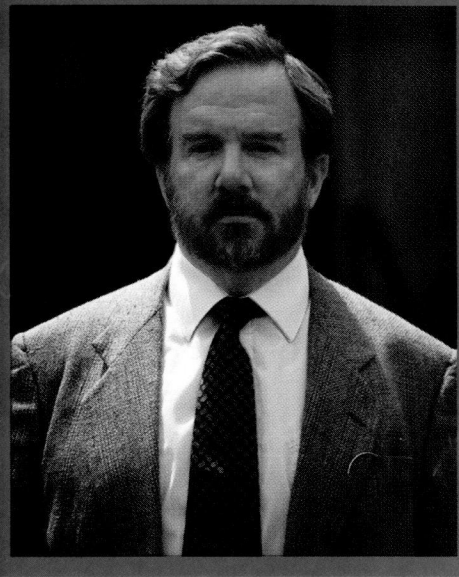


IN THIS ISSUE



Dr. Chad Oliver

Much has been written and said about ecosystem forest management, and the essential need to preserve biological diversity.

Preserving biological diversity is the cornerstone of the President's proposal for managing federal forest lands in the Pacific Northwest, which is the focal point of this issue of *Evergreen*.

Our own Evergreen Foundation files contain hundreds of articles written by forest scientists, forest land managers, loggers and environmentalists, and other deep thinkers, all proposing methods for managing ecosystems in ways that protect biological diversity.

The Forest Service calls its method "new perspectives in forestry" or simply, "new forestry."

Old growth guru, Dr. Jerry Franklin, calls his method "a kinder and gentler forestry."

The cosmic deep breathers talk about saving the planet, and the loggers turned philosophers declare they are the only true environmentalists.

The more pragmatic use a two-word, catch-all phrase that appears to have as many meanings as it has proponents: Adaptive management.

Boiled down to the basics, all of these discussions, with their various languages and labels, appear to rest on a single idea whose time has come: Land management practices need to more closely approximate natural disturbances, because disturbances caused by wind, wildfire, disease, and management activity are the shapers of structural diversity in forests.

Structural diversity and habitat diversity are one in the same, more or less, and some scientists believe there is greater diversity in old growth forests than exists in younger forests.

It is also assumed that if you have more structural diversity in your forest than there is in the forest next door, you have more habitat diversity, which means your forest can accommodate more different wildlife species than the forest next door.

How much more diversity you have in your forest is an open question because no one has figured out how to measure biological diversity, and no one knows how much is needed.

We know nature has been sculpting structurally diverse forests for eons. What is not known is whether scientists can replicate or improve on nature's artistry, by first observing natural processes, then mimicking them, using a variety of techniques tested and proven in small-scale experiments.

Whether science should even be engaged in such an ambitious undertak-

ing... tinkering with nature, as some would say... is also an open question, for reasons we will discuss in a moment.

What does need to be said here and now is that one of the few things forest ecologists and wildlife biologists agree on is that not all forests, including old growth forests, can be all things to all creatures all of the time. Different wildlife species apparently use different habitats at different times in their lives, and even at different times during each day of their lives.

Waiting For Perfect Knowledge

This truth about nature can also be stated in human terms. Put simply, we cannot have all of the things we want from forests, in all forests, on all acres, all of the time. Forests do not grow this way naturally or by the hand of man.

How forests grow, and what is truly possible in a management sense, is something we are just now beginning to understand. Clearly, we are not all interpreting what we are learning in the same way, which is why we are caught up in a bitter debate over how best to manage forests, especially federal forests.

Buried deep inside this debate is a "how to" question that is much on the minds of forest scientists and wildlife biologists.

The question is, "How do we preserve the biological diversity that exists in old growth forests?"

A second question, frequently asked in the same breath, is "How do we get more biological diversity?"

These questions most frequently take the form of back and forth discussions about the risks associated with tinkering with nature, versus the risks associated with waiting for nature to change biological diversity in forests long ago altered by people.

On one side are scientists who believe the risks associated with tinkering with nature are simply too great, especially in biologically rich old growth forests.

On the other side are scientists who believe the risk of massive wildfire is greater than the risk associated when tinkering with nature, especially in biologically rich old growth forests.

Among those who fear such a catastrophe is Dr. Chad Oliver, a professor of silviculture at the University of Washington in Seattle. In this issue of *Evergreen*, we publish an extensive interview with Dr. Oliver in which he talks about his views on ecosystem management.

Put simply, Dr. Oliver believes silvicultural tools... various harvest and thinning methods... can be used to speed the natural creation of structural diversity in forests.

If managing this region's forests were left to Dr. Oliver, we would use these silvicultural tools to mimic the kinds of natural disturbances that add up to habitat diversity.

As we have said, not all scientists agree with Dr. Oliver. Most notably, those who worked on the President's proposal for managing this region's federal forests, seem much less enthusiastic about the potential for good that might result from human intervention in forests. They believe the risk is simply too great, that waiting for nature to create a different habitat is a safer bet.

Since the spotted owl-old growth debate erupted in the 1980's, the chief spokesman for this "safer bet" has been Dr. Jack Ward Thomas, who chaired the federal government's Interagency Spotted Owl Management Team, and was heavily involved in developing the President's plan for managing the region's federal forests.

Dr. Thomas summed up his views in a January, 1991 *Evergreen* interview titled, "The Web Of Life: There Is No Final Truth." Here is some of what he said.

