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# **WAY** *of the* **BEAR**

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## **IN ALASKA**

*How Bears  
Communicate,  
Socialize,  
& Raise  
Their Young*

Photographed by Daniel Zatz  
Written by Derek Stonorov

**STUDY GUIDE**

By Derek Stonorov

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### **WAY OF THE BEAR IN ALASKA**

a 33-minute video suitable for grades 3- Adult

#### ***\* Teachers of Younger Children \****

*There are two brief scenes in this film that you should be aware of in case you want to prepare your class beforehand. One shows an adult male bear killing a cub (approx. 10:00 to 11:30 minutes from the start); the other (from 17:40 to 17:55 - very brief) shows two bears mating. (See page 5 of this guide.)*

# WAY OF THE BEAR IN ALASKA

Photographed by Daniel Zatz  
Based on the research of Derek Stonorov  
Broadcast Services of Alaska

A Teacher's Guide by Derek Stonorov

## Introduction:

Today we recognize only one species of brown bear in the world—*Ursus arctos*. Whether we call it a grizzly, a Kodiak, coastal brown, or European brown bear, we are talking about the same creature. These bears have the largest range of any bear in the world, a range that extends all the way from northern Spain, across Russia, down to northern Japan, over to Alaska and Canada, and down into the Rocky Mountains of the western United States. Once brown bears even lived in California and Mexico.

The brown bear, along with seven other worldwide species of bears, make up the scientific family Ursidae.

Brown bears are the largest of the terrestrial carnivores. Just how big they are depends on where they live, what they have to eat, and like people, their genetically determined size characteristics. Mature male brown bears of coastal regions, like the bears in this film, may weigh more than a thousand pounds, although most weigh a good deal less. A large female can weigh 500 pounds.

A big male can be almost five feet high at the shoulder, and have a body length of eight feet. When bears stand on their hind legs in order to see better, they are far taller than the tallest man.

In a world populated by over five billion people, there are less than 150,000 brown bears. They exist in very small remnant populations except in the former Soviet Union, Canada, and Alaska. In Alaska where this film was made there are about 30,000 brown bears and 600,000 people, or twenty people for each bear. Each year in Alaska, sport hunters kill about 1200 brown bears. Even more serious to brown bear conservation than hunting is the loss of a place to live. Each year the places where a brown bear can roam and find food become smaller, as logging, mining, oil field activities, and other human development continue to degrade habitat that is critical for brown bear survival.

Alaska brown bears are the top predators in northern ecosystems except on arctic ice and the shores and islands of the Arctic oceans, where their cousins the polar bears live.

Another predator in this environment is of course man. On this continent white people have been unable to co-exist with animals that have the tenacity, when surprised, hurt, or mistreated, to fight back. Lewis and Clark, in their historic journals of exploration on the Missouri River, mention the ferocity of these great bears, their willingness to attack, and the difficulty of killing them.

Competition for food and space has always existed between man and bear. Early settlers in southeast Alaska feared, and typically killed, every bear encountered when they homesteaded lands near rivers and streams. Commercial fishermen often killed bears, thinking perhaps that the bears were eating the same salmon they sought. Bears are still allowed to be killed in Alaska whenever there is a threat to property.

Behavioral research has shown that brown bears are very intelligent animals with a rich and complex social system. Their social behavior is not the same as wolves, who cooperate with each other and live in groups. Nor is it the same as lions, who have developed their own way of co-existing and sharing food resources. Bears are bears and have evolved social rules which fit the environment and ecological niche they exist in. In spite of the fact that brown bears have lived near man for thousands of years, it is only very recently that we have begun to understand how they live with each other. We now know that brown bear social behavior not only has similarities to that of other animals, including humans, but it also has elements that are totally unique.

Understanding how and what bears are communicating is essential if we are to co-exist with these wonderful animals. Unfortunately many bears are killed each year because people do not understand bear "language." Bears communicate in subtle and not so subtle ways. If we watch closely we can see just how the bears make their intentions known. Sometimes it is by biting and

pushing and other times by gentle nuzzling. Much more frequently it is a quick look and a hasty retreat. Vocal communication varies from loud roars by large males to almost inaudible “popping” sounds given by nervous mothers. An incredible sense of smell helps bears to identify each other.

Photographed by Emmy award-winning photographer Daniel Zatz, at the world famous McNeil River State Game Sanctuary and Katmai National Park, both in Alaska, the film is aimed at elementary, high school, and college students, as well as interested adults. It is interesting to people that want to know about the natural history of bears as well as serious students of animal behavior and wildlife biology. All the information used in the film is based on research, collected by Derek Stonorov, a wildlife biologist, with more than 30 years of field experience with brown bears.

