

EVERGREEN

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The Donato-Law Fiasco
Mixing Politics & Science:
Alchemy at OSU

In this issue, we write about the still unfolding scandal in the Oregon State University College of Forestry. It is meticulously researched and, we hope a thoughtfully written assessment of the so-called “Donato controversy”—a lamentable if not inexcusable act orchestrated from the shadows by at least two OSU professors and one Forest Service scientist.

That the shoddy and misdirected work of two graduate students—aided by instructors and advisors with anti-forestry biases—could suddenly trump the quite-visible results of 75 years of on-the-ground experience with salvage logging and replanting bears testimony to the country’s poisonous political climate. And lest you think all’s fair in love and war, consider how you might react on learning that experiments in cancer research were being corrupted for political purposes.

It will take you some time to get through our essay, perhaps even a couple of readings. But as you wade through the mountain of information we’ve assembled, ask yourself this question: why did this investigation fall to a very small non-profit forestry foundation when either of Oregon’s major dailies—the Portland *Oregonian* or the Eugene *Register-Guard*—could have more easily unearthed the same information we’ve gathered over the last five months? That they didn’t bears witness to the infectious pus now oozing from the pages of many of this nation’s daily newspapers.

This isn’t the first time a major forestry school has been rocked by controversy. Back in the 1970s, the late Arnold Bolle nearly wrecked the University of Montana College of Forestry when, as its dean, he injected himself personally into a rather nasty and highly politicized controversy involving terraced clearcuts in the mountains south of Missoula. It took all of the wisdom and diplomatic skills his replacement, Dr. Ben Stout, could muster to rescue the school from self-inflicted disgrace. OSU forestry dean Hal Salwasser now faces the same challenge.

In the interest of full disclosure I admit that Hal is a friend, at least in a

professional sense. We met when he was in the Forest Service’s Washington office, before he was named Northern Region One Regional Forester. I greatly admired his very public attempt to define the term “new perspectives in forestry” after the Forest Service tossed it into the debating ring with precious little explanation as to its philosophy or scientific underpinnings. I suspect he sensed that “new perspectives” needed to be defined quickly lest it be misrepresented by Forest Service critics who then, as now, oppose both active management and the large scale experiments that are needed to test the veracity of numerous unsubstantiated theories suggesting that forests are best left to nature’s whims.

Within a matter of hours after the Donato findings were leaked to the press Hal was publicly assailed for endorsing HR 4200, which mandates prompt salvage and restoration on federal lands following catastrophic events. What the two events have in common are the 2002 Biscuit Fire and the subsequent Sessions Report, which laid out the probable ecological consequences of several post-Biscuit alternatives ranging from no action to a fairly aggressive salvage of burned timber.

Not long after the first volleys were fired I sent Hal an email note in which I expressed my belief that he’d been set up by critics on his own faculty who disagreed with the findings of the Sessions Report, opposed Biscuit Fire salvage, disliked HR 4200 for the same reason and were up to their armpits in the Donato report. He responded in his usual statesmanlike manner expressing his hope that I was wrong. Nothing has happened in the ensuing months to change my mind. And while the cold, hard facts of the matter still aren’t available, and may never be, I will go to my grave believing my friend Hal was set up by his enemies.

For a time during Hal’s Northern Region years I thought he might be the next Chief of the Forest Service. Given his impressive scientific credentials and his communications skills he would have made a great one, but his honesty

got him in trouble with Vice President Al Gore, who by then had turned the venerable agency into his own fiefdom. So rather than be considered for the Chief’s job when Dale Robertson was forced out, he was banished to a Forest Service research station at Albany, California. In due course another old friend, Dr. George Brown, who was then Dean of OSU’s forestry school, announced his retirement. Sensing opportunity, I asked Hal if he was interested in applying at OSU. He was. The rest is history.

I don’t want to imply here that I am the reason why Hal got the OSU deanship because I clearly am not, but I was happy to help in a small way because, for 20 years, OSU’s College of Forestry has held a special place in my heart. And I believe Hal was the perfect choice to compass the college through what looked to be stormy political waters. I still believe it, though I fear Hal may be a bit too trusting for his own good.

Witness his defense of his student in a forum where a lesser man surely would have tossed him overboard: the American Forest Resource Council’s annual meeting last April. After U.S. Representative Brian Baird (D-WA) took Mr. Donato’s research paper apart in a blistering critique of its statistical validity, Hal stood up and defended both Mr. Donato and his motives, assuring all present—including me—that his wayward student was not part of a larger conspiracy to disgrace the college or Hal. Though I thought him wrong at the time, and still do, I admired his courage and forthright defense of a student who, in my view, had hung both Hal and the college out to dry.

Off and on over the years I have wished I could say I held an OSU forestry degree. It is—or was—the gold standard in forestry. I console myself in the fact that I’m a fairly good writer who gets to write about forestry. When the late Carl Stoltenberg was still dean he graciously allowed me to roam the halls any time I wanted to. I was warmly welcomed by some of the finest forest scientists in the world. Most of what I know about forestry I learned from them. To this day, I call on them whenever I encounter forestry research I do not understand. Their interest

ON THE COVER: Lodgepole pine beetles are responsible for this massive timber kill on the Nez Perce National Forest east of Elk City, Idaho, prime elk and steelhead habitat. The Forest Service developed a restoration plan in concert with nearby community groups, but radical environmentalists delayed implementation until the timber rotted. Would society’s economic and intrinsic needs have been better served by harvesting these trees while they still had value, then promptly replanting this forest, or will society’s needs be better served by inevitable wildfire? More than 70 years of on the ground experience with similar catastrophes makes clear the fact that we know how to speed natural recovery in devastated forests, but environmentalists continue to argue that society should allow nature to take its course, no matter the economic or environmental costs.

Jim Petersen photo

in helping me has been its own reward.

Dave Skinner has done what I could not have done in my present frame of mind. He has objectively sorted the mess into its various piles, providing necessary context, fact, comment and perspective. Dave also gave Hal's detractors ample opportunity to explain their roles in the Donato report and the ensuing controversy. Not surprisingly, they chose not to respond. Small wonder: peer-reviewed science—as it has been recognized and accepted for decades—is not on their side and they know it.

Of course it is possible that my fears are over-blown. I hope so. A strong case can be made for the fact that this is just the latest chapter in the 1919 debates between Pinchot regulationists and Greeley co-operatists; debates that Greeley won when Congress ratified the landmark Clarke-McNary Act in 1924, setting science-based forestry on a sparkling 60-year journey into the future. But this much is different this time: news that traveled at the speed of trains and telegraphs in 1919 travels at the speed of light today, adding magnitude, urgency and unearned credibility to the entire Donato fiasco.

Some observers believe OSU has emerged from its trial by fire stronger than it was before. I hope they're right. Only time will tell. Others believe Mr. Donato was used by his faculty advisors. It's a stretch in my mind, and it does not alter the facts of this case. At the very least, he is guilty of astonishingly poor judgment.

An old friend who just returned from a trip to Croatia, a country just now emerging from its own darkness, shared this insight with me: "What taxpayers



Dave Skinner

In a self-portrait, *Evergreen* writer Dave Skinner stands amid Biscuit Fire devastation between Burnt Ridge and Sugarloaf Mountain, at the headwaters of Indigo Creek. The *Donato-Law* et al paper that is the subject of this special report argued against salvaging timber from the Biscuit, alleging reforestation problems. But statisticians have since concluded their plot sampling data contains serious errors.

have a right to expect from the Oregon State College of Forestry is a disciplined debate in which all sides are heard—and are themselves disciplined in their responses." We aren't there yet but Hal is the only person I know who is capable of restoring order at OSU.

Before we knew what a fever swamp the Donato mess had become we had intended for this issue to be more of a photo essay featuring the human-aided recovery from landscapes savaged by the West's greatest natural calamities: the Great 1910 Fire, the largest such catastrophe in our country's history, Oregon's well-chronicled Tillamook burns and the unforgettable 1980 eruption of Mount St. Helens. These events—and the years' long salvage and restoration crusades that followed them—mock not just young Mr. Donato but the professors and scientists who conspired to embarrass Dean Salwasser and Oregon's once Olympian forestry school. Thus, you will find relevant photographs scattered throughout our essay—reminders of a wisdom shared with me a few years back by Alan Houston, a fine PhD wildlife biologist

infrequent but always incisive counsel more than words can say. His wisdom, from a 1995 interview, seems as timely today as it was then:

"The bias favoring old growth research has spawned largely cosmetic terms like 'ecosystem' and 'biological diversity,' which serve to promote the idea that ecosystem management is only possible on a very large scale. This isn't true. I want to promote the idea that it is possible to increase the ecological content of almost any tract of land regardless of its size or management regime. There is a positive role here for everyone, from the backyard gardener to the largest industrial forest landowner."

"It is time for science to produce some defensible, reproducible experiments. It is imperative that we verify or otherwise correct land policies decisions made on the basis of theories. The consequences of error—social, economic and environmental—are simply too great to rest on conjecture."

Onward we go,
Jim Petersen, Publisher

who works on middle Tennessee's Ames Plantation: "When we leave forests to nature, as so many now seem to want to do, we get whatever nature serves up, which can be pretty devastating at times; but with forestry, we have options, and a degree of predictability not found in nature."

I want to personally thank the many scientists who helped Mr. Skinner compass his way through this mess, especially my old friend, Dr. Robert Buckman. I've known Bob for many years and prize his

The Donato-Law Fiasco

Mixing Politics & Science: **Alchemy at OSU**

An essay by Dave Skinner, with postscript by Jim Petersen

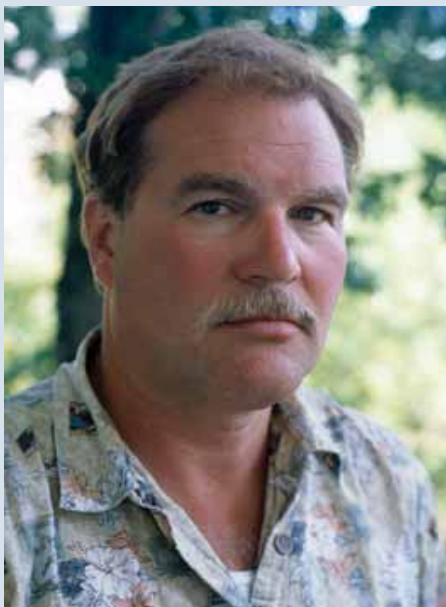
On January 5, 2006 *EurekaAlert*, the news service of the American Association for the Advancement of *Science*, announced that *Science Magazine* (published by AAAS) would present, in *ScienceExpress* and later in the January 20 edition of the hard-copy journal *Science*, “research by scientists from Oregon State University and the Institute of Pacific Islands Forestry in Hawaii.”

Entitled *Post-Wildfire Logging Hinders Regeneration and Increases Fire Risk*, by D. C. Donato, J. B. Fontaine, J. L. Campbell, W. D. Robinson, J. B. Kauffman, and B. E. Law; the finding was: “Unexpectedly, by disturbing the soil, salvage logging after a fire in a Douglas-fir forest reduced conifer seedling regeneration by 71% and also added kindling to the forest floor.”

By January 10, fifty-eight newspapers and other news outlets had posted reports concerning the study on their websites. A typical headline was the Portland *Oregonian's* “Scorched Forests Best Left Alone, Study Says.”

The Donato Report—as it is now widely known—made big news, not just in often cloistered forestry research circles, but in the public arena as well. Several environmental groups posted gleeful press releases lauding the Donato work. But the paper also stirred an unprecedented negative reaction from forestry professionals nationwide, including faculty at Oregon State and federal personnel officially involved with the study.

On January 17th, nine forest scientists subsequently labeled “The Gang of Nine” sent a letter to *Science* asking for a delay in publication in *Science's* January 20th issue until a response could be prepared. The attempted delay oxygenated matters into a political crown fire, an overheated shout-fest over “academic censorship” and “industry dominance” of the College of Forestry and what the editors of the Corvallis *Times-Gazette* sardonically called a “protracted lynching” of college



Dave Skinner

Dr. Tom Sensenig

“This is all new to me. I have never experienced anything like this before, hopefully never again. I was in this from the very beginning, I saw what happened, and what happened was unethical.”

Dean Hal Salwasser. Condemnations were made, apologies written and sent, funding withdrawn and restored, hearings held, witnesses grilled, resolutions were voted on, a “Committee on Academic Freedom and Responsibility” convened and “Recommendations” duly drafted.

Mercifully, a non-binding college-wide “vote of confidence” in Dean Salwasser’s ability to lead the College of Forestry was conducted in early June. 66% of those who voted endorsed his ability “to lead the college into the future”—a political landslide by any measure, despite the fact that 10% abstained for reasons unknown. Perhaps they’d already finished their final exams and gone home for the summer.

