

# NATURAL RESOURCES CAREERS

By Robbo Holleran



I never wanted to be a Park Ranger, but many kids who play in the woods do, and that is their dream job. I wanted to be a fisheries biologist and started my education in wildlife management. I had played in the woods, hiking, camping, fishing, and hunting all my youth. In my second year in college—since most of the courses for the two areas of study were the same—one forestry field trip made all the difference. We looked at various stages of the regrowth from clear-cutting in central Maine, with a profusion of mixed species, all crowded and struggling for the light. Then we saw plots where “crop tree release” had found the hidden stands of white pine, decent hardwoods, or spruce and fir on each separate area. These lovely, healthy, growing forests were there because someone had taken the effort to culture them. Forestry jumped out at me and became my life’s passion.

Forestry, wood products, and natural resources offer a wide range of careers. None of these are a “get rich quick” scheme, and most of them are “get rich never.” Many people who work in related fields love their work even after 30 or 40 years. Here, we will look at a range of related occupations. A few occupations require advanced degrees, and a bachelor’s degree is needed for most professions. An associate’s degree or some type of trade school can be enough for many decent jobs and there are opportunities for those who did, or did not, finish high school. Often those who did not perform well in a classroom situation are well-suited to working in the woods or with wood products. Tactile learners are hands-on. They learn by the feel of things, how they fit, and the processes involved. Few traditional high school programs give these kids much satisfaction, but if you can show them how things work and get their hands dirty, they can excel. There are still apprenticeships and entry-level jobs that can start the right person up the ladder for success. Many well-respected craftsmen and women did not do well in school.



## Forestry

There are three employment categories of foresters: government, industry, and private. Most professional foresters are required to have a bachelor’s degree in forestry or a closely related field. Government foresters have a wide range of jobs such as with the National Forest System. These jobs run the gamut from a forestry technician, managing forester, district ranger, or regional bosses. Federal foresters work for other agencies, such as the Bureaus of Land Management or Indian Affairs, and even the Army. Military bases often have thousands of acres of forest. State and even local governments employ foresters, sometimes to manage public land or to provide service and oversight to private lands and forest businesses. Public foresters are also involved in education. There can also be specialties, such as insect or disease experts, fire management, forest soils, wetlands, public and legal policy, and research scientists. Watershed management is an important topic for public land, and there are several specialties involved. To broaden the example, the national forests also employ a wide range of professions, from surveyors and archaeologists to biologists, lawyers, and recreation staff. Many forest-related agencies operate like this. There are entry level jobs for all of these, and a greater education starts you further up the ladder in most cases.

Woodlot owners—such as readers of *Sawmill and Woodlot* magazine—mostly deal with state service foresters. In Vermont, these are called county foresters. This can be a dream job and is largely educational. In some states, this is becoming a “regulatory” position, but it is still a pleasant job in most states. County foresters are a free source of information and usually

know their territory and most of the actors on the stage. In most states, they provide general information, might be able to take a walk in your woodlot for some specific assistance, and then will direct you to a list of private foresters for additional services. They act as the interface between landowners, private foresters, and state government.

Foresters who work for industry have a wide range of skill sets, responsibilities, and pay ranges. These are businesses from small to huge that either own land or process wood products. So, their foresters manage the company's land or purchase wood products for them or provide other services. I personally deal with many procurement foresters when selling my clients' wood. Some mills employ foresters who provide services to other landowners, and so they will be on different woodlots every week. These services are often in exchange for some rights to purchase wood when it becomes mature. But larger businesses also hire foresters and related professionals for research and development, public policy and educa-

tion, and insect, disease, and fire management.

Private foresters usually work for small or medium-sized businesses that provide services for hire to "nonindustrial" landowners with 10 acres to larger tracts of a few thousand acres. Larger consulting firms may have certain specialties such as larger tracts, timber inventory, or real estate sales, along with office



**Right:** The author's assistant, Ben Vicere, selecting red pine to be removed in a thinning. Ben has a BS in Forestry from Unity College in Maine.