### **Grades 3-5**

#### **Key Concepts:**

Animals are fun to observe. Sometimes they do the same things as people.

Brown bears live in Alaska and like to eat both fish and grasses.

Brown bears learn how to get along by playing with one another.

Brown bears “talk” to each other by using motions as well as many different kinds of sounds.

### *Before the film:*

This film shows bears mating. This should not be disturbing to children of this age. The film also shows a big bear killing a cub. This may be disturbing but it is shown and explained in proper context. As a mother and teacher noted after watching the film, "After all, it was about nature!"

Much of the film is about how bears communicate and learn. It may be helpful to talk briefly about how animals communicate with each other, and with people. Use dogs to illustrate. Why does a dog wag its tail? Why does a dog bark? Why do dogs bite? Why do we stay away from guard dogs? Why do we pat dogs? What happens when a very big dog walks up to a very little dog? Encourage your students to think that animal observation is fun and a natural thing to do.

Talk about the life cycle of both people and bears. People are born at all times of the year. Bear cubs are born in dens during January. Bear cubs stay with their mothers for almost three years. Why do cubs stay with their mothers for so long? How long do children stay with their parents? Why? Protection and learning are two answers sought here.

Ask questions like: Has anyone ever seen a bear? Was it in the wild or in a zoo? What was the bear doing? What were you doing? Was the bear looking at you? How could you tell? Introduce the concept that not only

do we watch animals, but animals watch us.

Talk about play. Why do we play? Why do children play more than older people? Why do animals play? The concept here is that both people and bears learn through play. It is an important part of our lives. People play games like football and baseball. Bears like to wrestle and chase each other.

Talk about sounds. Make noises like a bear. Why did you make that particular noise? Why was it loud? Why was it soft? Have the children shut their eyes and see if they can guess who is making the bear noise. Each bear has a slightly different sound.

Talk about predation. Some animals kill other animals in order to survive. We kill cows, sheep, and pigs and eat their meat. Bears kill moose, caribou, and salmon, and eat them to survive.

*After the film:*

Discuss with your students about how bears and other animals communicate with each other. What postures did the students see? What noises did the bears make?

Discuss why communication is so important. How do we make ourselves understood?

Talk about what brown bears need to survive. Talk about both food and space. Talk about people getting along

with bears.

## Grades 6-8

### Key Concepts:

Brown bears are large carnivores.

There are not many left in the world. It is our responsibility to see that they survive.

Brown bears communicate with each other just like humans and dogs do.

Brown bears have a society that they live in—there are top bears and bottom bears. This is called a hierarchy.

### *Before the film:*

Brown bears are very powerful animals with sharp teeth and claws. When they want to they can hurt each other. An entire professional football team couldn't hold a brown bear down. Each bear is many times stronger than a man. They can kill a cow or moose with a single blow or bite. In the film the students can see them bite a salmon in half. The film tells how bears have developed a social system so that they do not have to fight and thus have more time for fishing, playing, and taking care of their cubs. Do you have a social system in your classroom? Are there leaders and followers? Is the teacher at the top of the pecking order? A discussion about classroom dynamics has given children of this age some real insights into bear behavior.

The best way to get children to understand animal communication is to examine human communication. Get two children up in front of the room and have them talk to each other, then argue, then threaten, etc. Get the children in the audience to write down what they saw, paying close attention to head and arm movements, distance between the two actors, and the tone of voices used.

Brown bears learn about their environment and each other through play. What exactly is play? Have the students define it. How do bears (and students) communicate that they are playing and not fighting?

Get the children to view the film as if they are watching bears in the wild. What did they see? What did the bears do? Why did they do it? Prepare them to talk about what they observed.

*After the film:*

Get the children to list the ways bears communicate with each other.

What analogy can they think of that would be like two bears “cowboy” walking, like two bears “jawing”?

Talk about endangered species. If there are 5 billion people in the world and they need more and more room, what is the prognosis for brown bears? What can people do to ensure the survival of bears?

If bears live near your school discuss how to behave around bears. Have a wildlife biologist from your state fish and game agency come in to talk about bears and what to do if you see them.

## Grades 9-12

### Key Concepts:

Brown bears are large powerful animals that have developed different strategies for survival.

Two of these are social organization and easily understood methods of communication.

Brown bears learn from their mother, each other, and through play.

Brown bears are intelligent and highly individualistic. They are capable of doing things differently from each other.

Brown bears habituate quickly to each other and to humans. When food, defense of young, or surprise isn't the issue, they can peacefully co-exist with humans, like the bears in the film.

### *Before the film:*

Discuss the science of Ethology or Animal Behavior.

Why is it important for us to understand animals? Does it help us to see ourselves more clearly?

