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Foresters and Wildlife Biologists: Sharing Common Ground

BY FRAN CAFFERATA COE AND
LISA A. DeBRUYCKERE

Foresters and wildlife biologists are connected in the most fundamental way: We share the same resource.

Though the goals may sometimes be different, foresters and wildlife biologists find common ground in two ways—both are passionate about keeping working forests working, and both believe one of the greatest legacies we can leave are healthy forest ecosystems for future generations.

In December of 2009, a large group of land managers comprised of family forest owners, industrial forestry managers, wildlife biologists, agency wildlife and forestry managers, and others met in Eugene, Ore., to discuss important and practical methods for managing wildlife on working forests. The workshop was a great success and brought many perspectives to the table. This issue of the *Western Forester* builds on the success of the workshop to share its results with managers throughout the Pacific Northwest.

In this issue you will find articles on practical methods that foresters can implement on their landscapes to provide wildlife habitat and wood products. Tim Harrington, an expert on



Fran Cafferata Coe



Lisa DeBruyckere

manipulating stand structure of Douglas-fir plantations through thinning operations, furthers his discussion on practical thinning methods and their implications on forest productivity and wildlife management.

Matt Betts and Tana Ellis are studying the thresholds in songbird abundance in relation to forest management. They discuss their research about the importance of a hardwood component for songbird species, but also assess quantitative, practical levels of hardwoods.

A.J. Kroll, a Weyerhaeuser wildlife research biologist, presented his research on stream-associated amphibians at the workshop. In this issue, A.J. and Marc Hayes, a wildlife research biologist from the Washington Department of Natural Resources, discuss forestry in the Pacific Northwest and the importance of riparian buffers to stream-associated amphibians across their geographic range.

Invasive species are a threat to forest productivity and native wildlife species. Matt Blakeley-Smith presented his work on false-brome and its implications for forest and wildlife management. In this issue, Matt explores early detection, management, and control of invasive species as imperative actions to successful forest and wildlife management.

The workshop stimulated many discussions about forestry and wildlife management from its origins in game and predator management to thoughts about the future of wildlife and forestry



PHOTO COURTESY OF STEVE CAFFERATA

Tim Harrington talks with participants at the December workshop during one of the breaks. Professional wildlife biologists and foresters were available to answer questions for workshop participants during the day.

management, including managing for climate change and unpredictable natural disasters. David Quammen's, *Monster of God: The Man-Eating Predator in the Jungles of History and the Mind*, a book that discusses predator management in cultures throughout the world and relates predators to our own scientific identity, acknowledges that the loss of predators from ecosystems across the globe will fundamentally change how people view ecosystems and their role in providing healthy, sustainable habitats for native fish and wildlife, as well as people. This loss may permanently "disconnect" people from the very places that create quality of life through direct benefits, such as clean water and forest products, and indirect benefits, such as recreational and spiritual values. The potential for such a loss means that now, more than ever, it's important for foresters and wildlife biologists to work together to achieve consensus on how best to manage forestlands for a

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Foresters and Wildlife Biologists: Sharing Common Ground

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variety of values. It's what the Oregon Department of Forestry calls greatest permanent value: healthy, productive and sustainable forest ecosystems that over time and across the landscape provide a full range of social, economic and environmental benefits to the people of Oregon.

Foresters and wildlife biologists are uniquely positioned to work together to face the challenges of climate change, dwindling wildlife habitat and mounting pressures to convert forestland to development. Although past discussions about species, such as the northern spotted owl, have brought foresters and wildlife managers to their knees in frustration, it is time for land managers throughout the Pacific Northwest to convene and set a course that will manage the urban-wildland interface responsibly, develop proactive strategies to combat the mounting threats of invasive species, and above

all, keep working forests working. We can do this by seeking to understand one another and then working together to reach common goals. Common goals for foresters and wildlife biologists are, for example, managing for climate change and natural disaster, maintaining habitats at a landscape level (multiple seral stages) and providing for future generations.

In The Wildlife Society's publication, *The Wildlife Professional*, there is an article titled "Trial By Fire," in the Summer 2009 issue, which discusses the challenges of managing for wildlife through natural disasters. One of the defenses of managing wildlife and forestry in the face of natural disasters (or climate change, changing landscapes, etc.) is to maintain landscapes in a variety of habitats. Though we cannot prevent disasters (or change) from occurring, we can manage for risk and be responsive through adaptive management. The future of natural resource management is based on the ability of all land managers (foresters, urban planners, park rangers, etc.) to maintain a diverse



PHOTO COURTESY OF JOAN HAGAR

A large-diameter snag in a clearcut provides valuable habitat for many wildlife species. The cavities formed by the foraging activity of woodpeckers provide nest sites for secondary cavity nesters, such as swallows, wrens and bluebirds. Red-tailed hawks and other raptors use snags in open habitats for resting and hunting perches.

landscape that provides for multiple species of wildlife. We must work with our neighbors to create a mosaic of landscapes that will undoubtedly change, but persist, through time.

Forests provide habitat for wildlife species, for people to recreate and connect with the outdoors, and for people to work. They also provide important wood products for use here and abroad. It is important that wildlife managers and foresters work together to provide these products while also providing habitat for native wildlife species. Dr. William Lynn, a visiting professor at the Williams College and the founder and Senior Ethics Advisor of Practical Ethics (www.practical-ethics.net), wrote an article titled "Practical Ethics." Foresters and wildlife managers make decisions regarding the well-being of forests and wildlife on a daily basis. Dr. William Lynn's article provides some of the much-needed language for us as managers to use when discussing these difficult decisions. His tools provide the framework for working together from a place of understanding. His article brings clarity to the social and ethical responsibility of wildlife biologists and foresters, both in a personal and the career sense, to manage forests to pro-



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Next Issue: SAF Chapter Success Stories

vide wood products, wildlife habitat, places to recreate, and the many other uses that represent the vibrant forests of the Pacific Northwest.

Wildlife management on working forests has changed dramatically in the last 50 years. Continued research, implementation of practical management methods, and adaptive management—learning by doing—leads us to coming closer to achieving greatest permanent value. The workshop held in December with wildlife biologists and foresters,

funded by the Oregon Forest Resources Institute (OFRI) and the Society of American Foresters' Foresters' Fund, built upon the



PHOTO COURTESY OF MATT T. LEE

The western tanager is an insectivorous species that breeds in western coniferous forests.

legacies of Aldo Leopold and Gifford Pinchot and challenged natural resource managers to pave the way for forest and wildlife management successes in the 21st century. The workshop was a great success, but we cannot let the discussion end there, or end here with this issue of the *Western Forester*. It is imperative that we keep these discussions going and that we keep learning from each other. As foresters implement the "Top 5" list in the sidebar, or implement other strategies on their lands, it is important to practice adaptive management, and share the successes and learning opportunities with other land managers throughout the Pacific Northwest. In this light, be looking for our next workshop on wildlife management on working forests. ♦

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Survey Results: Practical Wildlife Management Tools on Working Forests

At the February 2010 Oregon Chapter of The Wildlife Society meeting, we polled wildlife biologists regarding practical management tools for foresters and wildlife biologists. Specifically, we asked, "What are the top five practical management tools that foresters can implement to improve wildlife habitat on their forests while still growing trees for wood production?" The top five responses were:

1. Maintain working forests.
2. Increase retention of snags and downed woody debris.
3. Manage and control invasive species.
4. Maintain diversity over the landscape to include habitats for a variety of species (seral stages).
5. Increase the variety of structure.

Wildlife in Managed Forests: A series for forest landowners

The Oregon Forest Resources Institute has created this series of publications for use by forest landowners and managers to report on what is known about habitat requirements and ecological roles of various wildlife species in Oregon and the Pacific Northwest. Three publications are now available:

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The Big Picture: The Role of Forests in Connecting Quality Habitats for Wildlife

BY LISA A. DeBRUYCKERE AND
FRAN CAFFERATA COE

Working forests provide many benefits for wildlife. But as wildlife habitat loss and degradation occurs through changes in land ownership and conversion of forested land to other uses, we lose a key component of forests—their ability to provide wildlife habitat as well as the landscape that connects wildlife habitats and creates “permeable” landscapes.

Continuous forested landscapes facilitate the movements of wildlife; when forests become discontinuous, other uses of the land can impede the movements of some species of wildlife, particularly large mammals and carnivores. Discontinuous forested habitats that are interrupted by development or contain large transportation corridors, such as interstate highways, can serve as barriers to wildlife if they do



PHOTO COURTESY OF NORTHWEST HABITAT INSTITUTE

A mosaic of connected forest types across the landscape helps to support biodiversity by providing different habitat types for many wildlife species.

not allow for safe passage under, over or around these structures. This type of habitat fragmentation has been identified as a major cause in the loss

of biodiversity.