Rivaling the strangeness of the seemingly unnecessary campus-wide vote of confidence was the reaction from U.S. Representative Baird, a Washington State Democrat with strong environmental credentials and a dislike for most things Bush. Congressman Baird, who was for a time chairman of Pacific Lutheran University’s Department of Psychology, and taught statistics and methods at the McMinnville, Oregon school, waded into the fray with a blistering critique of the post-fire regeneration study, which had been conducted in plots burned by the 2002 Biscuit Fire on southern Oregon’s Siskiyou National Forest, which was Ground Zero in the then widening debate over the veracity of HR 4200, a bill design to speed post-fire salvage and restoration work, co-sponsored by Oregon Congressman Greg Walden and, well, Congressman Baird.

Congressman Baird pilloried the study’s authors, including two graduate students, Daniel Donato and J.B. Fontaine; two Oregon State University College of Forestry professors, Beverly Law and Douglas Robinson; a research associate, John Campbell; and one of the study’s designers, J.B. Kauffman, a former OSU professor who now directs the Forest Service’s Institute of Pacific Islands Forestry in Hawaii.

Congressman Baird hammered the study team for withholding data he and other scientists wanted to double-check, failing to address the limitations of their research and “inappropriately derived, selective and misleading statistics.”

Particularly displeasing to Dr. Baird was the study’s claim that post-fire salvage logging had reduced seedling regeneration by 71%—a statistic he summarily dismantled in calculations he completed after the study team reluctantly surrendered its data after HR 4200 hearings had adjourned.

If anything, he explained in his critique, the possible loss of 71% of seedlings [he estimates the number is closer to 51%] underscores the need for prompt salvage because “the seedling

loss would likely have been minimal because no seedlings would have yet sprouted.”

Biscuit salvage was delayed over two years by protracted analysis and litigation, a time frame sufficient to allow some seedlings to sprout in burned areas, only to be crushed beneath heavy equipment. “If any summary statistic is chosen to indicate the seedling loss created by salvage logging two years after harvest, that statistic should actually best be understood as an index of the benefits of early, versus delayed harvest,” Dr. Baird wrote. “That interpretation, of course, is quite the opposite of the implication suggested by the report and by subsequent media coverage.”

Despite its statistical failings, nothing seems to have raised Congressman Baird’s ire more than the study’s frontal assault on HR 4200. “Nowhere does the report mention the key fact that prompt removal of the timber, as compared to the two year post fire harvest of this study, could prevent seedling mortality.” Equally disturbing, the study made no mention of the fact that single year seedling mortality was as high as 56% in five of seven unlogged study plots—a fact widely known to researchers more familiar with southern Oregon’s reforestation challenges.

“They used a value from a different plot entirely to arrive at the post-logging value,” Dr. Baird wrote of the study team’s multiple errors. “Rather than comparing the pre and post-values from the same plot, they took the median pre logging value from one plot and compared that to the median post logging value from another plot which was much lower! This is such a fundamental violation of standard practice that it is astonishing the reviewers failed to identify it and allowed it to be published in *Science*.”

You could be forgiven for believing that Congressman Baird’s withering analysis settled the post-fire salvage debate once and for all. But our story does not end here. Rather, it begins. The underlying issues that fostered the subsequent blowup at Oregon State University have not been confronted, and may never be unless federal authorities subpoena the sworn testimony of the parties involved—in our view an unlikely event in the politically charged environment *Donato* has created.

Much of the public debate has thus far swirled about two red herrings: academic freedom and industry influ-



Dave Skinner

Dr. Paul Adams

“Something really seems broken when reporters get advance copies of research findings before the scientific community can evaluate them.”



Dave Skinner

Marvin Brown

“There’s never a study that will give you a final answer, and there are always studies that give conflicting information. Your job as a practicing forester is to sort through it all and make use of it as best you can.”

ence on academic work. Neither of these has much to do with the facts of this story or the underlying causes of the controversy.

Academic Freedom

As Dean of the OSU College of Forestry, Dr. Hal Salwasser bears responsibility for issues and events that positively or negatively impact the College. Put simply, the buck stops on his desk. It is a responsibility he has handled with remarkable public candor since he was appointed Dean in 2000. Indeed, it was his candor that landed him in the middle of the *Donato* controversy; specifically his willingness to take a public position favoring science-based salvage logging and restoration following catastrophic wildfire—a view opposite that espoused by *Donato*’s authors, including two College of Forestry faculty members.

It may be that Dr. Salwasser’s troubles actually began on *Evergreen* pages. In “Siskiyou Showdown,” our July 2004 Biscuit Fire salvage issue, he observed: “There are some people in the ‘leave it alone to nature’ camp who think that the science [on salvage] isn’t clear. But the science is absolutely clear in southwest Oregon. If you don’t intervene after a major transformation like the Biscuit, it’s not going to come back as structurally complex conifers for a very long time.”

To those who opposed Biscuit salvage, Dr. Salwasser’s remarks were Strike One.

More than a year later, on November 10, 2005, Dr. Salwasser gave testimony endorsing HR 4200, the “Forest Emergency Recovery and Research Act of 2005,” FERRA for short. *Evergreen* also supports this pending legislation, in large measure because we have been at the forefront in the Siskiyou National Forest salvage debate since the 1987 Silver Complex Fire ravaged more than 100,000 acres of old growth timber.

Dr. Salwasser’s nine pages of testimony touched all the stones, including the importance of timely, site-appropriate, cost effective salvage. He also endorsed the legislation’s provisions for funding more research into restoration after catastrophic events. With characteristic candor he also called Congress’s attention to the 5,000-pound elephant no one else seemed to want to acknowledge: “Those opposed to restoration and recovery have also argued against the

experimental science or testing of traditional knowledge that would show everyone how to best achieve desired restoration or recovery outcomes. Resistance to a proposed Forest Service study on recovery options following the Biscuit fires is a classic example of opponents of active forest recovery blocking peer reviewed scientific studies. Why? Because they fear the results will not support their policy advocacy?"

Strike Two.

Two months later, on January 10, 2006, Dr. Salwasser wrote a letter to faculty that read in part: "When single-study, short-term research results on a highly charged issue are controversial within the scientific community, it is important that scientific debate occur on the full body of pertinent knowledge and that additional research be conducted if needed before drawing general conclusions is appropriate."

Dr. Salwasser briefly discussed academic freedom and debate; then wrote, "It is also not unusual for people to read a single report or newspaper article or opinion and accept its findings or conclusions without asking critical questions about the study and its interpretations or about other evidence pertinent to the issue. This is not the first time that has occurred and won't be the last."

Finally, he warned: "The proper role of science is to help inform people on the possibilities and consequences of those choices and to do that the science must be thorough and well tested. It is not the role of science to tell people what those choices should be."

This would be Strike Three.

It could be argued that Dean Salwasser pushed his luck in not seeking a consensus view toward aspects of the bill outside the funding provisions that would fiscally benefit the College of Forestry. But leaders are expected to set the pace for the institutions they lead and Hal Salwasser has been a pace setter since his halcyon days as the Forest Service's Region One forester. What remains to be seen is whether events of the past two years have robbed him of his ability to swing for the fences.

Industry Influence

The second red herring pounced on by both the press and OSU's Academic Freedom and Responsibility Committee was whether academic freedom had been chucked in favor of industrial timber interests whose state-controlled

private lands harvest tax dollars help fund research conducted by College of Forestry researchers.

Interestingly, a Google search of reports implying possible corrupting influence in the harvest tax did not turn up a single press account revealing the amount of money involved or its use. So we called OSU public relations manager Todd Simmons for clarification. Mr. Simmons explained that of the College's current total budget of \$26.1 million, roughly \$2.8 million, or 11%, came from harvest tax revenue. The tax funds are pooled with Forest Research Lab appropriations and are distributed to all faculty



Rich Drehobl

"Let scientists practice honest science and let politicians practice honest politics."

members as base salary for the research part of their position. The only earmarked money is ten cents per thousand board feet of harvest, dedicated to a special program providing competitive grants for research on fish and wildlife habitats in managed forests. It may be that the no-harvest faction at OSU isn't interested in research that helps wildlife in harvested forests, but we know of no faculty member who has come forward to refuse the portion of their salaries paid by the harvest tax.

The Players

This is a complex story featuring as large a cast of characters as any we've encountered in our 20-year forest reporting history. We begin here with the names of those we interviewed or attempted to interview for this essay. Those marked with an asterisk (*) are co-authors of a Technical Comment response to the Donato paper to be published in *Science*, entitled *More On Salvage*.

We started on the ground in Montana's Bitterroot National Forest and the adjoining Sula State Forest. There we interviewed Peter Kolb, PhD, Extension Forestry Specialist and Associate Professor of Forest Ecology, Montana State University, faculty Associate Professor of Forest Ecology and Silviculture at University of Montana. Then it was off to Oregon to see John Sessions, PhD*, OSU Distinguished Professor of Forest Planning and Engineering; Michael Newton, PhD*, OSU Professor Emeritus Forest Ecology, Plant Interactions, Reforestation, Silviculture; Tom Atzet, PhD*, retired southwest Oregon area ecologist, US Forest Service; George Ice, PhD, Principal Scientist, National Council for Air and Stream Improvement, Corvallis, OR; Paul Adams, PhD*, OSU Professor and forest watershed extension specialist, Forest Engineering; Bob Buckman, PhD, retired U.S. Forest Service Deputy Chief for Research, OSU retired Professor of forest policy and international forestry at OSU, 2004 New Century of Service Chief's Award; Bob Ethington, PhD, retired USDA Forest Service Pacific Northwest Research Station director, OSU retired Professor and Department Head, Forest Products.

We were on the ground twice in Oregon, first to attend the February HR 4200 hearing in Medford and later on the Deschutes NF with Stephen Fitzgerald, MS*, OSU Extension Specialist, Silviculture and Fire Science; and also got a look at the Tillamook State Forest and the wonderful new Tillamook Forest Center. While there, we spoke with Larry Fick, who supervised the Tillamook rehabilitation program and later developed recreation programs on the forest; Ross Holloway, Tillamook District Forester, Tillamook State Forest; Bob Gustavson, Assistant District Forester, Forest Grove, TSF; and Marvin Brown, Oregon State Forester and Society of American Foresters president.

We also attempted to contact and interview graduate student Daniel Donato, lead author of the report that bears his name; Beverly Law, PhD, OSU Associate Professor of Global Change Forest Science in the College of Forestry and Mr. Donato's advisor; K. Norman Johnson, PhD, Professor, Department of Forest Resources, OSU and chair of the Academic Freedom committee; and Jerry F. Franklin, PhD, Professor of Ecosystem Analysis, College of Forest Resources, University of Washington. In all cases our calls and/or emails were ignored, a fact that surprised us where both Dr. Johnson and Dr. Franklin were concerned because they have written for *Evergreen* in the past. Fortunately, we were able to get some collaborating information for other interviews they granted, and our federal Freedom of Information Act (FOIA) request turned up further evidence of what really happened at OSU. (An Oregon FOIA request is still pending)

Before we go further, we want to say that we believe the term "*Donato Report*" is a misnomer, first because it casts young Mr. Donato in a far more credible light than either he or his report deserve, and second because it is very clear that Mr. Donato had ample help from faculty members who oppose post-fire salvage logging, including Dr. Law and the aforementioned J. Boone Kauffman, the OSU fire ecologist who helped design the study. (More on Dr. Kauffman as our story unfolds)

With this perspective on the more appropriately named *Donato-Law Report*, we want to also tell you that this is not a story about academic freedom,



Dave Skinner

Dr. Peter Kolb

"I like solutions that occur out there. We have shelves and shelves and shelves of technical papers that nobody but researchers look at. There is a huge disconnect between academic research and the people out in the real world who face these problems and issues, who have to figure things out."

as many have suggested. It is about academic rigor. Nor is it about industrial corruption of academia. It is about taxpayer funded academic corruption. It is not about science, but rather the abuse of science for political ends. It is about deceit, dishonesty and deception. It is about a terrible piece of research that is, at the same time, a political masterpiece. It is about those in the scientific community who have lost sight of their trust relationship with the larger society they serve. And it is about warring value systems. Indeed, it appears to us that the only thing *Donato-Law* is not about—is the environment.

The Beginning

Our search for background material for this essay took us to Medford, Oregon in February to observe the HR-4200 Congressional field hearing. The media package included a tour of the Timbered Rock fire area northeast of Medford. Our seatmate was Tom Sensenig, PhD, formerly-BLM/now-Forest-Service ecologist and Project Inspector/Principal Investigator for Joint

Fire Science (JFS) Research Cooperative Agreement, NO. HAA003D00, Date (9/9/03) the *Donato-Law* study. We quite naturally struck up a conversation.

