

# Science at Work



Dr. Bridget Stutchbury is a biology professor at York University. Her research focuses on finding causes for why bird populations in the western hemisphere are declining.

## Canadians in Science

Dr. Bridget Stutchbury loved exploring nature and the outdoors as a child. She decided to turn her love of nature into a rewarding career. Today, she is a professor of biology at York University in Toronto and an expert on migratory birds. Dr. Stutchbury is trying to find out why bird populations in the western hemisphere are declining. She has written a book titled *Silence of the Songbirds*. In her book, she suggests that toxic pesticides and the loss of forests are the main causes of the dwindling number of songbirds.

### In Dr. Bridget Stutchbury's Words

The threats to migratory birds point to greater challenges for human society and for the environment. From the point of view of ecology, how we live today is not sustainable. Natural resources are not limitless. We need to develop better ways to manage the resources that we depend on.

This is an exciting time for students who are interested in ecology. Society is at the forefront of an environmental revolution. Many people in Canada, including leaders in governments and businesses, agree that we must change how we interact with our natural environment. This opens the doors to many career opportunities connected to ecology. There is a demand not only for solid technical skills, but also for good communication skills. People in science and related fields need to be able to write and speak effectively. We need good communication skills to share information about issues that affect ecosystems and to persuade governments and businesses to make the best decisions.

Studying science is valuable, even if you do not pursue a science career. Knowing about scientific methods will help you understand and evaluate results of research in subjects such as biology, chemistry, and medicine. This will help you to make informed decisions about personal issues, such as health and diet. And it will help you, as a consumer, make choices that will shape the ecology of tomorrow's world.



Researchers often capture and band birds to track their movements.

## Ecology at Work

The study of ecology contributes to these careers, as well as many more!



### Park Naturalist

Park naturalists develop education programs for park visitors of all ages. They often guide visitors on nature hikes. They also monitor the conditions of ecosystems within a park. Park naturalists usually have a university degree in forestry or environmental science.

### Zookeeper

Zookeepers take care of animals at zoos and aquariums. Their duties, however, include more than just feeding and checking the health of the animals. Zookeepers also help to collect data for research and scientific studies. In addition, they often help to manage breeding programs for rare and endangered species. Zookeepers study biology and zoology at university.

### Environmental Lawyer

Environmental lawyers help clients understand and obey laws and regulations that protect the environment. As well, environmental lawyers give advice to companies and other organizations about activities to conserve ecosystems and use natural resources efficiently. In Canada, governments often ask environmental lawyers to make recommendations about policy decisions related to important environmental issues.

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## Over To You

1. Dr. Stutchbury states that “threats to migratory birds point to greater challenges for human society and for the environment.” What do you think she means by this statement? Explain what you think are the main ecological challenges facing Canadians today.
2. Identify three strategies that Canadians could use to manage natural resources better. Share your strategies with a partner. What are the similarities and differences between your strategies and your partner’s strategies?
3. Growing scientific evidence suggests that loss of habitat and other major environmental threats are causing many bird populations to decline. How might a decline in a bird population affect an ecosystem?
4. From the list of careers related to ecology, choose one that interests you. Use Internet or print resources to research this career. What you would need to do if you wanted to pursue it? **What essential skills would you need for this career?**

