

The Boreal Forest eNewsletter

Interior Alaska Forest Science, Management Practices and News of Interest from the University of Alaska Fairbanks Cooperative Extension Service

From the editor:

Winter in Interior Alaska this year was one of the warmest on record and not much snow fell — some areas had less snow than we did in Fairbanks. The annual average temperature in Alaska has increased 3.5°F from 1949 to 2005. Temperatures have changed more in Alaska during the last 30 years than anywhere else on Earth. Winter temperatures have warmed on average during this time period by 5°-6°F. Globally, that increase is 1°F. Expect an active, early fire season. Trees and forests will become relatively moisture-stressed by the middle of June if we don't get rain before then. Watering your favorite yard trees if no rain occurs by then will help them fight off the insects and pathogens that stress our trees during dry seasons.

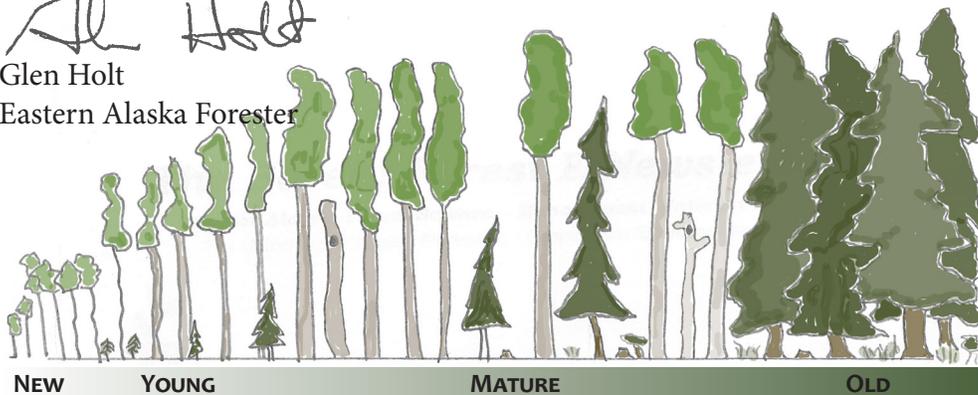


Our warm winter may enable spruce bark beetles to become more of a problem this year. The spruce engraver beetle and the spruce bark beetle (less common in the Interior) are better able to survive warmer winters. I have no predictions what we might be in for this summer.

In this edition we will look at using firewood from the Lower 48, warm summers and bark beetles, spruce aphid problems, prescribed burning, and more about silviculture and forest management. There will also be notices about tree sales, landscaping classes and job opportunities.

Because of budget cuts, this will be my last edition of the Boreal Forest eNewsletter. It has been an honor to serve you, the state of Alaska and the University of Alaska Fairbanks.


Glen Holt
Eastern Alaska Forester



What's Inside

Forestry and Small Private Forest Land Management Objectives in Alaska..... 2

Timber Harvest Methods Promoting Forest Regeneration, Part 2..... 3

Forestry Tools 4

The 30-Year Outcome of Assisted Regeneration Treatments in a Burned and Salvaged Interior Alaska Boreal Forest..... 6

Wildfire! Create “Survivable” Space! 7

Do You Use Local Firewood?..... 8

Book Review: Norwegian Wood 9

Biochar: a value added forest product 9

Announcements.....10

Glen Holt, Eastern Alaska Forester
UAF Cooperative Extension Service
907-474-5271 or ggholt@alaska.edu



Forestry and Small Private Forest Land Management Objectives in Alaska

Glen Holt, Eastern Alaska forester, UAF Cooperative Extension Service

Many Alaskans own forest land or live on a treed lot because they appreciate a woodland setting. Increasingly, Alaskans are interested in what they can do to manage their forest for a variety of reasons. Many are interested in maintaining or improving their forest to meet a variety of individual goals.

Forestry is defined by the Society of American Foresters (SAF) Web Dictionary as the science and craft of creating, managing, using, conserving and repairing forests and associated resources to meet desired goals, needs and values for human benefits. The science of forestry has elements that belong to the biological, physical, social, political and managerial sciences.