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staff and field technicians. But most smaller firms have foresters who need a broad general knowledge and connection to other professions. This includes local and regional timber markets, forest biology, silviculture, and invasive plant control, insects and diseases, wildlife habitat, and the full range of state laws and rules. Taxes, boundaries, real estate, wetlands, and many other areas of expertise are important. This is a difficult field for young foresters to enter, but many employ entry level technicians, which is the best way to get started in private forestry. Some states have licensing of foresters, which generally requires a college degree, but many states do not.

## Logging

Logging is becoming ever more complex with its sophisticated equipment, business requirements, and regulations. Some sort of forestry training, such as an associate's degree is helpful, along with business skills, computer abilities, and mechanical skills. Buying an antique skidder and a chain saw is not the best way to start. Thirty years ago, it was common for anyone with a chain saw to become a logger if other employment was scarce. Larger logging crews employ a range of workers and this is a decent entry level job if you are up to hard work and long hours when the logging is active, and short hours when it is not. There is a Pacific Northwest country music band called Craig and

Terry, who sing about spotted owls, old growth timber, and rigging crews. One song promises the "greenhorn fools" two moonlight rides and a picnic in the forest every day. This means you ride to work before dawn, come home after dark, and eat your lunch in the woods. Aside from that, learning advanced diesel mechanics or how to operate specific equipment, such as a feller-buncher, will make a better job available. Highly skilled chain saw operators are still in demand, even with most wood being cut mechanically. Of course, you will need to know your tree species, markets for the wood products, regulations, and landowner requirements, and some forestry skills to become more valuable. Logging contractors who put all the pieces together to run a productive crew have a tough life but can make a good living. It is work you have to love, but it is a worthy challenge for body and mind.

## Wood Products

Wood products manufacturing employs many more people than logging or forestry. A business that buys logs and makes lumber, veneer, paper, or anything else is referred to as primary manufacturing. These companies integrate with loggers and landowners to purchase raw material. They can be small family businesses or large factories churning out truckloads of products each day. Secondary manufacturing is the next step—taking lumber or other pre-processed material and

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making a finished product. There is no end to opportunity here, from laborers to craftsmen, engineers to office staff and sales. Many shops use sophisticated processing equipment such as CNC milling that requires skilled operators. There are often entry-level opportunities at each location. This work can extend to cabinets and furniture, flooring, millwork, and other products like wood chemicals, and energy from biomass. A smaller niche in wood products is brokering of logs, lumber, or other wood products. It is a people business.

## And That's Not All!

There are other jobs and professions that get people into the woods or in the trees. Arborists include entry-level labor, skilled climbers, pest control, crew leaders, sales, and can be a good opportunity for a small business startup in many areas. Surveyors require a degree to be licensed in most states, but there are rod-men, instrument operators, drafting, and deed researcher jobs that do not require the license. Real estate sales and land appraisal are further opportunities that benefit from some forest knowledge and provide business opportunities in the woods.

Natural resources management includes a wide range of professions, most of which require a bachelor's degree, or perhaps more for many specialties. Natural resources managers can work for state or federal government, large industry, or even military bases. These people are engaged in improving human health and protecting or enhancing the environment. Wildlife biology and wetlands are two professions that I deal with, and these can be academic, management, or regulatory. Some are involved with water protection or waste systems, public policy, sustainability and conservation, along with ecological processes, resilience, or monitoring. Some work for specific project management like mining reclamation or development mitigation. There are a few private consultants in these fields, but there are opportunities in private business, government, and academics. Land trusts and other nonprofits hire resource managers of various specialties. Parks and recreation management fits in here, and there are park rangers at federal, state, and local levels. There is the perfect job out there if this is where your interest lies. If you can fit your passion to your profession, your work will also be your pleasure. ■

*Robbo Holleran is a private consulting forester helping landowners meet their goals in Vermont and adjacent areas. His work has him outdoors about 150 days each year, plus play time. He is one of the authors of the new Silvicultural Guide for Northern Hardwoods.*



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