Reading 1.3 – Wildlife Biologists at Work

Getting Ready

Any box with a needs to be filled in.

Have you ever been around a child who seems to want to learn about everything? They watch things closely. They might get down on the ground to watch a worm move through the grass. They might watch tiny ants carrying food to their anthill. They might sit quietly and watch birds build their nest in a tree. Maybe these were things you did when you were younger, or that you still do now! Biologists make careful observations of organisms and their environment, too. They watch organisms really closely to learn about their behavior. Today, you will read about wildlife biologists who are trying to solve a problem by closely watching the interactions of sheep.

What Has Happened to the Sheep?

In class, you learned that whole populations of organisms have the same survival needs as individuals. If one organism dies, the population can survive. However, if all of a population begins to change, biologists try to figure out why. Just like you did on your field observation, biologists look for interactions between organisms, and between organisms and their environment. In this reading, you will learn about a population of organisms called Dall sheep. Their population began to decrease, and wildlife biologists, who study organisms in wilderness areas, wanted to figure out why.

What kind of interactions do you think biologists might look at as they study a population of sheep?

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Highlight one interesting fact per paragraph (3 total in this section):

Fact I-

Learning about Dall Sheep

Wildlife biologists noticed a decrease in a population of Dall sheep in the early 1990s. They wanted to find out why, so they began careful observations of the sheep.

Dall sheep are known for their beautiful horns. Males (rams) have huge, curling horns. Females (ewes) have smaller horns. Their horns are made of keratin, the same material that makes up your fingernails. But the sheep horns are much heavier. Like your fingernails, they keep growing throughout a sheep's life. The horns grow during the spring and summer, and stop growing in the late fall and winter. The growth cycle creates a pattern of rings along the length of the horn.

Dall sheep are found in very cold regions of Alaska, the Yukon, Northwest Territories, and British Columbia in Canada. This is an

	area that is very big, covering many acres of meadow, hills, and mountains. The map below shows where the sheep live.
Fact 2 -	Dall sheep have the food and shelter they need for survival. When an area supplies all the things an organism needs to survive, that area is called the organism's habitat. In the meadows, they find grasses and plants to eat. On the rugged mountains, the sheep eat moss. They also have hiding places to protect them from organisms that use the sheep as food. Wolves, bears, and eagles eat sheep. Some people in the Baird Mountains eat the sheep, too. Other people hunt the sheep as a sport.
Fact 3-	In late May or early June, the young sheep, called lambs, are born. Just before the lambs are born, the ewes look for places to give birth in the most rugged parts of the mountains. Can you imagine why? The ewes choose places that are especially difficult for predators to find. Ewes give birth to one lamb at a time. The mothers stay with the lambs in their hiding places until the lambs are strong enough to move. A week after they are born, lambs begin to eat plants, grasses, and moss.
Highlight answer to subtitle —>	A Problem with the Dall Sheep Population
What was the problem?	In the early 1990s, after two years of very cold winters, the Dall sheep population in one area decreased. There were less than half the number of sheep in the Baird Mountains. (Mountains in the western part of the region are shown on the map.) Wildlife biologists were concerned about the drastic change. They knew that many things could have an effect on the Dall sheep population. Imagine that you are one of the biologists beginning to investigate the sheep mystery. Before you can discover what may be causing the problem, you will have to observe the population to understand its interactions. Based on what you learned about observing organisms on your field study, what are some questions you might have to guide your observations of the Dall sheep?
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Highlight answer to subtitle —>	What Was the Result of the Wildlife Biologists' Work?
	The wildlife biologists began to study the problem by observing the sheep's interactions with the environment and other organisms. Questions they developed were probably similar to ones you developed. For example, biologists asked, what kind of interactions do the sheep have with people? They made observations and gathered data. They saw that people hunted the sheep for food and

for their horns. These data helped wildlife managers to decide to limit the Dall sheep hunting season.

Biologists do not have all the answers. Their work still continues, and they are still observing the sheep now. Even though they do not completely understand the population decrease in the 1990s, their data helped the biologists have an impact on the population. The Dall sheep population has once again become stable.

When you were young and watched worms, ants, or birds, you probably asked a lot of questions that helped you learn about your world. Biologists do that, too. They carefully observe interactions and ask questions, so that they can have a better understanding of organisms in the world.