Wikipedia goes on to say that modern forestry embraces a broad range of concerns that encompass multiple-use management, including the provision of timber for wood products and revenue, fuel wood, wildlife habitat, water quality, recreation, landscape and community protection, employment opportunities, aesthetically appealing landscapes, biodiversity, watershed management, erosion control, fire and wind protection, protection from insect infestations and, lately, preserving forests as “sinks” for atmospheric carbon dioxide. A practitioner of forestry is known as a forester. A forester may specialize in a number of areas listed above.

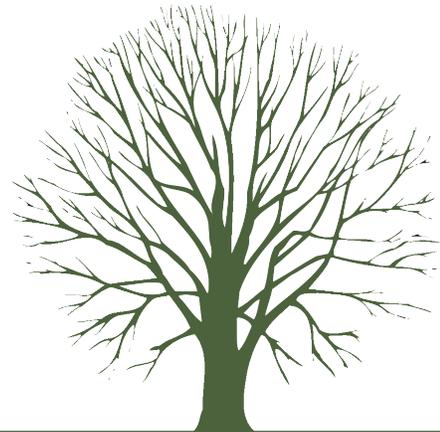
Forest management is defined by the SAF as a branch of forestry concerned with overall administrative, economic, legal, social, scientific and technical aspects. Some of those include silviculture, protection, enhancement, rehabilitation, restoration and forest regulation.

Land is often owned as a hedge against inflation. Some own forestland to facilitate increased monetary opportunity with an eye to the future. Most small private forest landowners in Alaska are less interested in producing a timber crop than they are in improving other attributes.

Small forest landowner objectives may include an array of personal interests including personal space, privacy, peace and quiet, personal use timber and firewood, forest health, wildlife habitat, water quality, biodiversity, aesthetics,

recreation and trails, wildfire defensible space, berries and other wild edibles, subsistence resources and a combination of opportunities. Often people in Alaska are interested in what they can do to improve their forest, for themselves, their children and their grandchildren.

Forest improvement may include the use of a chainsaw to harvest poor trees or create wildfire defensible space and the use of a shovel to plant additional trees for the future. We will present and discuss several means and methods of tending your small private forested ownership in future newsletters.



The University of Alaska Fairbanks Cooperative Extension Service Field Forestry Program partners and cooperates with other agencies, organizations and the private sector to address forest-related needs and questions posed by the public. Extension forestry is currently working with the State Division of Forestry, the USDA Forest Service, the Bureau of Land Management, the Alaska Department of Fish and Game, the USDA Natural Resource Conservation Service, various Soil and Water Conservation districts, a number of private non-government organizations, the Fairbanks North Star Borough, UAF affiliates, rural development organizations, community groups and others to provide information about the management, biology and social interests relating to Alaska boreal forest through workshops, newspaper articles, radio and television interviews and more.

Timber Harvest Methods Promoting Forest Regeneration, Part Two

Glen Holt, Eastern Alaska forester, UAF Cooperative Extension Service

In the Fall/Winter 2015 issue we outlined harvest methods that promote an even-aged forest.

A more even-aged forest regenerates naturally after a disturbance such as a wildfire. Most trees die after a hot wildfire or are killed or die shortly thereafter because of the injuries they suffered or from insect infestations or wind throw. This kind of natural disturbance may often be many thousands of acres. Tree species that by their biology require full sunlight to grow best are at an advantage in this situation.

The fire-regenerated forest begins regrowing with tree species that require full sunlight. These thousands of regrowing seedlings quickly compete for sunlight, moisture, nutrients and growing space. They are in a race for the light at this stage, and as saplings crowd each other, those that can't compete quickly get shaded out and die.

Sun-loving or shade-intolerant tree species in Interior and Southcentral Alaska include birch, aspen, balsam poplar and cottonwood. Certain willow species are important for wildlife browse. Willow is also shade-intolerant and grows best in full sunlight. Sufficient soil moisture and warmer soil temperatures facilitate regeneration after fires on good sites.

Even-aged harvest methods try to mimic wildfire or events such as avalanches and soil deposition from river bend deposits and, as described in the last issue, clearcuts, seed tree cuts and shelter wood cuts.