Dr. Sensenig explained that he had not been informed of, nor had he seen any drafts, prior to reading the *Donato-Law* report in *Science*. "It was a complete surprise," he said. No kidding.

Equally surprising was the quite forceful hearing testimony of just-retired BLM Ashland Resource Area Manager Rich

Drehobl. We made arrangements to get his version of events as well. Mr. Drehobl told us the brouhaha began in an unlikely place—the aftermath of the Quartz Fire, which burned 6,170 acres of private, Bureau of Land Management, and National Forest lands ten miles southwest of Ashland, Oregon in August 2001.

"I was manager at the time," he recalled. "We wanted to explore some different, more ecological approaches to fire salvage."

At the time there was a lively debate between staff members about the wisdom of post-fire grass seeding. "Grass drives silviculturalists nuts," Mr. Drehobl explained. "The soil scientists want to protect the soils, while the silviculturists are concerned about grass competition with trees, so they fight like crazy. So we started cross-falling snags and all, but we were catching so much heat that I asked Tom [Sensenig] to check out the research. Most of it was done on non-federal lands, so we needed to see what the results were with all the mitigation we do. That was the objective."

"There was very little published information on the effects of salvage like

we were hoping to do it,” recalls Dr. Sensenig, “so they decided to arrange and fund new research. Boone Kauffman, OSU’s fire ecologist at the time, was invited down the season after the fire in 2002 to brainstorm research opportunities. We went through the fire, looked it over and he said, ‘Well, let’s put something together and apply to Joint Fire Science to get this rolling.’ From 2002 to 2003, Doug [Robinson, an OSU avian biologist] and Boone were involved in getting the project written up and submitted to JFS. At that time there were only three principal investigators.”

In the meantime, the nearby Biscuit and Timbered Rock fires burned a half-million acres of new potential study ground in 2002. “Consequently,” says Dr. Sensenig, “the study plan included both of these areas in addition to the Quartz as potential study sites.” However, the Quartz salvage proposal went no-bid (unsold) because, explains Drehobl, “we had too much mitigation in it” for the low value of the timber, plus imminent litigation kept bidders away.

After a very competitive process the study was selected September 9, 2003 for research to be completed in 2008, using \$307,149 in JFS funds plus \$78,000 in-kind for Dr. Sensenig’s contribution. The funds were awarded to him and he, in turn, transferred the entire amount directly to OSU.

With the study plan ready, Messrs Robinson and Kauffman selected two graduate students, Daniel Donato and Joe Fontaine, to help gather field data. In March 2004, the students met Dr. Sensenig twice, selected the sites, and went to work. Fortuitously, they chose the Biscuit area sites, as Timbered Rock came under litigation that led to a permanent injunction from U.S. District Court Judge Ann Aiken in November of 2004. It was never salvaged.

The units selected for the study were (to the best of *Evergreen’s* knowledge) those in the Fiddler salvage units on the Biscuit west of Selma. Over the course of the summer, Messrs Donato and Fontaine conducted their respective research on birds, small mammals, terrestrial amphibians, plus vegetation and coarse woody debris. In September 2004, they conducted a field trip with Sensenig before returning to school. In the fall, Dr. Sensenig transferred from the Bureau of Land Management to the Forest Service, assuming the position vacated by Tom Atzet’s retirement, but his status as JFS liaison to the OSU

team remained unchanged.

In summer 2005, after the logging operations had been conducted, Messrs Donato, Fontaine, and other undergraduate students returned to the survey area. This year, there were some permitting and crew behavioral issues involving law enforcement that Dr. Sensenig had to smooth over. He subsequently found it necessary to halt all work on the project for the first time on August 15, 2005. “These problems were later resolved, or so I thought,” he explains.

In September 2005, Sensenig was e-mailed a one-paragraph progress report, which he says is normal for research at



Dave Skinner

Dr. George Ice

“Everyone is plagued with their own biases, we know that, but you have to be as open as you can about it, and provide the reproducible, defensible, verifiable science others can use.”

such an early point in the process: “The data was preliminary, very preliminary. I didn’t see any numbers, never reviewed it, I didn’t suspect, you know, that any kind of paper was being done on it.”

At this point, roughly October and November, the stories told by the *Donato-Law* team and Tom Sensenig diverge. The reason, apparently, was the impending introduction of HR-4200, the FERRA bill, which we will discuss later.

The *Donato-Law* team claims they were fully up-front in advising Sensenig

about their intentions to publish in *Science*. They claim they sent another progress report email to Dr. Sensenig on December 2, 2005, and informed him of their publication intentions at a face-to-face meeting in Corvallis on December 15 that Dr. Sensenig had scheduled as preparation for an upcoming Biscuit Fire science meeting in February 2006. But his records indicate he got the e-mail on December 20, after the Corvallis meeting, and the message contains only camping permit information and the previous September 2005 progress report. “I was unaware that they had prepared anything for *Science*,” declares Dr. Sensenig. “*Science* never contacted me. You’d think they would have con-tacted me if they had something up for review.”

Dr. Sensenig’s first inkling that something was afoot came when, on January 4, 2006, he dropped by his office from vacation to check his email after getting phone calls from Forest Service staffers Pam Bode and Robert Shull asking about a study showing that Biscuit salvage was a fire hazard. Dr. Sensenig immediately called Mr. Donato, who chose to respond via an email with the report attached. “Here’s the paper,” he wrote. “Do read it with an open mind.”

Rich Drehobl guessed that he first read about the report in the newspaper. “I called Tom and asked, ‘What the hell is going on? This isn’t our study, is it? Holy cow: no way, Jose!’ Sensenig was “Seeing bars on my windows.”

After all, the 15-page Joint Fire Science contract has very specific cooperative and publication requirements:

- Recipients must: “Provide timely review and comments on the document produced by this study and work in partnership on the project.
- “Recipients must obtain prior Government approval for any public information releases concerning this award, which refers to the Department of Interior or any employee.
- “The specific text, layout, photographs, etc., of the proposed release must be submitted with the request for approval.
- “Recipients shall not use any part of the Government’s funds for any activity or the publication of the literature that in any way tends to promote public support or opposition

to any legislative proposal on which Congressional action is not complete.”

It was clear to Sensenig and Drehobl that “the violations in the contract were very serious, particularly the Hatch Act violations” in the last clause.

The Shouting Begins

Needless to say, the fur was flying up at OSU, too. The paper was out in the world for all to see, and many people didn't like what they saw. Why not?

First, of course, was the paper's political slant through its specific mention of pending legislation. While Dr. Sensenig had his hands full with a possible contractual violation, his first response to Mr. Donato also expresses his “perception of a political stunt.” And what a grand stunt it was— nationwide coverage the first day in almost all major metropolitan newspapers.

But there was an almost-instant tide of criticism about the paper's scientific merit, too. As matters began to boil, in preparation for a meeting at the college regarding *Donato* and its release, Beverly Law e-mailed a copy to respected ecologist Tom Atzet, retired from 30 years with the Forest Service in southwest Oregon, for his commentary. “Right away, I thought it was political rather than science,” he says, “so my first thought was let's take the politics out and stick to the science.”

“I just wrote down what I saw as the flaws. Maybe because I sent a copy to the Dean it was seen as political, I don't know. But I did that, because it was so flawed and I was so critical, I thought that I better make sure someone else sees the criticisms. The next thing I know, there were a lot of people saying the same things, and I thought it would be a good idea to write *Science* and say, ‘wait a minute, let's take care of these flaws before going further.’”

And there were many flaws, including one that may have ruined the applicability of this paper to any environment. “I was reading it and I saw the term ‘stocking density,’ observes Stephen Fitzgerald. “There's no such thing. It was hard for me to determine from that short paper exactly how they measured for the seedlings. I guess they measured on a transect two meters wide. You can get

density per hectare using a transect, but it won't tell you how the seedlings are distributed across the unit.”

For a hundred years, foresters have not only counted gross seedling numbers, but checked their distribution. Two hundred seedlings under the lone surviving tree on an acre is not the same thing as two hundred seedlings spread out over the same acre.

Therefore, stocking surveys are properly conducted using the “stocked quadrat” method. Using a wire frame or similar device, random plots (typically 1/500th of an acre) are sampled across the test area in order to determine if



Dave Skinner

Dr. John Sessions

“They needed to strengthen the paper, something that would ordinarily happen in peer review. Our feeling was the authors were not well-served by the peer review process. If they had knowledgeable peer reviewers, the paper would have been strengthened.”

each random plot is “stocked,” that is, if there are one or more trees in the plot, or none. The result is tabulated as a percentage of the plots taken, and this stocked/not-stocked percentage in turn tells foresters how the seedlings are distributed.

The original JFS study plan agreed to by Messrs Kauffman, Robinson and Sensenig outlines a conventional stocking survey methodology. Dr. Atzet also “Went out on the ground with Messrs Donato and Fontaine, looked at

the study design [and] before they were in the field went over sampling in a very general” way.

“There were some things,” Dr. Atzet recalls. “For example, I told them ‘You need to stratify correctly so you understand population variability.’”

“You can't get a valid sample of the height of Portland residents by going to the Blazers' locker room,” Dr. Atzet explained. And, of any one site on the Biscuit fire, say the Babyfoot Lake area, “does that reflect all of what the Biscuit looks like? Noooo.”

Why was stocking and distribution not tested using standard methods? Why didn't Mr. Donato or his academic advisor, Dr. Beverly Law, who bore direct responsibility for the quality and veracity of his work, catch this error in the first year when the correct baseline had to be established?

Then there is the matter of natural seedling survival in salvaged and unsalvaged burned forests. First was the title, claiming in part that “*Logging Hinders Regeneration*.” Stephen Fitzgerald “was dumbfounded. My first thought was, ‘we knew this,’ if you have seedlings and run over them with equipment, some will die,” a fact known, studied, and published almost exactly 50 years ago, in: *Salvage Logging May Destroy Douglas-fir Reproduction*, by D.F. Roy, forester, Forest Service Division of Forest Management Research. In the wake of the 1951 Three Creeks burn on the Six Rivers National Forest, “two line transects were surveyed and 103 milacre [1/1000 acre] quadrats were established” in 1954 by Roy—the accepted standard.

Seed from nearby unburned timber had come in and was doing well. Then the loggers came in 1955, four years after the fire. Mr. Roy's subsequent survey found that salvage logging killed 80% of the regeneration, not a surprise.

Comparing the titles and findings of both the Roy and Donato-Law papers as well as their overall findings of logging-related mortality (80 versus 71% loss), both conducted in Klamath province forest types 50 years apart, is a classic Yogi Berra moment, “deja voo all over again.” And what did Mr. Roy suggest as a response for protecting regeneration? “The most obvious measure is to salvage fire-killed timber immediately.” That hasn't changed, either. (More on this later)

As for the regeneration in unlogged areas, *Donato* advisor-author Beverly

Law told reporters: “What this study does make clear is that natural regeneration does not necessarily fail to achieve our goal for conifer establishment. Strong numbers of seedlings regenerated naturally, and they have a good foothold. So far, so good.”

But Mike Newton asks: “What is the life expectancy of those seedlings if you don’t run over them? It turns out the life expectancy of those seedlings is very, very short. First year germinants have a less-than-5% chance of surviving to the next year. That was left out.”

Dr. Newton further pointed out another tree killer—the sun—which “comes burning in late in August, and the soil gets so hot, (150-170 degrees, 140 is lethal) it girdles the tree which dies within a day or two. I wrote my PhD 42 years ago on that, I have photographs of the girdling taking place, even with planted seedlings.”

Mr. Fitzgerald explains: “You can’t base future potential forest development on two-year-old germinants in a highly-competitive environment. Even though they may have adequate germinants, it’s premature to say the site may not require reforestation.”

Perhaps this is why Dr. Law qualified her press statement with an escape clause: “Only time will tell how the conifers will compete with shrubs in the long run.”

Actually, we don’t need to wait for that. There’s already a book out on it: *Reforestation Practices in Southwestern Oregon and Northern California*. This 465-page epic is the result of the 13-year Forestry Intensified Research Program, FIR for short. FIR, which ran from 1978 until 1991, sprang from the fact that the “Klamath province” forests of southwest Oregon—private, BLM and Forest Service—don’t play by the rules. As Dr. Atzet put it, a lot of research conducted elsewhere “doesn’t apply down here. It’s kind of, ‘What happens in Vegas stays in Vegas.’”

Indeed, the Mediterranean climate of the Klamath province, especially the hot, dry summers, makes it difficult, yet certainly not impossible, to re-grow forests following harvest, wildfire or other natural catastrophe. The difficulties pushed Oregon State University, the Forest Service, and the Bureau of Land Management to embark on a cooperative research program to find out how to bring these forests back, what Bob Buckman characterized as “\$25-30 million worth of research in the past three decades.”

