

CONSERVATION CAREERS

BY MARY HOFF
PHOTOGRAPHY BY DEBORAH ROSE

Do you like to learn about
rocks, trees, birds, or weather?

Do you enjoy telling stories or explaining how something works? Are you good at drawing pictures or fixing things? Do some of your best friends have four legs—or six?

Whatever your interests, hobbies, talents, and skills, they can be part of a conservation career. Let's visit some of the many people who make up the Minnesota Department of Natural Resources and see how they have fun and earn a living too, while protecting the living and nonliving natural resources that help to make our state great.



Gary Montz

AQUATIC INVERTEBRATE BIOLOGIST

When you think about animals that live in water, you probably think of fish, frogs, turtles, and other creatures with backbones. Gary Montz thinks of aquatic invertebrates—insects, mussels, and other water dwellers without backbones.

Gary travels around Minnesota collecting invertebrates from lakes and streams. Then he identifies and counts them. The information he gains helps us understand whether the water is clean or polluted, and what kind of care it needs to keep all creatures healthy. Gary works under a lot of different conditions. Sometimes he uses waders. Sometimes he even gets to scuba dive.

Gary found his future career when he was studying natural resources in college. He took a class about aquatic invertebrates and became fascinated by them. "There's lots of strange and unique critters out there," he says.

CONSERVATION CAREERS



Ike Anderson

WILDFIRE AVIATION SUPERVISOR

Imagine being responsible for 17 helicopters, 85 fixed-wing aircraft, and all of the pilots who help keep them operating safely and efficiently. That's Ike Anderson's job.

Ike works at the Minnesota Interagency Fire Center in Grand Rapids. These aircraft must be ready at a moment's notice for fighting fires—dropping water or foam on the flames—and hauling people and cargo. When not being used to fight wildfires, the aircraft may be used for stocking fish, planting trees, moving construction materials, and carrying out prescribed burns—controlled fires set to help keep habitat healthy.

Years of outdoor experience, along with military and leadership training, have given Ike the skills and ability to think clearly under stressful conditions. "You've got to make decisions," he says, "and they've got to be sound."

Ike has worked for the DNR for 30 years. He likes his job because he likes the challenge of solving problems and completing dangerous missions.



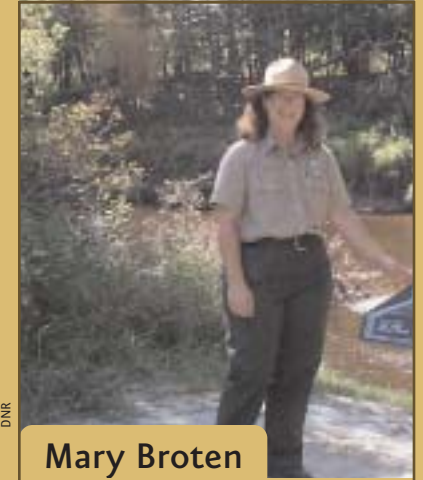
Pete Boulay

CLIMATOLOGIST

What do you do when you see a storm coming? When Pete Boulay was a boy, he would run to the top of a hill to watch.

Today Pete knows not to go to high places where he could be killed by lightning during a storm. But he still likes weather. As a climatologist, he gathers weather data and puts them on the Internet (www.climate.umn.edu). Many people use the information. Lawyers use it to prove what the weather was on the day of an accident. TV reporters use it to compare today with the past. Snowmobilers use it to find lots of snow.

People going into this field should be good at computers, science, and math. They also should be willing to work odd hours. "Weather never sleeps," Pete says.



Mary Broten

PARK MANAGER

"Park managers are jacks-of-all-trades," says Mary Broten, manager of Old Mill State Park. Mary keeps everything running smoothly in this northwestern Minnesota park, which hosts more than 15,000 visitors a year.

On a summer day, you might find Mary planning how to restore prairie, making sure grass gets mowed, figuring out a budget, or fixing broken plumbing. In winter she takes care of the sliding hill and trails.

Mary grew up on a farm, where she learned to enjoy working outdoors and fixing things. In school she studied mechanics, science, education, and other subjects. In college she worked DNR seasonal jobs to gain experience.

"I love being outside, and I love the variety," Mary says.

CONSERVATION CAREERS



Chel Anderson

PLANT ECOLOGIST

Chel Anderson is a detective—a plant detective in search of rare or unusual communities of vegetation. She knows a lot about the things different plants need to thrive, such as soil, moisture, and amount of light or shade.

