

Habitat Hike Transcript

Introduction

0:04

Hello, and welcome to the Kentucky 4-H Virtual Experience. My name is Joey Barnard and I'm the Extension Specialist for 4-H Camping, a part of the University of Kentucky's College of Agriculture, Food, and Environment. Today, we'll be visiting North Central 4-H Camp where Andy, an Environmental Educator, will be leading us on an Nature Hike through a variety of Animal Habitats. We hop you enjoy.

0:35

Hello, friends! Welcome to Exploring The Outdoors. In case this is your first time participating, my name is Andy, and I am one of the 4-h educator out here at the North-Central camp center. Previously we've talked about stuff such as mammals, pond study, and other interesting information. If you're interested in seeing those videos, just check out our Facebook page; it should be easy to find.

Today, what we're going to be doing is talking about animal habitats, and before we can get started, there is something I need you to do: pause this video, go find yourself a piece of paper and a pencil, and then come back, and we'll get ready to get started.

1:10

Alright, let's get to it then. Now, before we can talk about animal habitats we need to discuss something else that's very important for you to understand, and that is all the things living organisms need to survive. There are actually four things in total. I want you to take a second and write down what you think those four things might be. We'll pause for a second while you get a chance to figure that out.

1:29

Water

Alright, let's see how you did! The first thing that all organisms need to survive is water. It's very important, and actually most of our body, about sixty percent, is made up of water. All organisms need water because it allows our body to do the things that it needs to to survive such as: helping us breathe, helping blood run around through our body, and even help us digest our food. So if we didn't have it, we wouldn't survive for very long.

1:54

Food

Second is food, which is important because that is the main way living organisms get the nutrients and energy they need to move around. There are three main ways organisms can get food: First would be by being what we call a producer, meaning they produce their own food, typically through a process called photosynthesis. During photosynthesis, producers can absorb light from the sun, a gas called carbon dioxide, or CO₂, from the air, and nutrients from the soil. The most common producers we see are plants.

A second way organisms get food, is by consuming other organisms. We call these guys consumers. Sometimes they eat producers, such as mice or deer. Other times they might eat other consumers, such as snakes and birds of prey. Either way, once they eat them, they can absorb that energy and use it for themselves.

Lastly, a special type of consumer would be decomposers: organisms that eat by breaking down dead plants and animals. Think mushrooms and bacteria. Funnily enough, decomposers will also return some of those nutrients to the soil, and then those nutrients will be used by the producers, such as plants, to create more energy, and then the process begins all over again.

This is all part of a larger process that we call nutrient, or energy, cycling. But don't worry, you don't necessarily have to remember that term for now.

3:22

Shelter

The third thing that all animals need to survive is shelter, or a place that they can go to hide from dangerous things such as poor weather or predators. There's all sorts of different ways that animal can find shelter throughout the natural world. For example, a fish might hide underneath a dock, a squirrel might find a tree hole that they could live in. And if they can't do that, they can always build themselves a shelter (called a drey) that will keep the weather away and help protect them and their young.

I want you to think about the outdoors and start writing a list down of difference places that you think animals might be able to use for shelter or to hide from predators. Take a second to pause the video and get that done, and we'll see if we notice any as we discuss habitats later on down the line.

4:00

Space

The fourth thing that all organisms need to survive, and usually the one that's hardest for people to understand, is space. And what I mean by space, is there needs to be a physical area that is large enough for all the animals in that habitat to get the food, water, and shelter that they need. To kind of help you understand this, I want you to think about where you live. Do you have your own room? Do you have all the food and water that you need to survive? Is that enough for you? What about if you doubled the amount of people who live in your house? Would it be just as easy or would it be harder to find all the resources you need? Now double THAT number. It's pretty difficult to get as much resources if there's too many people inside of one smaller space. So, basically: the bigger the space, the more animals that can survive there!