The Forest Stewardship Council recognizes that a diversity of forest seral stages provides a variety of wildlife habitats, makes forests more resilient, and contributes to overall biodiversity. Scientific Certification Systems encourages diverse forest stands by developing standards that encourage “management actions [that] lead to an optimal distribution of seral stages from early regeneration to post-mature/senescent stands (i.e. ‘old-growth’), both in total acreage and geographic dispersion.” The Sustainable Forestry Initiative calls for the conservation of biological diversity by developing and implementing stand- and landscape-level measures that promote habitat diversity and the conservation of forest plants and animals.

On a large scale, connecting tracts of high-quality wildlife habitat is critical to the health and survival of many wildlife species as they meet their life history needs throughout the year. Some needs, like cover and water, may be found in a very small area. Other needs, like migration for breeding purposes, cause some wildlife to travel significant distances.

Understanding animal behavior and life history needs are critical in achieving landscape permeability for wildlife and contributing to diverse

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habitats. Different wildlife species require different size habitats to acquire the food, water and shelter they need to survive, creating the need for a mosaic of habitats connected by wildlife corridors. Providing a mosaic of large habitat patches and connecting wildlife corridors can improve the viability of wildlife populations.

In Oregon and Washington, a total of 78 species of wildlife are associated with early seral stage forests—those dominated by herbs, shrubs and some broad-leaved trees. A diversity of early seral stage forests provides the foundation for food webs that contribute to diversity in Pacific Northwest conifer forests. Maintaining habitats that support plant diversity contribute to biodiversity.

For example, early seral forests have low amounts of basal area, but higher amounts of grasses and forbs. Species such as alder flycatchers (*Empidonax alnorum*) and olive-sided flycatchers (*Contopus cooperi*) were found only in early seral stage forests in British Columbia. Other species, such as orange-crowned warblers (*Vermivora celata*) and MacGillivray's warblers (*Oporornis tolmiei*) were also found in late seral forest stands, but were more abundant in early seral stage forests.

And yet some species thrive in older forests—those with a denser multi-storied canopy cover, large trees and snags—or a combination of older and younger forest stands. Fishers (*Martes pennanti*) are found in mid- to late-successional conifer forests that have a deciduous component. Elk (*Cervus canadensis*) prefer early seral stage forests for browse, but benefit from the thermal and cover qualities of a late seral stage forest.

Understanding the life history needs of wildlife is important, but one of the most important practices a forester can implement is adaptive management. We do not know how different species of wildlife respond to landscape structure, corridor use and design, dispersal capabilities in fragmented landscapes, the role of remnant patches in preserving plant and animal populations, and the relationship between landscape matrix and patch isolation. Therefore, it is important first and foremost to maintain the forest land base, and second, to test

hypotheses—to learn and understand as we try new ways of managing forests for timber and wildlife outcomes. It is especially important, given habitat loss, for foresters to examine not only the goals for their lands, but how those goals integrate with adjacent forest landowners to create a healthy mosaic of forested landscapes.

We know that as wildlife habitat declines through loss of forests, the spatial arrangement of remaining wildlife habitat becomes even more critical. That is why it is so important for foresters to maintain their lands as forest, and understand the critical role

their lands play in continuing the legacy of forest products in the Pacific Northwest while providing wildlife habitat for native fish and wildlife species. ♦

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Manipulating Stand Structure of Douglas-fir Plantations for Wildlife Habitat and Wood Production

BY TIMOTHY B. HARRINGTON

Two turning points exist during development of Douglas-fir plantations that define the longer-term (20-plus year) structural characteristics essential for wildlife habitat and wood production: stand initiation and stem exclusion. These relatively brief periods during stand development, described in the classic text *Forest Stand Dynamics* (Oliver and Larson 1996), represent important decision points when applications of competing vegetation control and precommercial thinning (PCT) are likely to result in lasting changes to stand structure. Although the silvicultural technology for these treatments has existed for decades, only recently has a clear picture emerged of the longer-term consequences of combining different intensities of vegetation management with PCT.

During stand initiation, a “battle” for growth-limiting resources begins as plant species vie for control of the site. While Douglas-fir seedlings compete with a wide array of plants at this stage, sprout-origin hardwoods are especially competitive. Will the winner be Douglas-fir or fast-growing hardwoods? The outcome depends on species’ differences in size and growth rate. If large Douglas-fir seedlings are present at a time when site resources are high and competitors are much smaller and less abundant, there is a strong likelihood that a productive conifer stand will emerge and dominate the site. Intensive control of competing vegetation with herbicides and planting of large, vigorous seedlings generally ensure that Douglas-fir will emerge the victor in such a battle. However, if Douglas-fir has little or no competitive advantage when the race begins, hardwoods will gain a significant foothold in the structure of the stand, and a substantial portion of the conifers will become suppressed and



ultimately die from overtopping. A mixed stand of conifers and hardwoods is likely to result.

Once the forest canopy closes and no new trees are able to establish, the stem exclusion phase of stand development begins. This period represents another turning point in stand development when foresters are able to influence allocation of site resources—through precommercial thinning—and thereby redirect stand development toward alternative pathways. If hardwoods have been effectively suppressed during stand initiation, opportunities for recruiting them into the upper canopy for wildlife habitat are usually limited because of their small size and limited number in the understory. If some hardwoods have been allowed to gain a foothold in the middle and upper levels of the forest canopy, their status in the stand’s hierarchy can be elevated by providing additional growing space through PCT.

Hardwoods perform an important role in the ecology of conifer-dominat-

ed forests of the Pacific Northwest. Their foliage, flowering and fruit production are essential components to the habitat of many wildlife species. By providing breaks and layers in the often dense and continuous canopy of Douglas-fir, they create nesting places for birds and admit understory-promoting light. Early in stand development (0-10 years), hardwoods can become dominant and exclude Douglas-fir. However, later in stand development (20-30 years), conifers overtop, suppress and sometimes kill hardwoods, rendering them less effective as sources of wildlife habitat. Such a reversal in competitive roles is particularly common in Douglas-fir plantations. Therefore, hardwoods can potentially be retained at desired densities and with reasonable vigor if their growing space needs are met.

In southwestern Oregon, a study was initiated by Oregon State University (OSU) in 1983 to determine effects of hardwood competition on Douglas-fir plantation development. Two sites



PHOTO COURTESY OF TIM HARRINGTON

A view of the OSU study in the ninth year after the herbicide treatment. The rectangular area at center of photograph, dominated by Douglas-fir, is where all hardwoods had been removed; surrounding areas had various amounts of hardwoods retained. While pure stands of Douglas-fir generally produce the most volume of commercial wood products, mixed stands of Douglas-fir and hardwoods may provide more habitat opportunities for wildlife.

were selected that had been clearcut harvested, broadcast burned and planted with Douglas-fir. When the plantations were one to two years old, sprout-origin hardwoods were treated with herbicides to leave 0, 25, 50 or 100 percent of their initial cover, which averaged 15 percent of the total area when the study was initiated. The primary hardwood species was tanoak with minor amounts of Pacific madrone, golden chinkapin and canyon liveoak. Tanoak is an important wildlife habitat species because of its prolific production of acorns, an important food source for deer, bears and rodents. Tanoak is also a severe competitor with Douglas-fir because of its vigorous sprouting and dense, ever-green canopy.

As expected from the OSU study, Douglas-fir growth increased with the amount of hardwood removal—a trend that continued through the eleventh year after the herbicide treatment. Fifteen years after the herbicide treatment, PCT was applied to the stands. The best Douglas-fir “crop” trees were retained at an approximate spacing of 14 feet. In places where no Douglas-fir crop trees existed, generally because of mortality from hardwood competition, the best hardwood trees were left instead. These simple PCT specifications, when applied across the OSU study, set up a range of stand responses that were observed eight years later—a total of 23 years after the herbicide treatment (see Diagram 1).

Where the hardwoods had been left untreated (15 percent cover in the diagram), a codominant stand structure developed with Douglas-fir and hardwoods occupying the same canopy layer at a height of 25 to 30 feet. Where only 25 percent of the initial hardwood cover had been retained at a stand age of 1-2 years (4 percent cover in the diagram), a two-layered canopy structure developed with dominant Douglas-fir, about 40 feet tall, over hardwoods, about 23 feet tall. And where all hardwoods had been removed, Douglas-fir height averaged about 50 feet and its volume of wood per acre was three times that observed where the hardwoods had been left untreated.

