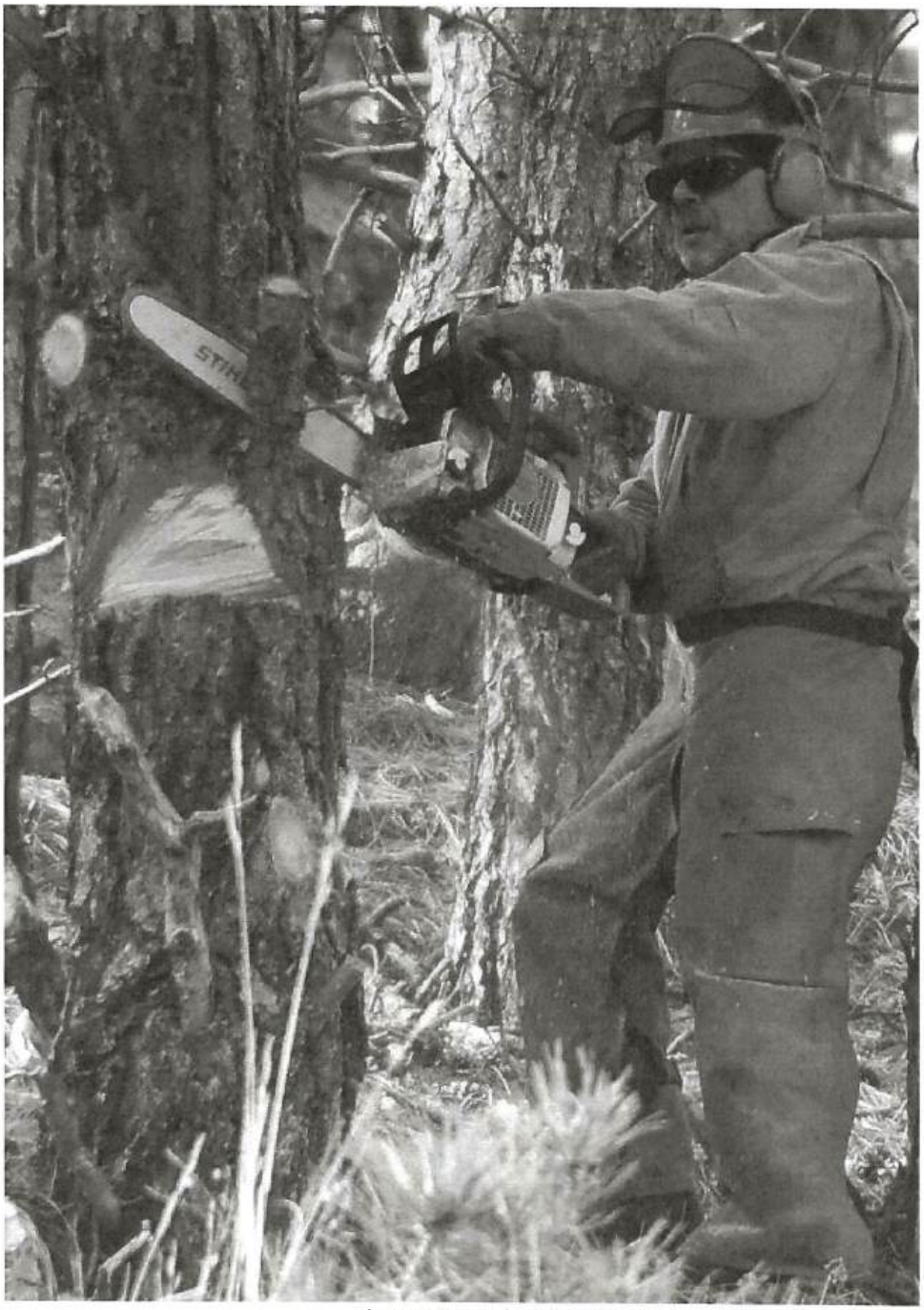
WORKING IN THE WOODS AND THE VIRTUE OF COMING HOME AT NIGHT

By Peter Smallidge

Woodland owners can use one or both of two strategies to work or steward their land. One strategy is to watch the woods and allow natural processes to control the outcome. The other is to change which plants dominate. Changing the dominant plants happens by planting seedlings or shrubs and ensuring their success or by removing some plants to favor the remaining plants with sufficient sunlight to thrive. Chainsaws are often the tool of choice in the latter, and an output of it is firewood. Almost two-thirds of woodland owners cut firewood on their property.

Chainsaws are amazing tools. Chainsaws have a motor that drives a gear that pushes the 14- to 20-inch chain around a bar at about 55 mph. A sharp chain can effortlessly cut through woods as hard as sugar maple or hophornbeam. Imagine the glee of someone who lived at the time of transition from bow saws to even the early chainsaws. That transition from human-speed to machine-speed saws creates new opportunities for production and new needs for safety.

