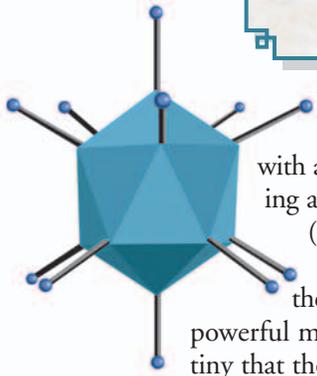


Wild Times

A Free Publication of the Wyoming Game & Fish Department

Spring 2004

THE HABITAT CONNECTION: ANIMAL VIRUSES



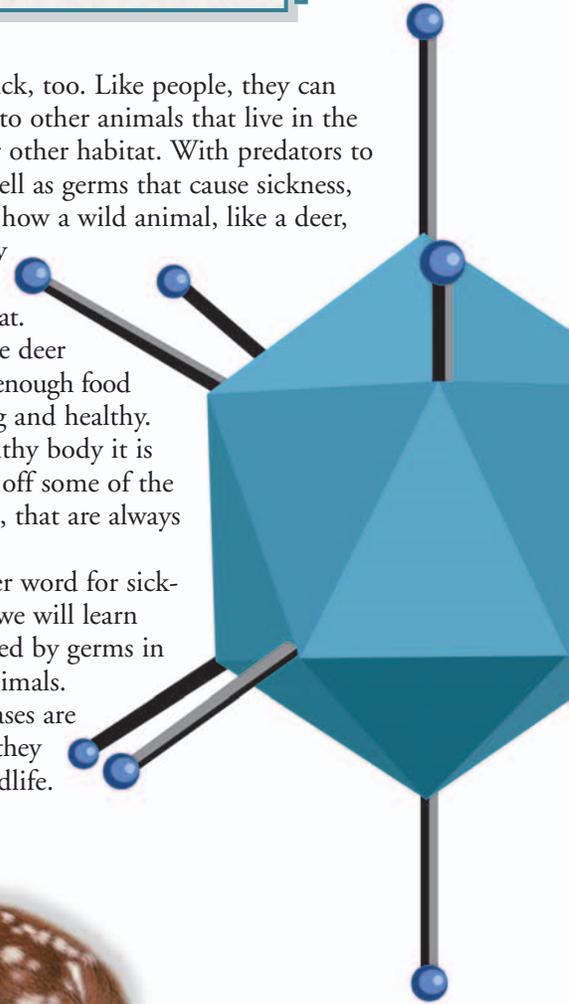
Remember the last time you were sick with a cold or the flu? While you were coughing and sneezing, your body was the home (or habitat) for germs known as viruses.

Viruses are very small. You can not see them with your bare eyes. You need a very powerful microscope to see them. Viruses are so tiny that thousands of them could fit in the period at the end of this sentence. When you are sick, you can spread viruses and other germs to other people and make them sick.

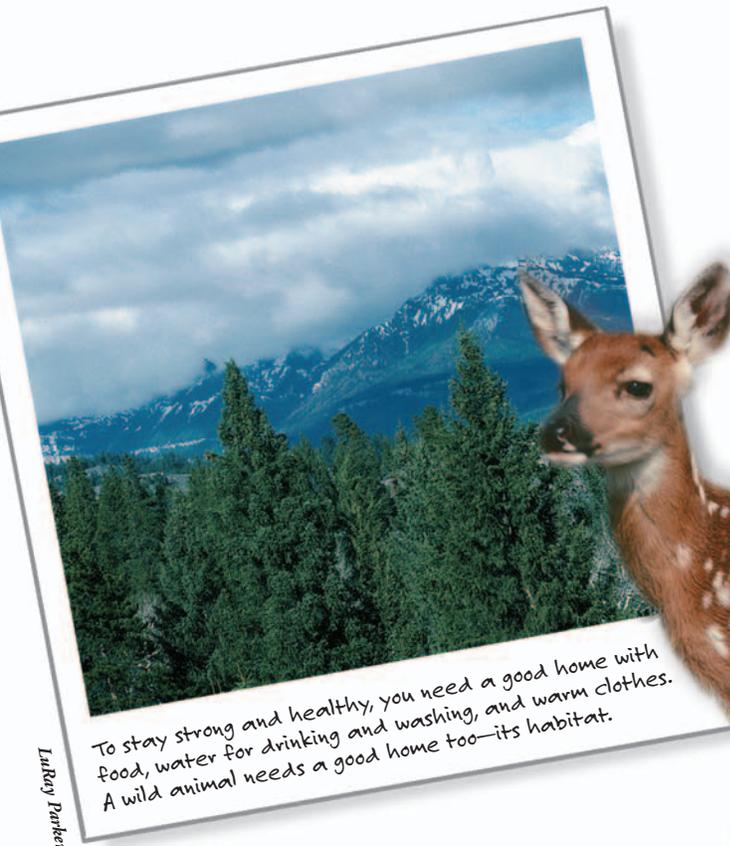
Wild animals get sick, too. Like people, they can spread their germs to other animals that live in the same forest, lake or other habitat. With predators to watch out for, as well as germs that cause sickness, you might wonder how a wild animal, like a deer, could even live very long. One of the secrets is good habitat.

