

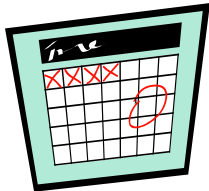


Oregon State University Extension Service

# Blue Mountains Renewable Resources Newsletter

Vol 21, No 3 Summer 2005

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## DATES *To Remember*

### Timber Cruising and Timber Inventory Workshop

If you are interested in learning more about how to inventory your timber or your property this workshop is for you.

Topics will cover the reasons for cruising, cruising principles, types of cruisers, cruise methods, designing a cruise and calculating a cruise. The class offers plenty of field time and practical applications.

Instructors: Bob Parker, Forestry Extension Agent, Baker City and Paul Oester, Forestry Extension Agent, La Grande.

This workshop will be held in **Enterprise** on July 8th from 9 am to 4 pm at the Wallowa County Fair Grounds Food Booth behind Cloverleaf Hall (560 NW 3rd St).

Register for the class by calling the OSU Extension, Union Co office at 541-963-1010 or 800-806-5274. The cost of the class is \$10 per person.



### Fire and Your Woodland Property

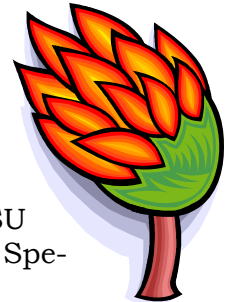
Put this a date on your calendar, July 29.

Topics for this workshop include: Fire ecology, How stand structure affects fire spread and intensity, How to assess fire risk in the woodland and around your home and what to do about it, Fuels reduction strategies and Senate Bill 160 and its implications.

Featuring Steve Fitzgerald, OSU Extension Silviculture and Fire Specialist for eastern Oregon.

This workshop will be mostly a field oriented class where we will visit woodland properties and homes in a forest setting.

Watch for details regarding times, location and more details.



Best Regards,

Paul Oester, Extension Forester  
Umatilla, Union & Wallowa Counties

## Wallowa Resources Field Program 2005

- Earn up to 18 college credits.
- Classes run September 12 to November 17
- Registration: May 16-August 1
- To learn more, visit [ecampus.oregonstate.edu/wallowa.htm](http://ecampus.oregonstate.edu/wallowa.htm) or contact OSU Extended Campus at 800-235-6559 or email [ecampus@oregonstate.edu](mailto:ecampus@oregonstate.edu)

## The Oregon Forest Industry Directory

<http://www.orforestdirectory.com>

The new **Oregon Forest Industry Directory** is helping connect woodland owners, wood products manufacturers, industry consultants and anyone interested in Oregon's forest industry. Some of the potential audiences and uses for the *Directory* include:

- *Small woodland owners* -
  - Searching for log buyers - Which firms buy *species xxx* (e.g., Douglas-fir, ponderosa pine, Oregon white oak, etc.) logs? Who are the log buyers? What are their specifications - minimum/maximum/preferred diameter and length?
  - Searching for service providers - Who are the consulting foresters in my area and what sort of services do they provide?
  - Searching for niche markets - Searches for log buyers may lead to identifications of buyers of logs for log homes, utility poles, "character logs"



for furniture, etc. Woodland owners may also find buyers for non-timber forest products (e.g., mushrooms, boughs, berries, cones, etc).



- Posting items for sale - Woodland owners can use the "Buy/Sell Directory" feature to list available products such as burls or other specialty items.
- *Sawmills* -
  - Searching for suppliers - Who are the private woodland owners in the region with *species xxx* logs for sale?
  - Searching for customers - Who are the firms that buy the type of lumber I produce?
  - Searching for buyers for waste products/downfall - What firms use sawdust/shavings/bark/low-grade lumber?
  - Searching for service providers - Where can I get custom lumber drying or machining (e.g., tongue & groove) done?
  - Posting items wanted or items for sale - Sawmill personnel can use the "Request for Proposal" feature to list available products or items wanted.
- *Furniture makers, Cabinet makers, etc.* -
  - Searching for suppliers - What firms (i.e., sawmills) produce the sort of lumber I need?
  - Searching for opportunities for outsourcing or partnerships - What firms provide machining service (computer-controlled routing, kiln drying, finishing, etc.)?

