

Chapter 1-2: Studying Populations

Study and Review Questions: #1

1. Define the following terms in complete sentences: population density, direct observation, indirect observation, sampling, estimate, mark and recapture.
2. What is the common formula that a wildlife biologist could use to determine the population density of white egrets in the Bolinas lagoon?
3. Explain why **direct observation** might be more a more effective method of determining the population of Monterey pine trees on our school campus than the population of crows.
4. Gophers tunnel under the ground and, as they do, they push up small, visible mounds of dirt. How could a wildlife biologist use this aspect of gopher behavior to determine the size of the gopher population in a given area?

Study and Review Questions: #2

1. It would be a very challenging task to count every madrone tree in Mount Tamalpais State Park. Describe a method biologists might use if estimating the madrone tree population was a study they were undertaking.
2. National Park rangers are not quite sure how many black bears live in Yosemite Valley. They do set many traps and have marked and tagged a number of bears. Discuss how this method helps the rangers estimate the bear population in the Valley.

Study and Review Questions: #3

1. Define the following terms in complete sentences: birth rate, death rate, immigration, emigration,
2. The wild turkey population on Mt. Tamalpais has been steadily increasing over the past five years. Construct a line graph that reflects this trend.
3. Angel Island, in San Francisco Bay, is home to a healthy deer population. Several years ago, the population was much larger and many of its members began to suffer. Several members of the deer population had to be relocated. Discuss some of the limiting factors that may have caused the deer population to suffer.