4:44

Habitats

So there you have it: the four things that all animals or organisms need to survive: food, water, shelter, and space. Now let's talk a little bit about habitat. A habitat is an area that has all of the food, water, shelter, and space and organism needs to survive. And to help you see kind of what an overall habitat can look like, we're going to visit four different habitat areas that we have located here on camp.

5:07

Woodland

This is a woodland habitat. In a woodland habitat, you're going to find lots and lots of trees: one of our major producers, and arguably the most important part of a woodland habitat. Think about it: a tree can provide food in the form of nuts and seeds for birds and squirrels, nectar and pollen for insects, and in the form of bugs for animals like woodpeckers. They also provide shelter for all sorts of organisms. Creatures can live in their canopy (that is, the top part of the tree), in tree holes, even among the roots. And after they've died, and their wood becomes soft and easy for organisms to chew through and breakdown, they can become shelter for burrowing insects, mushrooms, worms, centipedes—all sorts of stuff.

They even help provide water by catching rain in their leaves for insects and other animals to collect. You'll notice that our woodland doesn't have a lot of plants growing near the ground, what we call the understory. That's for a number of reasons, but one important one: remember how plants, a producer, need sunlight, carbon dioxide, and nutrients to create food? Well, on the forest floor, there isn't a lot of sunlight. Why do you think that is? It's because the trees block most of it out. So it's harder for plants down on the ground to get the amount of sunlight they need to grow. Enough about plants though, let's think about wildlife.

Woodlands are the home of many animal species: deer, for example. Or squirrels and chipmunks, bobcats and coyotes even! An easy one to find evidence of would be raccoons, especially around water sources. The next time you're out in the woods, near a creek or a stream, look for little handprints in the mud: those will be from raccoons. The real prize here though, would be all the different bird species. From sparrows, to crows, to owls, to hawks. Oak-Hickory forests, like the one we have here at camp, can make suitable habitat for 150, even 200 different kinds of birds across the U.S. (That's a lot of birds!)

7:11

Wetland- Vernal Pond

Next, let's check out a wetland: our vernal pond, or a pond that typically only has water for a portion of the year. Our pond is a little special, because it doesn't dry out entirely, thanks to how deep it is, but it does tend to have the most water right now in the spring months. So, it's an excellent time to get a good look at it. You'll notice that this pond is surrounded by trees, much like our woodland. This isn't always the case, but being that ponds are a source of water, it is a good place for trees to grow. What you'll really want to pay attention to, though, are the aquatic plants, or plants that live in the water. Here, that would be things such as algae or aquatic grasses. This would also be a good place for lily pads to grow, although, we don't have any here.

When looking at wetlands, what really shines are reptiles and amphibians. Animal species that like being around water, but don't necessarily live in them full-time. Something we would call semi-aquatic. This is fantastic habitat for turtle species such as red-eared sliders, painted turtles, and mud turtles. It's common to find them sunbathing on exposed log and rocks. Frogs, such as bullfrogs and green frogs, will lay their eggs in ponds like these, where they'll hatch into tadpoles. Those baby tadpoles will then go through a process called metamorphosis until they mature into adult frogs. Salamanders are very

similar, laying their eggs and then going through metamorphosis. Some common salamanders you might find would be the Northern dusky salamander, mole salamanders, and spotted salamanders.

One last thing I want to mention is our wood duck house, at the back end of the pond. Birds, like ducks and geese, also rely heavily on wetlands such as these for safety as they migrate throughout the year, and are therefore a common animal we find in this habitat. Wood ducks, in particular, have a difficult time finding nesting grounds. So occasionally, you'll find man-made homes for them. See if you can go back and find the house. I'll give you a hint: it's attached to a tree.

