

Genetic Drift and Bottlenecked Ferrets

Part 1: Luck of the Draw

How does sampling error affect allele frequencies? What is the founder effect?

- Black-footed Ferrets Near Extinction
- Sampling Error and the Founder Effect
- Test Your Understanding
- Summary of Part 1

Part 2: Random Mating

Can sampling error occur during random mating in a "gene pool"? What is genetic drift and when does it occur?

- Diving into the Gene Pool
- What Is Genetic Drift?
- Test Your Understanding
- Summary of Part 2

Part 3: Size Matters

How does population size affect the rate of evolution by genetic drift? Can fixation and loss of alleles occur just by chance?

- Large and Small Populations
- Loss and Fixation
- Test Your Understanding
- Summary of Part 3

Part 4: Inbreeding and Genetic Drift

How does inbreeding cause a reduction in effective population size, increasing the effect of genetic drift?

- Genetic Diversity
- Heterozygosity
- Effective Population Size
- Nonrandom Mating
- Unbalanced Sex Ratio
- Test Your Understanding
- Summary of Part 4

Part 5: Save the Ferrets!

Can you design and test a conservation plan for endangered ferrets that minimizes the risk of loss of genetic diversity?

- Genetic Diversity and Conservation
- A Simple Reserve Design
- Which Is Better: One Population or Many?
- Design Your Own Reserve
- Summary of Part 5

Part 6: Quiz Questions

Quiz Questions

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