

Figure 4. Percentage of permanent and migratory birds.

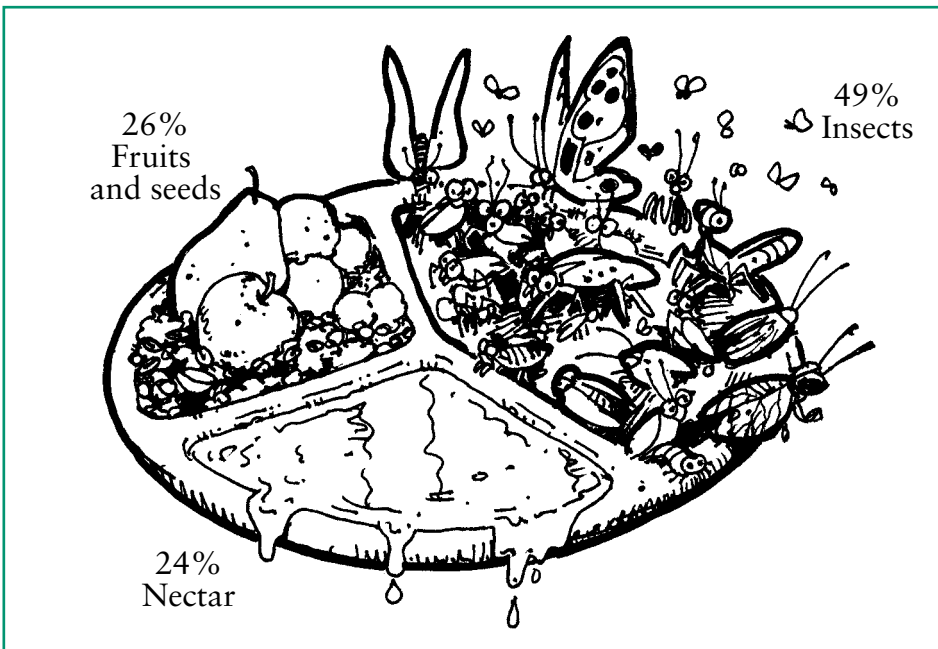


Figure 5. Food sources of birds in the Caribbean pine forest.

resident birds can live in the same place at one time. With this information, people can make sure that resident and migrant birds have the kinds of places in the tropics that they need to survive. By providing and protecting the forests that different kinds of birds need, people can help reduce the declining numbers of songbirds in the future.



Reflection Section

- A healthy food web is balanced between food sources

and the animals that eat the food. Think about insect-eating birds. What would happen to the population of insects if the birds were not there to eat the insects?

- How might protecting some tropical forests help reduce the declining number of songbirds in North America?



FACTivity

The scientists found that birds ate three kinds of foods. These foods were 1)

insects, 2) fruits and seeds, and 3) nectar. They also found that birds captured their food in the air, and they gleaned, jumped, and probed for their food (See Table 1). In this FACTivity, you will answer the question: What kinds of physical characteristics might



Reflection Section

- Name two examples of diversity described in this article. Think about the type of birds, the foods they eat, how they get their food, and the trees and plants where they find food.

- In what ways did diversity help the birds?

Implications

Throughout North America, the number of songbird species is declining. Many of those songbirds are migrants that live in the tropics during the winter. This study shows how migrant and

different birds have to help them capture their food? Here is the method that you will use to explore the question: You will need five large pieces of plain white paper and crayons. On each piece of paper, design a bird that captures and eats different kinds of foods. Pay careful attention to the kind of beak, wings, body shape, and legs the bird should have. You may want to design your birds in small groups, discussing how each part of the bird would help it capture the right kind of food.

Design a—

- Bird that gleans and eats seeds and fruit
- Bird that probes into flowers and eats nectar
- Bird that captures insects while flying
- Bird that captures insects by probing into trees
- Bird that jumps along the ground and picks insects off of the ground

After designing your birds, you may want to do some research on different birds to learn about the shape of their beaks, the size of their wings,

the shape of their body, and the length of their legs. You can explore different birds by using a bird identification book. Compare what you have learned with your own bird designs. What kind of physical characteristics do birds need to capture different kinds of food?

From Latta, S. C. and Wunderle, J. M. Jr. (1998). The assemblage of birds foraging in native West Indian pine (*Pinus occidentalis*) forests of the Dominican Republic during the nonbreeding season. *Biotropica* 30(4): 645-656.

Another resource: Bird Beak Buffet: <http://saveourlake.org/lessons/chpt2/act5.htm>.