What about the “Increases Fire Risk” aspect of the *Donato-Law* report? Was it sloppy loggers leaving a mess? No. The Fiddler Salvage Unit 1 (as with all the Fiddler salvage units) prescription states the project objectives. One is to “Provide adequate amounts and distribution of large, down wood and snags to achieve habitat requirements of dependent species.” The contractor is to “Maximize quality of habitat for animals that are prey for northern spotted owls by retaining moderate to high amounts

sugar pine and Port-Orford-cedar planting stock. Utilize natural regeneration where reasonable.”

If year 0 (Zero) was the salvage, in Year One, “micro-site” planting was planned to a 150 trees-per-acre stocking level, followed by a “Survival Exam” and “Stocking Exam” to determine if further action will be needed in years 2-5. Then, in years 3-5, a “Certification Exam” and grid survey will be done “to determine if the stand can be certified stocked with the objective of 60-80 healthy and vigorous free-to-grow trees per acre of desirable tree species.”

In other words, the prescription called for leaving a lot of wood on the ground in preparation for replanting with desired species at a density and distribution appropriate for maintaining Late Successional Reserve structure (owl habitat). The increased fuel cited by Donato was specifically left there not only in compliance with what the FIR program had learned was good reforestation practice in the tough Mediterranean environment of southwest Oregon, but also to provide the sort of “biological legacy” called for by Dr. Jerry Franklin in his recent congressional testimony. Furthermore, no matter the rate of seedling survival, the Forest Service had already planned and budgeted for planting the future forest, if monitoring found it necessary.

Puts everything in a different light, doesn’t it? It certainly isn’t difficult to see why so many scientists with experience in southwest Oregon were able to agree in only twelve days on a joint call for a publication delay of *Donato* until it could be revised.

The Gang of Nine

Besides Messrs. Sessions, Newton, Atzet, Fitzgerald and Adams, four other people agreed to contribute to the Technical Comment *More On Salvage*: Robert Powers, PhD, Program Manager and Senior Scientist, Ecology & Management of Western Forests Influenced by a Mediterranean Climate, PSW Research Station, USDA Forest Service; Robin Rose, PhD, Professor, Forest Regeneration, and Director Nursery Technology Cooperative and Vegetation Management Research Cooperatives, Oregon State University; Carl Skinner, Geographer and Science Team Leader, Ecology & Management of Western Forests Influenced by a Mediterranean Climate, PSW Research Station, USDA



Dave Skinner

Stephen Fitzgerald

“As a scientist, salvage doesn’t matter to me one way or the other. Salvage on federal land is a social decision, and everyone sees it differently. So you want good information to base the decision upon.”

of deadwood adjacent to spotted owl foraging habitat.”

The recommended silvicultural treatment is salvage of commercial wood, “leaving sufficient down wood to meet wildlife habitat requirements and facilitate stand regeneration activities,” which will be to “[r]eplant site with species mix favoring shade intolerant or mid tolerant with emphasis on resistant

Forest Service; and Steve Tesch, PhD, Professor, Silviculture, and Department Head, Forest Engineering, Oregon State University. Dr. Tesch also directed FIR program administration while Drs. Atzet and Newton contributed heavily to field research. Put simply, the Gang of Nine either wrote the book on reforestation in southwest Oregon, or they have it on the shelf in the office.

Twisting in the Wind

As the press-driven *Donato-Law* tornado spun its way through the forestry school, Dr. Sensenig asked why he had been kept in the dark by the report's authors. To date, he has not received a satisfactory explanation. In the ensuing silence, he asked BLM contracting officer Velvette Clayton to issue a second stop-work order on the study on February 1. That order in turn spurred Congressmen Jay Inslee and David Wu, both Democrats, to demand investigations into whether the Bush Administration was involved in suspending the funding.

Just prior to a February 8 Biscuit Fire science meeting in Gold Beach, a meeting at which the *Donato* team had been scheduled to present their project to a gathering of USFS and BLM staff, Messrs Donato, Campbell and Fontaine asked Dr. Sensenig about the circumstances of the suspension: "When asked about the potential consequences, I explained that the contracting officer has the authority to terminate the agreement if these violations were not satisfactorily explained."

But after high-level communications between lead HR-4200 sponsor Congressman Greg Walden and BLM Director Kathleen Clarke, Dr. Sensenig was overruled. The money was restored February 8, as announced in happy-talk letters about "miscommunication" from the Bureau of Land Management and Oregon State, an interpretation Dr. Sensenig responds to with a slow shake of his head.

In a February 9 "We the authors" media statement, the *Donato-Law* team characterized the decision to restore funding as vindication, and that "far too much" was made of "simple miscommunication." Further, "[s]peculations of some motivation behind the level of interaction are entirely unfounded speculation [sic]. This has been satisfactorily resolved [...]"

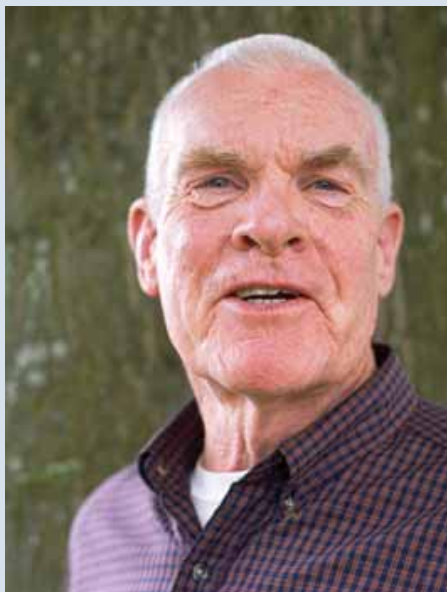
Later, the IG team called up by



Dave Skinner

Dr. Robert Ethington

"Sometimes it is hard to tell what the issue is, with so many others falling on the table."



Dave Skinner

Dr. Michael Newton

"The Code of Ethics for the Society of American Foresters says that if you see incorrect science being used in support of policy, you will take measures to correct it."

Representative Inslee paid Dr. Sensenig a visit, and grilled him only on whether the Administration had in fact told him to cut the funding. When Sensenig tried to explain that he had done so on his due authority as Project Inspector in light of the failure of the *Donato* team to comply with the JFS contract consultation and review requirements, the investigators explained that was "outside the limits of the investigation."

On February 15, 2006, Dr. Sensenig wrote Joint Fire Science Program Manager Erik Berg to resign from the *Donato-Law* study, which had been published "without my knowledge, consent, review or approval. I believe that both the science and the process had extraordinary flaws. Because the credibility of this research has been seriously compromised, continued work and subsequent reports relative to this JFS will be suspect as well."

"In their recent public release the authors stated, 'We the authors firmly stand behind our science and our paper.' This indicates to me [Dr. Sensenig wrote] that they firmly decline to acknowledge these flaws. This creates an environment outside the ethical bounds of which I'm willing to perform."

Perhaps Representative Walden did some political calculus and decided the firestorm of "censorship" put his legislation at risk. After all, the public debate was already hopelessly off-track and the street media was doing nothing to correct it.

Whatever the case, Dr. Sensenig has never had the chance to make his case and *Evergreen* is still waiting on a Freedom of Information Act request for the full docket of communications that passed between the *Donato-Law* partners, Dr. Sensenig and other agency personnel.

A Question of Values

Two years ago, when we were working on *Siskiyou Showdown* we asked Dr. Robert Buckman, former Deputy Chief of Research for the Forest Service and retired OSU professor, if he could explain what factors were driving the salvage debate. Was it a scientific or technical disagreement or something else entirely?

"In the end it is not the technical issue that is central to the debate, but the deeply-held values that underlie them," he explained. "Scientists, including academics, have their own

values and beliefs. I have them too. But we try as best we can not to let values override facts. In so far as we are able, science findings must be repeatable, verifiable and defensible, or it is not science. My concern is that if scientists, including academics, depart from these standards, the science loses its value.”

Dr. Sensenig agrees. “There is no ‘good’ or ‘bad’ to salvage.” Humans put values on these decisions, he explained. They assign labels based on their values, perceptions, experience and knowledge, or lack of it. “That’s where the ‘good’ or ‘bad’ comes from.”

Values in the Ivory Tower

We tracked down Dr. Buckman again for this essay. He invited Dr. Bob Ethington to join in what turned out to be a lively discussion of possible reasons why the *Donato-Law* debate, which should have been centered on academic rigor, so quickly led to calls for a complete restructuring of the College of Forestry.

Dr. Buckman described the intellectual separation that often distances theorists from those whose work centers on the real life application of theory. Purely academic schools “tend to be in conflict with the professional schools,” he observed. “That’s happening right here. People who follow a more fundamentally intellectual pursuit, like botany or ecology, are uncomfortable with some of the professional aspects of the school, the ‘service to humanity’ side. The professional schools—engineering, medicine and forestry, for example—tend to have a much closer touch with the sector they’re engaged with in the real world than core faculty.”

Dr. Ethington responded “That must be a conflict in every land grant school in the country.”

Dr. Buckman: “I think it goes beyond just land grant schools.”

Dr. Ethington: “It’s more a question of philosophy rather than loyalty to one’s discipline, and it just struck me that almost all land grant schools must have this internal conflict because by the nature of the school, they have this professional need along with providing training in the core sciences. And the core practitioners tend as individuals to relate to their science. That’s where their focus lies.”

Dr. Buckman: “I sense that ecology is attempting to become a stand-alone



Dave Skinner

Dr. Robert Buckman

“Academic freedom is essential, but with academic freedom goes academic responsibility.”



Dave Skinner

Dr. Tom Atzet

“I don’t give a rip if HR 4200 passes or fails, or what they do with the Biscuit. We need to refocus this whole debate on the responsibility of research to put out excellent science. That’s why I haven’t disengaged. My best hope is that science is not kicked in the face and that people still respect the protocol, the tradition of excellence in science.”

discipline. I would argue that forestry was one of the first fields that picked up ecology. But now ecology is attempting to sequester itself without reference to the applied side, forestry.”

“Every professional school is sensitive to its customers,” Dr. Buckman continued, “whether it’s medicine or engineering, forestry, or students who need jobs. The school simply would not survive without its customers.”

Dr. Ethington: “You’re doing research you hope will be applied by somebody and that isn’t just people in the street. Basic research is needed, of course. But it’s probably easier to get funding for research that has a foreseeable application. And when money gets tight, [and money is tight at the College] the competition between the basic and academic research sides intensifies.”

The applied versus basic research issue surfaced many times in interviews conducted for this story. “Why are we here, and what are we doing,” was an oft-repeated question. Peter Kolb: “Science plays a very important role in supporting the people who are doing the applied work in helping them do their job better. In that sense, I think it’s ludicrous to indicate that if industry donates money to research, that it’s tainted. Why should industry not pay for research that benefits them by helping them do a better job?”

Stephen Fitzgerald observed that even “public” universities don’t rely completely on the public sector for support: “Our university system would fall apart if it weren’t for private donations. The College of Engineering has a multimillion-dollar facility funded in part by private donations. Look at U of O, Phil Knight and Nike.” Never mind OSU’s Reser Stadium, named for the Beaverton-based salsa and snack food distributor.

For those in academia who see a compromising influence in industrial contributions, OSU’s Dr. Adams posits this reminder: “We’re a land-grant university, and I don’t think a lot of our faculty members are aware of the land-grant university mission. This concept was established during Abe Lincoln’s administration to bring the university to the people in rural areas to deal with rural concerns. That’s the strong emphasis on agriculture, economics and extension; to better the lives of rural Americans in practical

Tillamook

One of the most impressive examples of post-fire forest restoration in America is located west of Portland, Oregon on State Highway 6: The Tillamook State Forest. Making it even more impressive is the new \$10 million Tillamook Forest Center on the Wilson River at highway mile marker 22.3. In a word, “Go.” *Evergreen* went, and we’re going back.

The Center has a wonderful array of interactive and static display items along with historic photographs that are sure to give the traveling public something to think about when it comes to the value of forestry and forests.

For Ross Holloway, Tillamook District Manager, the construction of the Center is “very timely, an educational tool that is needed. Public awareness of wildfire salvage has increased so much, and here is an example of a large wildfire, where 50-60 years later, you have this forest. I’d bet there are a lot of people who drive through here, the Burn never enters their mind.”

The Tillamook burns, in 1933, 1939, 1945, and 1951, together burned and re-burned a total of 355,000 acres in a “six-year-jinx” cycle, the worst year being 1933 when 240,000 acres burnt before the rains came. The private owners salvaged what they could over the years and then abandoned the land to the counties. In 1951, a statewide ballot issue was brought before Oregonians, who voted to assume the lands and back \$12 million in bonds for a huge replanting effort that today is a huge success.

