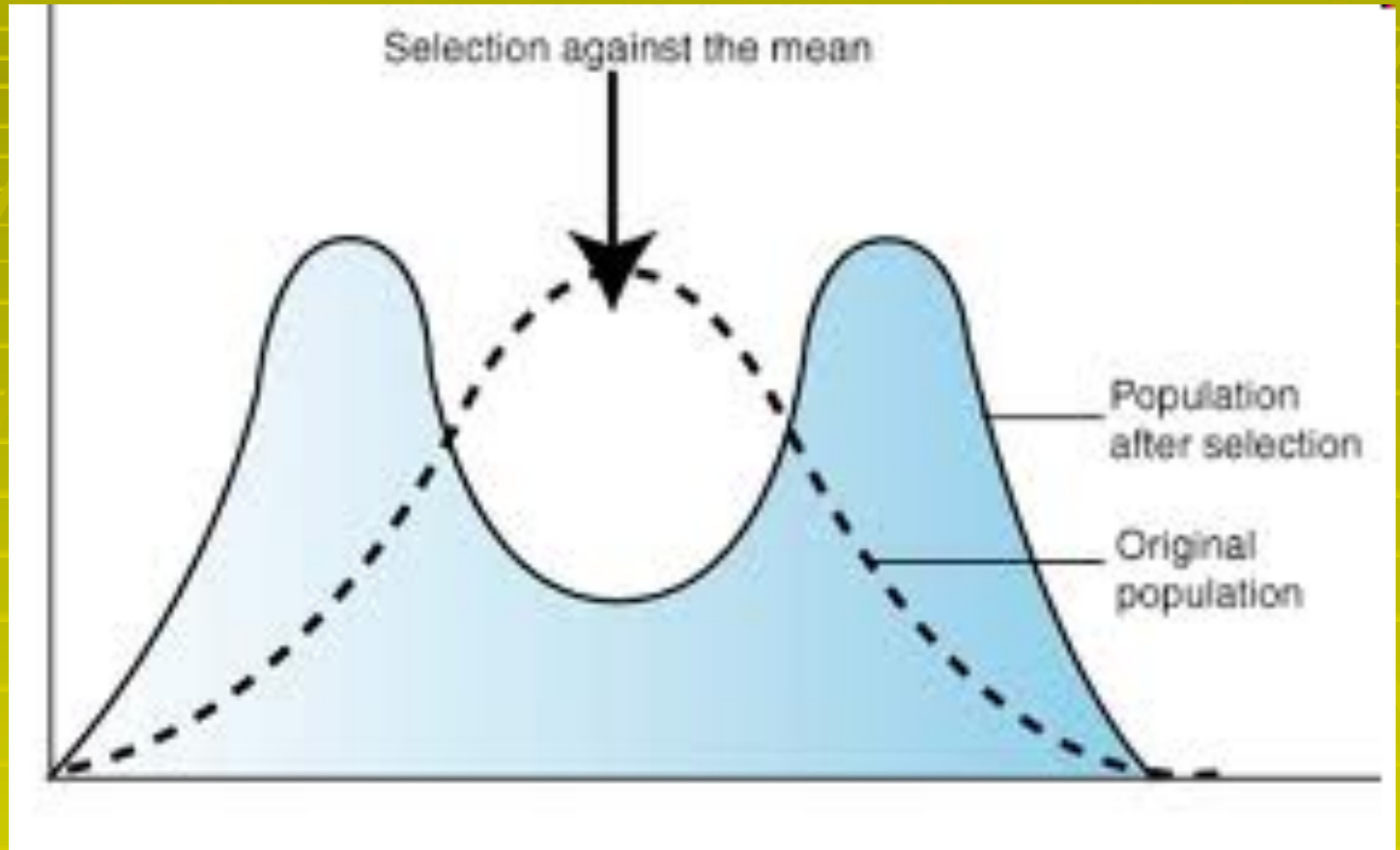
- Natural selection on polygenic traits
  - Directional selection