The OSU study has demonstrated the longer-term effects of a vegetation management treatment applied 23

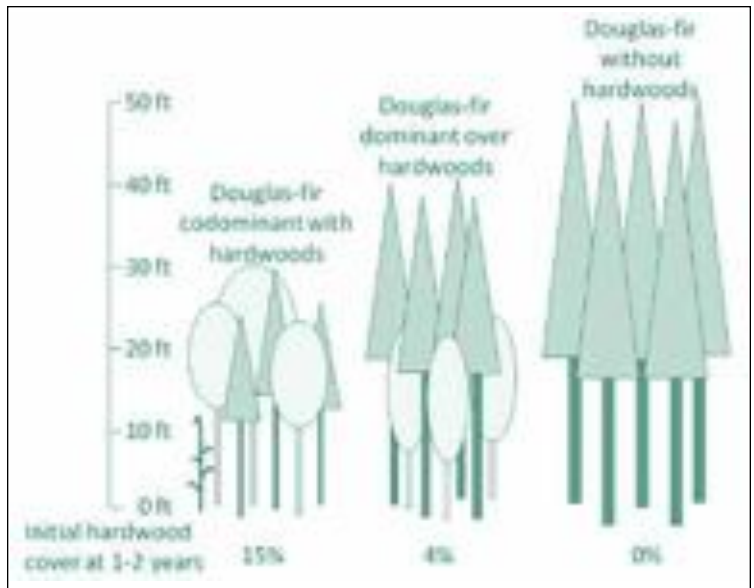
years previously, when the Douglas-fir plantations were only one to two years old. Today, Douglas-fir growth continues to increase with the amount of hardwood removal that occurred several decades previously. In fact, the most recent measurements of the study indicate that a given amount of hardwood basal area has displaced over twice the potential basal area of Douglas-fir that could have been grown in the same area. Precommercial thinning has caused further separation in stand growth and structure among levels of hardwood removal than that caused by vegetation management alone. Thus, the study demonstrates that hardwood competition can be managed as a tool to generate a variety of stand structures.

If management objectives are to grow a mixed Douglas-fir and hardwood stand primarily for wildlife habitat, the following sequence of treatments is likely to generate a codominant stand structure: start with a “clean” clearcut by harvesting all conifer and hardwood stems one inch in diameter and greater, plant with Douglas-fir, and apply PCT at age 15 years with selection of crop trees divided equally between Douglas-fir and hardwoods.

If management objectives are to retain a low density of hardwoods in a Douglas-fir plantation, herbicides can be used after clearcutting and planting to eliminate 75 percent or more of the hardwood sprout clumps, leaving only those of largest size and best vigor at the desired spacing within the plantation. Crop trees left after PCT would be predominantly Douglas-fir with an occasional hardwood of good form and vigorous growth. Note that based on the basal area relationship described

Diagram 1. Stand Structure diagram.

SOURCE: TIM HARRINGTON



previously, hardwoods need more growing space per tree than does Douglas-fir. If the retained hardwoods are expected to flower and produce food for wildlife, they will need twice the growing space of a Douglas-fir at the time of PCT to prevent them from being overtopped and suppressed by their much larger neighbors.

Clearly, from a wood-production standpoint, using herbicides to uniformly suppress competing vegetation—especially fast-growing hardwoods—is an effective approach to ensure dominance and a high level of productivity for planted Douglas-fir. However, contemporary management objectives often include the retention of some hardwoods in a vigorous state to provide habitat and other resource values. The OSU study is providing a clearer picture of how vegetation management and PCT can be combined to promote development of a broad range of stand structures in Douglas-fir plantations. ♦

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Integrating Bird Conservation into Commercial Forests: How Much Hardwood is Enough?

BY TANA ELLIS AND
MATTHEW BETTS

To meet growing global demands for wood products, forest managers have increasingly emphasized intensive management techniques to increase the pace of timber production. These practices include clearcutting and herbicide application, which suppress competing broadleaf growth and shorten the early shrubby stage of forest succession (typically called early seral forest). The benefit to suppressing broadleaf competition is that young replanted conifers thrive without competition and time until timber harvest is substantially reduced. However, many argue that the cost is a loss in biological and functional diversity within intensively managed forests. In the Pacific Northwest, structurally and compositionally diverse early seral forest habitat has declined since pre-European settlement and may now be the scarcest habitat type in the region.

Several Neotropical migrant bird species that breed in early seral habitat have shown concurrent population declines over the past few decades. It is unclear whether these declines have been caused by loss of early seral habitat, though this possibility highlights the importance of evaluating the habitat needs for these bird species. Our research program at Oregon State University investigates how forest bird presence and demography is impacted by intensive management practices. A better understanding of bird habitat requirements in managed forests could suggest ways to improve bird habitat while meeting wood production goals.

Previous research in early seral forest has identified several key species as important contributors to forest food webs. Red alder, bigleaf maple, vine maple, red elderberry, cherry and California hazel are hardwoods with leaves that support abundant arthropod prey, which are subsequently important food sources for insectivorous birds. Compared to conifers, these hardwood species may provide

greater food availability and cover, which may ultimately influence the abundance and breeding success of insectivorous forest birds. Unanswered questions include: If hardwood cover is needed to maintain thriving bird populations, how much hardwood is enough? Can we provide enough hardwood habitat to make a positive difference in declining bird populations without sacrificing wood production goals?

To address these questions, we captured forest birds using mistnets in 28 intensively managed stands in the central Oregon Coast Range of northwestern Oregon during the 2008-09 summer breeding seasons. (Mistnets are made of 12 x 2 m fine mesh that is difficult for a flying bird to see. Birds inadvertently fly into the mistnet and are captured.) Stands were selected to represent a changing hardwood component, ranging from virtually zero hardwood up to 33 percent hardwood canopy cover (the maximum hardwood cover we could find). All stands ranged in age from five to nine years old. All but one stand was managed for Douglas-fir, with the remaining stand managed for red alder.

At two week intervals, we erected eight mistnets within each stand, opened them at sunrise and captured birds for five hours. We banded each bird with a uniquely numbered aluminum USFWS band, and collected information including species, age, sex and breeding status.

To measure vegetation composition within the stand, we established vegetation plots surrounding each net. We visually estimated canopy cover of hardwood within each plot, and averaged over all plots to obtain the stand-level hardwood cover, which ranged from 0.3 percent to 33 percent.

Our efforts banding birds in each stand ranged from a humdrum average of one bird caught per hour to a blitz of 18 birds per hour. In 4,000 open-net hours, we captured 5,500 birds of 52 species. When we compared bird capture rates with the amount of hardwood cover surveyed within each



PHOTO COURTESY OF DANA McCLOSKEY

A MacGillivray's warbler is captured in a mistnet.



PHOTO COURTESY OF MATT BETTS

A captured and banded Wilson's warbler.



PHOTO COURTESY OF MATT BETTS

Body feathers can be blown up and away from the bird's underbelly, revealing the sex of the bird.

stand, we found intriguing results. The relationship between hardwood cover and capture rates was not linear. As hardwood cover increased from zero to 6.7 percent, capture rates increased sharply. However, as hardwood cover increased above 6.7 percent, capture rates no longer increased. Above the "threshold" of 6.7 percent (SE=1.6%) hardwood cover, capture rates tended to remain the same. In other words, stands with greater than 6.7 percent hardwood cover (give or take about 3

percent) had similarly high abundances of birds. Secondly, as hardwood cover fell toward zero, bird abundance declined sharply. These results indicate that overall bird abundance is correlated with hardwood cover. When hardwood cover is scarce, bird abundance increases sharply with small additions of hardwood. And of greatest interest, relatively high bird abundances were maintained with a minimum of only 6.7 percent hardwood.

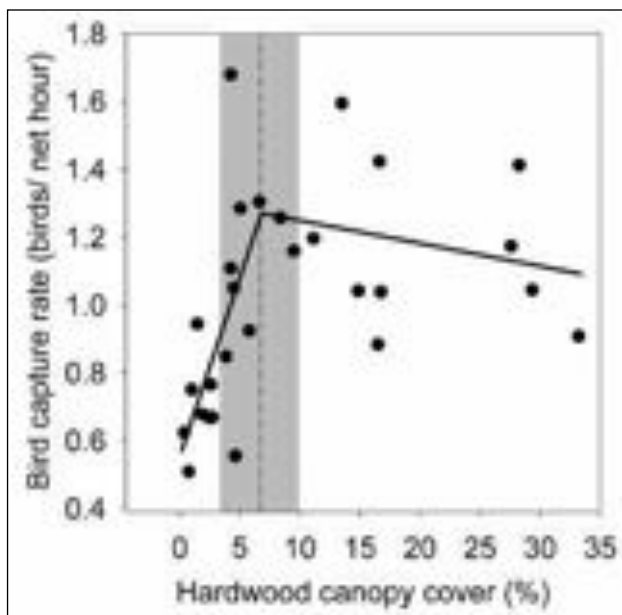
It is important to consider that finding high abundances of birds does not necessarily mean these birds are breeding successfully; previous studies have shown that singing males in certain habitats may not be able to find mates, or may have failed reproductively. Clearly, for populations to be conserved, breeding success is essential. In order to assess breeding success as related to hardwood cover, we focused on three early seral associated species: Swainson's thrush, orange-crowned warbler and Wilson's warbler. These species typically breed in early seral habitat and have been showing population declines in Oregon. We compared hardwood cover to capture rates of

breeding adults and juvenile birds within each stand. Results varied between species, though the general trends remained consistent. For Swainson's thrush, both adults and juvenile capture rates increased significantly with increasing hardwood cover. For orange-crowned warbler, both adults and juveniles showed increasing trends, though this is not statistically significant. Wilson's warbler adults also showed a non-statistically significant, yet increasing trend. However, Wilson's warbler juveniles showed a very strong positive correlation with hardwood cover. These results by age class are particularly interesting, as they suggest that juve-

niles are even more sensitive to the amount of hardwood than adults.