Modern chainsaws, the only kind you should use, have features to help reduce the likelihood that the operator is cut or otherwise suffers injury directly from the chainsaw. These potential injuries are the result of the chain moving fast. It's worth noting that the safety features for the chainsaws, and power tools in general, reduce the likelihood rather than prevent serious injury. Essential safety features on a chainsaw include a chain brake lever, broad base plate below the throttle, a throttle lock, shock absorbing cushions and a spark arrestor on the muffler. The spark arrestor is more important in areas prone to forest fire. The chainsaw you should be using is lightweight compared to early chainsaws, but still might weigh between 8 and 12 pounds, plus a fuel can and related equipment. An hour or two with this weight, sometimes held at arm's length, can be physically draining.



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A big part of using a chainsaw safely is wearing the appropriate safety gear including a logger's helmet, cut-resistant chops or pants, cut-resistant gloves and steel-toed, cut-resistant boots.

Knowing that chainsaw features reduce the likelihood of serious injury, the obvious questions are how to further reduce the likelihood of injury and whether there are other safety considerations. This emphasis on safety seems to focus on desired outcomes, but knowledge and

understanding of undesired outcomes helps us appreciate the consequences and become more capable of avoiding those outcomes.

Related to the operation of the chainsaw and additional personal safety, there are products described as personal protective equipment (PPE) that amplify the safety features of the chainsaw. PPE are used to protect important body parts and body parts that are commonly injured. Because PPE isn't foolproof, a list of personal protective behaviors (PPB) follows. From the top down:

- **Logger's helmet**: The helmet serves as protection from falling and flying objects for the skull and for the eyes; the earmuffs on the helmet protect hearing, as well. The helmet is convenient to ensure all protections are together, but safety glasses, ear plugs and a hard hat would result in comparable protection. Cost is about $75-$90. There is no PPB that substitute for head protection.
- **Cut-resistant chaps or pants:** These are made from specialized fabric, distinct from heavy jeans or double-front work pants which are insufficient as protection. The cut-resistant fabric is often Kevlar and resists the cutting action of the saw, plus it is woven so that when cut its fibers bind and prevent movement of the chain. Chaps or pams should extend from the waist to the top of the foot and wrap behind the calf. Chaps too big or too small are ineffective. Cost is $100-$150. There is no PPB that substitute for leg protection.
- **Cut-resistant gloves:** Hands are a common location for injuries, and gloves with protective fabric reduce the chance and severity of that. Common work gloves reduce minor cuts and bruises and keep your hands clean of pitch when cutting conifers. Many people prefer to use cut-resistant gloves. The chance of cutting your hands with the chain is reduced by always holding the saw firmly with two hands. Cost of safety gloves is about $40. There is no PPB that substitute for hand protection.
- **Steel-toed, cut-resistant boots:** Working in the woods involves variable terrain, obstacles and weather. Boots designed for these conditions have materials embedded (now often plastics rather than actual steel) that protect the toes from being crushed, the sole from puncture and the shell from cut-through by the chain. Further, they are waterproof for added comfort that allows you to focus on cutting rather than on cold, wet feet. Boot styles include leather and rubberized material. Cost $150 to $450. There is no PPB that substitute for foot protection.
- **Be where you are.** This single PPB, fully enacted, is I believe the most powerful advice (shared with me by Jim Signs, Owego, NY). Accidents with chainsaws happen in a split second, but those accidents often result from existing circumstances. Be alert to your existing circumstances of person, place and equipment. Through complete attention to your priority activity, which should be the safe operation of the chainsaw, you can greatly reduce your potential for injury or death. Think only about what you are doing, how you are doing it, your personal ability and the current conditions. If you mind starts to wander, stop running the saw.
- **Participate in an approved safety and productivity course before using your saw.** Good courses will last all day and allow you to participate. Some courses with advanced instruction will require several days, but these are worth the investment. Some chainsaw dealers provide limited instruction.

Spring chainsaw classes

- **Blue Heron Stewardship.** A series of SAWW-certified chainsaw safety classes will be held this spring at the Kickapoo Valley Reserve near La Farge. Level 1 training will he held April 7, Level 2 will be held April 23 and Level 101 will be held May 15-16. (The two-day event is geared toward novices and will cover Level 1 material at a more deliberate pace.) To sign up, go to *blueheronstewardship.com/education.*
- **Chainsaw Safety Specialists, Rhinelander.** Email Safety Trainer Jim Olive at *jim@chainsawsafetyspecialists.com* about DNR chainsaw training openings.
- **Forest Industry Safety & Training Alliance (FISTA), Rhinelander.** Fill out the chain saw training information request form at *fistausa.org/fista/Chainsaw_Training.asp.*
- **Forest Safety Instruction (FSI) Chainsaw Safety.** Register at *fsichainsawsafety.com/* for classes below:
  - **Carpenter Nature Center, Hastings, Minnesota:** Level 1 training is held April 1, Level 2 is held on April 2.
  - **Upham Woods, Wisconsin Dells**. Dates not available by press deadline. Go to *fsichaiansawsafety.com* for information.
  - **Women's Environmental Institute**, Women and Chainsaw, Safety and Operational Training in North Branch, Minnesota. March 14, from 9 a.m. - 4 p.m.
- **Samsel Ltd. Tree Farm, W10420 Beechnut Drive, Hancock:** Classes are held the second Saturday of each month from 8 a.m. – 5 p.m. Level 1 is held April 11 and May 9; Level 2 is March 14 and June 13. Cost is $120 per session. Participants must have completed the prior level. There is no prerequisite for Level I. Learn more at *samselsawmill.com/chainsaw-safety-classes.*
- **UW-Madison Extension**: Two two-day chainsaw classes will be held in 2026, although the dates were not yet set by press deadline. In spring, the class will be held at the Arlington Ag Research Station and in fall at the Marshfield Ag Research Station. Class registration will be listed at *woodlandinfo.org/current-events/* once dates are known.