In good habitat, the deer will be able to find enough food to keep itself strong and healthy. With a strong, healthy body it is better able to fight off some of the dangers, like germs, that are always lurking around.

Disease is another word for sickness. In this issue, we will learn about diseases caused by germs in Wyoming's wild animals. Some of these diseases are important because they can kill a lot of wildlife.



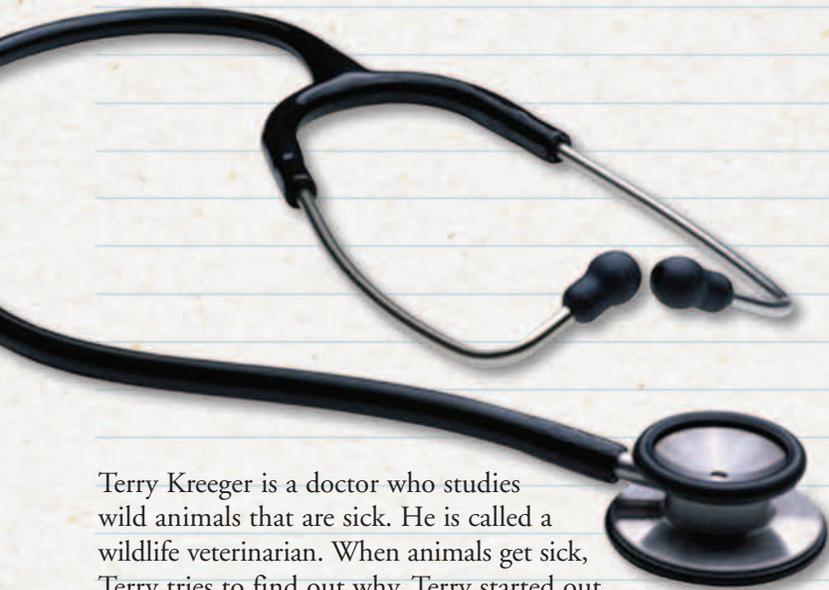
Animal Virus Structure



To stay strong and healthy, you need a good home with food, water for drinking and washing, and warm clothes. A wild animal needs a good home too—its habitat.

Larby Parker

FIELD Wildlife Journal



Terry Kreeger is a doctor who studies wild animals that are sick. He is called a wildlife veterinarian. When animals get sick, Terry tries to find out why. Terry started out as a writer, working for a magazine. But soon he found out he liked working with animals better. He went back to school for twelve years to earn all his degrees. In school, he studied wolves, coyotes and foxes.

Terry says there are some bad diseases in Wyoming's buffalo, elk, deer and big horn sheep. He studies these diseases and tries to find out what can be done about them.

and how to use them on animals. He has even written a book on how to do this. Wildlife biologists from all over the world use his book. Terry, himself, has traveled to many interesting places to give advice on trapping animals, including Europe, Russia and New Zealand.

Terry is also an expert on trapping animals so they can be looked at and treated. Sometimes special drugs are used for this, especially when the animals are large or dangerous like mountain lions or bears. Terry knows a lot about these drugs

Terry has worked for the Wyoming Game and Fish Department since 1995. He says there are some bad diseases in Wyoming's buffalo, elk, deer and big horn sheep. He studies these diseases and tries to find out what can be done about them. He also tries to keep diseases from spreading between wildlife and cattle. Terry says that in his job, he has to know about lots of other things besides wildlife. He says it helps to know about green plants and soil, and also about money, people and laws. Terry says you must always look for the truth. He believes the best way to do this is to get a good education. Terry believes a person can never know too much. Are you ready to study hard and learn as much as you can? If you are, and you like helping wild animals, maybe wildlife veterinarian is the career for you.