While touring the Tillamook Center we were treated to some living history in the form of Larry Fick, who worked off and on for the Oregon Department of Forestry for 50 years, retiring in 1986 to another ten years of forestry research and book writing. An Oregon State College of Forestry alumnus, Mr. Fick came out of the Army Air Corps after World War Two “concerned about getting out of college with enough education to get a good job.”

So, forestry it was. Mr. Fick got his forestry degree and then joined the Oregon Department of Forestry in 1947, coming to the Tillamook Burn as a Rehabilitation Assistant in January 1956. “After I got the job, my boss took me up to camp at South Fork. I thought that was the most miserable place I had seen in my entire life. There was about a foot of



Dave Skinner

Larry Fick

“I look at what is today, and remember what was, 50 years ago.”

snow on the ground, there were only two colors, black and white. When we got there I thought I was back in the Army, with tarpaper shacks.”

Mr. Fick notes the total investment in the camp was \$14,600. “Wow...but I began to figure it all out. I had inmate and hired planting crews, inmates and contractors falling snags, road crews, the works.”

Planting a forest on such a massive scale was new. For example, when you visit the Tillamook Forest Center, there is a display of hoedad planting tools, the design of which was changed as reforestation crews learned the hard way what shapes worked, and which ones didn’t. Another lesson quickly learned was latching on to every advantage to give tree seedlings a chance. “We preached to our planters, go for the dead shade,” what is today called a “micro-site.” Fancier words, same deal.

Today, Mr. Fick is “happy I got to get involved in this program. With reforestation, you can see the accomplishments. I can go out there today and get lost, and it’s great.”

That it is.

There are two lessons to be learned from the Tillamook that apply to the *Donato-Law* debate. First, the *Donato-Law* paper says that logging hinders regeneration. Salvage logging was conducted in the Tillamook from 1933 until 1958 when the decision was made to stop salvaging, a span of 25 years. By all accounts, the forest turned out fine—so fine that in 2004, environmentalists offered Ballot Measure 34, a proposal to turn half of this man-made forest into a wilderness. The measure was soundly defeated.

The other lesson of Tillamook concerns capturing the value of burned timber—either by cutting and running, or as is the problem today, not cutting at all. The private owners of the land and the logs captured the salvage value and left Oregonians with the reforestation bill. While the last bonds are to be paid off this year, the interest on those bonds has been forgiven. In short, if salvage operations are not conducted and natural regeneration is delayed or thwarted, any future reforestation will be a fiscal loser. In 1951, because the previous owners didn’t reinvest in the land as they should have, Oregon voters made a sacrifice for future generations.

ways. We have a mission of service to this state and its people.” Service, of course, should be the mission of all educational institutions.

Values as Advocacy

Some academics clearly have another mission of service in mind, and Paul Adams has given this matter a lot of thought over the years. “My background and most of my work is along the line of keeping forests and watersheds together,” explains Dr. Adams, “basically it amounts to environmentally sound timber harvesting and road design.” But he also has “pretty broad interests. I teach a class in forest operations, regulations and policy issues, and I’m also interested in how these things blow up into big public issues.”

Dr. Adams traces his interest in the intersection of science, advocacy and policy to the creation of the Northwest Forest Plan in the early 1990s. During a panel discussion he participated in, Adams was especially struck not only to hear straight facts, but also “casual thoughts and anecdotes, all presented in the language of science. What you hear from scientists can be any of these things, and you need to be careful.”

Dr. Adams has gone so far as to senior-author a peer-reviewed journal article about sifting facts from opinion. He’s also created a handy “Shades of Grey” scale upon which “scientific” statements can be evaluated, running a hierarchy of rigor from a peer-reviewed “Universal Fact” down to such grey areas as “Hearsay”—unvalidated observations or comments “repeated as if actually a fact,” and “Value”—an “expression of personal preference (i.e. how I would like the world to be).”

Values presented as “Science” have

polluted the landscape for a long time, of course, probably as long as the institution of politics has existed. Many scientists and policy makers are able to pick the gems from the slop, but not all.

“Resource Management by Epistle: The Use of Facts and Values in Policy-Related Communications” by Dr. Jay O’Laughlin and Philip S. Cook of the Policy Analysis Group at the University of Idaho documents how eighty natural-resources graduate students reacted to a “Scientists on Postfire Salvage Logging” letter written to President Clinton by five scientists affiliated with the Pacific Rivers Council environmental group in 1994.



Dave Skinner

Evergreen toured the Tillamook State Forest with forester Bob Gustavson, who worked briefly on the Tillamook in the 1970s and didn’t return for 34 years. This setting gives an indication of what the Tillamook Country was like before the fires. As for today and tomorrow, Gustavson lays it out: “In the span of all I’ve done in my career, in coming back to the Tillamook, the whole thrust of what we foresters and the public have done to create the Tillamook Forest from the Tillamook Burn, is probably the capstone of my career. To see that and understand that, it really gives validity to everything I’ve done in my work. It’s awe-inspiring to see what it is and what it’s taken to get there, to think of what it is possible to do.” Indeed.

After analyzing the 30 sentences in the letter to determine fact/value content (it contained a mix of the two), students were asked to identify the scientists’ role as either policy analysts, advocates, entrepreneurs, or educators. A majority of the students, 80%, tagged the five authors as policy advocates. None selected the policy educator role, even though all five authors signed the letter as university employees and currently teach. And three of the policy advocates, Chris Frissell, James R. Karr, and G. Wayne Minshall, play other parts in this story.

Science as Politics

It is not possible to understand how *Donato-Law* found its way to the pages of *Science* without first understanding how the two best known fire-salvage studies—polar opposites of one another—were conducted, who conducted them and how they eventually went through two very different peer review processes leading to their publication in very different journals. Ironically, current and emeritus faculty in OSU’s College of Forestry played central roles in both of these studies, which are widely regarded as the “intellectual

bookends” on the salvage/restoration debate.

One bookend is the Sessions Report, formally titled “Hastening the return of complex forests following fire: The consequences of delay” by Dr. John Sessions, P. Bettinger, R. Buckman, M. Newton, and J. Hamann, all of OSU. The report outlined a series of post-fire management alternatives for Siskiyou National Forest lands burned by the 2002 Biscuit Fire. It then waded into more controversial environs by describing the probable ecological

consequences of each alternative, including a no-action alternative. To this day, critics incorrectly claim the exhaustive report did nothing more than advocate aggressive salvage of Biscuit timber.

The other bookend is the “Beschta Report,” formally titled, “Wildfire and Salvage Logging: Recommendations for Ecologically Sound Post-Fire Salvage Management and Other Post-Fire Treatments On Federal Lands in the West,” by Dr. Robert L. Beschta, OSU; Dr. Christopher A. Frissell, OSU and University of Montana (UM); Dr. Robert Gresswell, U.S. Fish and Wildlife

Service; Dr. Richard Hauer, UM; Dr. James R Karr, University of Washington; Dr. G. Wayne Minshall, Idaho State University; Dr. David A. Perry, OSU; and Jonathan J. Rhodes, Columbia River Inter-Tribal Fish Commission.

Beschta's authors drew an opposite conclusion to that reached by Sessions authors: To wit: "Human intervention should not be permitted unless and until it is determined that natural recovery processes are not occurring."

It is a given that both the Sessions and Beschta reports have political origins. *Sessions* was requested publicly through OSU by the Douglas County (OR) Board of Commissioners (a bunch of politicians). *Beschta* was privately paid for by the Pacific Rivers Council, an environmental (political) group.

The difference between the two is, as Rich Drehobl puts it, the *Sessions* team "put their objectives right up front, to recover dollars from their losses. They didn't call it research, it was an assessment: How can we do this?"

By contrast *Beschta's* authors claimed moral superiority as a pure "science" paper, not the epistle it in fact was.

After their respective political motives were satisfied, both *Sessions* and *Beschta* underwent revision and peer review leading to publication—*Sessions* by the Society of American Foresters and *Beschta* by the Society for Conservation Biology: organizations with two very different missions and memberships steeped in deeply different philosophies.

The Society of American Foresters

Founded in 1900 by Gifford Pinchot, first Chief of the Forest Service, the Society of American Foresters (SAF) is the largest

professional society for foresters in the world. SAF has almost 13,000 professional members. SAF's Code of Ethics, among other things, declares: "Sound science is the foundation of the forestry profession," and furthermore, members "pledge to use our knowledge and skills to help formulate sound forest policies and laws; to challenge and correct untrue statements about forestry; and to foster dialogue among foresters, other professionals, landowners, and the public regarding forest policies."



Dave Skinner

Tillamook District Manager Ross Holloway (left) and construction project manager Frank Evans visit on the balcony of the restored lookout tower that greets visitors to the spanking-new Forest Center. Behind the center is a modern laminated-wood suspension bridge over the Wilson River.

The Society for Conservation Biology

Just as SAF reflects the utilitarian vision of its founder, Mr. Pinchot, the Society for Conservation Biology (SCB), co-founded by Michael E. Soule' and others in 1978, reflects the vision of its creators. Soule' is a PhD population biologist and generally credited with inventing the field of conservation biology. Soule' is also credited with helping to found the Wildlands Project with Earth First founder Dave Foreman, after a 1991 meeting in San Francisco hosted by Doug Tompkins. Mr. Tompkins, who enjoyed wild financial success as owner and founder of The North Face and Esprit, plowed much of

his fortune into both Ted-Turner-style land acquisitions in South America and the Foundation for Deep Ecology.

The Encyclopedia of Religion and Nature, edited by Bron Taylor, Professor of Religion and Environmental Ethics at the University of Florida, explains how Earth First beliefs can be integrated with peer-reviewed science by discussing the professional evolution of Reed Noss from Earth First member to PhD conservation biologist, SCB journal editor and college professor. Mr. Taylor writes that, as Mr. Noss evolved, he "continued to work with

Dave Foreman and other radical environmental activists who appreciated conservation biology, many of whom also quit Earth First while retaining their ecocentric value systems, in which nature is considered to be of intrinsic, moral value."

Put simply, some radical environmentalists learned early on that getting an advanced degree and then producing "peer-reviewed" papers is far, far more effective politically than sweaty, howling bacchanalia in the desert. Today, they make

up at least part of SCB's 9000 members in 120 nations.

Eco-centrism or Anthro-centrism?

Close scrutiny of the SAF and SCB journals, their mission statements and ethics codes suggests that their differences can be boiled down to a choice between two vastly different intellectual pursuits: anthro-centrism and eco-centrism. Anthro-centric SAF operates in an overtly social context while eco-centric SCB operates within an overtly "natural" context.

SAF adheres to Pinchot's utilitarian model, declaring right up front that



Lookout Pass along Interstate 90 near the Idaho-Montana state line: among the many locations where the Great 1910 Fire crossed from Idaho into Montana. This forest is partly the handiwork of nature and partly the work of tree planters who worked in this area for many years following what is believed to be the largest forest fire ever to burn in the United States. More than three million acres of old growth timber were destroyed when high winds drove several hundred smaller fires into a mid-August firestorm that lasted two days and nights. Lodgepole pine forests along Interstate 90 are again reaching maturity and beginning to die. Minus thinning, another conflagration is likely to claim this forest. Would it be better to thin this forest or let nature take its fiery course and accept the century-long consequences?





Dave Skinner

Montana State University Extension Forester Peter Kolb amid burned lodgepole on upper Warm Springs Creek in the Bitterroot National Forest in May 2006. This area burned in 2000. Six years out, there is still very little ground cover and only marginal recruitment of new lodgepole from a relatively close green patch. Minus the helping hand of man, it will take many years for this area to recover.

“Service to society is the cornerstone of any profession.” By contrast SCB’s mission and ethics statements mention society only in the context of impacts on the natural environment, expressed as “biodiversity.”

SAF members pledge to “manage land for present and future generations.” SCB members pledge “To advance the science and practice of conserving the Earth’s biological diversity.”

“[SCB’s] vision for the future takes a global perspective both in how we want the world to be and how we, as a Society want to be. In these visions we see: A world where people understand, value, and conserve the diversity of life on earth.”

Earth First or Not?

Which approach—SAF’s or SCB’s—is more mainstream? The “book” on mainstream scientific ethics and practice is probably *On Being a Scientist*, first published by the National

Academy of Sciences in 1989 and revised in 1995. This booklet is so well-known in the scientific community that its title is often abbreviated to “*OBAS*” in documents that refer to it.

OBAS dedicates an entire section, entitled “The Scientist in Society,” to the social context of science. The *OBAS* authors warn that “scientists must seek to avoid putting scientific knowledge on a pedestal above knowledge obtained through other means”—such as that pesky real life stuff.

“[T]he core values on which (scientific) enterprise is based—honesty, skepticism, fairness, collegiality, openness—remain unchanged. These values have helped produce a research enterprise of unparalleled productivity and creativity. So long as they remain strong, science—and the society it serves—will prosper.”

