

## Being Caribou

By Karsten Heuer

The author describes the epic journey he and his wife make when they follow the Porcupine caribou herd for five months. They witness births and deaths, and endure many hardships to stay with the herd.

### What Do You Think?

1. What was the hardest thing about Karsten and Leanne's journey?
2. Does that affect the caribou? If yes, do they have an *adaptation* to help them cope with it?
3. If you went on a journey like this, what one thing would you most want to take with you?
4. Have you ever heard of any other animals—including people—that make long migrations?

### Try This!

1. Caribou Clues
  - a. Have students look at the map of caribou (*Rangifer tarandus*) herd ranges\* at <http://www.rangifer.net/carma/herds.html>. This is a different perspective than normal; have the students identify the countries shown by referring to a world map.
  - b. Ask the students if they can make any predictions about herd size based on the size of the range (e.g., "I think the herds with big ranges will have more animals than the herds with small ranges.")
  - c. Have students test their ideas: in small groups, students will categorize each range into "small", "medium", and "large". Then they can click on each area, which will take them to a page with the name of the herd and its current population. Students will make a table of the information and discuss the results. *Ask:* What additional information would you need to make your results more accurate (e.g. actual size of range, actual usable size, information for more herds)?
  - d. Extension: What other kinds of things might affect caribou populations? List ideas on the board. Briefly discuss the use of models in science, explaining that they are often used to explore particular facets of a problem, so do not include all the variables that are present in reality, and then have students run the climate/caribou population model (<http://www.taiga.net/caribou/models/climate/index.html>). Based on the model, what appears to be the more important variable in caribou decline?
2. Culture Connection
  - a. The Gwich'in people have been linked with and dependent on caribou for millennia. In the book, Randall even tells of a time "when people could talk to caribou and caribou could talk to people".
  - b. Have students research Gwich'in culture and folktales (<http://arcticcircle.uconn.edu/ANWR/anwrgwichin.html>). These are from

an oral tradition, and are meant to be read aloud. Do the stories underscore the importance of caribou and the natural world?

- c. Are there other cultures with similar beliefs and stories? Have students research their own backgrounds and bring in one animal folktale to share with the class. How are these similar to those of the Gwich'in? How do they differ?
  - d. Extension: Sometimes, legends are parables that promote ethical and desirable behavior. Have students write animal-based stories to illustrate good behavior in school, e.g. no bullying, no cheating, or study hard.
3. Get involved!
- a. Have students discuss the issue of drilling for oil in the caribou's calving grounds.
  - b. Find contact information for your federal representatives and senators (<http://www.usa.gov/Contact/Elected.shtml>) and make it available to students.
  - c. Have students write and send letters expressing their opinions.

### **Field Trip**

The family CERVIDAE (deer) comprises 41 species living throughout much of the world. The smallest is the pudu, and the largest is the moose. All but one species have antlers. Antlers are branched, bony growths that are shed every year. While they are growing, they are covered with skin and fine hair that resembles velvet; this covering dries and is rubbed off when growth is complete. Take a closer look at deer by going to a zoo, wildlife park, or natural history museum. Call ahead to make sure deer are exhibited—ideally more than one species.

1. Have children bring notebooks with them, and tell them they are going to look carefully at the deer.
2. Assign or have them choose two species to compare. Ask them to sketch pictures and label, noting especially color and size. They should also write down the common and scientific names of the animals (usually found on the graphic labels) and any other information given, such as habitat, range, and diet.
3. Ask the students to notice if there are antlers on any of the animals. If there are, have them count the points (the ends of the branches).
4. Back in the classroom, have students discuss the animals they saw. How were the species similar? How were they different? Do you think there's any relationship between the differences and the habitats the deer live in?
5. Extension 1: have the students research one of the species they studied and give an oral report about it. Students may work in teams.
6. Extension 2: have students make a class mural depicting a variety of cervids labeled with the scientific name, habitat type, geographic range, and size.

### **Did You Know?**

- In most species of deer, only the males bear antlers, but in caribou the females grow them also.

- There are about 100 distinct herds of caribou in North America. Animals tend to stay in their herds, and do not mix with animals from other herds.
- The clicking sound made when a caribou walks is the sound of a tendon slipping over a bone in the foot.
- Some caribou may travel 5,000 km, the longest migration known for any terrestrial mammal.

### **Learn More...**

#### *Glossary*

Adaptation: a physical or behavioral trait that helps an animal survive in its habitat. For example, caribou have wide hooves that help them walk on the snow (a physical adaptation) and they migrate to find food and avoid insects (behavioral adaptation).

Cervidae: a family of animals commonly known as deer. For more information, go to <http://animaldiversity.ummz.umich.edu/site/accounts/information/Cervidae.html>

Gwich'in: the northernmost Native American Nation, living in 15 villages scattered across Alaska and Canada. Their historic homeland overlaps much of the range of the Porcupine caribou herd. For more information, go to: <http://www.gwichinsteeringcommittee.org/gwichinnation.html>.

Migration: a periodic movement of animals due to changes in weather, food availability, or for successful reproduction; often occurs seasonally.

Model: a representation of a process or object in the real world; often used to elucidate the role of particular variables. For more information on scientific models, go to <http://www.psychstat.missouristate.edu/introbook/sbk04m.htm>

\*This site does not show *all* caribou herds, but focuses on the major migrating herds in North America and Russia as well as sample herds from other areas.