

## Interdependence and Interactions

### The Story of Duke

#### **From Riding Mountain National Park By Bob Waldon**

Riding Mountain National Park has a diverse landscape of forests and grasslands, hills and valleys, lakes and rivers. Here the plants and animals of eastern, western and northern Canada can be found, including black bears, wolves, elk, moose, and great grey owls. This story is about one particular black bear that was known as Duke.

Most famous bears that we're familiar with never really existed. Some, like Yogi Bear, are pure fiction. Others are captives trained to perform in movies and TV fantasies.



Some real, wild bears were famous during their lives. Frontier history tells of "outlaws" like Old Three-toes, a grizzly bear. He began killing range cattle because his sources of real bear food had been destroyed by settlers. Posters offered a reward for him "Dead or Alive".

A famous bear of an entirely different kind grew up in Riding Mountain National Park. His name was Duke.

Duke was not an "outlaw". As far as anyone knows he never attacked and ate anything but his lunch — ant hills, berry bushes, garbage, and all kinds of things.

Some people got to know a lot about Duke. They belonged to a research team of Park Wardens and biologists. Park Wardens are the uniformed people who make sure that visitors know and obey the regulations that prevent them from harming the Park. Biologists are scientists who study animals.

The team studied Duke and some of the bears in and around Riding Mountain National Park between 1987 and 1990. Riding Mountain was chosen as the

study site for two reasons. First, it has quite a few bears.

Second, it is a place where the needs of animals are given a high priority. Outside the Park the needs of humans may come first, and this may be harmful to wildlife. Inside the Park there is likely to be a greater variety of natural things for wildlife to eat and places for them to shelter.

As well as recording scientific data about black bears, the scientists did the same thing to them that we do to our pets. They gave them names. "Duke" just seemed to fit this particular mild-mannered giant.

Giant? Yes. Duke was the biggest known wild Black Bear in the world. We of course don't know if there have been other, unknown wild Black Bears that were in fact larger. Duke just happened to be the biggest wild one that people have been able to measure.

In his prime he weighed 368.3 kilograms, or a touch over 812 pounds.

To grow into a big bear you need a good start in life. This means your mother has to be smart enough to know where to find the best bear food, and big enough to defend it from other bears.



#### **Tipping the scales**

Black bears, on average, weigh about the same as humans, in the 70 kilograms (155 lb) range. A male over 140 kilograms (+ 300 lb) is a big bear. Unlike most mammals they keep on growing throughout their adulthood, a process that gets slower as they age.

Duke was born somewhere in the Park along with several brothers and sisters in February, 1978. Their home was a den dug by their mother in the autumn of 1977. Being a good mother bear, she would have lined it with lots of dry grass and leaves. She would also have plugged up the entrance with some of the leaves and grass to keep out the cold.

For most of the first few weeks of his life Duke and the other cubs spent their time nursing and snoozing in their mother's warm fur. Because she had lots of very rich milk, they all grew quickly.

When spring came mother bear cleared away the entrance of the den and crawled out. The cubs followed. By then they were about the size of large cats.

At first the mother didn't go far from the den. She knew that travelling around would just be a waste of energy. The ground was still frozen and there would be no nice fresh greens to be found. So, she just went a short distance to a big, thick spruce tree. Under it she scratched together a bed of dry needles and leaves. The tree sheltered her and the cubs from wind and rain, and gave them a place to climb if danger threatened.

One thing Duke's mother had to worry about was large male bears. They will try to catch and kill cubs. The reason is that as long as a female bear is caring for little cubs she will not mate until the next year. But if they die in the spring of their first year, she will mate later that summer.

A mother bear will fight ferociously to defend her cubs. But males grow much bigger and are more muscular than females. Even if she's a large female she could be injured or killed in a brawl with a male. So, she has another way of saving her babies.

From the time they are able to walk, baby bears will scramble up the nearest tree when danger threatens. They will climb away up where a big, heavy male can't reach them. They will stay there until their mother calls them down.

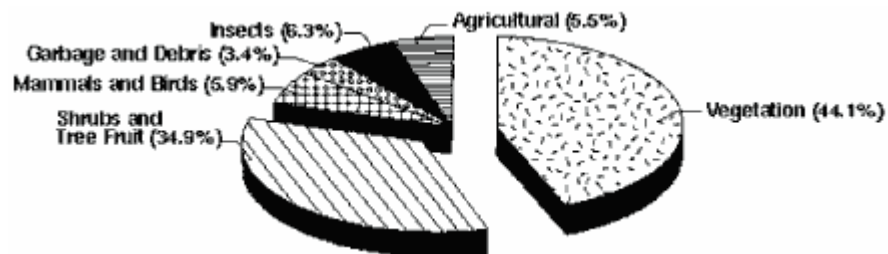
Wolves are also potentially dangerous. One wolf won't hassle a mother bear. But two or more working as a team might be able to distract her long enough to grab a cub. But if she and the cubs just hike smartly up a tree, no problem!

