



What is your name?

Jorie Favreau

What is your job description?

Professor of Wildlife Biology at
Paul Smith's College

What do you study now?

Snowshoe hares (*Lepus
americanus*)

Why study it? I wonder why
animals travel like they do. For
instance, why does an animal

choose to climb a hill or go down a valley or move from a stand of evergreen trees or go towards a lake? These kinds of movements are very complicated in many mammals. In snowshoe hares however, these movements are fairly simple. Hares move to eat and to avoid predators. That is it. They do not move in social groups like some primates, they do not move far distances like large predators, and they do not migrate. Also, because snowshoe hares live in the North Country all year and are active in the winter (not in dens or hibernating), they are doing interesting things all year. That means I always have something to do! Even if I can't see the hares, I see their tracks and signs of what they have been eating. These clues allow me to understand where they are moving and why they are moving.

Where do you study it? Fortunately, snowshoe hares are quite common (another reason why they are a good animal to study), so I can study them near Paul Smith's College easily with my students.

What fascinates you the most about North Country ecology? I am fascinated by how animals survive our winters. Think about snowshoe hares. They don't do what so many animals do – migrate (many birds), hibernate (ground squirrels), put on a bunch of fat (raccoons), live under the snow where the air is warmer than above the snow (small rodents and weasels), sleep in dens (they do not live in burrows, all they get is a little depression in the ground or a place under a balsam branch), or eat high energy food (chickadees). Some of these survival strategies aren't even choices for snowshoe hares. For instance, they can't gain a lot of fat (which would be good insulation and provide energy to combat the cold) because then they couldn't run away from their predators. Instead they face the cold, lower their metabolism, and eat bark (low calories and high in fiber) in the winter. That is really amazing!

What is the best thing about your job? I love thinking like animals. I like reading about their biology. I like talking to other people to learn what they know about animals. I like thinking of new ideas and then collecting the data to see if I can explain why animals act the way they do.

What is the worst part about your job? That each day only has 24 hours. I have more ideas and more projects than I have time for. I feel like I need two of me to do everything I want to do in my life.

What inspired you to first study science? During college I took a class on the social ecology of primates. We lived in tents in Mexico and studied the behavior of a large group of macaques (a kind of monkey) that lived on an island. The monkeys were completely comfortable with researchers and let us get close to watch them. We learned to recognize each individual and spent each day recording data about macaque behavior. During college I also volunteered at a zoo and realized that I wanted to work to conserve wild animals. After college I was a zookeeper and did science for “fun” on the side. My research projects at the zoo were very much like what I did in Mexico – I studied coatis (long tailed mammals that are relatives of raccoons) and Siberian ibex (a goat like animal that lives in the mountains). Finally I realized what I really wanted was to study animals in their natural habitat. I worked as an assistant on other people’s research projects for a few years and then went to graduate school so I could lead my own research. I really had no idea that being an ecologist was an option until after I had these life experiences.

What do you do in a typical day? I teach other people who love animals as much as I do. I teach students who are majoring in Fisheries and Wildlife Science how to study animals. One course I teach is called Natural History of North American Vertebrates where students learn to identify fish, amphibians, reptiles, birds and mammals. They also learn about their habitats, what they eat, interactions with other animals, and evolutionary history. Another course is called Animal Behavior. In this course students learn “why” animals act the way they do – including neurons, hormones, genetics, development (learning), and evolutionary history. One of my favorite things is talking to students to help them figure out how to make their own careers as ecologists. Their interests are broad, from endangered species to common species, amphibians to mammals, a range of ecosystems, and a range of careers from research to management to law enforcement (i.e., “game wardens”). I also find time to work with students on my or their own research projects. Their research projects have been fascinating! Students have investigated color vision in otters at the Wild Center in Tupper Lake, how chickadees balance foraging and avoiding predators in winter, how roads affect the movement of flying squirrels, “scrape” behavior of white-tailed deer, nesting of guillemots in Maine, social behavior of captive wolves, and much more. Even my law enforcement students have conducted research. For example, one student examined the decline of body heat in moose after they have been harvested. This knowledge would help law enforcement officers determine how long a moose had been dead and thus if it had been poached before the season opened.

What was your first science project/experience as a child?

Rocks. I collected rocks and wondered about them. My mom took me to the library at the community college so I could learn more. Every year in grade school my science fair project was on rocks.

What advice would you give to someone interested in becoming an ecologist?

Spend as much time as you can watching animals and observing details about their habitat. Sometimes watching animals means that you looking at the clues they leave behind. Tracks tell

you where animals are going, how fast they are moving (being chased by a predator?), where they find cover, and where they eat. Browse sign (chewed plants) and other remains of meals (fish bones) tell you what animals ate. You can't understand animals without understanding their habitat (the plants especially). Habitat provides cover from predators, protection from heat and cold, and food. The kinds of foods that animals eat change throughout the year – especially here in the North Country. So make notes - what did you see on what days? The notes from naturalists (those who watched nature and asked questions about what they saw) from a hundred or more years ago continue to help ecologists today understand big events like climate change.