- Searching for buyers for waste products/downfall - What firms use low-grade lumber, trim ends, etc.?
- Posting items wanted or items for sale - Value-added producers can use the “Request for Proposal” feature to list available products or items wanted.
- *Other Audiences* -
  - Architects - Are there firms that can provide certified wood products for the project I am designing? Where can I get large timbers sawn or custom glue-laminated beams produced?
  - General public - Who are the local producers of lumber, furniture cabinets, etc.? Where can I buy boughs for wreath-making? Who are the custom sawyers that might buy my downed black walnut tree? Are there u-cut Christmas tree producers near me?

How will we ensure information is kept up-to-date? - The **Oregon Forest Industry Directory** allows firms to update their own information. Firms not currently on the list can join by filling out an on-line form at <http://www.orforestdirectory.com>. Contact OSU Wood Products Extension Agent and database administrator Scott Leavengood (503-725-2123 or [Scott.Leavengood@oregonstate.edu](mailto:Scott.Leavengood@oregonstate.edu)) with comments, questions or suggestions.



*Delivered*

**LOG MARKET REPORT** \$/1,000 board feet

June 15, 2005

<b>Umatilla/Pendleton/Lewiston</b>								
Douglas-fir /Larch	Ponderosa Pine				Grand fir /White fir	Lodgepole Pine	Engelmann Spruce	Pulp/chips Logs
	6-8"	9-13"	14-19"	20-24"				
\$420-455	\$240	\$300	\$420	\$500-550	\$290-340	\$250-320	\$200-300	- -
<b>La Grande/Elgin/Joseph</b>								
Douglas-fir /Larch	Ponderosa Pine				Grand fir /White fir	Lodgepole Pine	Engelmann Spruce	Pulp/chips Logs
	6-11"	12-17"	18+"	24"+				
\$430-500	\$250	\$450	\$550	call	\$390-410	\$410	\$390-410	- -
<b>Burns/John Day</b>								
Douglas-fir /Larch	Ponderosa Pine				Grand fir /White fir	Lodgepole Pine	Englemann Spruce	Pulp/chips Logs
	8-11"	12-14"	15-19"	20-23"				
\$400-440	\$250	\$360	\$425	\$500	\$275-330	\$180-320	\$175-320	\$10/ton
Source: Oregon Log Market Report, Editor John Lindberg, ph 360-693-6766, fax 360-694-8466, <a href="mailto:logmkt@comcast.net">logmkt@comcast.net</a>								

**Ecology and Management of Eastern Oregon Forests: A comprehensive Manual for Forest Managers.** OSU

Extension Service, Manual 12, \$25



Hot of the press (printing completed in July) is a new manual for forest owners and managers! This 200 plus page manual is designed to help you identify your forest type, determine reasonable short and long term site capabilities and management objectives, and provide tools to achieve your objectives. The chapter titles are: Understanding eastside forests, silvicultural systems for eastside forests, managing ponderosa pine, managing lodgepole pine, managing mixed-conifer forests, reforestation methods and reforestation control, eastside conifer pests and their management, managing range values and, finally, managing wildlife values. A glossary of terms and selected references are also part of the manual.

Plans are to plant a "shelf" copy in OSU Extension and ODF offices to give anyone interested a chance to stop by and look it over before deciding to purchase a copy. Both the Union and Baker County Extension offices currently have copies for review.

You can order from:  
Publication Orders  
Extension & Station Communications  
Oregon State University  
422 Kerr Administration  
Corvallis, OR 97331-2119  
Phone: 541-737-2513  
E-mail [puborders@oregonstate.edu](mailto:puborders@oregonstate.edu)  
Fax: 541-737-0817

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## Managing for Healthy Forests

Adopted from an article by Greg Filip

Healthy forests: What are they? The recently crafted Oregon Society of American Foresters position statement speaks of a "condition where biotic and abiotic influences on the forest do not threaten current or future resource management objectives or options." The recently legislated Healthy Forests Initiative and the Healthy Forest Restoration Act provide national guidance for and funding to reduce fire, insect and disease risk through thinning unhealthy forests.