Uneven-aged forest management methods

The Selective Cut Method — The selection harvest or partial harvest method is used to promote an uneven-aged forest that has several age and size classes. The use of this method may be to promote the growth of trees that prefer or can tolerate partial shade and/or provide for other forest attributes, such as diverse wildlife habitats, watershed protection and excessive snow melt to maintain soil site moisture and attributes of habitat for wildlife that prefer a mix of forest types, including the older growth forest type.

Other considerations might include aesthetics, wind protection and/or a lack of sufficient market to justify cutting those trees left in the forest.

This method works in Interior Alaska when managing uneven aged white spruce stands. Selective harvesting works best when accompanied by prompt site preparation methods to expose mineral soil so that spruce seeds (if any) may germinate or planted spruce seedlings may be free to grow while not degrading the residual forest.

Site preparation for natural regeneration or tree planting is best applied during or immediately after harvest so the area isn't taken over by grass or shrub competition. The intent is to maximize seedling establishment and survival.

“High grading” may be confused with selective harvesting, which is intended to diversify tree age and size classes through additional successful regeneration. Anything that resembles high grading is basically “mining” the forest and fails to take into consideration the future condition of the residual forest or its ability to regenerate. High grading maximizes profits by taking the highest quality timber with little regard for what is left uncut. A selective cut that does nothing to improve forest stand condition or regeneration is of little future value.

Poorly formed trees left in the stand have little chance of improving once the best are cut. A harvest plan to selectively cut the poorly formed trees, for example, for firewood, hopes and plans that the good trees left over will improve or retain their value and that their seed and genetic traits will be passed on in the form of healthy regeneration. Harvests of this nature must rely on successful regeneration and assume that new seedlings and small trees will be in locations that won't be significantly impacted by additional future harvesting.

A modification of the selective cut called the group selection method has been shown to be a biologically sustainable silvicultural system for western hemlock-Sitka spruce forests in Southeast Alaska where the intent is to maintain current tree species in an uneven-aged composition and structure on a long-term

basis. Often this less economically feasible harvest may benefit winter range habitat for Sitka black-tailed deer, which are important for subsistence.

The best scenario is that selective harvesting improves healthy trees in all age classes. Improperly applied, this method looks like a “cull tree release” and the forest is devalued economically for many years in the future.

Timber stand outcome must be anticipated to determine whether the forest will successfully regenerate under any of these harvest methods. Using the selective or single-tree harvest method, the landowner should decide whether the small trees left in the forest are sufficiently undamaged after harvest and are arranged in such a way as to benefit from the extra sunlight without undue grass or brush competition. Scarification to expose mineral soil might be a good idea prior to harvesting if possible in those locations where access is not relegated to winter only.

I encourage all of you interested in forest management to Google “about forestry,” which will lead to forestry.about.com and many excellent articles written by forestry expert Steve Nix.

References

Nix, S. 2015. “Tree Harvesting Methods That Encourage Forest Regeneration: The Major Natural and Artificial Reforestation Schemes,” <http://forestry.about.com/od/silviculture/a/Natural-And-Artificial-Methods-Of-Forest-Regeneration.htm>

Forestry Tools

Using a Biltmore or Cruiser Stick to Determine Tree and Log Volumes

Adapted from an article, photos and drawings by Steve Nix, About-Forestry.com

The Biltmore stick, or cruiser stick, is a tool used in cruising and measuring trees and logs to estimate their lumber volume. It is a useful part of a timber owner’s toolkit and can be purchased at any forestry supply center, or you can get instructions to make your own.

The Biltmore stick is a straight wooden stick, similar in appearance to a yard stick but graduated for direct readings of tree diameters and heights. The stick allows you to measure tree diameter at a point 4½ feet above stump height (DBH) and also the merchantable height in terms of 16-foot logs from a distance of 66 feet. With these two measurements, the board foot volume of the tree may be determined. The volume table is actually printed on the stick.