Terry Kreeger is a doctor who studies wild animals that are sick. He is called a wildlife veterinarian.



Lukay Parker

Prairie dogs are rodents eaten by the black-footed ferret. They can also catch a dangerous disease known as plague



Dr. Kreeger poses with a sleeping mountain lion that has been drugged.

WILDLIFE PROFILES

All kinds of wild animals get sick from time to time. Often, they get better again on their own. But if the disease is a bad one, they can die. Some wildlife diseases can be cured, but most of them can not. It would be impossible to catch all the



Will Cook



Chris Madson

WILDLIFE PROFILES

Continued from Page 3

wild animals that are sick. Sometimes germs and disease seem like bad things but they are a normal part of nature. Cut out the flashcards on this page and use them to learn about some of the diseases that infect wildlife in Wyoming.

STRIPED SKUNK

SIZE: Less than ten pounds

HABITAT: Lives all over Wyoming

FOOD: Insects, mice, eggs, berries

DID YOU KNOW?

Skunks can carry a deadly disease called rabies. It can be spread to other animals and humans if they are bitten or scratched by a skunk. There is no cure for rabies. Rabies makes skunks less afraid of people and makes them behave strangely. Skunks usually do their hunting after sundown when it is getting dark. A skunk that is out in the middle of the day could be a sick one.

SNOW GOOSE

SIZE: Slightly bigger than a large duck

HABITAT: Marshes, grain fields and arctic tundra

FOOD: Green plants

DID YOU KNOW?

Thousands and thousands of snow geese crowd together in summer on their nesting areas. When there are so many birds, they eat up all the green plants, leaving only bare ground. Snow geese can catch a disease known as avian cholera (CALL-er-uh). Cholera spreads very quickly from bird to bird, especially when they are crowded. A snow goose can die suddenly in just a few hours after catching cholera.

BISON

SIZE: One of our largest mammals

HABITAT: Yellowstone National Park

FOOD: Grass

DID YOU KNOW?

The bison is the Wyoming state mammal. Its meat tastes a lot like beef. Before the first Europeans came west, there may have been millions of wild bison. Now the only wild bison in Wyoming are those in Yellowstone. Like elk, bison can get a disease known as brucellosis. This is a dangerous disease that may be spread between bison and cattle.

SWIFT FOX

SIZE: About the size of a cat

HABITAT: Grasslands

FOOD: Small mammals, birds, lizards, insects

DID YOU KNOW?

Very few people have ever seen a swift fox. These little predators are out mainly at night hunting mice and other small mammals. Swift foxes live in underground burrows. They often have lots of fleas, ticks and lice in their fur. These "parasites" don't always make the foxes sick but they do make their skin itchy. Swift foxes, and other wild animals, also have parasites that live inside their bodies. These are worm-like creatures.

OUR Wildlife Heritage

As you know, when kids are close together in school during the winter, many of them get sick. Everybody is coughing. Colds and flu are passed around from person to person and so are mumps, measles and chicken pox. Wild animals get sick, too, when they are crowded together. One such animal is the elk. In summer and fall, elk have lots of room to roam and feed. But things change when the weather gets cold and snow begins to fall. In winter, elk can't travel as easily because they have to walk through deep, heavy snow. The snow also covers up plants that the elk need for food. When winter comes, elk come down out of the high mountains and crowd together in meadows. Elk are large animals weighing several hundred pounds, so it is not



LuRay Parker

Hunters help elk by thinning out the herds.

long before they can fill up a small valley where food can be found. When they are close together like this, diseases can spread more easily from one elk to another. One of these illnesses is brucellosis. It makes female elk sick when they are having their babies, which are called calves. The elk calves die. One way to help keep herds of elk healthy is to make sure they don't get too big and crowded. This is done by letting elk hunters harvest some of the elk. By taking some of the elk each year during hunting season, hunters help the herds to stay smaller. Then there is plenty of food during the winter, as well as more room, for the elk that are left. Elk are an important part of our wildlife heritage in Wyoming.