What are the abiotic and biotic influences on forest health? In interior forests east of the Cascade Mountains in Oregon and Washington, insects such as the western spruce budworm and the Douglas-fir tussock moth defoliate mixed-conifer forests that are overstocked with Douglas-fir and true fir. Bark beetles subsequently invade the defoliated firs and kill many of the stressed trees. Fuels increase exponentially. Millions of acres of stressed forests become at risk to catastrophic fires and burn extensively as seen in recent years. In coastal forests west of the Cascade Mountains, overstocking and drought have resulted in attack from bark beetles and wood borers. Decades of conversion of spruce-hemlock forests to Douglas-fir along the Oregon and Washington coast may have contributed to unprecedented damage from Swiss needle cast. Now we are faced with another introduced disease, sudden oak death, which has yet-to-be-determined effects on forests.



So how do we manage for healthy forests? Reduce stocking, reduce stocking and reduce stocking! Most of our forest

health problems are the result of too many trees on the site. We have the tools and tables to reduce stocking to acceptable levels. Oregon State University Forestry Extension Service will release a new eastside manual this year that summarizes stocking guidelines and management strategies for interior Douglas-fir, true fir, lodgepole pine and ponderosa pine.

Research has shown that properly done thinning reduces the adverse effects of several forest pests including root diseases, dwarf mistletoe and bark beetles. Timely and effective fuels management is also critical. Of course, improperly done thinning and harvesting can create as many pest and fire problems as it can reduce. Careless thinning can wound residual trees and lead to stem decay. Thinning can exacerbate certain root diseases such as black stain and annosus root and butt rot. Thinning creates slash that is attractive to bark beetles and becomes fuel for the next fire. Thinning has also been shown to benefit many wildlife species that utilize more open forests for foraging.

Here are 9 guidelines for thinning to reduce pest-caused damage, improve the health of residual trees and enhance wildlife habitat.

1. In stands with dwarf mistletoe, remove the most severely infected trees—those rating a five or six out of a maximum of six. Light to moderately infected trees will grow relatively well if adequately spaced. Leave a few severely infected trees for roosting, resting and hiding cover.

2. In root-diseased stands, thin to favor trees species that are more resistant to root disease such as pine in white fir/Douglas-fir/ponderosa stands with Armillaria root disease or cedar in Doug-

las-fir/hemlock/cedar stands with laminated root rot.

3. In stands with black stain root disease, thin or prune in August or September to avoid bark beetle flights.

Fresh thinning slash and stumps attract root-feeding bark beetles that carry black stain spores to residual stumps and trees.

4. In five-needle pine stands, thin to favor trees without lethal bole cankers of blister rust. Many cankers on resistant trees may be non-lethal.

Also, prune lower-crown branches to reduce infection, improve wood quality and reduce fuel ladders.

5. To prevent attack from bark beetles, carefully follow stocking guidelines by tree species and site class. Poorer sites can effectively support fewer trees than the better sites. Overstocking leads to stressed trees that attract bark beetles.

6. In thinned ponderosa pine stands, treat all green slash over three inches in diameter. Pine engraver beetles breed in this material and will attack residual trees. Green slash should be created from August to December or lopped and scattered or chipped.

7. In lodgepole pine stands, thin and prune to remove trees and branches with mistletoe and rust infections, especially trees with bole cankers. Removing these parasites will improve tree growth, prevent bark beetle attacks and reduce fuel ladders. Leave some infections for wildlife.

8. In thin-barked hemlock or true fir stands, carefully plan thinning and harvesting operations to avoid tree injury both in the planning and operation phases. Some wounded trees can be left for future decay and wildlife habitat. Leaving a few wounded trees will enhance habitat for cavity-nesting birds.

9. In larch stands, thin from below to improve stand health and reduce the



adverse effects of dwarf mistletoe, if present. Larch mistletoe brooms load with snow and ice that cause branch breakage, bole bending and subsequent tree mortality.

We have the tools and tables to reduce stocking to acceptable levels and improve forest health. We just need to get out in the forest and use them!