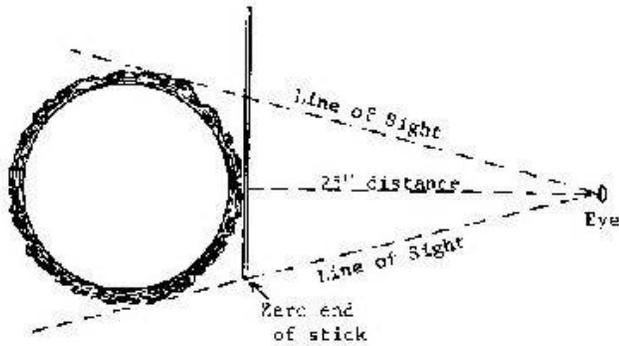


The Biltmore, or cruiser, stick

Here is the step-by-step process of using a Biltmore stick to determine tree height, diameter and total merchantable volume.

How to measure tree diameter with a Biltmore stick

Stand squarely in front of the tree and hold the stick face flat against tree horizontally at right angles to your line of sight. Hold the stick against the tree at DBH (a spot 4½ feet above the stump height) and 25 inches from the observer’s eye. The stick is also 25 inches so you can determine that distance from your eye to the tree. Read the diameter directly from the “diameter of tree” side of the stick.



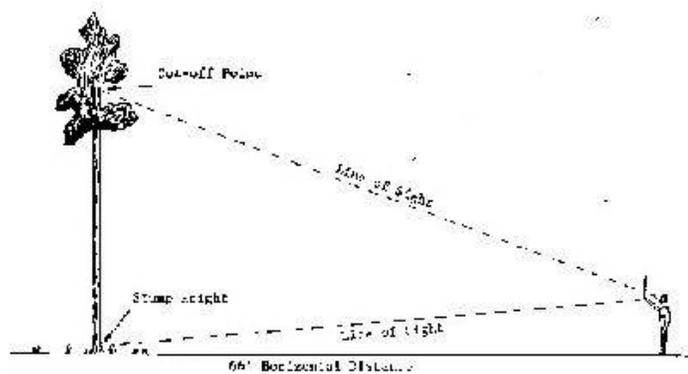
Biltmore stick DBH drawing from the USFS-NC State

The user’s perspective is compensated for by the DBH graduations (inch marks get shorter as tree diameter increases) making it possible to measure a 40-inch diameter tree. Most commercially purchased Biltmore sticks are calibrated for using at a distance of 25 inches from the eye.

Because of the difficulty maintaining exact distance and keeping the stick in the absolute vertical or horizontal, the stick must be regarded as a fairly crude measuring device. It is handy for quick estimates but not generally used by foresters for generating precise cruise data.

How to measure Tree Merchantable Height with a Biltmore Stick

Merchantable height refers to the lengths of usable logs and is measured from stump height to the cutoff point in the top. That height may be 9, 6 or 4 inches from the top, depending on the product intended and on the number of tree limbs.



Biltmore stick tree height USFS-NC State

To measure merchantable tree height stand 66 feet (approximately 12 paces) from the tree you want to measure. Hold the stick in the upright vertical position 25 inches from your eye with the “number of 16-foot logs” side of the stick facing you. Usually this is on an edge of the stick.

The number of logs can be read directly off the stick starting upward from the estimated stump height. You are not actually measuring total height but are estimating 16-foot log sections. With this merchantable height estimated in logs, plus the diameter, you can estimate tree volume.

You can also estimate the total height of the tree by counting each 16-foot length and adding them together for a total height. Every total tree height will not come to an even log. Prorate the last log into feet by using a proportional estimate. Volume may be estimated using the DBH and the total tree height on another volume table obtained locally from the state forestry area office.

To measure tree volume, hold the Biltmore stick squarely against the tree at DBH and 25 inches from your eye.

Shift stick to right or left side of the tree until the zero, or left, end of the volume side of the stick lines up with the left edge of the tree. Sighting the right side of the stick where it touches outside bark (only moving your eyes) gives you the diameter on the top line and below this the number of board feet for trees of different numbers of logs. The tree in the picture above appears to be 16 inches DBH. Don’t move your head to read the DBH, just your eyes.