Why these results? One possibility is that stands with high amounts of hardwood cover may provide more food and cover resources that result in greater breeding success or juvenile survival. On the other hand, high-hardwood stands may attract juveniles from low-hardwood stands. Either way, these results suggest that hardwood cover could be an important factor in juvenile survival for all three of these species. Furthermore, we found

Figure 1. Hardwood canopy cover percentage and capture rate for each stand. A hardwood cover threshold was found at 6.7% (SE=1.6%), shown by dashed line. As hardwood cover declined below 6.7%, capture rates declined sharply. Above 6.7% hardwood cover, capture rates remained relatively high and stable.



no clear thresholds in hardwood cover as we saw with overall capture rates. It appears that for juvenile abundance, more hardwood cover is better.

Managers are faced with numerous challenges for meeting economic and ecological goals, which is further com-

plicated by a lack of information about how specific management activities affect habitat quality for wildlife. Our research provides information that can be used to aid in assessment of objectives and techniques in light of current conservation concerns. Depending on management objectives, commercial forests have the potential to provide valuable natural resources AND wildlife habitat for species that are suffering population declines.

The idea of purposefully allowing increased hardwood cover within commercial stands may not appeal to managers when there are associated trade-offs in terms of timber growth. So it may come as good news for managers interested in bird conservation that according to our preliminary data, small amounts of hardwood could make a great difference in bird abundance. Changes in management practices to increase hardwood cover by a small amount could result in disproportionately large increases in bird abundance. However, results show that for some species of songbirds (often those that are in decline), the more hardwood available within an early seral stand the better. Maintaining higher amounts of hardwood cover could do even more to conserve declining bird populations by providing food and cover that support vulnerable young birds. ♦

Matthew Betts is an assistant professor, Wildlife and Landscape Ecology in the College of Forestry at Oregon State University, and Tana Ellis is a graduate student, Forest Ecosystems and Society, Oregon State University. Matt can be reached at 541-737-3841 or matthew.betts@oregonstate.edu and Tana can be reached at 520-390-8148 or tana.ellis@oregonstate.edu.



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Forestry in the Pacific Northwest: How Important are Riparian Buffers to Stream-associated Amphibians?

The *Western Forester* has asked Washington Wildlife Biologists Marc Hayes and A.J. Kroll to provide their perspectives on the importance of riparian buffers to stream-associated amphibians. Literature Cited for both articles is available on our website at www.forestry.org/wf.

BY A.J. KROLL

Timber harvesting and road construction can impact riparian habitats by increasing fine sediment loads (which fill substrate interstices used by stream-associated amphibians or SAAs for cover and egg deposition), raising water temperatures and through accumulation of slash in the stream channel. Several factors may moderate these impacts on SAAs, including high-gradient channels that flush fine sediments; reduced production and accumulation of fine sediments on consolidated lithologies; and variation in species-specific responses. For example, giant salamanders may have wider temperature tolerances than either torrent salamander (*Rhyacotriton* spp.) or coastal tailed frog (*A. truei*), and may be more tolerant of increases in water temperatures that result from canopy removal.



Current forest practices regulations in Oregon and Washington protect aquatic communities with either machine exclusion and/or forested buffers. Forested buffers on streams have been suggested as a management practice to ameliorate potential deleterious impacts of timber harvesting on SAAs. While two studies evaluated differences in SAA responses between non-buffered and buffered streams (neither were experimental), one study concluded that: "We caution that results of our comparisons of forested band widths may have been compromised by small sample sizes. As a result, large error bars on relative odds may have obscured biologically significant differences among band widths." Many of the streams to which buffer prescriptions have been applied were harvested previously and no studies have been published in peer-reviewed outlets that examine differences in SAA responses between buffered and non-buffered streams in forests that are being harvested for the first time. Buffers are unlikely to harm SAAs. However, the consequences of buffer failure to local amphibian populations have not been evaluated and, in the absence of this information, buffers should not be relied upon to support SAA persistence.

Conversely, SAAs may benefit from increases in solar radiation and stream primary productivity that result from a partial reduction in stream canopy cover. Several studies found strong positive associations between solar radiation, primary productivity and growth rates of tailed frog tadpoles in experimental stream enclosures. In addition, reduction in canopy cover from clearcut logging was associated with increased primary productivity and abundance

BY MARC P. HAYES

Whether a buffer of unharvested trees along streams provides some benefit to stream-associated amphibians (or SAAs) is a question that current science cannot confidently answer. One should appreciate the irony here, since much energy has been directed at attempting to answer this question in the Pacific Northwest. Some investigators have suggested that buffers are important, even critical, to SAA survival; or differently stated, that clearcut harvesting negatively affects SAA survival. However, examination of the science behind this assertion reveals it is complicated and rooted in interpretational and design issues. This situation arises from underappreciation that variability across forested landscapes may contribute much more to patterns than was historically realized, and that novel assessment approaches have forced re-evaluation of how to effectively answer this question.



The obvious physical consequences of harvest are shade reduction and sedimentation, but whether those changes negatively impact SAAs has proven elusive. That the impacts of shade reduction and sedimentation on SAAs often differ is generally recognized, but that they differ in relative magnitude among locations remains rarely appreciated. At least two studies have shown that reducing shade increases the growth of coastal tailed frog (*Ascaphus truei*) tadpoles by increasing available food (they are algal grazers). Yet, the generality of this finding is not clear as neither study was done in the southern portion of its geographic range where greater potential for increases in water temperature (eggs and tadpoles of coastal tailed frog are relatively cool-temperature adapted) could negate a positive growth response. Geophysical studies have shown that sediment originating from harvests can fill the interstitial spaces in stream substrates. This notion is the basis of the idea that refuge habitat for the instream life stages of SAAs disappears post-harvest. Even if we assume this to be true (unequivocal linkage of such microhabitat loss to amphibian response remains unaddressed), geophysical studies also reveal that the underlying rocks that make up stream substrates vary over an order of magnitude in their ability to produce fine sediments. Indeed, though parent materials can affect SAA occupancy and abundance, only recently has this been used to guide study site selection. This should make it easier to understand how varying differences between the impacts of shade reduction and sedimentation could result in different responses by SAAs among sites and that some patterns will vary geographically. This complexity represents at least part of the reason that SAA response to timber harvest has

A.J. Kroll (CONTINUED)

and biomass of giant salamanders (*Dicamptodon* spp.). Interactions between canopy cover, SAA density, nutrients, and algae and periphyton growth rates may lead to differential



PHOTO COURTESY OF MARC P. HAYES

A metamorphosed adult Cope's giant salamander (*Dicamptodon copei*).

responses across even those streams in close proximity to one another. Whether the beneficial effects of more open stream canopies will outweigh negative impacts from harvesting and road-building is surely site- and region-specific, although interactions among these factors have not been thoroughly evaluated. ♦

A.J. Kroll is a wildlife research biologist for Western Timberlands R&D, Weyerhaeuser Company, in Federal Way, Wash. He can be reached at 253-924-6580 or aj.kroll@weyerhaeuser.com.

Marc P. Hayes (CONTINUED)

shown a mix of positive and negative responses in earlier studies. Disentangling this complexity is a prerequisite for understanding the basis of these seemingly different responses.

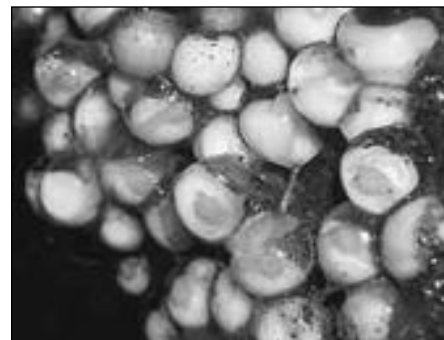


PHOTO COURTESY OF AMBER PALMERI-MILES

The developing eggs of a tailed frog (*Ascaphus truei*).