9:13

Meadow

Our second terrestrial, or land-based, habitat is the meadow, or field. Notice that, unlike woodland habitats, there are very few trees. Meadows and fields are largely covered in grasses, so you are going to see lots of plant species here that wouldn't grow well in the forest. In fact, these grasses, if left grow, can reach heights of four, five, even six feet! Something else we're going to see a lot of in meadows and fields are wildflowers. Things such as daisies, black-eyed susans, coneflowers, coreopsis, and chicory. Most of these won't bloom until June or July though. Kentucky meadows and fields tend to create good habitat for summer-blooming flowers and what we call warm-season grasses: Grasses that prefer temperatures of eighty degrees Fahrenheit or higher.

And where there are flowers, there are pollinators. Meadows and fields provide a food source for hundreds, if not thousands, of species of insects and, for a lack of a better word, bugs. Bees, beetles, crickets, grasshoppers, butterflies, dragonflies, ants, praying mantises—all of these can be found in droves in meadows across the state. One I want to mention in particular is the monarch butterfly, who is dependent on the milkweed for survival—a plant that is fairly common amongst Kentucky grasslands, and to some extent, woodlands. In fact, many people will actively plant milkweed to help keep monarch populations healthy, since their numbers have been decreasing in recent years.

Tall grasses also make fantastic shelter for a number of mammal species (especially rabbits, mice, moles, shrews) and ground birds (like quail or pheasants) who are able to burrow and hide themselves easily. As a direct result, you'll often find predators that like to eat these guys, such as hawks, snakes, and foxes. A meadow also provides an ample amount of grazing food for larger animals: deer and turkey are frequent visitors to meadows.

What about water though? While some meadows have ponds or streams, you'll notice our meadow doesn't have any standing water. How do you think the organisms who live here get their water then? They basically have two options: they either have to leave and find water, which can be simple for large animals such as deer, or they can get water from less obvious sources, such as insects drinking morning dew, or water animals eating grasses that have collected water after it rains.

11:32

Stream

Our final habitat is another aquatic one: a fresh water stream. We learned a little bit about them last week. Although it is a wetland, streams are very different from the vernal pond we saw earlier. That's because the water is, for the most part, moving. This is important, because the way the water moves

changes what we see. It's basically like having many different habitats in one. There are three major areas of a stream: pools, riffles, and runs. A pool is exactly what it sounds like: an area where the water pools and moves very slowly. This gives things like sticks, leaves, and soil the chance to settle on the bottom, which is excellent habitat for organisms that need places to hide such as frogs and salamanders, some insects like beetles and dragonfly larva, and worms. It's also a good place for animals to lay eggs.

Pools also tend to be the deepest part of a stream. So, if there's a drought, it will likely hold water the longest. Meaning that animals that are more permanently aquatic, such as fish or mussels and clams, will do better here. If there are any aquatic plants floating around, this is also where we're likely to find them.

Riffles are shallow areas, typically filled with smaller rocks, cobbles, and pebbles where the water runs quickly. They're usually right before or after a pool, and are pretty easy to identify because of how active the water is. But, because the water moves quickly, it is not great habitat for a lot of plants and insects unless they can find shelter under rocks or are able to cling well to things. We're mostly going to find insects here, especially mayflies, stoneflies, and caddisflies hiding in the gravel and cobbles. Plant-wise, maybe some algae or mosses.

Runs are the main area where the water moves at a steady pace, or are easier to identify in larger streams and rivers. A small stream like ours may not have much of a run. If it did, though, that is where we would find larger organisms, such as fish, crawdads, and other more active species. Something I want to point out is the general lack of plants, or producers, in the stream. Most of the plants, as you can see, are on the sides: what we call a riparian zone. If that's the case, how do the consumers in the stream find their producers they eat? The answer is leaves and branches. Throughout the year, leaves and branches will fall into the stream, or along the edges. The stream organisms can then use that for shelter, and even for food.

14:03

Conclusion

Alright, so that wraps up all the different habitats we're going to look at today. Were you able to pinpoint different places that animals can get all four of those things they need to survive? Remember, that was food, water, shelter, and space. Thanks again for joining us for another episode of Exploring The Outdoors. My name is Andy, and we'll see you next week.