Let’s say you measure a 16-inch-diameter tree at DBH that has three 16-foot logs. If you have a Scribner log scale Biltmore stick, you would calculate that the tree has approximately 226 board feet of merchantable timber in it. To accurately measure lengths and diameters, you must hold the stick in the exact vertical or horizontal positions.

To measure volume of logs on the ground, position the “log diameter” scale across the small end of the log by placing the stick across the place that appears to be average diameter (or take several readings and

average). Log volumes for different diameters and lengths from 8 to 16 feet can be read on the flat side of the stick marked “log scale”.

If you have a 16-foot log that averaged 16 inches on the small end, looking at the log scale where these numbers correspond you would read 159 board feet Scribner Scale for that log.

Logs over 16 feet long are scaled as two logs, allowing for taper on logs 22 feet or longer. A 20-foot log, for example, 15 inches in diameter, would be scaled as two 10-foot logs, each 15 inches in diameter.

A Biltmore stick is a helpful tool to determine gross rough estimates of tree and log volume. Percent defect may need to be deducted to determine an estimate of merchantable volume.

UAF School of Natural Resources and Extension Forest Science Research

The 30-Year Outcome of Assisted Regeneration Treatments in a Burned and Salvaged Interior Alaska Boreal Forest

Andrew Allaby, M.S. Candidate Research at UAF School of Natural Resources and Extension. Edited by Glen Holt, Eastern Alaska forester, UAF Cooperative Extension Service

Forestry practices to improve forest regeneration, including site preparation (scarification) to expose mineral soil and planting or direct seeding, were evaluated on certain test sites. These practices were carried out immediately after a timber harvest or wildfire. The early effects of these practices are presumed to persist throughout a timber stand’s lifetime.

Timber salvage after a fire has been increasing in the Alaska boreal forest, creating the need to evaluate its effect on forest regeneration.

Samples were taken in an operational-scale white spruce regeneration trial in a productive upland forest after a 1983 wildfire and subsequent timber harvest.

Regeneration treatments were applied on two land form types, four ground scarification treatments (to expose mineral soil for tree seed germination) and a non-scarified control plot, and five artificial white spruce regeneration treatments (planting) plus a natural seed fall control plot were measured and compared.

Total biomass was analyzed as well as how many square feet of solid wood was present for all tree species in order to evaluate the persistence of regeneration treatment effects after 28 growing seasons. In this research, ground scarification treatments were determined to have had no significant effect on white spruce size or amount of wood. However, when compared to natural seed fall control plots, white spruce density was found to be six times higher in planted seedling plots, and white spruce stem density was found to be nearly three times greater in plots that were direct seeded.

White spruce stem density from natural seed fall averaged 2,360 stems/acre. This stem density was dependent on both topographic position of the site measured and distance to wind-dispersed seed sources.

Scarification nearly doubled Alaska birch stem density and square feet of wood compared to non-scarified control plots. Planted white spruce plots supported 19 percent fewer square feet of solid birch wood, except in the most intensive scarification treatments in which birch did not differ.

Although quaking aspen density and the square feet of wood were generally unaffected by the regeneration forestry practices in this study, intensive scarification reduced wood density by half on sloping plots.

These results confirm that forest regeneration practices continue to influence stand development beyond the tree/stem initiation stage. However, practices that promote one species may reduce others.



An aerial image of the Rosie Creek reforestation study area plots

Wildfire! Create “Survivable” Space!

Glen Holt, Eastern Alaska forester, UAF Cooperative Extension Service, was formerly a fire prevention officer with the Alaska Division of Forestry and worked as a wildland firefighter for 29 years.

Last year wildfires burned more than 5 million acres in Alaska. Carelessness with burn piles and burn barrels and sparks from power tools occurred during hot, dry conditions and caused wildfires that burned out of control.

Creating and maintaining defensible space so firefighters have a chance of suppressing fire is important. It is also critical to think in terms of creating and maintaining our own “survivable space” if wildfires become so large that they thwart initial suppression efforts.

No one who has ever gone through the ravages of wildfire has considered themselves, in the aftermath, to have been totally prepared for the losses they suffered. Each year, evaluate your home owner’s fire insurance policy. Make sure your coverage adequately reflects the losses you’d incur if fire burned your home or property tomorrow.