Once Duke's mother left the den area, she spent the rest of the summer moving from one source of food to another. They ate tree buds, dandelions, roots, fruit and berries, acorns, mushrooms, mice, fish, grubs dug out of decayed logs, lots of ants, and dead animals no matter how stinky they were.



By the time summer was over Duke had learned a great deal from his mother about how to be a bear, especially what was good to eat and where to find it. He weighed 35 kilograms (77 lb), a tubby shape since at least a quarter of his weight was fat.

#### What's for dinner



As part of the bear study that Duke was involved in, the biologists collected bear scat (droppings) and analyzed what bears were eating. This chart is the result. As you can see, black bears are omnivores and like humans eat a great variety of things. They eat very little meat.

When it came time to den up, he and the other cubs went into the den with their mother.

When spring woke them up again, Duke wasn't tubby any more. He'd used up most of his fat, but he was healthy. And he began to grow again when his mother took her family to where the earliest plants were sprouting.

#### Where's the bathroom?

Bears don't hibernate like woodchucks, which descend into a dormant state in which no sign of life can be detected without instruments. But bears go into a prolonged sleep ranging from very deep to light snooze. During this time they do not eat, drink, or "go to the bathroom". Instead, their body is able to recycle waste back into useable protein, in a metabolic reversal not yet understood.

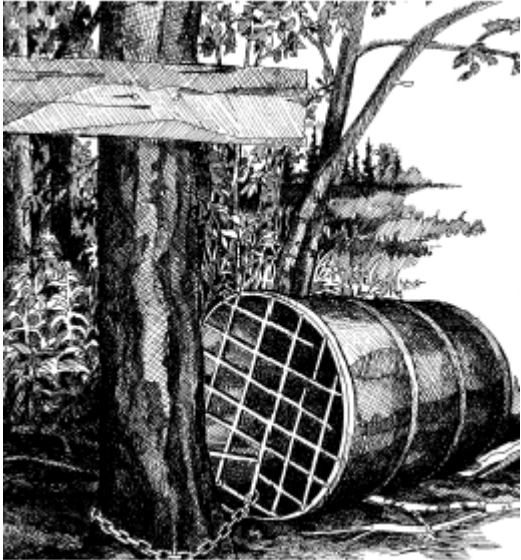
And they got lucky. A moose had been hit on the highway that winter by a truck. It had struggled into the bush and died. When the body began to smell, mother's keen nose picked up the scent. There were already several smaller bears feeding on it. Mother just drove them away. For the next few days they stuffed themselves until there was nothing left but bones.

In June the bear mating season arrived. With it came a big male bear. Duke and the others climbed a tree. To their surprise, their mother didn't drive the male away. Instead she just wandered off with the big male following.

When they came down and tracked their mother, they found not just one, but several males around her. Although they were afraid of being alone, they were even more scared of those big males.

After several days, they just wandered away together. In a few more weeks Duke left the others and began to forage on his own.

For the next few years he wandered far from his mother's home space. Some of that time he travelled out of the Park. But he was lucky, or smart, and survived. Many other young bears who crossed the Park boundary went to bear baits and were killed during the legal bear hunting season. Others found their way to towns and farms where they became nuisances, raiding garbage cans or bee hives, or feeding in farm crops and gardens.



One of those summers he discovered the Park garbage dump. It is said by people who know bears that once they discover human food they become nuisances. A "garbage bear" usually doesn't want to eat anything else. To get human food it starts raiding garbage cans in campgrounds. Often it gets so bold it starts breaking into tents, trailers, and cottages.

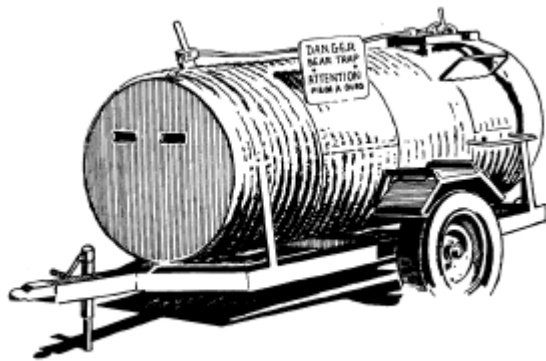
The Wardens tried capturing and relocating these garbage bears. But this never worked. The bears came right back, worse than ever. The only unhappy answer was to destroy them.

For some reason, however, there are a few bears that find all the human food they want at a source like a dump. They don't necessarily become nuisance bears. These are likely very large bears big enough to have first choice at the food. They get all they want at the dump. Other, smaller bears, chased away

from this source by the bigger ones, go looking for garbage elsewhere. "Elsewhere" can be garbage cans, picnic tables and other sources that bring them into direct conflict with people.

Meanwhile, what about Duke? As more summers went by he grew even bigger. Then one summer, it happened. He was the biggest bear at the dump. If there were others around when he arrived, he lifted his head and gave a mighty snort. Any other bears that were there took off.

It was at the dump that Duke encountered humans. Most of them were on the work crews that collected the garbage from nearby Wasagaming, and the campgrounds, and emptied it at the dump. He got used to having them around. They didn't bother him, and he didn't bother them.



having it injure itself struggling to get away?