Equally important, methods that quantify detection where only a small proportion of animals are typically found (a pattern typical with SAAs) are revolutionizing forestry studies. Detection of cryptic animals varies with habitat complexity, so it is expected to change dramatically as the landscape immediately post-harvest becomes debris-laden. Results of ongoing studies that apply these methods are eagerly anticipated, in part because earlier studies that did not address detectability may need to be reassessed.

Marc P. Hayes is a senior research scientist, Washington Department of Fish and Wildlife, Olympia, Wash. He can be reached at 360-902-2567 or hayesmph@dfw.wa.gov.



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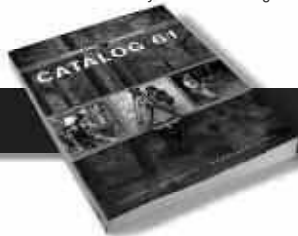


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Management Recommendations for Controlling Invasive False-brome

BY MATT BLAKELEY-SMITH

Grasses surround us. Their deep fibrous roots stabilize soil and their nutritious seeds and leaves feed wildlife and livestock. We fervently plant grasses at home, in parks and in pastures due to all the benefits they provide us. Even in arid places where grasses don't easily grow, we go to great extremes to support an inveterate human desire to gaze across green lawns.



But how many types of grasses do you actually know? Chances are, not that many. You are not alone. Even botanists tend to look at grasses with glazed eyes. The floral parts used to identify grasses are very small—necessitating a magnifying glass and a technical key. Not to mention many animals eat the tops off grasses before they develop the very features needed to identify them.

Despite this fact, learning to differentiate between all the varieties of grasses can be extremely important to landowners and land managers. Although grasses provide a great num-



PHOTO COURTESY OF MATT BLAKELEY-SMITH

A close-up of a false-brome flower.

ber of benefits, the wrong grass in the wrong place can be very destructive. For example, European beach grass has permanently altered the sweeping coastal dunes of the Pacific coast, reed canarygrass has choked irrigation ditches and wetlands across the region, and cheatgrass has taken over 125 million acres of sagebrush steppe habitat.

For those of you working in the woods, grasses might not seem that common since most grasses prefer to grow in open sunlight and not under a dense forest canopy. In fact, you may not have cared about the understory vegetation once the trees were free to grow. The times are changing. Foresters and land stewards are becoming increasingly concerned about a new invader to Northwest forests: false-brome (*Brachypodium sylvaticum*).

False-brome is a perennial grass native to Europe, northern Africa and Asia. Most of the evidence for the initial introduction of false-brome points toward a federal effort to scour the world for useful plants in the early 1900s. Plant materials from all parts of the world were brought to the U.S. in order to find the best species for stabilizing erosion-prone slopes, grazing or for ornamental value. European beach grass was cultivated and intentionally spread over vast areas to stabilize shifting sand, only to find decades later how devastating this decision was. In the case of false-brome, the species simply escaped and spread unnoticed for 50 years.

False-brome has been spreading rapidly since its first detection in Lane County, Ore., in 1939. Foresters hoped it would be limited to low-elevation forests in western Oregon, but reports have been popping up from the Columbia River Gorge to the north, to California's Santa Cruz Mountains in the south, and most recently from a bog in New York state. In 2010, false-brome now impacts tens of thousands of acres in western Oregon and has started to spread into the ponderosa pine regions of the state.

In the regeneration phase of a forest stand, false-brome competes directly with tree seedlings for water, nutrients and light. After multiple years of growth, heavy thatch accumulation from false-brome provides habitat for voles and mice, which eat the cambium of newly planted Douglas-fir seedlings. Additionally, thatch buildup can potentially alter fire regimes in forests as a large amount of flash fuels



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accumulate on the forest floor.

From an ecological standpoint, false-brome is having an enormous impact on wildlife. The foliage of false-brome is hairy and high in silica, which makes it unpalatable to most wildlife. The grass forms a dense carpet that smothers native plants and eliminates the food base upon which most wildlife depends. Forests that once supported colorful wildflowers and a diverse assemblage of amphibians, small mammals and birds are now carpeted with a single layer of grass.

Luckily, false-brome is easier to identify than most grasses due to its lime green color, bunching growth form and hairy leaf edges. A trained eye can spot a small infestation at 20 miles per hour on a forest road while large infestations can be picked-out on aerial photos due to the grass's unique sheen.

False-brome often grows along roadsides and quickly radiates into the surrounding forest and open meadows. Deer spread it locally as the seed gets caught in their fur. Long-distance dispersal occurs when people move between job sites and fail to clean their vehicles, boots and logging equipment after working in an infested stand. Hikers and mountain bikers also pick up the seed and unknowingly spread it to new trails.

Controlling false-brome begins with prevention. If you don't have the grass on your property yet, it's easier to keep it weed free! All equipment should be cleaned prior to starting work in the forest and immediately after working in an infested stand. Always be suspect about gravel and soil since seeds can easily travel in these materials. Often we forget to do the simple things like cleaning the mud off our boots.

Whenever treating noxious weeds, it is best to go after the small new infestations instead of the single large ones. Prevention is key, so maintaining clean roadsides can help considerably. Although mowing will not kill the grass, if mowed in June false-brome will not be able to produce seed that year. If you have fall and winter projects planned in areas with false-brome, mowing in June will help stop the spread of seed once work begins. Caution: If you mow too late in the season seed will be spread over the entire road system.

Glyphosate has been very effective



PHOTO COURTESY OF DEBBIE JOHNSON

False-brome covers the understory of this Douglas-fir stand.

at controlling false-brome if applied in October or May. Spring treatments can harm native species when they are growing amongst false-brome, but many native species go dormant in the summer and are avoided if spraying occurs in the fall. The main disadvantage with spraying in the fall is that the plants have already produced a seed crop that will germinate once the mother plant dies. This could result in an endless cycle of ineffective spray treatments. In order to avoid this cycle, mow the plants in June to stop seed production, but spray treatments must occur late enough in the fall so that the plant has re-grown sufficient leaf material to absorb the chemical. Another option is to include a preemergent herbicide in the tank mix. This is a very effective way to kill both the mature plants and the next generation of seedlings. Consult with an herbicide specialist to determine which preemergent herbicides are labeled for your unique conditions. A third option is to do a spray treatment in the fall, and a follow-up treatment in the spring. Whichever herbicide treatment you choose, multiple years of spraying are needed to control false-brome. Finally, hand pulling small populations of false-brome can be effective when soils are damp. This approach is best suited for sensitive areas close to water or native plants.

After removing false-brome, the treated area should be seeded with



PHOTO COURTESY OF TOM KAYE

The characteristic clumping growth form of false-brome.

native species or covered with native straw. Weeds usually grow in bare areas where there is little competition, so being proactive about establishing new cover helps block future invasions of false-brome.

With so many weeds in the world, controlling invasives can seem like a futile task. Don't get discouraged! There are detailed control options for most damaging weeds and early prevention will pay-off in the long run. Not only will noxious weeds devalue the standing trees on your property, it can have dramatic consequences for wildlife habitat. ♦

Matt Blakeley-Smith is a restoration ecologist for the Institute for Applied Ecology in Corvallis, Ore. He can be reached at 541-753-3099 x503 or matt@appliedeco.org.

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Council Holds Teleconference After Storm Cancels Meeting

BY CLARK SEELY, CF

Under the leadership of President Mike Lester, the SAF Council met by teleconference for two hours on February 6, 2010, due to severe winter weather in the Mid-Atlantic States, which forced cancellation of the in-person meeting. All Council members and officers were present.

Highlights of the February meeting are provided below.

During 2009, Council's Finance and Investment Committee had been in discussions with one of SAF's investment advisors about a more efficient way to manage our Foresters' Fund account to both lower risk and significantly reduce management fees. The change involves the type of account utilized with the investment firm, and because of the size of our account, we are able to take advantage of this different approach. The committee concluded it was the correct approach at its last meeting in



December and made a recommendation to Council to make the change at this February meeting. Council unanimously approved the change.

Membership and financial status continue to be at the forefront of Council and staff concerns in these uncertain times. Since the December Council meeting, the officers and several Council members discussed non-dues and alternative revenue concepts, and agreed that we need to ensure that long-term financial planning is institutionalized and that we need an understanding of revenue and program costs for the short and long-term. Dues were also discussed with recognition of the need to establish a more formal long-term membership dues policy that does not exist today. Council also discussed how and in what form a more established development role might benefit the Society and will continue to explore revenue efforts in a comprehensive way.