*Western Forester (vol. 50: no 1)*

## Changing Crops in Oregon's Grand Ronde Valley: Growing Hybrid Poplar as an Alternative

**By Paul Oester, Dave Hibbs and Jeff Shatford - Oregon State University**

Farmers in northeast Oregon are exploring hybrid poplar as an alternative crop, yet little is known about hybrid poplar performance in higher elevation, mountain valleys. Growers in the Willamette Valley of western Oregon rely on abundant winter rainfall while industrial plantations in eastern Oregon depend on drip irrigation systems; no one has evaluated growing hybrid poplar on sites relying only on water from a high water table. In 1997, three *Populus* hybrids (52-225, 50-197 and OP-367) were planted in a randomized complete block design at 10ft. X 7ft. spacing near La Grande (elevation 2788 ft.). The OP-367 clone was also planted at 10ft. X 14ft. The Catherine Creek Silt Loam (McKenzie site) soil has a seasonally high water table at 24-48 inches, a pH of 7.0 and typically has standing water during late winter and spring. Another soil, a La Grande Silt Loam (Union site), is saturated with water at depths of 24-40 inches for 90 days during winter and spring. Tiling has eliminated seasonal flooding. Soil pH ranged from 7.8 to 8.3



across the site. Growth and survival was constrained by soil pH greater than 8.1 (part of Union site) or where standing water was present in the spring (part of McKenzie site). We are reporting results only for those plots where these constraints were not a factor. Survival ranged from 67% to 100%. Comparing the top 50% of Willamette Valley sites at age six with the top 50% of the blocks from the two La Grande sites, we found that the La Grande plots yielded 69% (McKenzie) and 94% (Union) of the volume on Willamette sites. Considering the same top 50% of the sites in the Willamette Valley and blocks in La Grande, McKenzie grew 76% and Union grew 82% of the height of Willamette Valley trees. These results show that hybrid poplar could be considered as an alternative crop on sub-irrigated agricultural sites in northeast Oregon; however, economic comparisons with traditional crops are needed.

## Forest Products Harvest Tax (FPHT) Change for 2005

The Forest Products Tax rate has changed for the 2005 calendar year. Yes, rates have been lowered, not increased! Not by much, but a decrease none-the-less. The FPHT rate for 2004 was \$2.95/MBF and the 2005 rate has been revised to \$2.85/MBF. FPHT revenues go to a myriad of agencies, including the Forest Research Laboratory at Oregon State University, Oregon Department of Forestry for emergency firefighting and the administration of the Forest Practices Act, and the Oregon Forest Resources Institute, (OFRI). OFRI is a major contributor to OSU Forestry Extension programming. The first 25 MBF of a timber harvest is exempt from the tax.



It is important to remember that

whether you are enrolled in the Small Tract Forestland Option (STF) or the Forestland Program, FPHT taxes are owed for all harvested timber, excluding the 25 MBF exemption.

*Lane Woodland News, April 2005*

### Oregon Tax Update

[www.oregon.gov/DOR/TIMBER/index.shtml](http://www.oregon.gov/DOR/TIMBER/index.shtml)

**New Severance Tax Rates** - DOR sets and announces these rates each June

1. Severance Tax rates for 2005 are:

- Western Oregon - \$4.00/MBF
- Eastern Oregon - \$3.12/MBF

**Oregon Forestland Values** - New bare forestland values that will be used to calculate property taxes for July 1, 2005 to June 30, 2006 have been published. They can be found on the DOR web site identified above or by using the link below:

[http://www.oregon.gov/DOR/TIMBER/docs/05-06\\_forestland.pdf](http://www.oregon.gov/DOR/TIMBER/docs/05-06_forestland.pdf)

### Federal Reforestation Tax Changes

The tax treatment for reforestation expenses on your federal tax return has changed. October 21, 2004 is the key date. If your reforestation project and expenses occurred before that date, you can take the Reforestation Tax Credit (and Amortization Schedule). After that date, the rules have changed; the Reforestation Tax Credit is repealed and you deduct outright the first \$10,000 of qualified expenses. You can also deduct expenses



in excess of \$10,000 over 8 tax years. If you would like a copy of a summary use this web site <http://www.timbertax.org/>.

