Key Words

Migrate: to move from one part of the world to another

Neotropics: the region of the world that includes South America, Central America and much of Mexico

Raptors: birds such as hawks and eagles, which hunt and kill other animals for food

Toxic: a substance that is poisonous or harmful to living things

Many birds and other animals do not like to live in just one spot. They will migrate between summer and winter "homes." Why do you think these animals don't live in one location?

In general, the answer is food! Cold winters make it hard for birds to find food and shelter. So, they will spend the summer in one part of the world, but fly south when the weather cools. They typically will migrate to parts of the world that have warmer winters. Birds that spend summers in the United States often travel to the **neotropics**, and winter in Mexico, Central America and South America.

Do the math:

1. There are about 500 species of birds found in Arizona. Of these, almost 240 migrate to the neotropics. About how many species of birds do not migrate to the neotropics? What percent of the bird species found in Arizona migrate?

- 2. The elf owl spends summers in Arizona, from April through October. It spends the rest of the year in its winter home in Mexico. How many months does it spend in Mexico? What percent of the year does it spend in Arizona? In Mexico?
- 3. The ruby-throated hummingbird flies 500 miles nonstop over the Gulf of Mexico. The trip takes 25 hours. What is the hummingbird's average speed in miles per hour? In kilometers per hour?

Because migratory animals often move across state and national borders, protecting them can be difficult. For example, the Swainson's hawk is a raptor that summers in Arizona. When winter approaches, these hawks travel in huge flocks to Argentina in South America. Once there, they gather near fields to feed on grasshoppers. In 1995, thousands of hawks died in Argentina. After research, scientists believe the hawks died because they ate insects sprayed with a highly toxic pesticide.

Now, biologists and government officials in the United States and Argentina are educating people about pesticides and possible alternatives that may be safer to wildlife.

Map it:

Let's track a Swainson's hawk through its annual migration. Ask a parent for a map that shows both North and South America. Pretend this particular hawk spends the summers near Phoenix. Locate this city on the map and place a dot. Now, locate Buenos Aires, Argentina on the map and place a second dot. This represents the wintering grounds for the hawk. Raptors cannot migrate over large bodies of water, such as oceans. They must travel over land. On your map or a piece of tracing paper, draw a possible flight path for the hawk as it migrates from Arizona to Argentina.

How far does the hawk travel round trip?

Which countries would need to work together to protect Swainson's hawks along the entire route of their migration?

■ This feature is part of the Arizona Game and Fish Department's Focus Wild Arizona program, a free educational program for teachers, parents, students or anyone interested in learning about wildlife and habitat. Visit our Web site, www.azgfd.gov/focuswild, to find exciting lessons and resources.



By Eric Proctor