There’s also the matter of what society’s core values may be, and where science fits. As Oregon State Forester Marvin Brown sees it, “sci-

ence informs policy. Policy is an expression of the values people have. Values fit within a very broad range, from those who value economics to those who value preservation and naturalness. What policy does is figure out the societal priorities within that range of values.”

What values and priorities do people express about forests, more specifically salvage? A poll conducted in August 2005 of Oregon residents by the independent polling company of Davis, Hibbits & Midghall, revealed nearly three-quarters of those surveyed supported restoring federal forests after wildfires by removing dead trees and planting seedlings. Over half felt fires are growing out of control and causing too much damage. 74% of the public surveyed think it takes too long for un-restored forests to return. Conversely, 56% felt the environmentalist argument—that forests should be left alone because more damage would be done by

equipment and roads, a main point of *Beschta*—was a poor one.

Regardless, the Society of Conservation Biology actively seeks to change those numbers. SCB's 2006 Strategic Plan, *Enhancing the Impact of Conservation Science*, states that "powerful constituencies, interest groups, and institutions should look to us as sources of sound information that will help them solve problems in a way that *serves our values* [emphasis added]. Effectiveness with important constituencies in part hinges on our ability to work well with the media and targeted constituencies."

Incidentally, Hal Salwasser is a founding member of the Society for Conservation Biology—and a member of the Society of American Foresters.

Ethics

According to *OBAS*, peer review originated to address the problem of scientists stealing each other's work and hogging credit. Henry Oldenburg, the secretary of the Royal Society of London "won over scientists by guaranteeing rapid publication" in the Society's journal, as well as introducing "the practice of sending submitted manuscripts to experts who could judge their quality. Out of these innovations rose both the modern scientific journal and the practice of peer review."

While the general public sees "peer review" as a rigorous process, peer review of scientific and academic work is not always so. Dr. George Ice finds the level of uneven peer review "astound-

ing." However, being an associate editor of the *Western Journal of Applied Forestry* as well as *Forest Science* has given him an appreciation for both how critical and how flawed the peer review process can be.

"It's hard to find good peer reviewers," observes Dr. Ice. "People are incredibly busy. Plus, you get a lot of credit for the paper, but almost none for doing the review. Surveys show that those who write the papers are much more senior than those doing the reviews." Ice has concerns about a breakdown in the review process because "there's so much demand for review and not that many qualified people doing reviews."

A special issue of *Forest Science* that Dr. Ice was working on when *Evergreen*



Dave Skinner



Dave Skinner

The 27,000 acre Timbered Rock Fire has cost taxpayers \$17 million since 2002: \$13.7 million in suppression costs, \$1.1 million for emergency rehabilitation, \$1.2 million for seedlings, \$1 million on an environmental impact statement needed before salvage could begin on 8% of the dead trees, plus \$121,000 in litigation costs. Expected revenue was \$14.7 million. The sale now has a permanent injunction against it, has been appealed to the Ninth Circuit, and may never be salvaged. BLM planted trees on 5,000 acres, at an estimated average cost of \$240 per acre. It is not known how much it will cost to get the planted stock above the brush, or if funds will be available given the litigation outcome. The right-side photo shows how BLM contractors hand cleared competing vegetation on 1,670 acres to allow seedlings the opportunity to get established. The photo on the left shows a seedling on nearby Forest Capital land. Notice the planting is near a felled log in order to capture runoff moisture and also to block the evening sun's rays (this shot was taken in the morning). Forest Capital's expected five year cost per acre to have free-to-grow trees is \$380.



Dave Skinner

Oregon State University extension forester Stephen Fitzgerald (facing page) took *Evergreen* on a tour of several burn sites of various vintages in the Deschutes National Forest around La Pine. One location we visited was the Newberry II site, a 548-acre August 2000 arson fire east of town that was partly salvaged the next spring. OSU and the Forest Service cooperated in setting up two test plots on the north and south slope aspects in the basin to test the survival and growth performance of six different types of planting stock with and without herbicides, in order to find the most cost-effective combination. The picture above is the north-facing plot, the picture on the facing page is the south-slope aspect. Overall, the most expensive stock, with the longest roots, did the best. Some of the least expensive seedlings “did fine on the north slope,” says Fitzgerald, “but on the south, they were toast. When planning for regeneration, you really have to look at the worst-case scenario.”

visited contains 14 papers. With three reviewers for each manuscript, Dr. Ice has “gotten one Accept, one Reject, and one Accept with Major Modifications recommendation.” While rejections and modifications slow the process, he points out these recommendations “provide the most improvement in the papers.”

Even peer review at *Science* has had problems. The very same day the hard copy of *Science* containing *Donato-Law* hit the newsstands, *Science* announced “the authors of two papers published in *Science* have engaged in research misconduct and that the papers contain fabricated data.” Those papers, of course, were on human cloning. “We therefore retract these two papers and advise the scientific community that

the results reported in them are deemed to be invalid.”

As *On Being a Scientist* warns, “If publication practices, either new or traditional, bypass quality control mechanisms, they risk weakening conventions that have served science well.

“An example is the scientist who releases important and controversial results directly to the public before submitting them to the scrutiny of peers. If the researcher has made a mistake or the findings are misinterpreted by the media or the public, the scientific community and the public may react adversely.

“When such news is to be released to the press, it should be done when peer review is complete—normally at the time of publication in a scientific journal.”

What happened with *Donato-Law* is a textbook example of what *On Being a Scientist* warns against.

A Lesson Learned

The story of how *Beschta* came to be peer-reviewed nine years after it was first written is a classic example of iterative learning inasmuch as the lessons learned by *Beschta*'s proponents seem to have been directly applied to presenting *Donato-Law* in a way that would maximize its impact in the political arena.

In June 2002, testifying before the House Resources Committee Subcommittee on Forests & Forest Health on the subject of agency gridlock, Forest Service Chief Dale Bosworth's testimony singled out the *Beschta* “com-



Dave Skinner

mentary” as having “never been published in any scientific or professional journal, nor has it been subject to any formal peer review.”

“Nonetheless,” Mr. Bosworth continued, “interest groups have filed numerous lawsuits challenging post-fire recovery projects in part on the grounds that the associated NEPA documents fail to adequately document the agency’s consideration of the *Beschta Report*.”

Chief Bosworth’s testimony spurred a revealing response from six of the original *Beschta* participants, Messrs Karr, Frissell, Rhodes, Beschta, Perry and Minshall. Their letter of July 3, 2002 to the Subcommittee complained “the Chief’s testimony incorrectly asserts that our 1995 report was not peer-reviewed. Our 1995 report was peer-reviewed, prior to issuance, by other scientists with expertise in fire ecology, including Dr. J. B. Kauffman, a Professor of Riparian Ecology at Oregon State University in Corvallis,

OR.” (Kauffman was actually the *Beschta* paper’s editor, not a reviewer.)

“Further,” they wrote, “in March 1995, more than 50 scientists with expertise in biology, fisheries, wildlife, ecology, and geology endorsed our report in an open letter to President Clinton”—again, that’s not peer review, but a petition.

So, why was there no peer review in 1995? “[W]e decided to forego presenting our conclusions and recommendations in a form suitable for a technical journal for two reasons. First, we felt that it was crucial to rapidly inject sound science into the discourse regarding post-fire salvage practices [and] second, we decided to issue a concise and policy relevant document in a form understandable to a wide audience, including citizens, agency personnel, and scientists, rather than issue a report full of the often ponderous language of technical papers published in peer-reviewed journals with their limited, but specialized audience.”

But because Chief Bosworth called them on it, the authors, seven years after the fact, declared “accordingly we are taking steps to pursue publication in a scholarly journal.” Two years later, in August 2004 the Society for Conservation Biology finally “published” *Beschta*. The report was edited by Dominick DellaSala, a biologist with the World Wildlife Fund [WWF], an SCB partner and long time Siskiyou salvage critic. And should you wonder why, there is a likely reason why *Beschta*’s authors felt the need to “rapidly inject sound science into the discourse” in March of 1995. At the time, Congress was debating the so-called “Salvage Rider,” which President Clinton signed into law in July 1995.

Dude, Sign My Petition?

“Scientist” petitions seem to be all the rage these days when environmental issues are involved, whether it’s roadless areas, global warming, wolves in Alaska,

or, yep, salvage logging. *Donato* was no exception. Just as *Beschta* had a “fifty scientists” endorsement sent to President Clinton back in 1995, *Donato-Law* got backing from 169 “scientists.” Among the 169 signatories were Messrs Beschta, Frissell, Karr, Perry and Rhodes, five of the original *Beschta* participants. The other four took a pass, two most likely because they are federal agency employees at this time, and one, obviously, because he was a *Donato-Law* co-author.

Peter Kolb dryly adds, “Incidentally, I looked through that petition and about 90% of them were biologists that had no background in forestry or forest management, so I’m not sure what sort of expertise they were referring to when they signed.”

When *Evergreen* asked its cadre of scientists if any had signed a “scientist” petition, the response was an instant and flat “No.” Mike Newton says “the only thing I’m prepared to advocate is high-quality research. Scientifically, a politically-correct question cannot be answered correctly.”

George Ice observes, “Oftentimes, the scientists don’t have any more credibility on the issue they are addressing than anyone in the general public.” For Bob Ethington, “as a scientist, the most important thing I’ve got to protect is my reputation for objectivity. You can’t sign petitions and stick your biases out there for people to see. From then on, you’re viewed against that bias. I’d rather people look to me as a source of information.”

The only exception: Bob Buckman’s views on political suppression of sound science. “On certain fundamental issues I would sign a petition,” he explained. “If, for example, the Admin-



Jim Petersen

This beautifully thinned red pine stand in the George Washington Grove in Minnesota’s Superior National Forest was planted by the Civilian Conservation Corps in the 1930s. For a time the Superior produced timber for sawmills in the Grand Marais area, along Lake Superior, but it is now mainly a recreation area, as this bicycle trail suggests.

istration said you can’t publish a scientifically-sound document, I’d sign.” So would Tom Atzet, but only in such a narrow circumstance.

The Lesson Applied

Given all its scientific shortcomings, summed up by Bob Buckman as “woefully inadequate in terms of context, a travesty,” how could *Donato-Law* have passed peer review? Here’s how: When the report was first released, the *Portland Oregonian* interviewed Jerry Franklin, a forestry professor at the University of Washington. The *Oregonian* reported that Dr. Franklin, “an authority on Northwest forests, said charred trees are especially important because they are the only source of wood to nourish forest recovery and lend shelter to wildlife.”

Dr. Franklin told the *Oregonian* “it’s

usually far better ecologically to take a green tree from a live forest than a dead tree from a burned forest.” He also stated “salvage almost never achieves any ecological goal. It almost always is a tax on the ecological process,” wording which, upon further research, is almost identical to that in Congressional testimony Franklin gave—on November 10, 2005—regarding HR 4200.

Dr. Franklin later let it slip to *Science* reporter Erik Stokstad that he “reviewed” the *Donato* paper, possibly making him one of the two peer reviewers of *Donato-Law*. Fine, but given a timeline of submission on November 21, 2005, distribution to peer reviewers, revision and publication of roughly eight weeks going back from January 4-5, 2006, then Dr. Franklin was asked to peer review the *Donato* document for

Science after he gave testimony regarding HR-4200. That alone is a good basis for recusal.

Besides, Dr. Franklin’s congressional testimony warned that “generic responses to large catastrophic disturbances are not appropriate.” As “an authority on Northwest forests,” how could he find the generic nature of the conclusions reached in *Donato-Law* acceptable?

We tried to contact Dr. Franklin to ask if he had actually peer-reviewed *Donato-Law*, but he did not respond. But thanks to a federal response to our FOIA request, we do have his January 13, 2006 e-mail message to Beverly Law. It reads: “I obviously thought and still think that the results of the study are important and need to be out there. *Science* got my review of the paper within 90” [minutes] of the time that I got it!”



Jim Petersen

Southern Oregon's Siskiyou National Forest in better days: aftermath of an early 1990s selective harvest that was designed by Mel Greenup, a legendary Siskiyou silviculturist for many years. Mr. Greenup wanted to increase age and species diversity in the stand, while recovering some economic value from older trees that were dying—unthinkable amid the serial litigation now controlling the Forest Service's every action.

The Cipher

The great unknown in the *Donato-Law* controversy is OSU fire ecologist J. Boone Kauffman. Although Dr. Kauffman was the original university participant in the JFS project, and has loudly proclaimed ownership of *Donato-Law* in academic communications, his name has been absent from press coverage. Nor does anything significant appear in e-mail traffic obtained through FOIA.