The Canadian Institute of Forestry (SAF counterpart) has had a long-standing recognition program for graduating forestry students with the presentation of a silver CIF ring. In

the words of the CIF, "As the Voice of Forest Practitioners, it is one of the Institute's objectives to welcome individuals to the profession of forestry. It has been our tradition since 1967 to present silver rings to graduating students from Canadian Institute of Forestry-recognized Canadian forestry programs...The Canadian Institute of Forestry provides the silver ring as a welcome to the profession of forestry. It is a symbol of achievement in having completed an Institute recognized forestry program. The silver ring is visible evidence of the national bond among Canadian forestry graduates." To strengthen the bond of American foresters, particularly between students and the rest of the profession, Council is considering establishing a similar program for SAF. There is still much work to do and decisions to be made, but the idea is intriguing and one more possible way to better serve and engage the student segment of our profession and membership. National staff and Council members will seek membership input before final decisions are made. For more information about the CIF ring program, go to www.cif-ifc.org/site/silver_ring_program.

In response to the devastating situation in Haiti, staff presented some ideas for discussion about how SAF might be more fully engaged in the restoration efforts there for the long-term through forestry expertise and in particular, through meaningful leadership in reforestation efforts. Continued exploration and discussion will take place this spring.

As always, if you have any questions or concerns relating to national SAF operations or governance, please contact me or District 1 Council Representative Chuck Lorenz at any time. We look forward to serving you. ♦

*District 2 Council Representative Clark Seely, CF, can be reached at 503-999-3475 or cleoregon@comcast.net.
District 1 Council Representative Chuck Lorenz can be reached at 360-951-0117 or c_4str@yahoo.com.*



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SAF Leaders Meet at Pack Forest

The PNW Forestry Leadership Conference was held January 28-30 at Pack Forest near Eatonville. A total of 81 attendees from Washington, Oregon and the Inland Empire societies received top training on developing leadership skills, fund raising, membership recruitment and retention, working with the media, how to hold successful meetings and field days, and even how to negotiate with elected officials. Each of the outstanding presentations is now available as PDF PowerPoints on the joint website at www.forestry.org. In addition, as shown in the photo, a great field day at Pack Forest was enjoyed by 44 people.

Special thanks go to the Green River Community College Student Chapter for their great support and attendance,

UW Pack Forest, and sponsorship from International Forestry Consultants,

Port Blakely Tree Farms and West Fork Timber Co. ♦



PHOTO COURTESY OF DON HANLEY

It's Not Too Late! Annual Meetings Await

Registration is still open for the Inland Empire and Washington State SAF annual meetings.

The May 20-22 Inland Empire meeting in Wallace, Idaho, is focusing on *1910 Fires: A Century Later*. The meeting will examine the social and institutional conditions prior to the 1910 fires, the fires themselves, the impacts of fires on resources and institutions, and the possibility of such fires burning again. For additional information, visit www.iesaf.org and click on "Events."



Opportunities and Challenges in Uncertain Times is the theme of the WSSAF annual meeting scheduled for May 12-14 in the historic town of La Conner. The meeting will bring together experts to discuss the pressing questions in regulation, public timber supply, higher and better use in timber lands, climate change, carbon markets and forest certification. For more information and to download a registration form, visit www.forestry.org/wa/annual/index.php. ♦

Tree Farm Management Plan Workshops Scheduled

The Washington Tree Farm Program is sponsoring Tree Farm Management Plan workshops this spring. The purpose of the workshops is to develop management plans suitable for American Tree Farm System (ATFS) and county forest tax classification purposes. Tree Farmers will have the opportunity to complete a basic management plan for their ownership that will enable them to become certified through the ATFS. The workshops will also add elements required by local counties to qualify for open space timberland or designated forestland for tax reduction purposes.

Workshop dates and locations are May 22 in Chehalis; June 19 in Battle Ground; and June 26 in Spokane. The Management Plan Workshop fee is \$35, which includes snacks and lunch. Local area foresters that volunteer for

the Washington Tree Farm Program will be at the workshop to help landowners write their plans and schedule follow-up inspections (which are provided at no cost to the landowner) for ATFS certification.

For more information, contact Bob Falkner at 360-789-1265 or wtfp.bob@gmail.com. ♦

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Information Sought About Variable Retention Harvesting

BY SUE BAKER

As an Australian Fellow at the World Forestry Institute (WFI) in Portland, Ore., I am working on a one-year project focusing on variable retention harvesting and the outcomes for biodiversity.

Forestry Tasmania, the Government Business Enterprise managing Tasmania's State forests, has started

using aggregated retention in place of clearcutting in most wet old-growth forests. Since these practices are new to Australia, I hope to learn how variable retention and adaptive management is used in United States to achieve improved outcomes for biodiversity, while still achieving silvicultural and operational objectives. Since different growers operating in different forest types are likely to have customized practices to their particular situation, I plan

to conduct interview-style surveys about variable retention practices and adaptive management. The outcome will be a report or journal article synthesizing this information for the U.S. and Canada, and providing insight into how to successfully integrate silvicultural, conservation and adaptive management aspects of variable retention harvesting.

What is variable retention?

The variable retention (VR) approach to forest harvesting was developed in the Pacific Northwest and Canada to maintain structural legacies and biodiversity at the stand level. The two main forms of VR (sometimes called green-tree retention) are aggregated (or group) retention where patches of forest are left unharvested, and dispersed retention where scattered trees are retained. VR harvest units are therefore expected to retain structural elements and species compositions more characteristic of stands regenerating from natural disturbance. VR is a regeneration cutting system (as distinguished from variable density thinning) and typically 10-30 percent of the area or basal area is left behind. Importantly, this is retained for the entire harvesting rotation. Also distinguishing VR from clearcutting is the concept of "forest influence" where, for example, the majority of the harvest unit needs to be within one codominant tree height of long-term retention. This latter concept is likely to differentiate VR sites from clearcutting with retention, where retention levels will typically be too low to provide sufficient forest influence (required to facilitate recolonization of the harvested areas by species from the unlogged forest).

Help needed

As part of my project with the WFI, I'm hoping to interview foresters about their VR practices. I am also looking for biodiversity datasets from various distances into harvested areas for a meta-analysis about forest influence. If you or your organization can participate in interviews, or if you have any other comments, queries or suggestions, please contact me directly. ♦

Sue Baker is an Australian International Fellow at the World Forest Institute in Portland, Ore. She can be reached at 503-488-2148 or sbaker@worldforestry.org.

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SAF Makes “Global Connection” with Idaho High School Teachers and Students

Darrel Kenops, former SAF District II Councilmember from the Eugene area and now an active Intermountain SAF Society member (shown sitting in the photo), works at Boise's Timberline High School with area teachers and students at a special two-day training February 5-6.

Sponsored by the Idaho Project Learning Tree (PLT) and the Idaho Forest Products Commission, this special outreach program for Advanced Placement (AP) teachers and students was part of the new *Global Connections: Forests of the World* program developed by the World Forestry Center and the American Forest Foundation.

Ten thousand copies of the *Global Connections* teaching guide are now in print and 17 states have established professional development workshops for teachers including recent sessions in Oregon and

Washington. According to Michelle Youngquist of Idaho PLT, this was the first training in the U.S. to directly

engage teachers and their students at the same workshop. ♦



PHOTO COURTESY OF RICK ZENN

THANK YOU!

This issue of the *Western Forester* was generously supported both financially and editorially by the individuals and organizations listed below.

- **Fran Cafferata Coe, Cafferata Consulting, LLC and SAF/The Wildlife Society Liaison, Oregon SAF Executive Committee**
- **Emerald Chapter, Oregon SAF**
- **Oregon Forest Resources Council**
- **Oregon Chapter, The Wildlife Society**
- **Lisa DeBruyckere, Creative Resource Strategies, LLC**

Peterson Turns Golden

Portland Chapter member Chuck Peterson receives his 50-year Golden Member award from executive committee member Tom Ortman at the chapter's December 21 meeting at the World Forestry Center.

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We Remember

Ronald E. Smith 1929-2009

Ronald Emerson Smith was born in St. Paul, Minnesota, on July 20, 1929, and passed away on November 20, 2009, in Sublimity, Ore., from the effects of Alzheimer's and Parkinson's disease. He is



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survived by his wife of 19 years, Marie Zarfas Smith.