To find plants, Chel says, she has to “try to think like a plant.” She studies maps, aerial photos, and historical information that show natural features of the land. Putting together this information and her plant wisdom, she decides where to look for rare or unusual species or plant communities. She also looks for common plant communities that have not recently been disturbed. When she finds these plants, she records information about them so we can understand them better and so people can avoid building houses, trails, or roads where they grow.

Among Chel’s favorite days was one she spent exploring a rocky beach of Lake Superior. Peering beneath the branches of a blown-down black spruce, she gave a shout of surprise. Beneath the tree, she saw the creamy yellow blossom of a plant called northern paintbrush. The last time someone had documented seeing a wild northern paintbrush in Minnesota was in the 1800s. “There it was, just staring me in the face,” Chel says.

As a child Chel spent a lot of time being curious and exploring outdoors. “I knew as a teenager that I wanted my work life to be connected with the natural world,” she says. In college she studied plants, ecology, and humanities. Eventually she focused on work related to plants and plant communities “because they’re everywhere and are so important to what makes Earth the kind of home it is.”

Chel says she likes her job not only because it is interesting, but also because she gets to use both her mind and her body. “There aren’t very many parts of who I am that don’t get exercised,” she says.

DNR



John Wizik

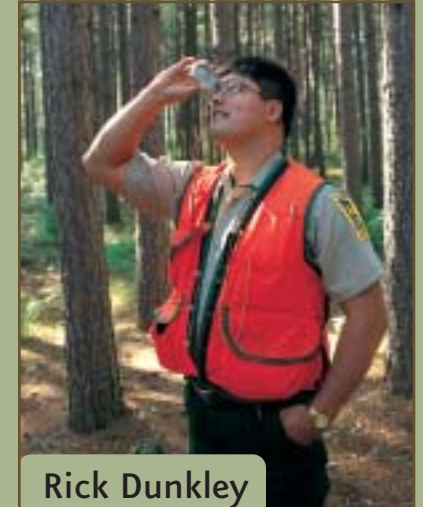
NURSERY TECHNICIAN

Have you ever taken care of a baby tree? John Wizik takes care of about 26 million of them.

John is a technician at the DNR’s Badoura tree nursery in Akeley. He and his coworkers grow trees from seeds, then ship them to state and county forestry departments, farmers, and other landowners.

John’s work changes with the seasons. In winter he and coworkers extract seeds from pine and spruce cones. In spring they dig up and ship young trees. In summer they care for seedlings. In fall, they plant seeds and dig up trees to be stored until spring.

John has been working at Badoura for 13 years. Trees he’s cared for now grow all around the state.



Rick Dunkley

FORESTER

Managing forest land, fighting fires, and planting trees are among Rick Dunkley’s many jobs as a DNR area forest supervisor. He and six other foresters take care of state forests in east-central Minnesota.

Rick and the other foresters fight about 100 fires each year. Last summer he helped fight fires in Washington and Oregon.

Landowners who need advice managing their forests call Rick. He helps create plans for keeping the land healthy for future generations.

Rick says his job has taught him that there is more to work than money. He quit a high-paying job to work for the DNR. “Money can do a lot of things for you, but you have to enjoy what you do,” he says. “I really enjoy forestry.”

CONSERVATION CAREERS



Donna Dustin

FISHERIES BIOLOGIST

Donna Dustin spent much of her childhood searching for interesting creatures. “I was always looking under rocks,” she says. In college, she took classes in natural resources, hoping to turn her curiosity into a career. And she did. As a DNR fisheries biologist, she spends much of her time learning about Minnesota’s fish and how to help them thrive.

For many years Donna’s job was to catch fish. She and her coworkers traveled from lake to lake, netting hundreds of fish each day. Their catch helped them estimate the number, kinds, and sizes of fish in the lake. One day on Mille Lacs, they caught a 50-inch muskie and several other muskies more than 40 inches long, all in one giant net, all at one time!

Right now Donna is studying whether the addition of artificial riffles—shallow, rocky spots—to a stream improves the survival of walleye eggs laid there. She collects jars of “gunky stuff” from nets that filter the stream. Then she takes the jars to the laboratory, where she sorts through the gunk, chunk by chunk, to count baby walleyes.

Donna says you need to be good at math and computers to be a fisheries biologist. She says the best part of her job is the variety: “If you have to work on something tedious, you’re only doing that for a while.”