### 2004 Tax Legislation: A Plus for Woodland Owners

This 3 page summary, by William C Siegel, J.D., from National Woodland magazine should bring you up to date with current tax law as it affects woodland owners. Included in the information is how to handle reforestation costs. For a copy contact the OSU Extension Union County office at 541-963-1010.

### Super Studs-An New Approach to Marketing Structural Lumber

Engineered wood products are pieces of wood glued together to form materials with specific, definable strength properties. Examples include wooden i-joists (*see photo on page 8*), glulam beams, and oriented strand board, all of which are being used to make modern houses stronger and less costly to build. Advances in the use of engineered wood products, however, come at the cost of lost market share for traditional structural lumber. For example, in California nearly 90 percent of the floors in new homes are made with wood i-joists rather than solid lumber.

Building contractors are generally the party that decides whether to use solid wood or engineered wood products. Some insight into their decision making process comes from a survey of United States builders, which revealed that straightness was the most important attribute of structural lumber. The results also showed that straightness was the attribute that made builders the least satisfied with solid lumber.

Recognizing this problem, a company in Scotland has decided to take a new approach in marketing solid-sawn lum



Wood I Joists—an Engineered Wood Product often used in place of solid sawn lumber to frame floor systems in homes

ber. They introduced Ultra Joist — a line of solid lumber that has been dried to 14 percent moisture content, thereby providing increased dimensional stability. Most solid structural lumber manufactured in the United States is dried to 19 percent moisture content, or sold green. The higher moisture means that conventional lumber is likely to bow, warp, or twist as the moisture in the piece equilibrates with the ambient air conditions where it is being used.

After the UltraJoist lumber comes out of the dry kiln it is visually inspected to insure that it meets straightness and appearance specifications. The lumber is also tested with a non-destructive stress rating machine to insure that all pieces meet strength specifications. The UltraJoist product is also treated with a water-based chemical that protects the piece from fungal decay, insect attack, and provides water repellency.

Finally, the UltraJoist product is manufactured from logs that originate in forests certified under the Forest Stewardship Council's guidelines for

good forest management.

According to Todd Brinkmeyer, owner of Plummer Forest Products in Idaho, about 40 percent of US consumers prefer and are willing-to-pay-more for high quality lumber like that offered by UltraJoist.

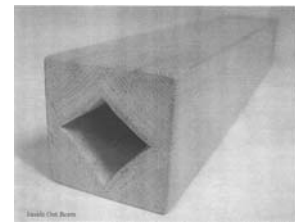
*Montana Forest Products Marketing News, March 2005*

### Inside Out Beams

Finding uses for the abundance of small diameter timber growing in Western U.S. forests continues to be a challenge. That may be changing, however, as researchers develop new products and processes for utilizing the small diameter timber resource.

For example, researchers determined the feasibility of producing inside out beams (see photo). In this process, a small log or cant is cut into quarters.

The quarters are then turned inside out and glued together to produce a square beam. According to the re-



searchers the advantages of producing such beams are that the hole in the center allows for easier treating with chemical preservatives, the beam is easier to dry, and drying defects such as warping, twisting, and cracking are minimized because the natural stresses that build up during drying work against each other. Testing also showed that there were no significant differences in strength (MOR and MOE) when inside out beams were compared to standard beams of the same dimension.

*Montana Forest Products Marketing News, February 2005*

## Private Forests – In search of added value

Nils D. Christoffersen, Wallowa Resources

Over the past year, Wallowa Resources has worked with several partners to explore opportunities to enhance the value of private land forest assets and promote high standards of forest stewardship.

The effort responds to the decline in relative timber value and utilization opportunities in Eastern Oregon following the closures of many regional saw mills. “In the last 10 to 20 years we have lost many sawmills in Eastern Oregon. Baker, Crook and Deschutes County, for example, no longer have sawmills – and Wallowa County is down to one mill,” said Bob Parker, Baker County Oregon State University forestry agent. “As a result there are fewer purchasers for small woodland owners’ timber and they often have to haul their logs much further distances, increasing costs.”

A limitation on log supplies available to the few remaining mills discourages investment in new, more efficient technology. The decline in wood products manufacturing infrastructure decreases competition for timber assets. Together, these factors affect timber revenues and the degree of raw material utilization. This impacts individual land management options.