Begin to think in terms of “survivable space”. Ask yourself, if a wildfire becomes so large firefighters can’t protect me, will I survive the occurrence? Often fires can grow beyond the local wildfire resources’ ability to control them. After creating defensible space

and working to maintain it each year, assess your property for its ability to resist wildfire when no one has yet arrived to suppress it.

Anything that can catch fire on or near your home should be removed so your structures don’t ignite from a cloud of hot burning embers. Check your property, home, buildings, wood piles and vehicles, etc., for their ability to resist burning embers or direct impingement by flames. Is your woodpile so close it will catch your home on fire? Are your home and porch skirted so embers and fire can’t burn beneath them? Are your fuel tanks, gas cans, ATV or snowmobile, extra vehicles, lumber piles, patches of dry grass or other things that could catch fire too close to your home and other structures?



This home near Willow, Alaska survived the Coho Fire in 2015 because nothing on or around it could catch fire.

Windborne burning embers are the leading cause of wildfire spread. Determine if your property and possessions can survive a virtual cloud of hot embers falling on them as a wind-driven wildfire approaches.

Following are some suggestions on how to survive a wildfire:

Move all flammable vegetation at least 30 feet away from your home and other structures. Make a border around your home and buildings of four feet or more with gravel. Move everything flammable 30 or more feet away from structures. If a wildfire is in the area, cover gable and eave vents with fine metal screening. Block in beneath your porch so embers can’t blow there. Clean out or remove your gutters. Keep your

grass cut short around structures. Water your home and surroundings with a hose or sprinkler before the fire gets there or the power goes out.

Contact the Alaska Division of Forestry or your local Fire Department and ask them for a wildfire FIREWISE evaluation. Maintain defensible space. Find out what else you can do to prevent wildfire from destroying your property.

For more information on how you can create and maintain defensible space go to the Alaska State Forestry's link.

<http://forestry.alaska.gov/fire/firewise>

Insects and other Forest Problems

Do You Use Local Firewood?

Adapted from a poster publication by the USDA Forest Service, Liz Graham

Alaska, with its majestic landscapes, is home to more than 120 million acres of our nation's forests. With endless trees in the Interior and towering rain forests along the coast, it seems strange to many Alaskans that firewood is being brought or transported from outside. But every year firewood makes its way to Alaska, and it often brings unwelcome visitors along with it.

Tree killing pests can live inside firewood for years.

Tree-killing insects and diseases can lurk in firewood. These insects and diseases can't move far on their own, but when people move firewood they can jump hundreds of miles. Alaska is partially protected by geographic isolation. But because we have so



few species of trees, the introduction of a single exotic pest could dramatically change our landscape and lifestyles. Imagine your community without birch or spruce trees. Chestnut blight and Dutch elm disease are two examples of exotic pests that have virtually eliminated their entire host species from America's landscape.



Firewood movement is a well-established source of spreading insects and disease. Each year visitors bring firewood with them when camping, and commercial firewood bundles are brought from out of state by the pallet. It is illegal to transport firewood to or from Canada unless it has been heat-treated and inspected. Commercial firewood from other states should be treated the same. But as many as half of tested firewood samples transported harbor living wood borers or bark beetles. The Alaska Division of Agriculture has captured living insects in firewood from as far away as Oklahoma.

Our forests are threatened by invasive tree-killing insects and diseases.

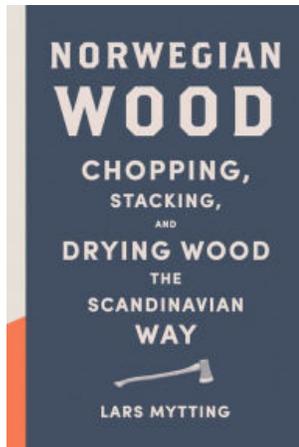
Alaska has seen large swaths of forest killed by our native bark beetles in the past. However, native trees have defenses against the insects and diseases that they've been living with for thousands of years. Non-native insects and diseases have no predators in their new homes, and the trees have no natural defenses against them.

Want to know more? Contact Liz Graham, entomologist, eegraham@fs.fed.us.