Besides his participation in the *Beschta* report, which he edited, Dr. Kauffman provided a sworn affidavit in a federal lawsuit brought against grazing in eastern Oregon by the Oregon Natural Desert Association and Center for Biological Diversity, organizations known for their “zero-cows” activism. In sum, Kauffman’s view of “proper management” in his testament was “cessation of livestock grazing.”

In May 1997, Drs. Kauffman and Beschta published a journal article in *Fisheries* about riparian zone recovery. *High Country News*, an environmentalist newspaper, reported it as: “A report from the Oregon State University Department of Fisheries says that current salmon habitat and river restoration efforts will fail unless they focus on entire watersheds or landscapes, rather than on a single process or species. For such a holistic approach to work, the report says, overgrazing, pollution and too much water consumption must stop and riparian areas must be allowed to heal themselves.”

Also on the grazing front, Dr. Kauffman contributed an essay to *Welfare Ranching*, edited by long time “deep ecology” advocate and Earth First member George Wuerthner. The book is

best described as the ranching equivalent of *Clearcut*, the anti-forestry tome released by Sierra Club. It is equivalent in another way, as the publication of both these books was financed by Doug Tompkins’ Foundation for Deep Ecology. Dr. Kauffman’s essay said that “given the inestimable natural values” of grasslands, grazing must go.

On the timber side, in August of 2002,



Jim Petersen

An R.B. Slagle truck loaded with old growth Douglas fir rumbles across the Siskiyou National Forest in the halcyon days when timber was still being harvested. For years, the Siskiyou yielded a quite sustainable 125-150 million board feet annually. Not anymore. In fact, no timber is harvested from the Siskiyou, save for small thinnings that somehow survive the appeals process. As testament, *Evergreen* writer Dave Skinner (page three) stands among dead trees killed in the 2002 Biscuit Fire. These trees will never be harvested, nor will the forest you see there be replanted—in our view two terrible losses for the American taxpayer.

in response to Forest Service Chief Dale Bosworth’s criticism of the *Beschta* report, Drs. Kauffman and Beschta co-wrote an op-ed defending their work as “simply a reiteration of increasingly accepted forest management and ecological principles.”

Also in August of 2002, the day before President Bush unveiled his Healthy Forests Initiative while touring southern Oregon’s Squire Peak Fire, Dr. Kauffman was alongside Sierra Club’s Carl Pope at a Portland press conference. Reporters wrote that Dr. Kauffman declared that logging, livestock grazing

and roads have proven to be more damaging than fires by making the denuded forest floor susceptible to erosion and flood damage. Allowing thinning in the backcountry could exacerbate those problems: “If this act focused on these lands and the urban-wildland interface, we’d address the problems facing firefighters and wildland managers,” he said. “Thinning with chain saws isn’t necessarily the best approach. Reintroducing fire may be the best restoration effort.”

In October 2002, Dr. Kauffman was a panelist at the Oregon Wilderness Conference. The panel, “Smoke and Mirrors—Fire Science vs. Political Opportunism” discussed “how the conservation community is moving beyond the inflammatory rhetoric of the 2002 fire season.” Dr. Kauffman’s fellow panelists included WWF’s Dr. DellaSala.

Dr. Kauffman’s affiliation with Dr. DellaSala also yielded the August 2, 2003 *Oregonian* op-ed that criticized the Sessions report as “scientifically indefensible.” The essay, which Dr. DellaSala apparently wrote and Dr. Kauffman co-signed, characterizes John Sessions as a “forest

engineer” in contrast to “scientists” who, of course, feel the Biscuit should be “protected from logging:” a strange tactic given that *Beschta*’s lead author, Robert Beschta, recently retired from OSU’s School of Forest Engineering, where Dr. Sessions works. It seems clear that Dr. Kauffman’s public persona is that of a “noninterventionist,” who believes in the no-management-is-the-best-management model espoused by the Society for Conservation Biology’s “precautionary principle” paradigm.

Oddly, Dr. Kauffman falls off the Internet radar screen immediately

following August 2003 publication of the op-ed piece he and Dr. DellaSala signed. Why? Perhaps because that month he was hired as director of the USDA Forest Service's Pacific Southwest Research Station Institute of Pacific Islands Forestry.

A Rapid Injection of Science

As earlier noted, the timelines given by *Donato-Law* partners and federal project inspector Tom Sensenig diverged in mid-October.

HR 4200 was introduced in the House of Representatives on November 2, 2005. But even before bills are introduced, draft language is circulated widely. Congressman Greg Walden, R-OR, the lead sponsor of HR 4200, stated the bill went through fifty drafts over a period of months before the introduced version hit the legislative calendar.

The environmental community obviously had time to prepare a response.

By November 3, the Wilderness Society had posted its first "analysis" attacking the legislation, and TWS was only the first. Putting "HR 4200" plus Congressman Walden in the Google search window rings up 13,700 web pages, with TWS, Earthjustice, Unified Forest Defense Campaign, Defenders of Wildlife, EPIC, Southern Appalachian Forest Campaign and the left-wing Daily Kos blog hogging the top ten, with the exception of Congressman Walden's website at No. 9.

Furthermore, when witnesses are called to provide testimony, they are given time to prepare. *Evergreen* briefly spoke with House Resources Committee aide Doug Crandall, who explained that in general, about two to four weeks of notice is given prior to a Congressional

hearing to witnesses as well as the general public. So given a November 10 hearing date, a mid-October decision by parties unknown to accelerate *Donato-Law* toward publication is not out of the question.

Ethics and Hatch Act aside, the decision to use *Donato-Law* in this way is a political no-brainer. What could be more applicable than "new" taxpayer-

of venue for maximum impact. *Conservation Biology*, the SCB journal? No, given the lessons of *Beschta*, it couldn't be published in a peer-reviewed journal with a "limited, but specialized audience" such as *CB*. But the lack of peer-review had harmed the social credibility of the original *Beschta* paper. *Donato-Law* still needed peer-review. To "issue a concise and policy relevant document in a form

understandable to a wide audience, including citizens," without peer review, would be just another press release.

The answer: *Science Brevia*. According to the *Science* website, "*Brevia* present research results on subject matter attractive to, and understandable by, scientists from a wide range of fields. Interdisciplinary work, or experiments or analyses that produce a result of general interest, are especially appropriate for this section. Authors should avoid highly technical presentations and jargon specific to particular disciplines. Manuscripts are peer-reviewed in the usual manner."

The usual manner is: "Papers are reviewed in depth [for at least 90

minutes] by two or more outside referees. It is the policy of *Science* that reviewers are anonymous. Reviewers are contacted before being sent a paper and asked to return comments within one to two weeks for most papers. We are able to expedite the review process significantly for papers that require rapid assessment."

Science also has its *Express* route: "Each week, up to four papers are selected by *Science* editors for rapid online publication in advance of their scheduled print publication date. Online publication on *ScienceExpress* allows particularly interesting or topical papers



Jim Petersen

The Forest Service has been studying relationships between forests and human disturbance since it established the Fort Valley Experimental Station west of Flagstaff, Arizona in 1908. The massive ponderosa pines are part of the agency's ongoing research program, which, of late, has turned its attention toward determining optimal stand densities under various forest conditions. In the aftermath of the Donato fiasco, the agency is reviewing years of data concerning post-fire treatments.

funded research (with the associated neutrality versus an industry- or environmentally-supported project) being conducted in the lead sponsor's home district?

And none of *Donato-Law's* authors can claim they were not fully involved. The SCB Code of Ethics reads that scientists may "Claim authorship of a publication or report only when they have contributed substantially to the conception, design, data collection, analysis, or interpretation, or have helped draft or revise the article, and approve of the published version."

Then the question becomes a matter

to become available to *Science* readers two to six weeks before these articles appear in print.”

Science had also recently proved a useful forum to anti-salvage environmentalists. In February 2004, *Science* published a one-page *Policy Forum* item written by Australian ecologist David Lindemayer, Reed Noss, Jerry Franklin, David Perry and two others on the effects of salvage harvest on the “biological legacy” of natural disturbance events. The *Policy Forum* is not peer reviewed, but rather a platform for issues commentary. This item wound up being cited as a full paper by environmental groups seeking an injunction against the Timbered Rock salvage sale, as well as self-cited by Franklin in his testimony regarding HR 4200.

Significantly, “most items in these sections [including *Policy Forum*] are commissioned by the editors, but unsolicited contributions will be considered on occasion.” Furthermore, *Science* warns prospective authors “[b]ecause of the stiff competition for space in the journal, *Science* can accept less than 10% of the original research papers submitted.”

Getting past a 90% rejection rate before formal review, then past peer-review, and into the elite three or four *Express* items as “particularly interesting or topical” is quite a coup, is it not?

Could there have been favorable treatment? It is hard to say, as *Science* has 100 members on its Board of Reviewing Editors. They are listed, but only by university or other affiliation,



Jim Petersen



Jim Petersen

These two photographs, taken in the Black Hills National Forest, illustrate the power of thinning in overstocked forests. The top photo shows how sickly forests become when drought and disease overtake a forest that has grown too dense. The bottom photo reveals nature’s remarkable recovery powers in the aftermath of thinning. The first timber sale ever conducted by the U.S. Forest Service—called “Case No.1”—was conducted near this site in November 1899. Over the next 86 years, five billion board feet of timber was harvested from this forest. Between 1899 and 1986, as much timber grew on this forest as was harvested: 5.1 billion board feet.

and not by academic specialty. But as has been discussed above, whatever review this paper had was demonstrably weak, and certainly not objective.

Nor is the Chief Editor of *Science*, Donald Kennedy, completely disinterested. Dr. Kennedy is a Bing Professor Emeritus of Environmental Science at Stanford, as well as former president of the University. Dr. Kennedy left the Stanford presidency in the wake of a scandal over research funding. At the start of his tenure at *Science*, Dr. Kennedy was introduced to readers by his faculty colleague, Paul Erlich,

the Malthusian 1970s “global winter” advocate turned 1990’s “global warming” expert; PhD advisor for Society for Conservation Biology founder Michael Soule’s’ doctorate in Population Biology; and president of the Stanford Center for Conservation Biology.

Donato-Law seems to have been on a fast track from the beginning. The final hard copy in *Science* states the paper was submitted November 21, 2005 and accepted December 21 for publication. John Sessions notes that for the Gang of Nine technical comment *More on Salvage*, “It took twice as long to get the peer review as it did for the *Donato* paper.”

The Great Secret

Science furthermore has a press embargo policy. Advance notice is given to media outlets so when *Science* breaks the news, the coverage is

“broad and accurate.” Authors, however, are not supposed to spill the beans before “2:00 p.m. Eastern U.S. Time on the Thursday before your paper’s publication”—which in this case was January 5, 2006.

In order to learn who may have had prior knowledge of the release of *Donato-Law*, *Evergreen* spoke with David Stauth, an Oregon State University Public Relations staffer who prepared the initial *EurekaAlert* press release in January. It turns out that due to spam-blocker problems, the OSU PR department had had no prior

notice from *Science* that *Donato* was to be published. Mr. Stauth told *Evergreen* his first knowledge was upon a call from the media. At that point he contacted the authors of the paper and prepared the release.

Science's embargo rule does allow scientists to “present the results of their upcoming *Science* papers at professional meetings to colleagues. If the paper has been accepted for *Science* publication, we ask that you inform the AAAS News and Information office that you are planning to make such a presentation.”

Why the secrecy if *Science's* embargo policy allows sharing the good news with colleagues at a professional meeting? Well, as Dr. Atzet put it, “if any of the nine of us had seen it before it went into *Brevia*, it never would have happened.”

It wasn't until January 3, at 4:39 p.m., that Mr. Donato sent an e-mail out to Dean Salwasser and Dr.

Sessions. It read: “Attached is an article that Bev Law, myself and several others are publishing in *Science* magazine. You will almost certainly be hearing about this in the next day or two [...]”

“Note that it is not quite the final version yet; some edits remain yet, so of course it's not for distribution.

“I'm being flooded with requests for interviews, but would be very open to making time for us to chat about all this in the near future.”

Paul Adams cynically observes: “Welcome to the brave new world of



Jim Petersen



Jim Petersen

Small diameter logs harvested from the Clearwater Stewardship Project on the Lolo National Forest near Seeley Lake, Montana. Most of these trees are too small for lumber manufacturing, so they will be sold to furniture makers or post and pole manufacturers. This project won several awards and kudos from local environmental groups that worked hand-in-glove with the community, the Forest Service and locally-owned Pyramid Lumber Co. The thinning work was done to protect the neighboring Seeley Lake community from wildfire, improve wildlife habitat and generate in-kind revenue for a series of recreation and habitat projects. Seeley Lake District Ranger, Tim Love, stands on an overlook constructed as part of the project. Before the trees in the background were thinned, the mountains beyond were not visible.

science publicity—science headlines happen before scientists get a look at the work. Never mind the shortcomings of editing the paper post-facto as was done in this case.”