As a young boy, Ron moved with his family to Los Angeles where he grew up and graduated from Hollywood High School in 1947. He was active in Sea Scouts. During his high school years he was impressed by stories of heroic fire fighters in Oregon, so he applied for summer jobs with Oregon Department of Forestry, working at fire camps throughout the state. This led Ron to enroll at Oregon State University where he excelled as a forestry major. He earned his B.S. degree in 1952 and was recognized as the Outstanding Forestry Student his senior year. Upon graduation, he was appointed assistant district forester for Northwest Oregon in charge of the Tillamook unit. This assignment was interrupted by service in the U.S. Navy Seabees during the Korean War. Following his honorable discharge in 1954, Ron returned to his position at Tillamook. In 1957, he accepted the first of several promotions that took him to many regions of the state as he steadily rose through the ranks of management with state forestry. In 1980, he was promoted as the first appointment to the new position of associate state forester, the second-in-command of ODF Ron retired in 1984, capping an exemplary career of over 39 years.

Mr. Smith was active in the SAF, serving as chapter chair, and public information officer, secretary, vice chair and chair at the state level. He was twice elected to two-year terms as the National Council representative and he served as chair of the 8th National Task Force on Forest Practices in 1974. He was awarded Ron the coveted John A. Beale award in 1980.

Contributions can be made in Ron's honor to Salem Alliance Church Building Fund, Salem Academy; The Salvation Army; or The Smith Family Leadership/Scholarship Award Fund at Seattle Pacific University. ♦

J.E. Schroeder 1914-2010

J.E. "Ed" Schroeder, who served as Oregon State forester from 1965 until his retirement in 1979, passed away January 22 at the age of 95.

Ed Schroeder was instrumental in replanting efforts for the Tillamook Burn while serving as an Oregon Department of Forestry (ODF) employee. Schroeder was appointed as Oregon's eighth State Forester in 1965.

Under Schroeder's leadership, Oregon launched several efforts aimed at conservation and long-range management of forests, including implementing the nation's first statewide forest management laws when the Forest Practices Act was passed in 1971. Schroeder oversaw the dedication of the Tillamook State Forest in 1973 and formal recognition of the Sun Pass State Forest in the late 1970s. During Schroeder's tenure the Forestry Program for Oregon, which serves as the Oregon Board of Forestry's central policy guidance plan, was introduced to guide long-range forest policy planning for the state.

To honor Schroeder's commitment to replanting Oregon's forests, including the devastated Tillamook Burn area in north-west Oregon, in 1980 the Board of Forestry named ODF's tree seed orchard near St. Paul as the J.E. Schroeder Tree Seed Orchard.

Following retirement, Schroeder lived near Salem and is survived by numerous family members.

For a full biography of Mr. Schroeder, visit http://egov.oregon.gov/odf/agency_affairs/JE_Schroeder_Biography.shtml. ♦



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Calendar of Events

Western Forest Economists annual meeting, May 3-5, Welches, OR. Contact: WFCA.

Tree Risk Assessment Course and Exam, May 3-4, Richland, WA. Contact: Patty Williams, 800-335-4391, pwilliams@pnwisa.org.

LoggerPC V4, May 4-5, Corvallis, OR. Contact: Forest Engineering Inc., 541-754-7558, <http://forestengineer.com>.

Starker Lecture Series-Ecosystems Services Capstone Lecture, May 6, **Capstone Field Trip**, May 7, Corvallis, OR. Contact: <http://starkerlectures.forestry.oregonstate.edu>.

FRA Western Region spring meeting, May 11-13, Seattle, WA. Contact: Tim Gammell, 509-396-2478, fiber@woodcom.com.

Washington State SAF annual meeting, May 12-14, LaConner, WA. Contact: Paul Wagner, psq@glacierview.net.

Land Trust Alliance Northwest Regional Conference, May 13-15, Walla Walla, WA. Contact: Deana Metz, 970-245-5811, dmetz@lta.org.

TimberValue Seminar, May 18, Beaverton, OR. Contact: Tom Hanson, 503-201-4428, tjhanson@forestmgt.com.

RMS & NARRP Symposium, May 18-20, Portland, OR. Contact: Denny Huffman, rapids@wildblue.net or Rick Just, rick.just@idpr.idaho.gov.

Inland Empire SAF annual meeting, May 20-22, Wallace, ID. Contact: Richard Reid, 509-758-2411, reid66519@aol.com.

Klamath Tree School, May 22, Klamath Falls, OR. Contact: Susan Honea, 541-883-7131, susan.honea@oregonstate.edu.

Washington Tree Farm Management Plan spring workshops, May 22, Chehalis; June 19, Battle Ground; June 26, Spokane. Contact: Bob Falkner, 360-789-1265, wtfp.bob@gmail.com.

OSAF Foundation Fellow's Luncheon, May 27, Corvallis, OR. Contact: Mike Cafferata, 503-945-7351, mike.j.cafferata@state.or.us.

Oregon Urban and Community Forestry Conference, June 2, Boring, OR, and June 3, Silverton, OR. Contact: PNW-ISA, 503-874-8263, <http://oucf2010.eventbrite.com/>.

Spray Drift Management in Rights-of-Way and Forestry, June 4, Portland, OR. Contact: WFCA.

Western Hazard Tree Meeting, June 15-17, Medford, OR. Contact: Greg Filip, 503-808-2997, gmfilip@fs.fed.us.

Restoration of Disturbed Sites with Native Plants, June 15-18, Wenatchee, WA. Contact: WFCA.

Western Mensurationists annual meeting, June 21-22, Missoula, MT. Contact: WFCA.

OSAF Golf Tournament, June 26, Trysting Tree Golf Course, Corvallis, OR. Contact: Chris Jarmer, 503-371-2942, chris@ofic.com.

ANREP 2010 Conference, June 27-30, Fairbanks, AK. Contact: Eleanor Burkett, 907-474-1195, burke044@umn.edu.

Target Seedlings, Aug. 24-26, Portland, OR. Contact: WFCA.

Pacific Logging 6th Annual In The Woods Show, Sept. 16-18, Clatskanie, OR. Contact: Julie Woodward, 503-584-7259, woodward@ofri.com.

Who Will Own the Forest? 6, Sept. 20-22, Portland, OR. Contact: Sara Wu, 503-488-2130, swu@worldforestry.org.

FRA Western Region fall meeting, Sept. 22-23, Bend, OR. Contact: Tim Gammell, 509-396-2478, fiber@woodcom.com.

PNW Reforestation Council, Oct. 27, Vancouver, WA. Contact: WFCA.

2011 Oregon/Washington State SAF Leadership Conference, Jan. 21-22, Hood River Inn, Hood River, OR. Contact: Shaun Harkins, 541-267-1855, shaun.harkins@plumcreek.com.

Contact Information

WFCA: Western Forestry and Conservation Association, 4033 SW Canyon Rd., Portland, OR 97221, 503-226-4562, richard@westernforestry.org, www.westernforestry.org.

Send calendar items to the editor, **Western Forester**, fax 503-226-2515; rasor@safnwo.org.



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Student SAF Chapter Thrives at Washington State University

BY MARK E. SWANSON

The Palouse country of Washington State, with its rolling hills of wheat and other crops, is justifiably best known for agricultural productivity. However, at Washington State University in Pullman, a sizeable group of students is engaged in forestry through their studies and through active participation in a Society of American Foresters student chapter.

The WSU Forestry Club and SAF Chapter (here referred to as “the Club”) has had two tremendously successful years from 2008-2009. Membership has increased from just a handful of students in fall of 2007 to over 40 members today, and attendance has risen at meetings and activities. The student members of the Club are very excited about forestry and the forestry community. “As a westside forestry student and professional transitioning into the field of soil science, WSU’s Forestry Club has helped me maintain my passion for forestry and broaden my perspectives and experiences by learning some eastside management practices,” says Ian Yau, graduate student in Natural Resource Sciences.

Nowhere is the Club’s dedication to forestry more apparent than in field activities focused on “hands-on forestry.” Josh Himsl, past Club president, shares his perspective on this



PHOTO COURTESY OF MARK E. SWANSON

Washington State University Forestry Club and Society of American Foresters Chapter, 2009.

type of activity: “The club has allowed me and other students to implement ideas, lessons and classroom exercises on club projects to attain real world experience.”

In the spring of 2008, along with members of the student chapter of The Wildlife Society at WSU (mentored by Dr. Lisa Shipley), we planned and performed a thinning and fuels-treatment operation on two acres of private land in Idaho, enjoying the mentorship of Professor Harold Osborne of the University of Idaho. This operation removed suppressed Douglas-fir and grand fir trees from underneath older, fire-resistant ponderosa pine, western larch and Douglas-fir. In November of 2008 the Club and Wildlife Society members performed a similar opera-

tion on five acres of another private property in Idaho, removing hundreds of stems per acre in a stand of ponderosa pine by thinning, piling, pruning and burning slash piles. We then acted as inventory consultants on an adjacent 66-acre tract in February 2009, giving students experience in inventory consulting. All along the way we have conducted stand improvement and salvage cuts in forest stands at WSU’s 80-acre E.H. Steffen Center, which generates firewood revenue for the Club. These activities provide an opportunity for students to gain experience in forest operations, safe equipment use and the application of scientific forest management principles. Having Wildlife Society members participate has forged cooperative rela-



PHOTOS COURTESY OF MARK E. SWANSON

Left: Multi-age ponderosa pine stand before student-led thinning operation. Right: Stand after thinning and slash treatment.