Working with landowners in Wallowa, Union and Baker County, as well as the Oregon Department of Forestry and Oregon State University Extension Service, Wallowa Resources initiated a Market and Business Opportunity Analysis for non-industrial private timberland. The Oregon Economic and Community Development Department and the USFS

funded this work.

An initial review of available timber supply indicated that that 67 percent of the total non-industrial private timber in the three counties is less than 13 inches in diameter, and much of this is ponderosa pine. Both factors limit market opportunities. Imports of Radiata pine from Chile and New Zealand for furniture have contributed to the erosion of markets for ponderosa pine.

Several markets for small diameter timber were reviewed including flooring stock, furniture and edge-glue stock, hog and fuel chips, and export markets. The Doug fir and larch laminated stock market is one of the best opportunities for local timber resources as it takes advantage of density characteristics. This market averages \$100-115 per thousand board feet over comparable commodity prices.

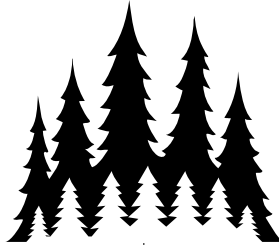
Post and pole production is now taking place in Wallowa County.

Trucking and treatment costs are a challenge. Untreated Douglas fir and larch is the most profitable market segment for local resources, but this market is very small. Opportunities exist for treating Douglas fir with new arsenic

free treatment solutions. A doweled fence market exists for ponderosa pine in California.

Wallowa Resources will conclude its study with further analysis on the feasibility and design of a “tonwood” manufacturing facility that produces post and pole, chips, and firewood, as well as a green flooring mill. Within Wallowa County, such a facility would complement not compete with the Wallowa Forest Products mill and improve local timber utilization and forest management returns.

Further analysis will also explore the potential benefits of forest landowners



selling logs as a group. Such an arrangement might generate improved log prices if it can reduce the supply uncertainties for existing mills, and allow these mills to extend their planning and investment horizons.

*Wallowa Resources Newsletter (24:12)*

## Researchers examine the effect of forestry on headwater streams

This summer, scientists at Oregon State University's College of Forestry will begin a series of silvicultural practices, including road building and timber harvesting, in areas of the Hinkle Creek Paired Watershed Study, an ambitious, long-term research effort of contemporary forest management on headwater streams.



## Using Off-Stream Water Developments, Animal Attributes and Fencing to Improve Grazing Distribution

Kenric J Walburger and Timothy DelCurto, Eastern Oregon Agricultural Research Center, Union Station, Oregon State University

Distribution of cattle on western rangelands continues to concern land and livestock managers and currently serves as a source of contention with other stakeholder groups. The objective of this article is to evaluate management strategies to improve distribution of cattle across diverse landscapes. Water is one of the most important factors influencing cattle distribution, and the creation of off-stream water sources has proven effective in changing cattle distribution patterns. As a result, cattle provided with off-stream water had greater gains than cattle with no off-stream wa-

ter. Several animal attributes have implications for influencing distribution patterns. Research conducted in Oregon suggests that age of cattle can influence distribution patterns across forested rangelands. Older cows with



calves tended to more uniformly distribute across the landscape and use areas further from water as compared to yearlings or younger cows with calves. Likewise, many believe that changing the nutritional status of cows, lactating vs. non-lactating cattle, will change distribution patterns, with weaned cattle distributing better than lactating cattle. Fencing, a common tool to manage livestock distribution, has undergone increased scrutiny on forested rangelands because of the increased use for exclusionary fencing of riparian areas. However, fencing can be a useful tool to develop sustainable grazing strategies that maintain the vegetation diversity and vigor with limited effects on animal performance. In summary, cattle grazing and healthy rangelands can be compatible if appropriate management strategies are implemented to optimize distribution and use of available forage resources.

## Synthetic Rope and Logging

John Garland, Stephen Pinkerton and others from the OSU Forest Engineering Department have been testing synthetic ropes as an alternative to steel cables. The ropes are made of ultra high molecular weight polyethylene fiber, which provides a high breaking strength to weight ratio, as well as high flexibility and low stretch. Re-splicing is relatively easy if the rope breaks, and breaking strength is not affected much at all. The advantages of synthetic rope includes: it's a lot easier to haul around in the



woods than heavy cable, i.e. faster and less harsh on our backs. Synthetic rope currently costs more than steel cable and is subject to abrasion if you're skidding in rocky areas. Awareness and use increase costs could come down.