There's another aspect to the “brave new world” which some may find disturbing. On January 11, a seminar discussing *Donato-Law* was held on campus. Joe Campbell's talking points sheets (a FOIA item) indicate “the early release by *Science* of what is essentially a draft was not expected nor even under our control.”

As for the political language about HR-4200 in the draft, Mr. Campbell's points read: “Editors wanted policy in, then all involved decided to take it out. Got left in a couple of places by *Science*.” A brave new world indeed...of active political spin? Editorial negligence? Both? Perhaps in the *National Enquirer*, but in America's most prestigious scientific journal? And yet it is *Science* editor Donald Kennedy who wrote “The authors of the (Gang of Nine) letter to *Science* may get some counseling about collegial behavior, which they surely need.”

More Secrets

Post-publication, the Gang of Nine respondent team has repeatedly asked for access to the *Donato-Law* study units. For example, the biggest baseline flaw in the report is apparently the method used to determine the seedling stocking in the research units. The quickest way to clear up the situation either way would be to allow other researchers,

not only the Gang of Nine, access to the units.

Denying access is not accepted practice for repeatable, defensible science. *On Being a Scientist* reads: “After publication, scientists expect that data and other research materials will be shared with qualified colleagues upon request.” Furthermore, *Science* specifies, “When a paper is accepted for publication in *Science*, it is understood that: Any reasonable request for materials, methods, or data necessary to verify



Jim Petersen



Jim Petersen

No salvage and restoration project in America rivals the work done by the Weyerhaeuser Company on the southwest Washington lands following the May 18, 1980 eruption of Mount St. Helens. Within the blast zone, 68,000 acres of timberland and hundreds of miles of roads were covered with volcanic ash up to three feet deep. Trees were killed by searing heat or blown over by the force of 100 mile an hour winds generated by the blast. But by November 1982, company logging crews had salvaged sufficient timber to build 85,000 three-bedroom homes. More than 18.4 million Douglas and noble fir seedlings were planted by June of 1987. Today, what was lost is again a productive forest. Forests on the adjacent Gifford Pinchot National Forest were set aside in a research area so scientists would have the opportunity to observe a completely natural recovery. If you haven't visited the area, you should—if only to discover that nature is indifferent to human need, and that those who claim man cannot help speed natural recovery are wrong.

the conclusions of the experiments reported must be honored.”

However, the requests of the Gang of Nine for access to materials and unit locations have been rebuffed. *Evergreen* also asked to see the ground where the *Donato* transects were, if only to have photographs for our readers of the general conditions. As it was, we had to plead and cajole just to get the harvest plans from the Forest Service office in Medford.

John Sessions says “we are disappointed and frustrated. We have asked the authors, while they are working down there this summer, if we could have a field trip to see what the conditions are. The grad student has agreed, but the major professors refused.”

Several reasons for the refusal have been given. One is public safety. Another is that the research is still ongoing. Tom Sensenig responds: “They’ve made statements insisting that it is not preliminary, but final, therefore they published it. However, they’re back out there continuing the study!” The last, best reason, given by Beverly Law to *Science* reporter Erik Stokstad, is “There has been a history of sabotaged research plots in this region.” No one we asked, including Messrs Atzet, Sensenig or Newton, all of whom know the Siskiyou well, could confirm Dr. Law’s assertion.

Now What?

When *Evergreen* first looked at *Donato-Law* affair, the reporting task looked fairly straightforward. Much ado about nothing we thought; a suspicion re-affirmed when, after the report was released, it became so obvious that this was nothing more than another attempt by the usual suspects to sabotage national forest policy by creating cannon fodder for lawyers. As it appeared in *Science*, a journal read by few outside the scientific community, *Donato-Law* spanned a single page, including one chart, some footnotes. It was hardly earth-shattering. As for the Joint Fire Science grant, \$380,000 in cash and labor over several years is chump change. Congressmen have been known to try to stuff more cash than this into their freezers.

Also as usual, the public debate

over *Donato-Law* was framed in “industry versus ecology” terms. But a more realistic assessment would have at least acknowledged that most of the “industry” exited this debate ten years ago. And most of the sawmills that survived the spotted-owl-precipitated collapse of the federal timber sale program have secured other log sources and no longer have much interest in doing business with the federal government. There are exceptions, but even among these no one is counting on renewed federal timber sales.

Moreover, when fires burn on private, tribal or state-owned timberlands, there is no crisis visceral response, no gnashing of teeth and no hand wringing. Merchantable dead trees go to a mill and new green trees are planted. Applicable state and federal laws insure that soil, water quality and fish and wildlife habitat are protected throughout the salvage process. Where salvage is ecologically unwise or economically impossible, the landscape is left to recover on its own. Life goes on.

But as *Evergreen* waded more deeply into this controversy it became clear that we were gazing at the surface of a much deeper pond, one that certainly deserves to be more fully investigated if only because public funds are involved. But equally if not more important than the debate over whether federal timber should be salvaged is the complete absence of an discussion concerning the intellectual and cultural health of the institutions involved: the press, the public agencies, elected officials, Oregon State University, *Science*, forestry, even science in its broadest context. And the question that ought to be asked is, “If these institutions are as healthy as they should be, would the individual acts that led us to this point ever have occurred?”

As forester Bob Gustavson points out: “Science gives us knowledge and information. It is used by people to make decisions on how to achieve their objectives. Good science supports informed decision-making. More and more now, we find science that is political. The way a subject is studied and written is biased and seems intended to influence decisions toward a particular outcome.” Does this matter? We think it



Dave Skinner

Naturally-regenerated seedlings are doing well on this “micro-site” created by a log purposefully felled by salvage loggers on the Sula State Forest in the French Basin near Sula, Montana. This area was part of a study conducted by Dr. Peter Kolb after the Bitterroot fires of 2000. His objective was to “see what sort of impact salvage would have on the natural re-vegetation and recovery of those sites.” On state lands, the salvage was conducted the winter of 2000-2001 and, despite thin snow cover and some muddy work in the early spring, after three years, Kolb’s research team found “no difference in natural vegetation recovery between salvaged and unsalvaged plots.”



Jim Petersen

This ponderosa pine thinning is west of Flagstaff, Arizona, just outside the boundary of the Fort Valley Experimental Station. The logger reported that the stand was so dense on the day he started he had to use the cab lights on his harvesting machine. By noon, he heard birds calling for the first time, and by the next morning, deer were following behind his machine, eating the moss from felled tree limbs. While these thinnings do wonders for forests and wildlife, few log markets remain in the Southwest, a direct result of the litigation-driven collapse of the federal timber sale program.

should. Moreover, we believe all the institutions involved in this brouhaha have a shared basic mission to provide information, investigate and disseminate new knowledge, make sound decisions based on that information, and train people how to handle information effectively and, dare we say, honestly. As our world becomes more complex, handling information effectively and honestly becomes an imperative, not an option.

Postscript

The Gang of Nine finally got their day in court in the August 4 edition of *Science*, eight months after they first requested equal access to the journal's

pages. They used their 29.5 column inches of space (*Donato-Law* got 69.75 inches to rebut their rebuttal) to systematically critique the study, just as they did in their January 4, 2006 "Comments on the Donato et al Paper." They again pointed out that much is already known about Siskiyou vegetation ecology and the challenges associated with both natural and planted reforestation in southern Oregon's Klamath province—and that the Forest Service had made generous use of this research when it laid out its plan for salvage and reforestation following the Biscuit Fire.

In their rebuttal to the Gang of Nine rebuttal, *Donato-Law* failed to acknowledge or correct any of the

sampling errors uncovered by Dr. Baird in his analysis and critique of their study. Once again, the writers seemed bent on simplifying both active management and the often counter-intuitive nature of southern Oregon forest ecology, complexities described and measured in numerous vastly more authoritative studies dating back at least two decades. And they again sought to minimize the damage done by their report, suggesting that the Gang of Nine were guilty of a disproportionate response to their work. "A short-format paper such as ours is not intended to review or explore every angle but to present key data that will stimulate discussion and further research," they wrote.



Dave Skinner

A naturally-germinated ponderosa pine with a new lodgepole germinant in the Bitterroot National Forest on the Laird/Warm Springs creek divide shows how ponderosa seedlings require mineral soil for best results. Dr. Peter Kolb showed *Evergreen* many cases of successful germination on cooked-bare patches, in skidder ruts (on salvaged areas only, of course) and along log lines where down logs had burned partially or completely.



Jim Petersen

This larch and pine stand on Salish-Kootenai timberland south of Polson, Montana has been thinned to promote tree growth, natural regeneration and wildlife habitat, while also providing a source of revenue for tribal projects, including the tribe's college at Pablo. Radical environmentalists oppose such thinnings in federally-owned forests. Court rulings have so disheartened Forest Service and Bureau of Land Management managers that few such thinnings are now being proposed in diseased and dying federal forests that would benefit from treatment.

Indeed. But we are left to wonder how often *Donato-Law* will be cited in legal briefs filed by lawyers seeking to block publicly popular salvage and restoration work; or how long it will take Oregon State University to repair the damage done, not just to its own reputation, but to decades of research in the Klamath province.

“Perhaps one of the most significant but unheralded outcomes of all of this is that it fired up a bunch of dueling statisticians and got them excited for 15 minutes before they sank back into their cubicles,” Gang of Nine scientist, Dr. Robert Powers wrote in an August 3 email note to colleagues. Dr. Powers is Senior

Scientist and Program Manager for Ecology & Management of Western Forests Influenced by Mediterranean Climate, a research program housed at the Pacific Southwest Research Station in Redding, California.

“Their argument on how best to analyze the same data set was mildly interesting, but most of them missed the larger point of whether or not brief findings from a limited situation truly carry any cosmic meaning,” Dr. Powers observed. “I didn’t realize how much fun statisticians were to watch, to which our Station statistician, Jim Baldwin said: ‘If you want fun, you should watch when Bayesians and Frequentists argue. Now that’s fun!’ “

We know something about Bayesian statistics, having just last month interviewed Dr. Edwin Green, the Rutgers University biometrician who, in 1991, used Bayesian methodology to dismantle the U.S. Fish & Wildlife Service’s 1990 Status Review of the Northern Spotted Owl, the report on which the June 26, 1990 owl listing decision was based. Fearing academic and government reprisal, a much younger Dr. Green regretfully withdrew his stinging critique the day before it was to be made public. We have a copy of the report—and Dr. Green’s permission to publish it at our leisure—but that is a story for another time.

The Evergreen Foundation: Exploring the art and science of forestry

The Evergreen Foundation is a non-profit forestry research and educational organization dedicated to the advancement of science-based forestry and forest policy. To this end, we publish *Evergreen*, a periodic journal designed to keep Foundation members and others abreast of issues and events impacting forestry, forest communities and the forest products industry.

In our research, writing and publishing activities, we work closely with forest ecologists, silviculturists, soil scientists, geneticists, botanists, hydrologists, fish and wildlife biologists, historians, economists, engineers, chemists, private landowners and state and federal agencies responsible for managing and protecting the nation's publicly owned forest resources.

All statistical information appearing in *Evergreen* is taken from publicly supported federal and state forest databases in place since the

1950s. Industry information is also used, but only when it can be

independently verified.

All *Evergreen* manuscripts are reviewed before publication to ensure their accuracy and completeness. Reviewers include those interviewed as well as scientists, economists and others who are familiar with the subject matter. While not a peer review, this rigorous process makes for strong, fact-based presentations on which the Evergreen Foundation stakes its reputation.

Evergreen was founded in 1986. Initial funding came from a small group of southern Oregon lumber companies interested in promoting wider citizen involvement in the federal government's congressionally mandated forest planning process. In the years since its founding, *Evergreen* has assumed a much wider role, providing public forums for scientists, policymakers, landowners, federal and state resource managers and community leaders across the nation.

Support for our educational mission comes from Foundation members and other public and private sector organizations that share our commitment to science-based

forestry. We also generate revenue from reprint sales and from "Our Daily Wood," a hand-finished four pound wood block that is the volumetric equivalent of the amount of wood fiber consumed every 24 hours by each person on the Earth.

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For more information concerning our work, contact Kathleen Petersen, Development Director, The Evergreen Foundation, P.O. Box 1290, Bigfork, MT 59911.

The September 1967 Sundance Fire, on northern Idaho's Priest River Divide, incinerated more than 50,000 acres of old growth hemlock, fir, cedar and pine. At its worst, the blaze was releasing 500 million BTU's of energy every second, the equivalent of a 20-kiloton nuclear explosion every two minutes. But quick salvage and replanting work by the Forest Service, Idaho Department of Forestry and neighboring private landowners—actions forbidden in today's litigious world—helped speed the recovery. This 1996 photo looks northward, up the Pack River drainage toward Chimney Rock, seen in the distance.

Jim Petersen

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