Nationally, a course known as "Game of Logging" provides comprehensive, hands-on, technical training for landowners on felling and saw maintenance.

- **Be conscious of who's around you.** There are two schools of thought: One is to work alone and the other is to have someone nearby. When working alone, there are no distractions or thoughts of seeing someone else. However, the sharing of time working in the woods builds bonds. A buddy might be able to help you if you have a minor injury; however, they may just be distractions in other circumstances. Know if and where others are located, and remember that all moving parts (chains, trees, tractors, etc.) can injure others. If working with others, keep a safe distance of about a tree length or more. Ideally, not more than one person per acre should be working at one time.
- **Know your physical limitations.** The average woodland owner is 63 years old. Cognitive decline starts very subtly in your mid-20s. By this point in life you should be smart enough to know that your strength, endurance, reaction time, mental acuity, flexibility and range of motion are diminished with each passing year. Regardless of your age, physical attributes vary among people — know your limits. Visit your cardiologist to ensure the physical demands of woods work won't unduly stress your cardiac capacity. Stretch before going into the woods. Be consistent with resistance weight training to ensure all muscle groups (yes, you use virtually all of them) are toned, or of known capacity.
- **Identify hazards in and near the tree you plan to cut.** Before felling any tree, and even if cutting downed logs, look for dead branches, hanging branches, standing snags, saplings in the path of the falling tree and other potentially hazardous tree structures that might dislodge and strike you. Bent saplings, called spring poles, are under considerable pressure. Root balls of blow-downs can flip back. Remove hazards if possible. If hazards cannot be managed, there are plenty of other trees to cut. Evaluate hazards within one tree height of your location.
- **Determine the back or side lean of the tree relative to the direction the tree will fall.** Before felling any tree, look into the crown of the tree you will cut and determine where the majority of weight is located. Consider branches that extend to the side which add weight or which might get caught in or bind with adjacent trees. Special techniques, available in training courses, are necessary to fell a tree against the natural lean. Avoid using ropes, chains or tractors to pull or push a tree against the lean.
- **Identify and clear an unobstructed work area.** When cutting downed logs, keep brush clear so you can see your feet and avoid hitting dirt or rocks with the chain. If felling a tree, when the tree starts to fall you need to be at least 15 feet away from the stump and at a 45 degree angle from the direction of the fall. Take time before felling to clear any obstacle that might block your path. Do not stand near the stump of a falling tree. After the tree falls, look for falling branches and trees before moving to the next tree.
- **Determine the length and thickness of the hinge.** Felling a tree is an exercise in applied physics. You have a heavy object that you want to pivot on a solid base it is connected to and have it travel in an unobstructed arch to the ground. A correctly felled tree depends on the hinge wood to determine the direction of travel. Based on what you learned in an approved felling course, measure the tree to determine the length and thickness of the hinge. The location of the hinge on the stump is largely irrelevant, but the size and structure of the hinge is pivotal (pun intended). Be careful not to cut your hinge.
- **Determine the final cut.** Know where you will stand and how you will execute your final cut to fell the tree. If using wedges, anticipate how many you will need and where you will place them. Make a final check on safety and others before releasing the tree to fall.
- **Maintain your equipment.** Assess the operability of your chainsaw and safety equipment at the beginning and end of each day. Keep the chain teeth sharp, the chain appropriately tight and the engine running smoothly. Make adjustments to equipment as necessary during the day. Replace worn or broken safety equipment. Improperly functioning equipment can cause increased fatigue and greater chances of injury.
- **Stop before you get tired.** Know the limitations of your physical endurance. If you stop before you get tired, you can return tomorrow to cut the tree; it will still be where you left it.

For some, working in the woods felling and cutting trees is "stump therapy." For most of us, the output of wood on any given day doesn't really matter. We can walk away from the tree we suspect "might be a bit dangerous." What matters is the process, the recognition that we can shape the future of the woods, and most importantly that we walk out of the woods each day. Your family and friends will miss you if you don't.

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