Laurel Reeves

HYDROGEOLOGIST

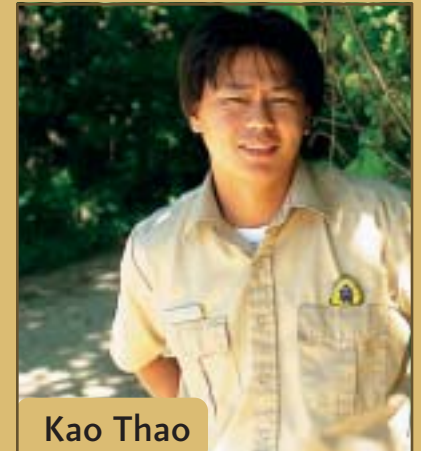
Laurel Reeves is in charge of 700 wells that have been drilled around Minnesota. They let her look at groundwater, the water found in pores and cracks in rocks and soil.

Groundwater is an important natural resource, used for drinking water, manufacturing, and much more. Laurel’s job is to help make sure we don’t use it faster than it can be replenished.

Laurel collects water-depth data from the wells. The data are used to identify problem spots, help people share groundwater, and decide whether a place has enough groundwater to support new development.

“The idea is to not use too much now, so that it is there for future use,” she says.

If you want to be a hydrogeologist, Laurel recommends you learn all you can about computers and math.



Kao Thao

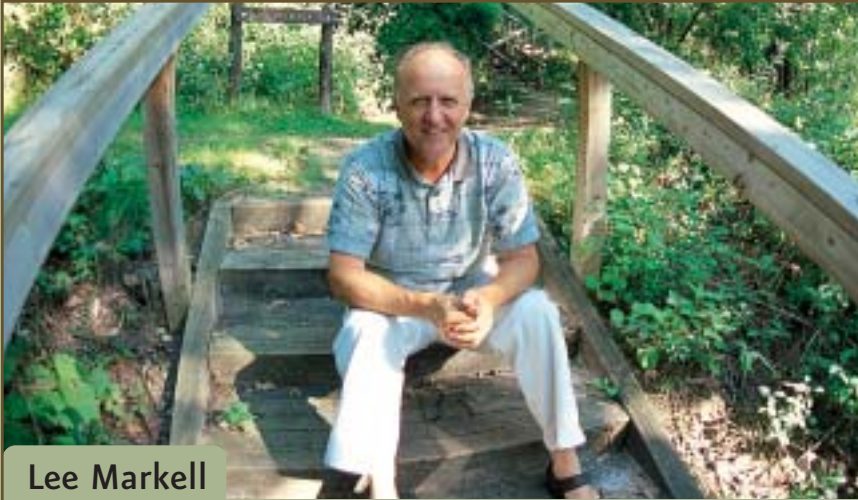
PARK NATURALIST

Kao Thao remembers two things about visiting a Minnesota state park as a child. One is how much he loved it. The other is how little his family knew about the plants and animals there. Today, as a naturalist at Fort Snelling State Park, he helps others understand Minnesota’s natural resources.

One of Kao’s favorite responsibilities is teaching people of Southeast Asian descent about Minnesota’s great outdoors. Last year a group of Hmong children visited his park. He taught them that the Mississippi River provides the water they drink every day. That made the children want to help take care of the river. They came back and cleaned up the riverbanks.

“It’s really exciting, seeing how excited they are picking up trash,” Kao says.

CONSERVATION CAREERS



Lee Markell

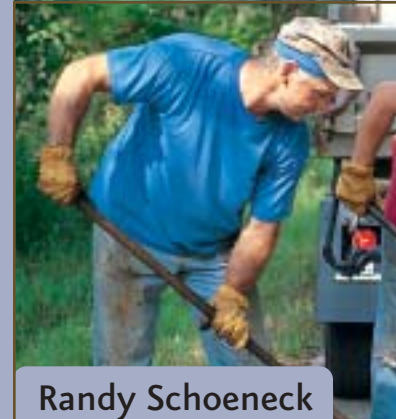
LANDSCAPE ARCHITECT

How do you make a natural place easy for people to visit and enjoy without ruining it? Lee Markell will find a way. A landscape architect, Lee designs trails, visitor centers, campgrounds, and water accesses for boats.

Lee always starts a project by getting to know the place, so he can respect and work with its natural features. He thinks about the future users. How many parking spaces will they need? Might they be using wheelchairs or strollers? Will they need restrooms, drinking fountains, racks for their skis or bikes? He uses his imagination and starts to draw pictures of what the place might look like when buildings and paths are added to what's already there.

Lee's background—he's a hunter and angler, and he studied wildlife biology in college—helps him take into account the needs of the animals and plants that already live there. He also knows a lot about drafting, computer-aided design, engineering, and natural science. To become a landscape architect, a person should have four or more years of college.

This year Lee had a pleasant surprise when he opened the 2002 Minnesota state road map and saw a photo of a wildlife observation blind he designed. "It's kind of neat to look back and say at least you had a hand in doing something useful," he says.