Book Review

Norwegian Wood: Chopping, Stacking, and Drying Wood the Scandinavian Way by Lars Mytting

A condensed book review by Peter Lewis found in BARNESANDNOBLEREVIEW.COM



In his new book, *Norwegian Wood*, Lars Mytting mixes the practical with the art and science of burning firewood from a cultural European, Norwegian perspective.

“The woodcutter who attunes himself to the ways of nature and the passing seasons will quickly find his reward. The annual growth cycle of trees means that the best time to fell them is in the winter or spring, well before the leaves have started to bud.” Mytting continues, “One of firewood’s most attractive qualities is that it burns up and disappears.”

There are chapters on the subjectivity of the chopping block and the evolution of the wood stove and a special section, wisely given its own space, of “cold facts.”

Sections in the book deal with the environmental soundness of wood burning (managed properly, argues Mytting, it is a carbon-neutral renewable); the amount of Btus by species; comparative weights per cord; and drying rates depending upon the character of the stack of wood. There is also information on chainsaws, axes, peaveys and bow saws.

Norwegian Wood is currently available in Fairbanks at the Woodway and Gulliver’s Books.

Forest Products Corner

Biochar: a value-added forest product

Glen Holt, Eastern Alaska forester, UAF Cooperative Extension Service

Biochar is a form of charcoal used historically for agriculture and soil enhancement. It is not the charcoal used in the hibachi. Biochar is most often being used as a soil amendment by organic farmers. Reports indicate some South American cultures used biochar for intensive agriculture as long as 8,000 B.C. on soils that to this day are more fertile than surrounding local jungle soils.

Biochar feedstock processing methods and soil characteristics determine the soil’s chemistry and how biochar can be used to enhance soil capabilities. These factors determine biochar’s effectiveness when compared to the use of modern fertilizers and other soil enhancers. Soil organics is an important factor in the soil’s ability to hold water, increase nutrient availability and improve microbial and fungal populations. Organic farmers are interested in biochar as a way to enhance soil without chemical fertilizers.

Biochar is also being used and tested as a form of “activated charcoal” to bind and absorb toxins introduced into soil systems from pollutants.

Ongoing, present-day research is focusing on biochar’s benefits in soil water retention and its ability to make natural soil nutrients and those from fertilizer more available over time. Fertility enhancement would be of considerable interest in the far north where colder soils make nutrient uptake, even with fertilization, situationally problematic.

Biochar could be obtained and produced as an additional value-added product made from low-value, renewable feedstock, including waste wood and byproducts from other timber products made in the manufacture of lumber, pellets, etc.

Many people are also interested in biochar production and use as a means to sequester carbon.

Biochar was historically produced in covered pits dug into the ground, in large open piles and in bee-

hive-style kilns. These systems are inefficient and labor intensive and create significant smoke particulate pollution. Modern technology is computerized and heats the feedstock quickly to a temperature at which uncombusted gases are driven off and then returned to the combustion chamber, providing an ongoing fuel source for additional combustion for the remainder of the burn. The fuel and air mixture must be carefully controlled to minimize smoke particulate pollution and maximize biochar production.

Biochar can be produced during the production of charcoal by further grinding the size of extra or poorly formed briquettes into the small pieces preferred when using biochar for soil enhancement or toxin remediation.



A biochar kiln in Exeter Retort, UK, www.biocharretort.com

In Alaska, biochar could be an additional forest product from waste wood or underutilized species harvested to meet forest management goals and increase the potential for further economic and environmental opportunities.

Adapted from an article in the Forest Business Network and a paper entitled "Biochar 101: An Introduction to an Ancient Product Offering Modern Opportunities" by Harry Groot et al., March 1, 2016.

Announcements

Tree Give-Away at Fort Wainwright

Fort Wainwright will have a tree seedling give-away and a tree planting on Arbor Day, Friday, May 13. The seedling give-away will be at the Environmental Building 3023 from 10 a.m. to 2 p.m. Tree planting will be at Glass Park at 4 p.m. For more information call 907-361-9318.