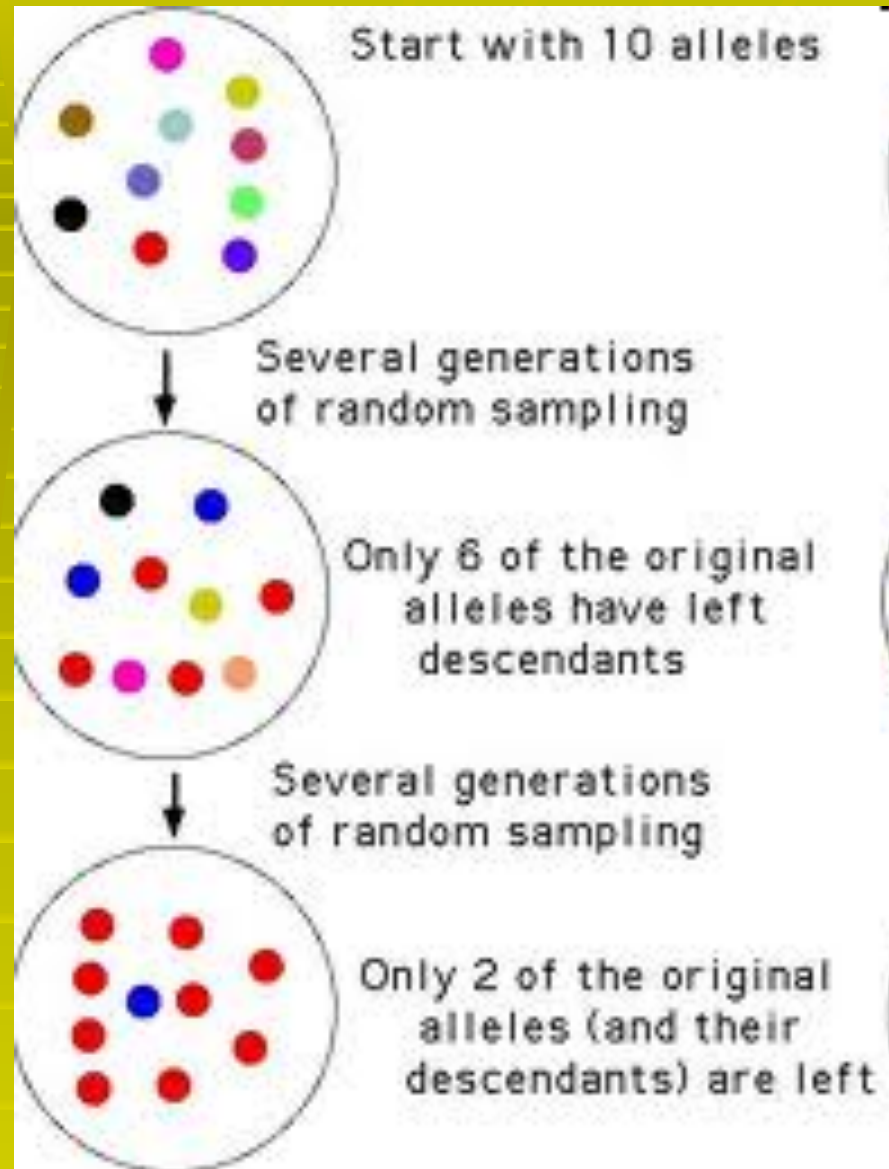
- Stabilizing selection



- Disruptive selection

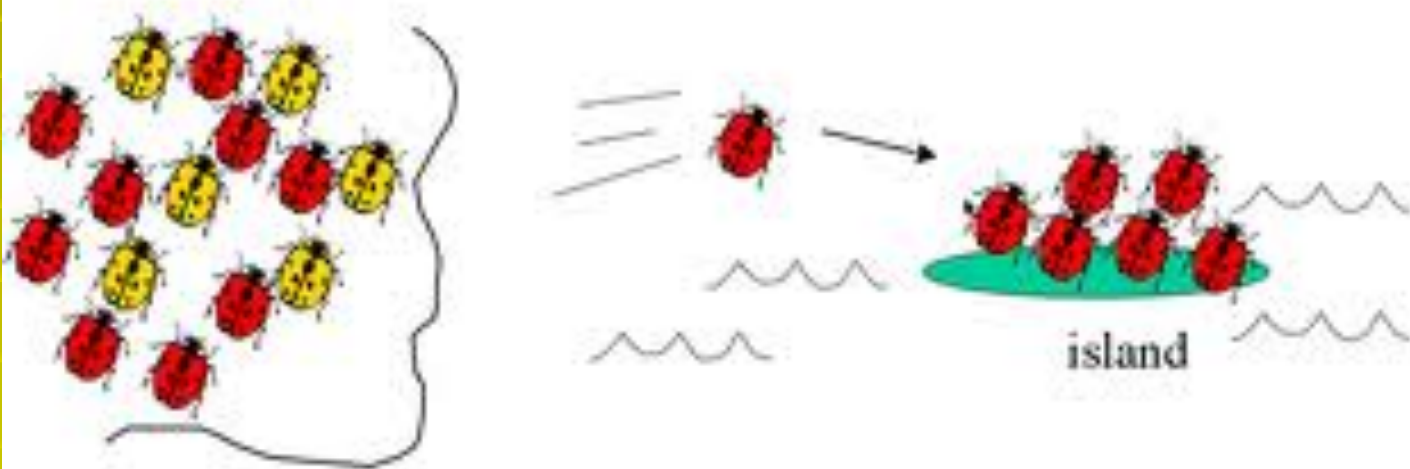


- Genetic drift
  - small pops



- Founder effect
  - Migration causes changes in allele frequency
  - Natural selection not a factor

- founder effect: a few individuals from a population start a new population with a different allele frequency than the original population



- Evolution vs. genetic equilibrium
  - Hardy-Weinberg principle
    - Allele frequencies in a pop. will be constant unless 1 or more factors cause change
      - Random mating
      - Large pop
      - No movement in/out of the pop.
      - No mutations
      - No natural