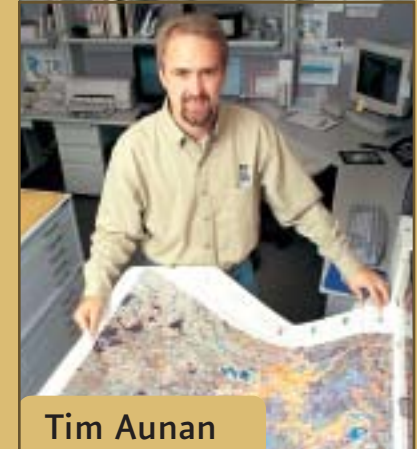
Randy Schoeneck

TRAIL TECHNICIAN

Ever wonder who to thank for building and taking care of DNR trails, boat launches, parking lots, and fishing piers? Thank Randy Schoeneck and other trail technicians and laborers.

Randy and coworkers take care of the Sakatah Singing Hills State Trail and water accesses near Mankato. They work outdoors summer and winter to install blacktop, trim trees, build picnic tables, and do lots more.

"We do a little bit of everything, which I really enjoy," Randy says. He says a person who wants to be a trail technician should take college classes in recreation and get lots of experience with chain saws and other equipment and working outdoors. "You've got to like being outside," Randy says, "but you've got to like to work too."



Tim Aunan

GIS IMAGE ANALYST

If you like maps and computers, you'd like Tim Aunan's job. Tim develops computer programs and creates maps using software and data called Geographic Information Systems, or GIS. His programs and maps are valuable tools for the people who take care of Minnesota's woods, waters, and wildlife.

"I've always been a fan of maps," Tim says. After taking mapmaking and computer classes in college, he went to Alaska. There he applied his GIS skills to help assess the environmental damage caused when the ship *Exxon Valdez* spilled 11 million gallons of oil in the ocean. Tim is currently writing a computer program that will help DNR managers determine which areas along Minnesota rivers and streams need special protection.

CONSERVATION CAREERS



Gretchen Mehmel

WILDLIFE AREA MANAGER

If you think taking care of a pet is a lot of work, imagine being responsible for all of the wildlife on more than 400,000 acres of land! That's what Gretchen Mehmel does as manager of the Red Lake Wildlife Management Area.

Gretchen and her coworkers help make sure the land can provide the food, water, and shelter that animals need to thrive. They keep brush under control by cutting or burning it. They conduct animal surveys to improve understanding of what kind of habitat is best for each species and to track changes in wildlife populations. Gretchen also helps with moose research, develops trails, surveys hunters, and educates citizens. She likes to show visitors her collection of skulls of all sizes and shapes.

Gretchen first became interested in wildlife as a child when she attended naturalist programs at state, national, and provincial parks campgrounds. She earned a college degree in wildlife biology, and gained experience through summer jobs for the DNR and other natural resources employers.

"I'm living my dream," she says.

Mary Hoff, Stillwater, is a free-lance science writer and production coordinator for the Volunteer. After working in laboratories during and after college, she realized she loved biology but didn't like focusing on just one tiny aspect of it. She decided to pursue a career writing about all kinds of life sciences instead. Her favorite topic is natural resources. Deborah Rose is DNR staff photographer.



Joel Heyn

CONSERVATION OFFICER

As a conservation officer, Joel Heyn helps make outdoor recreation three things: fun, safe, and fair. One way he does this is to check to see that people who fish, hunt, and boat have licenses. The license fees help pay for taking care of the resources. Another way is to make sure people who hunt and fish obey regulations, which help ensure game populations will be around for future generations. Joel also teaches classes about safety, helps rescue people who get lost or hurt outdoors, and helps police and sheriffs with their work.

Joel became a conservation officer because he likes to spend time outdoors. He has degrees in law enforcement and wildlife management. It helps to be a hunter and an angler, he says, "because then it is easier to relate to the people you are dealing with."



Heather Anderson

GEOLOGIST

Heather Anderson says her friends tell her she has "the coolest job of anyone."

Heather is a geologist. She travels around the state looking for places where glaciers left behind mounds of sand and gravel, and then she drills holes to see how much is there. Why would anybody want to know that? Because sand and gravel are important ingredients in the recipes we use to make roads, parking lots, houses, office buildings, shopping centers, and other structures.

Heather was always collecting buckets of rocks as a kid. She earned a college degree in geology. Her advice to young people: Follow your interests and build on your strengths. She says, "I was told early on, just go into what you enjoy and things will develop." 