Cooperative Extension Service Classes and Other Opportunities

Several communities throughout Alaska offer Cooperative Extension Service (CES) classes, programs and workshops for people interested in a wide range of endeavors. Extension program personnel offer classes on special topics and partner with experts from other disciplines to bring you information about such topics as growing grains, mushroom identification and use, raising chickens, cold weather construction, energy, home and family skills, forestry, gardening, canning, and managing your finances to name just a few.

Check out the Extension website to find classes and workshops offered near you: www.uaf.edu/ces/info/calendar/workshops.

Extension also offers many free and for-a-fee publications with useful information relevant to living in Alaska. For publications, to to www.uaf.edu/ces/pubs.

Fairbanks also offers other fine opportunities to expand our useful knowledge.

Osher Lifelong Learning Institute (OLLI)

The OLLI in Fairbanks provides learning opportunities for seasoned adults (age 50+) in the Fairbanks area. Led by its membership, OLLI offers stimulating courses, lectures, educational travel and relevant interest groups on a variety of topics. Members explore academic and general interest courses in an atmosphere that is intellectually stimulating but without the stress of tests and grades. Participating members of all backgrounds share intellectual curiosity in an atmosphere of mutual respect. Over 100 courses are offered each year on a variety of topics. Some of the

recent topics include edible wild plants, digital photography, book readings, musicals and movies and more! To find out more, go to www.uaf.edu/olli.

The Folk School in Fairbanks

The Fairbanks Folk School provides opportunities to learn new skills throughout the year, including wood boat building, basic carpentry, spoon carving, wildlife sketching, poetry writing, wood working, blacksmithing, chaga collecting and use, and a myriad of other interesting topics. Visit <http://thefolkschoolfairbanks.org> for more information.



The Folk School green chair building class

Fairbanks Soil & Water Conservation District Annual Tree Sale

It is Fairbanks Soil & Water Conservation District Tree Sale time! The FSWCD tree sale is Saturday, May 21 from 11 a.m. to 4 p.m. Go to http://www.fairbanks-soilwater.org/user-files//Tree_Sale_Brochure_2016.pdf to view the brochure with the order form. NOTE: Currently sold out of raspberries and bearberries. Visit www.fairbankssoilwater.org for more information.

Fairbanks Arbor Day Announcements

May 13, 16, and 17

We will help with tree plantings on school sites

May 14, 1 p.m.

Alaska Peace Center will add the third tree to a series in Veterans Memorial Park

May 16, 6 p.m.

The Fairbanks Arbor Day Committee will be hosting an Arbor Day tree planting at Goldstream Valley Lions Park.

May 16, 11 a.m.

50th Anniversary of Arbor Day community celebration and tree planting, Golden Heart Park

May 16, 1-5 p.m.

Tree plantings and landscaping at Big I Bar, Tanana Valley Watershed Association

May 16, Time TBA

Raven Landing Retirement Community will plant a 10-foot tamarack/larch

Contact Richie Musick at ritchiemusick@gci.net for further information on events and participation.

Go to <http://forestry.alaska.gov/community/news> to find out more about Arbor Day events throughout the state.

TVWA Arbor Day Event

The Tanana Valley Watershed Association is hosting an Arbor Day event May 16 from 1 to 7 p.m. at the Big I, downtown along the Chena River. This fun event will include a free educational workshop and installation project. Sign up and learn about the importance of riparian zone plantings and how to correctly plant trees and shrubs. At the workshop we will be planting native trees, shrubs and flowers to revegetate this downtown stream bank. There will be food, fun and other activities. More information to come in the next few weeks. Contact Laura at laura.tvwa@gmail.com if you want to sign up to help or learn more.

Now Hiring: Forestry Field Assistant

UAF Forest Growth and Yield Program, May 18 to August 31, 2016

- Work with a forestry crew remeasuring permanent sample plots within the Cooperative Alaska Forest Inventory project (CAFI).
- Perform basic forest measurements
- 40 hours per week at various locations in Interior and Southcentral Alaska
- \$14.75 per hour

For more information on qualifications, duties and how to apply, go to www.uakjobs, posting number 0071887, or contact Matthew Stevens for more information, 907-474-7079 or mwstevens2@alaska.edu.