If you would like a demonstration give me a call and we'll see if we can organize something.

### Cooler in the Shade

Aggression and Violence are Reduced with Nature Nearby

A study by University of Illinois scientists Frances E. Kuo and William C. Sullivan finds that inner city families with trees and greenery in their immediate outdoor surroundings have safer domestic environments than families who live in buildings that are barren of nature.

The study examined the relationship between the outdoor environment and family violence in a public housing project. Levels of aggression and violence were significantly lower among residents who had some nearby nature outside their apartments than among residents who lived in barren conditions. Mental fatigue was a key factor. The more fatigued a resident was, the more aggression and violence she reported. Residents living in greener apartments were systematically less fatigued than neighbors living in barren surroundings.

Exposure to trees and greenery reduces mental fatigue and feelings of irritability that come with it. The ability to concentrate is refreshed, along with the ability and willingness to deal with problems thoughtfully and less aggressively.

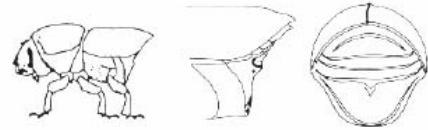


It seems that trees and greenery cool more than outdoor temperatures; they help cool tempers as well.

### Fir Engraver Beetle (*Scolytus ventralis*)

In 2004 true fir mortality was detected on 371,915 acres statewide. This was an increase from the 308,959 acres infested in 2003. Grant County in eastern Oregon

and lower elevation true fir stand in



southwest Oregon were areas with major increases in true fir mortality. Even true fir stands on the edges of the Willamette Valley have been susceptible to fir engraver beetle attacks during this drought. Typically fir engraver beetle outbreaks subside when wetter conditions return.

### Western Pine Beetle and Ips (*Dendroctonus brevicornis* and *Ips* spp)

Ponderosa pine mortality detected by aerial surveys reached its highest point in almost a decade with most of the increases occurring in Central and Northeast Oregon. When ground crews examined pockets of dying ponderosa pine western pine beetle was identified as causing most of the tree mortality. Ips infestations were detected on over 8,000 acres in 2004, the most damage since 1993. Ponderosa pine damaged by snow and wind-storms in 2003-04 has led to a large increase in Ips breeding material in many areas of eastern Oregon. Both western pine beetle and Ips are associated with elevated levels of pine mortality during drought events.

## Publications of Interest

### New Publication Focuses on Wood Quality

#### Impacts of Forest Management

John PUNCHES has a new Pacific Northwest Extension publication "hot off the press" titled, *Tree Growth, Forest Management, and Their Implications for Wood Quality*. (PNW 576). It is available at the Union County Extension office or online at: <http://extension.oregonstate.edu/union/forest/forestrypubs.php>. If you are serious about growing trees, you will want a copy of this publication for your reference library!

#### Effects of Heavy Equipment on Physical Properties of Soils and on Long-term Productivity: A review of Literature and Current Research. Technical Bulletin #887.

It contains detailed information on mechanistic relationships between physical soil properties and root growth, tree growth on disturbed soil, soil recovery

from compaction and puddling, ameliorating soil disturbance and preventative measures. Call 916-941-6400 or visit the website at [publications@ncasi.org](mailto:publications@ncasi.org)

*Teacher's Guide to Forest Education Opportunities 2005-2006*. An OFRI publication. Call 1-800-719-9195. New publication showing opportunities for Pre-Kindergarten through grade 12 age kids. <http://www.nyfarmlink.org/guides.htm>

*Effects of wildfire on soils and watersheds*. An article entitled "effects of wildfire on soils and watershed processes," by George G. Ice, Daniel G. Neary, and Paul W. Adams, was published in the September 2004 issues of *Journal of Forestry* (Vol. 102, No. 6, pp. 16-20). Contact: George Ice at 541-752-8801 or email [gice@ncasi.org](mailto:gice@ncasi.org).

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