

"Bear necessities": Study shows bear poop is important for seed dispersal

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A black bear walks through dense bushes of blueberries in Juneau, Alaska. A study of bears and berries has determined that the big animals are the main dispersers of fruit seeds in southeast Alaska. Photo from: Taal Levi and Laurie Harrer via AP

It's no surprise that bears poop in the woods. But what is a surprise is how it affects the ecosystem. An ecosystem is made up of all the living and nonliving things in an area. Plants, animals, rocks and water are all part of the ecosystem.

But back to bear poop. Scientists from Oregon State University recently discovered that brown and black bears in Alaska spread more small fruit seeds than any other animal. They spread these seeds through their scat. Scat is another word for poop. Before this discovery, birds were thought to spread the most seeds.

Bears are like farmers, explained Taal Levi. She is one of the scientists from Oregon State University. By spreading seeds, the bears are helping to grow more of the plants they eat.

It's important to know how seeds are scattered, said Levi. It is key to understanding any ecosystem. This is the first time scientists have seen seeds in this kind of forest spread mainly by

mammals, Levi said. Their findings suggest that plant life will suffer if bears are removed from the ecosystem.

Brown Bears Eat Berries While They Wait For Salmon

Brown bears, also known as grizzlies, grow happily in size and numbers in Alaska. They love the Tongass National Forest, America's largest forest. There, they gorge on spawning salmon. While they wait for the fish to enter streams, they eat berries.



Levi and other scientists set up motion-triggered video cameras in the forest. They wanted to see which animals were eating berries. They collected bear DNA from spit left on plants after berries disappeared.

DNA tells bodies how to grow and function. It is like a set of instructions for every living thing.

The scientists recorded birds picking off a few berries at a time. Bears, on the other hand, gulped them down by the hundreds!

Brown bears stopped eating berries when they started eating fish. Then black bears moved into the berry patches.

Spreading Fruit Seeds By The Thousands

Both bears, through their poop, spread fruit seeds by the thousands. This profoundly affects what grows in the forest, according to the scientists.

Rodents that find bear scat help to scatter seeds even farther. They bury the scat just below the ground's surface, Levi said. Sometimes rodents lose track of their hiding places. Then the seeds in the scat have the chance to grow into plants.

It is a complicated system, Levi said. And it all starts with salmon attracting the bears.

How Plants Interact With Other Living Things

Laura Gough is an ecologist. She studies animals and how they interact with their environment. For more than 20 years, she has studied how plants interact with other living things in Alaska's tundra. She said a lot of scientists study those relationships and how whole systems change if they're disrupted.



Think about a plant that is an important food source, she said. If that plant becomes harder to find, the whole ecosystem could change.

Gough read about the bear scat study. It reminded her of the dodo bird stories she tells to students. The dodo bird is extinct, which means it is no longer found on Earth. The dodo bird used to spread seeds of certain plants.

Link Between Plants And Animals Is Important

"When dodos went extinct, those plants basically went extinct as well," Gough said. The link between the animals eating plant seeds and the spreading of the seeds is important. This link helps both the animals and the plants survive.

The Oregon State study ended by saying that if bears are removed, the seeds they move would simply fall to the ground. Fewer bears will lead to the spreading of fewer seeds. That means consequences for plants.