



# Student Reference Sheet A

## Neotropical Migratory Birds

Almost 70 percent of the world's bird species are declining in population. Many birds are on the endangered, threatened, or watch lists in different states and countries. The rapid decline in the number of species of birds worldwide signals that the ecology of the planet is changing. What are the major threats to birds worldwide? What are people doing to try to protect them?

You will complete a simulation that focuses on certain types of neotropical migratory birds. These birds breed and spend summers in the United States or Canada and then travel great distances to their wintering grounds in Central or South America. The majority of the approximately 200 species of neotropical migratory birds are songbirds.

The life cycles of these migratory birds are very complex. To understand the population changes of these birds, you must consider the breeding grounds in the north, the wintering areas in the south, and the migration path. Below are some of the major threats facing neotropical migratory birds:

- habitat fragmentation
- nest predation
- cowbird parasitism
- urbanization
- linear development (i.e., roads, pipelines, and high tower lines)
- loss of habitat—summer, winter, and stopover habitat

You will investigate how forest fragmentation might affect populations of interior forest migratory birds. Forest fragmentation is the breaking up of large continuous forest into smaller, isolated parcels separated by roads, fields, houses, and other development.

Studies by the U.S. Fish and Wildlife Service have shown that many forest bird species are

rare or absent from small, isolated blocks of forest. It is difficult to determine the exact size of territory each bird species needs because it can vary by regions and habitat types. Despite these difficulties, we do know that some bird species occur in habitat patches of all sizes, whereas others are moderately or highly sensitive to fragmentation and rarely occur in small forested areas. Listed below are samples of each:

### Moderate or High Sensitivity

- Ovenbird
- Acadian flycatcher
- Scarlet tanager
- Wood thrush



### Low Sensitivity

- Red-headed woodpecker
- Northern cardinal
- Indigo bunting
- Black-capped chickadee
- Blue jay



Wildlife research now shows that many species of forest birds require large blocks of habitat. Moderate-to-high sensitivity species avoid habitat on the edge of built communities and do not nest successfully near edges. Populations of these species generally do poorly in areas where habitat is broken, or fragmented, into small, isolated blocks.

You will now look at two different scenarios for changes to a forested area and the effects of fragmentation on a wood thrush population.

