

Chapter

2

Principles of Ecology

Problem Solving

Use with Chapter 2, Section 2.1

How the Cowbird Affects Songbird Populations

Since the early 1980s, ornithologists have noticed a steady decline in migratory songbird populations in North America. Some of this decline has been attributed to reduction in feeding and nesting habitats, due to the decrease in forest and wetland areas. Others think that a major cause of the decline and even disappearance of some songbird populations is the brown-headed cowbird.

No Nest of Its Own Cowbirds never build nests, incubate their eggs, or feed their young. Even so, their populations are growing at alarming rates. The cowbird lets other birds rear its young. It does so by

laying its eggs in the nests of vireos, flycatchers, warblers, and other birds that build open, cup-shaped nests. The female cowbird may even remove eggs or small young from the host's nests before laying her own egg there. The cowbird egg will hatch in ten or eleven days, usually earlier than any remaining eggs of the host bird. Even if the host species hatches, the young cowbird will grow larger and demand most or all of the food brought to the nest by the parents. The cowbird outcompetes its nest mates. To learn more about the effect of cowbirds on songbird populations, answer the following questions.

1. A female cowbird lays ten to twelve eggs each breeding season, one egg per host nest. The undisturbed nests of host species usually contain three or four eggs. During one breeding season, one cowbird female might be responsible for the displacement of how many native songbirds?

2. At a Christmas Day Bird Count in Louisiana in 1984, more than 30 million cowbirds were observed. If half that population is composed of females, how many songbirds might the cowbird population displace in a single breeding season in that area?

3. In California, the cowbird has been responsible for the disappearance of at least three kinds of songbirds—the willow flycatcher, yellow-breasted chat, and Bell's vireo. What actions might be taken to halt the increase in cowbird populations and perhaps even reduce their numbers? What kind of information would you want to have before you could come up with the best possible solution to this problem?

4. Would you advocate eliminating the brown-headed cowbird from North America? Why or why not?