The answer is a "tranquillizer", a drug that makes an animal go limp for awhile. To tranquilize a bear you have to jab a rather large dart into its hide that injects a measured amount of the drug. If the bear is in a cage trap, you jab it with a dart on a pole. If it's in a snare, you shoot the dart in with a special kind of gun. Then you wait until it goes completely limp.

Then, in 1987, he met another kind of human. It was the research team that was capturing bears in order to study them.

By "capture" is meant they caught bears in either a cage trap or a foot snare. Whichever device was used, the bear was lured into it with a big slab of smelly raw bacon.

For the research team, catching a bear was only the first step. They then had to measure and weigh and mark an animal that could be very upset about being caught. How do you do this to a bear, strong enough to bash your head in or tear off your arm? And how do you do this without harming the bear or



Bear collar

In addition to being weighed and measured, each bear was fitted with a thick collar with a compact radio transmitter built into it. This made it possible for the team to track the bear from the ground, or from an airplane.

They did this by tuning into the little radios in the collars. Each radio sent out a constant beeping sound on its own frequency. The beeps could be picked up

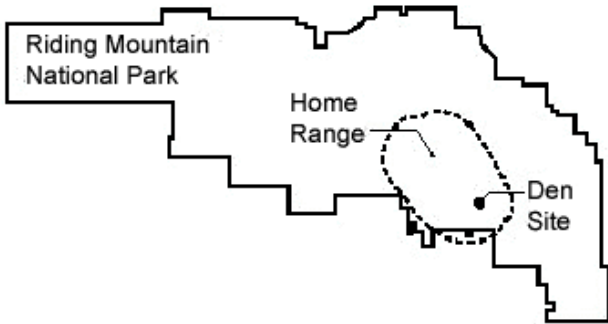
several miles away on a receiver that looked like a very small TV roof antenna. These antennae could tell the research team which direction to go to find the bear. When the team found exactly where it was, they would mark its location on a map.

By continually checking where the collared bears were, and marking the maps, the biologists on the team could tell where the bears moved during the summer, how much time they spent in each location, and where they denned up in the winter. Below is the map for Duke. He was found to move about in an area that was 386.73 square kilometres.

During the research project Duke was actually captured several times, thanks to his weakness for that smelly bacon. Each time he was captured he was weighed and measured. Between two such weigh-ins it was discovered he'd gained an average of over two kilograms (just under five pounds) per day!

Duke, like all bears, was an incredible eating machine. By late autumn he could have a layer of fat 13 cm thick (over five inches) over his back and rear end. His stomach was so big it almost dragged on the ground.

One of the things the research team did with each bear when it was tranquilized was pull a tiny little tooth. They sent this to a lab that can tell from the rings in the tooth exactly how old the bear is. Duke was ten years old the first time he was caught. When the research team found out how big Duke was, they tried to keep it a secret. They knew that hunters outside the Park would be eager to shoot Duke to get the record for killing the world's biggest Black Bear. And they knew that poachers, people who hunt illegally, would also be out to get Duke.



But the secret got out. Soon stories about Duke were in the newspapers, on radio and on TV. He suddenly became famous.

On a grim day in October, 1992 Duke's body was found in the dump. Poachers had sneaked into the Park and shot him. They cut him open and took out a small part of his insides.

That small part was his gall bladder. This is a small organ attached to an animal's liver. In China and other oriental countries people believe that medicine made of bear parts cures all kinds of sickness. They will pay high prices for the gall bladder and the paws. Dealers who supply these can make enormous profits.

The result is that bears in China and neighbouring countries have been hunted almost to complete extinction. So the dealers have turned to other countries, especially Canada. A poacher who sneaks around killing bears whenever and wherever he can find them can make money just selling their gall bladders and feet.

When the public heard that Duke had been killed they reacted with sorrow and shock. Headlines said Duke had been "murdered". People were especially angry that he had been shot in Riding Mountain National Park where bears are supposed to be safe from guns.

The Wardens, who are responsible for guarding the Park, didn't know who had shot Duke. They had a number of suspects. Some of these were men who poach animals for fun, or to get skins and meat for themselves. Others were criminals who, when they're out of jail, commit robbery, and deal in drugs, guns, stolen goods, and animal parts.



With the co-operation of the RCMP and other enforcement agencies, the Park Wardens began an investigation. Using information gathered by undercover agents, a shipment of bear gall bladders was seized at Winnipeg International Airport.



Whether one of these was from Duke will never be known. And who the actual poachers were has not yet been identified.

The Park did something else to help keep other bears from getting shot. Early in the spring after Duke was killed a fence was put up all around the dump. It was especially designed to keep bears out. If they try to climb over it, or even touch it, they get a severe electric shock. It doesn't harm them, but it's so painful even a tough bear won't go back and try it again.

It was very sad that Duke was murdered. But by finding out more about Duke and the other bears in Riding Mountain National Park, the research team was able to add important scientific information about all black bears.

Another important thing is that bears, wolves, elk, moose, deer and other animals have a chance to live out their lives in a special place. That place is Riding Mountain National Park.

**The End**