

## "Lungs of the Planet"

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Treating the 'Lungs of Our Planet' with Respect: Local Farm Utilizes Biological Woodsman to Harvest Timber

By Kristin C. Waters Wise, Virginia Horse Center Equestrian Special Coverage Editor

Rockbridge County residents Craig Halliwill and Bobby Jean Bressler recently arranged to harvest timber from approximately one hundred fifty acres of their Voyager Farm in Glasgow. Instead of hiring a logger who employs a conventional clear-cut skidder harvesting system that indiscriminately wipes out huge tracts of trees at one time, they contracted with Chad Vogel, a biological woodsman trained by the Healing Harvest Forest Foundation (HHFF), of Copper Hill, Virginia, in the methods of restorative forestry.

"Restorative forestry keeps the integrity of the forest intact," explained Vogel. "After a job is completed, the land is still in a forested condition."

Vogel, who is originally from the Finger Lakes region of New York and has a forestry degree from Paul Smith College, entered the HHFF biological woodsman apprenticeship program in January 2001. Under the tutelage of HHFF founder and president Jason Rutledge, Vogel learned the skills, knowledge and ethics needed to practice restorative forestry. Since completing the apprenticeship, Vogel has worked various jobs for the HHFF.

Voyager Farm is Vogel's first job as an independent contractor. He moved onto the farm in January and plans to live and work there for at least a year. Using the restorative forestry techniques he learned during his apprenticeship, Vogel began harvesting various hardwood and yellow pine timber from the farm in January 2002. He expects to complete the project in twelve months.

During the first week of April, Vogel was joined at Voyager Farm by Rutledge and other biological woodsmen from around the region for Biological Woodsmen Week. In addition to being a week of fun and camaraderie for the usually solitary working horseloggers, Biological Woodsmen Week was a rare opportunity for the public to witness restorative forestry and the associated horselogging methods of timber harvest taking place on the farm.

As Rutledge explained, restorative forestry is an ongoing management system that increases the value of timber at a given site over time while preserving the beauty and recreational value of the forest. A key element of the restorative forestry methods practiced by the biological woodsmen trained by the HHFF is their “worst-first” method of harvesting timber. “We believe that what you leave is more important than what you take,” said Rutledge.

Conventional loggers mark trees to be harvested with paint, most often high-grading the stand of trees by choosing the healthiest, most valuable specimens to harvest. In contrast, biological woodsmen utilize “nature’s tree marking paint” indicators to identify inferior, damaged and/or diseased specimens when choosing which trees to harvest, hence the name “worst-first”.

Indicators used in worst-first selection that mark inferior trees include low market value, shade tolerance, leaning, crowded growth, stump sprout regeneration, improper crown to stem ratio, and the wrong species location for site exposure. Damage indicators include dry and weeping frost cracks, crown damage, insect damage, and rub damage from previous extraction activities. Disease indicators such as blister rust and bottom hanging fungi are also used during the worst-first selection process.

Choosing the worst tree specimens for harvest ultimately increases the value of the forest, said Vogel. By removing nearby damaged or diseased trees, healthy, high-grade specimens are allowed to reproduce and maximize their growth potential.

Another key element of the restorative forestry methods practiced by biological woodsmen is the use of animal powered extraction, a team of Suffolk Punch draft horses in Vogel’s

case. According to Vogel, logging using horses and other animals such as mules, oxen and elephants has many advantages. One of the most obvious benefits is the spot impact made by the horse's hooves, which is far less damaging to the soil and tree roots than the continuous track created by track or wheel-driven machinery, he said.

Horses have greater mobility than machinery and have the ability to weave in and out of trees, pulling logs this way and that without disturbing residual trees, leaving the remaining trees healthier. In addition to using solar fuel in the form of hay and grain and producing fertilizer as a by-product, horses are a renewable resource that is self-repairing when given time and proper care.

“As an added benefit, few roads are needed for horse logging and the ones that are created can be built harmoniously with the contours of the land to limit erosion,” said Rutledge.

Once a worst-first selection is made and the tree has been felled, Vogel cuts the limbs off and cuts the log into manageable sections. Depending on the diameter of the tree, the sections can be anywhere from eighth to near fifty feet in length. Using a long length of chain, Vogel then attaches the section of log to a two-wheeled “cart” called a mechanical or log arch, to which his team is harnessed.

Through a series of forward and backward movements made by the team and arch, and by periodically shortening the length of chain between the log end and the arch, Vogel eventually has the front-end of the log raised six inches or so from the ground. This keeps the log from gouging into the topsoil as it is skidded out.

“The log arch provides front end suspension of the log, [allowing for] low impact skidding, increased productivity and operator safety,” said Rutledge.

Vogel and his team skid the log to a landing area where it will be loaded onto a specialized truck called a forwarder, which will then carry multiple logs to a central loading area near the road. Use of a forwarder to move log sections from the woods to a central loading area limits the ground disruption incidental to dragging them. In addition, the forwarder utilized by the HHFF is equipped with large flotation tires that further reduce the soil compaction

caused in the roadbed.

“There is so much life in the soil,” said Rutledge. “The soil is resilient and if the soil profile is kept in place, it will recover.”

For Vogel, Rutledge and other biological woodsmen, restorative forestry allows them to supply the human need for forest products while maintaining the integrity and ecology of the forest, which is important for the protection of air and water quality. “The forests are the lungs of our planet, the first filtration system for our every swallow and the air conditioner for the whole world. We must treat the forest with respect and due regard to insure our own existence,” said Rutledge.

Vogel and the other biological woodsmen who have harvested timber from the forest on Voyager Foundation Farm will not ask a premium for the timber; it will be sold at market value from a central location. However, the logs are source differentiated using bar codes so that their lumber can be marketed as coming from an environmentally friendly source.

For more information about biological woodsmen and restorative forestry, contact Vogel at 258-1811 or the Healing Harvest Forest Foundation at 540-651-6355.