The first thing an ethologist does is to describe what he or she sees. Pick two actors from your students and in front of the group, ask them to have an intimate conversation, a disagreement, and an angry confrontation. Have the class take notes and describe body postures, tone of voice, facial expressions.

Discuss social behavior and communication in humans and animals. Why do both humans and animals have social systems? What is the value of communication?

Talk about predation, again by both humans and animals. What is its effect? Why is the world's population of bears slowly shrinking?

*After the film:*

Discuss possible reasons that the bear cub was killed.

Talk about what you would do if you met a bear in the wild.

Talk about the value of understanding animals.

Talk about popular theories of the evolution of behavior. Suggest that the students read Stephen J. Gould (evolutionary theory), Konrad Lorenz (pioneer behaviorist), or Jane Goodall (modern day primatologist).

## College Age and beyond

### Key Concepts:

Conventional wisdom has always identified brown bears as asocial animals that are intolerant of each other. Modern research has shown the opposite: that except when food is involved, brown bears are intelligent animals that have an intricate social system.

Another popular brown bear myth is that brown bears are unpredictable and not safe to be around. This film shows that the opposite is true. A brown bear that is correctly habituated is predictable and is safer to view than a non-habituated bear.

Brown bears communicate using readily identifiable visual signals and vocalizations. Combinations of these signals make up ritualistic displays that are specific to brown bears.

Brown bears can live for 30 years or more. Brown bears of a particular area recognize each other and have special relationships. This behavior accounts for much of what we see when we watch brown bears in the wild.

Brown bear behavior that looks very stressful to a human, is not necessarily stressful to a bear.

### *Before the film:*

Discuss various aspects of animal behavior. Make sure that the student understands the following words and concepts: scientific methodology and objectivity, dominance hierarchy, social signal, ritualistic behavior, individual distance, stress, and habituation.

Discuss communication. If appropriate discuss the evolution of language in both humans and other animals.

If the class is one that is primarily interested in animal behavior it may be helpful to watch the film twice. The first time, simply to observe the bears, as one would in the wild, and the second to pay close attention to the narration.

### *After the film:*

This is very group dependent! Hopefully the discussion will come directly from what was observed in the film. However some topics could be:

- The worldwide status of brown bears and strategies for conservation. How can this be improved with new knowledge of brown bear behavior? How can we remove the “trophy” status from brown bears? After all European and American hunters used to “bag” both gorillas and pandas! As our knowledge has increased our perceptions have changed. Silverbacked gorillas now make threatening but non-lethal chest beating dis-

plays at eco-tourists; pandas have proven to be shy and retiring bamboo eating creatures; and we now know that if we behave we can sit down with brown bears.

- Discuss safety in bear country. What can we do to minimize conflicts. The issue of food. What are we willing to do?
- Discuss predation and population regulation. What are possible reasons for the death of the bear cubs in the film?
- Discuss the film and bears in terms of comparative ethology. How do bears differ from other animals?

### **Additional Reading:**

*Craighead, Frank C.*, Track of the Grizzly. San Francisco: Sierra Club Books, 1979.

*Goodall, Jane.* The Chimpanzees of Gombe. Patterns of Behavior. Cambridge: Harvard University Press. 1986.

*Herrero, Stephen.* Bear Attacks. New York: Nick Lyon Books, 1985.

*McNamee, Thomas.* The Grizzly Bear. New York: Alfred A. Knopf, 1984.

*Murie, Adolph.* The Grizzlies of Mt. McKinley. Seattle: University of Washington Press, 1981.

*Walker, Tom.* Photographs Aumiller, Larry. River of Bears (About McNeil River). Stillwater, Minnesota, Voyageur Press, Inc. 1993.

## **Related Bullfrog Titles**

### **ALASKA WILD!**

*CD-Rom, Macintosh      Grade 1-Adult*

Daniel Zatz's nature cinematography in a CD-Rom format! A live-action video resource of animals in their natural habitats. Includes black bears, grizzly bears, and polar bears.

### **BEARS!**

*14 minutes                      Grades K-3*

Bears! shows the magnificent beauty of grizzly bears. An Emmy Award winner.

### **POLAR BEAR**

*11 minutes                      Grades 2-8*

Close-up view of a unique polar bear tagging program.

### **PEACOCK'S WAR**

*60 minutes                      Grades 7-Adult*

The moving story of Doug Peacock, author of "The Grizzly Years", and his determination to resist destructive forces that threaten our world and the survival of the wild grizzly bear.

### **PELTS: POLITICS OF THE FUR TRADE**

*56 minutes                      Grades 10-Adult*

The film takes a look at the ethical, environmental, and economic issues raised by the debate about animal rights, the fur trade, and Native American traditional means of livelihood. *A National Film Board of Canada production.*

**Bullfrog Films**

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