PHOTO COURTESY OF MARK E. SWANSON

Students receive chainsaw training from Clifford Osborne, Idaho Department of Lands Safety Inspector.

tionships and understandings that will continue into today's natural resource career field, where foresters and wildlife professionals work together frequently.

There is certainly more to the Club than getting our hands dirty. We have had several "bonfire socials" to reduce academic stress and hazardous fuels at the same time. Our Club made a group presentation on our activities to the Palouse-Snake River Chapter in January 2009, which was well received by our counterparts in industry and academia. We have also had a few socials with the student chapter of The Wildlife Society (TWS), fostering good relations between students involved in two important natural resource-related professional societies. We have had very successful T-shirt sales every year to benefit the Club. All of these efforts were recognized with the receipt of the Inland Empire Student Chapter of the Year award in early spring 2008 and the Superior Club award from the College of Agricultural, Human and Natural Resource Sciences at Washington State University for 2009. It is now winter of 2010, and we are continuing to work hard and have fun. We are grateful for the kind monetary and mentoring support of our parent chapter, the Palouse-Snake River Chapter. We have more hands-on forest management activities in the planning stages, and a few social events on the calendar. We plan to interact to a greater degree

with the SAF student chapter at the University of Idaho, especially with respect to field activities. Recent meetings of the Palouse-Snake River Chapter have demonstrated the importance of student participation,

with a respectable portion of the attendance consisting of students from both WSU and UI.

This success comes at a pivotal point in natural resource education at Washington State University. The forestry major is in the process of being phased out, so our success as a Club depends on a diversity of membership among majors in our department. Our membership is about evenly divided between the remaining forestry majors, natural resource sciences majors, and wildlife ecology majors. This successful integration of students with a range of professional interests offers a way forward during a time of uncertainty and change in academia, and reflects well on the dedication and professional character of our current generation of undergraduate students. ♦

Mark E. Swanson is assistant professor of Landscape Ecology and Silviculture, and proudly serves as the faculty advisor for the WSU Forestry Club and SAF Chapter. He can be reached at 509-335-1349 or markswanson@wsu.edu.



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Policy Scoreboard

Editor's Note: To keep SAF members informed of state society policy activities, Policy Scoreboard is a regular feature in the Western Forester. The intent is to provide a brief explanation of the policy activity—you are encouraged to follow up with the listed contact person for detailed information.

Idaho Bill Would Provide State Funding for Conservation Easements.

The Idaho Working Lands Coalition has introduced a bill in the Idaho Senate (SB 1343) to create a state conservation fund to protect and enhance working lands that provide natural resource benefits for all Idahoans. The coalition is not seeking money at this time, just a fund to begin building the infrastructure. A similar bill asking for money was introduced in 2008 and did not pass. Contact: Jay O'Laughlin, IESAF Policy chair, 208-885-5776, jayo@uidaho.edu.

Idaho Bill Would Create Woody Biomass Tax Incentive.

The Intermountain Forest Association has drafted a bill to create a \$10/green ton tax incentive, modeled after the incentive Oregon created in 2007. At this writing the bill has not been introduced in the legislature, but it is significant that forest business interests in the state are backing this initiative. Contact: Jay O'Laughlin, IESAF Policy chair, 208-885-5776, jayo@uidaho.edu.

Legislators Meet and Speak with OSAF.

The OSAF Annual Meeting in April featured presentations by two Oregon legislators, State Senator Chris Edwards of Eugene and Congressman Kurt Schrader of Oregon's 5th District. Senator Edwards spoke on "Connecting Foresters and

Lawmakers," a direct outcome of his leadership support in a highly successful, OSAF co-sponsored field tour for state legislators in October on "Keeping Working Forests Working." Although Rep. Schrader was unable to leave Capitol Hill for a live presentation at the OSAF meeting, he provided a video message on "Federal Forest Issues and Strategies," which includes several bills he has co-sponsored. In February, Rep. Schrader also was the featured speaker on forestry issues at a Portland SAF Chapter meeting, as well as a session he held in Salem to discuss renewable biomass energy and specifically invited SAF to participate. Contact: Paul Adams, OSAF Policy chair, 541-737-2946; paul.adams@oregonstate.edu.

Testimony Presented at Senate Hearing.

OSAF Policy and Legislation Committee member Stephen Fitzgerald presented testimony on behalf of SAF at a March 10 hearing of the Senate Energy and Natural Resources Committee on Capitol Hill. The testimony provided a professional perspective on S. 2895, the "Oregon Eastside Forests Restoration, Old Growth Protection, and Jobs Act of 2009," which was introduced in Congress in December by Senator Ron Wyden. A similar draft bill released in April 2009 prompted a joint letter of concern from OSAF and National SAF to Senator Wyden. S. 2895 retains a number of elements from the draft bill that are of concern to SAF, including highly prescriptive directives such as specific diameter limits for cutting individual trees. Fitzgerald's written testimony is available on the committee website at http://energy.senate.gov/public/_files/fitzgeraldtestimony031010.pdf. Contact: Paul Adams, OSAF Policy chair, 541-737-2946; paul.adams@oregonstate.edu.

WSSAF Policy Update. The state budget continues to be the focus for Washington's elected leaders as they try to merge House and Senate budgets and revenue packages to grapple with a \$2.6 billion budget shortfall for the 2009-2011 biennium budget that ends June 30, 2011. The I-960 Initiative approved by Washington voters in

2007 was suspended as allowed by the state constitution to allow the legislature to develop new tax revenues to avoid massive cuts to education and social services. Most tax increases target tax loopholes such as out-of-state businesses that do business in Washington such as big oil and financial institutions, and cigarette tax increases, as well as a possible small sales tax increase. At the time of this writing, the state legislature is struggling to complete budget and revenue compromises, and may need a possible special legislative session.

Because the focus of the legislative session has been on the budget deficit, little forestry-related legislation has made it through, with a few exceptions of special note. SHB 2481 is an act relating to the WA DNR authority to enter into forest biomass agreements. It allows DNR to contract for sale of biomass as a valuable material through separate bids and also as part of existing timber sales. It also directs sales of biomass without public auction and allows the DNR to enter into contract terms up to 15 years if an entity plans and commits to a capital investment of at least \$50 million.

HB 2659 continues the requirement for another four years that all private timber purchasers of 200,000 board feet or more submit reports to the Department of Revenue (DOR) for inclusion into the stumpage database for determining semi-annual forest tax stumpage valuation tables. This no-cost legislation was promoted by Washington Forest Protection Association with support from DOR to guarantee fair and equitable timber tax.

The North Olympic Chapter is exploring the need of a chapter position statement with regard to possible expansion plans of the Olympic National Park. Although the planning and securing funding for the park expansion is very complex, there appears to be environmental organizational support to increase park acreage through private land acquisition from willing sellers, especially around Crescent Lake and Lake Ozette. WSSAF members are encouraged to visit the updated WSSAF position statements located at www.forestry.org. Contact: John Walkowiak, WSSAF chair, 253-320-5064, jewalkowiak@harboret.net. ♦

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Ideas Sought for Future Issues of the Western Forester

Due to budget constraints and lower-than average advertising revenues, five issues of the *Western Forester* will be printed this year instead of the usual six issues. The customary three spring and summer issues will be condensed into two issues: March/April/May and June/July/August.

In addition to helping find additional advertisers to maintain the publication at its historic level, members are encouraged to provide article suggestions for upcoming issues focusing on thinning (September/October), clean water (November/December), and forestry and energy (January/February 2011). As there is a lag time between solicitation of articles and submission deadlines, article suggestions are being sought now.

Themes for the remaining 2011 issues will be discussed and decided upon June 14 at the next SAF Northwest Office Committee meeting, so get your theme ideas in by June 1.

All suggestions and comments on the *Western Forester* can be directed to Lori Rasor, editor, at 503-224-8046 or rasor@safnwo.org.

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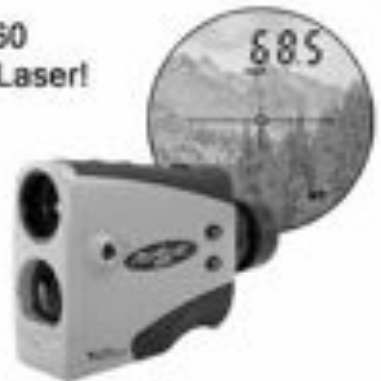
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