On feedgrounds, elk crowd together.

Around Wyoming



Some sage grouse in Wyoming have died from West Nile virus



Chris Madson

West Nile virus is spread by mosquitoes.

Chronic Wasting Disease

Chronic Wasting Disease, often just called CWD, is a problem mainly for deer and elk. Animals infected with this sickness lose weight and get skinny and weak. Another strange thing happens to them too—their brains become filled with

tiny holes. Finally, they "waste" away and die. This disease is not spread by viruses, but by other very tiny things called prions. There is no way to cure an animal that is sick with Chronic Wasting Disease.

Whirling Disease

You might think fish would be safe from getting sick, but they are not. In recent years, a very bad disease has crept into Wyoming waters. It is known as Whirling disease.

This illness makes trout sick, mainly rainbow trout. It makes the backbones of young trout grow crooked. These fish don't grow up to be healthy adult fish. Young fish infected with whirling disease, can't swim well. They "whirl" around in circles because they are deformed, hence the name. Biologists are closely watching fish in our creeks and rivers to find out if Whirling disease is spreading.



Whirling disease most often attacks rainbow trout.

West Nile Virus

West Nile virus is named for the Nile River in Egypt, where it first was found. This virus, came to Wyoming a couple of years ago. It made blackbirds and crows sick, leaving dead birds laying on the ground in different parts of our state. Now West Nile has also infected the sage grouse, a

West Nile virus is spread by mosquitoes.

popular bird for hunters. The West Nile virus is spread by mosquitoes. Mosquitoes breed in shallow water. Humans can get sick from this virus too. Biologists are looking for ways to stop mosquitoes from spreading West Nile virus.



Greg Scaman

West Nile virus is named for the Nile River in Egypt, where it first was found.

Outdoor Classroom

SICK OR HEALTHY?

Suppose you are out hiking in the country and you find a wild animal. How do you know if it is healthy or sick? One clue about whether or not an animal is sick is how it behaves. Most wild animals fear people and try to get away. If an animal doesn't run from you or fly away, it may be sick. You should never touch or pick up a wild animal. Did you know your pets can get diseases from wild animals? Make sure your pets get the shots that will protect them from diseases carried by wildlife.



LuRay Parker

SPREADING DISEASE

Whirling disease germs live in water. They can cling to the rubber boots and other things fishermen use. Often, fishermen will fish in several different places. When they go from one lake or river to another, they can carry Whirling disease germs on their boots and spread them from place to place.

One way to prevent this is to rinse off the rubber fishing boots and other fishing gear with a garden hose before going fishing anywhere else.



LuRay Parker

If an animal doesn't run from you or fly away, it may be sick. You should never touch or pick up a wild animal.

Dogs need shots to be protected against diseases sometimes found in skunks, raccoons and other wild mammals.

The germs that cause Whirling disease in trout can cling to a fisherman's boots.

The droppings of the deer mouse can contain hantavirus, a germ that makes people sick.



LuRay Parker

▶ TEST YOUR KNOWLEDGE ◀

NEW WORDS

VIRUSES

Tiny germs that cause the disease known as West Nile

VETERINARIAN

An animal doctor

PARASITE

A smaller animal that lives on or inside the body of a larger animal

DISEASE

Another word for sickness



Lucky Parker

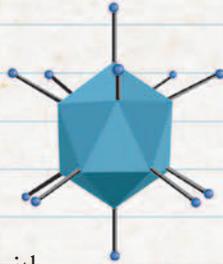
TRUE OR FALSE

1. T F You should not touch a wild bird or mammal, alive or dead.
2. T F The West Nile virus is spread to birds and people by spiders.
3. T F Trout never get sick.



Answers: 1-T, 2-F, 3-F

HOW SMALL ARE GERMS?



What is the smallest speck you can see with your bare eyes? Some germs are so tiny that special, powerful microscopes are needed to see them. It is hard to imagine anything so small, but here is one way to try. Suppose one of the tiny germs that causes rabbit fever was in the center of this "o." Now, pretend the germ and the "o" suddenly start growing bigger at the same pace. When the germ is as big as a football, how wide do you think the "o" will be?

- A. 10 feet wide
- B. 100 yards wide
- C. 1 mile wide



Answer: C

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