

Citizen Science • Reflection Section Answer Guide

Invasion of the Song Snatcher!

Introduction

What did the scientists want to study? *The scientists wanted to study the chipping sparrow population in both native habitats and those invaded by spotted knapweed. Scientists wanted to see if a relationship existed between the areas influenced by knapweed invasion and the number of old versus yearling birds and song diversity of the chipping sparrow.*

Why is a bird's song important? *The male birds sing to send a message to females and to other males in the area. Singing can attract females and warn other males to avoid their territory.*

Methods

Scientists use different methods to collect data about a topic. Describe one method used by the scientists in this study. *Students will have individual answers to this question. However, students should mention at least one of the following methods: recording bird songs, using computer software to analyze data, banding birds, observing banded birds, creating plots to study, or developing a time frame to collect the data.*

Why do you think it is a good idea to have the same scientist measure and make notes about all the bird songs? (Hint: Think about a time when you and a friend did the same activity, but later when you talked about the activity, you both remembered different things about the event.

Why might this cause a problem in the world of science?) *Different observers may not observe and make notes in the same way. This difference would create a problem for the quality and consistency of the data.*

Findings

In your own words, summarize what the scientists found. *Students will have individual answers to this question. The students should, however, mention several of the findings in the study.*

See figure 13. What is one difference you notice for the older birds when you compare them in the native versus the invaded habitat? *Students will likely notice that on Figure 13, older birds in invaded habitats had fewer song types than older birds in native habitats.*

Discussion

Explain one reason why spotted knapweed may impact the chipping sparrow. *Students will have individual answers to this question. They should, however, be able to discuss why spotted knapweed may impact the chipping sparrow based on what the scientists studied in this article.*

Do you think that other migratory songbirds may respond similarly to invasive plant species invasions? Why or why not? *Students will have individual answers to this question. They should, however, be able to discuss why or how scientists might pursue this same study for other migratory bird species.*