"We are finding owls in second growth timber stands which contain residual old growth components, and I believe there is a damn good chance we can replicate

these conditions in managed forests, but I can't prove it yet, and I am unwilling to bet the farm on something I can't prove."

Dr. Oliver does not want to bet the farm either, which is why he now argues that the risk of natural catastrophe is greater than the risk associated with using silvicultural tools to protect what we have, while speeding the natural creation of habitat diversity in forests that are not yet old.

We asked two respected forest scientists to comment on Dr. Oliver's assertions, and on his hands-on approach to managing this region's forest ecosystems.

Dr. John Tappenier is a forest ecologist. He divides his time between a teaching position in the Oregon State University College of Forestry, and the Bureau Of Land Management's cooperative research unit, which is located on OSU's Corvallis campus.

Dr. James Agee is a professor of forest ecology and chairman of the Division of Forest Resources Management, College of Forest Resources, at the University of Washington in Seattle.

Drs. Tappenier and Agee are well known and well respected in scientific circles, and both have directed research projects designed to test new techniques for managing the region's forests. But neither scientist was directly involved in crafting the President's proposal, or the federal government's spotted owl management plan.

"Yes, I think we can do a lot with silviculture," Dr. Tappenier told us. "There is good evidence we can create the habitat structures we think owls need. What Dr. Oliver is suggesting is historically and scientifically sound. We don't have a lot of local experience with producing multi-stored forest stands, but we need to find out how to do it, and the only way to find out is to do some experiments in different areas. Dr. Oliver is simply suggesting some of the kinds of silvicultural experiments we should be doing."

Dr. Tappenier also told us there is growing support for Dr. Oliver's views, particularly concerning thinning operations in young, overstocked forests that exhibit few of the structural characteristics associated with older forests. Perhaps one-third of the region's forests fall into this category.

"People are coming around to the idea we don't have much to lose in thinning young stands, up to 50 years old," Dr. Tappenier said. "Personally, I think we could thin stands as old as 120 to 150 years. We have many 80-year-old stands that are a long way from containing old growth structures."

Even so, Dr. Tappenier concedes there may be limitations to how much science can do. "We need to be careful when we talk about what silviculture can do for specific species," he explained. "The 'build it and they will come' idea has yet to be proven."

So should we wait until we know more, we asked Dr. Tappenier.

"Only if we are willing to accept the consequences, including the increasing risk of natural catastrophe," he told us. "If we had waited for perfect knowledge before replanting the Tillamook Burn, we would still be waiting, and the Tillamook Forest that exists today would never have been planted."

Dr. Agee agrees with the need to move forward quickly on some experiments in adaptive management, though he concedes determining which forest structures are best for specific wildlife species may be difficult.

"I think adaptive management can work, but there is a lack of confidence in what can be done, and I don't believe we will overcome it until we can look back on some successful experiments," he said.

Agee, who is a fire ecologist, also believes the President's plan should have considered a wider range of alternatives, reflecting the role wildfire has played in shaping this region's forest ecosystems.

His views were perhaps best expressed in "Fire History of Douglas-Fir forests in the Pacific Northwest," a paper he wrote in 1990 for a Forest Service publication.

"The historic role of fire in Pacific Northwest forests is critical in understanding how these Douglas-fir forests developed, and to what extent they provide habitat for wildlife... Without fire, the old growth forests of the Pacific Northwest would have significantly different species composition and structure, and would likely function quite differently as wildlife habitat."

Agee also noted that, while historic logging and slash burning regimes have been intended to imitate natural disturbance, they have not been the functional equivalent of natural fire, which frequently leaves dead snags and other debris, and rarely disturbs soils as much as logging does.

Even so, he wrote, "Eventually we must come to grips with the realization that these... (old growth forests)... will change, even with complete protection from disturbance... In the long run, we will be forced to recognize a more dynamic management strategy, sensitive not only to historic fire regimes, but also

to the new fire regimes expected with future climate change."

We have never devoted so much space to a single story as we have our interview with Dr. Oliver, but we believe his ideas merit serious discussion, and we believe our readers need to know there are many



This forest was thinned in 1976

scientifically-sound approaches to protecting biodiversity in Pacific Northwest forests.

Moreover, it is our view the federal government's Ecosystem Management Assessment Team should have developed a wider range of alternatives for the President's consideration. They should have included Dr. Oliver's ideas and those of other scientists who believe a hands-on approach poses less risk to forest ecosystems than the hands-off approach the President's scientists endorse.

Even more disturbing is this: We know several respected forest scientists in the Pacific Northwest who are afraid to speak out in opposition to what the President's scientists have proposed, for fear of reprisal, and a loss of federal funding important to their research. This ought to scare the daylights out of all who cherish academic freedom.

A "before and after" photo essay accompanies our interview with Dr. Oliver. Our "before" photographs are of timber stands that need thinning to promote desired biological diversity; and our "after" pictures show what forests might look like after some of the silvicultural treatments Dr. Oliver describes in his interview. The visible contrast between these before and after photographs is stark and leaves no doubt silviculture should be used to speed natural creation of structural diversity in forests.

Our photographs were taken last month on the Siskiyou National Forest in southwest Oregon, and we are indebted to our old friend Mel Greenup for being our tour guide and helping write the explanations that go with each photograph. Mel was the silviculturist on the Siskiyou for many years, and he knows this forest as well as anyone.

The Siskiyou has been the subject of many Congressional hearings over the years, and remains a focal point of preservationist attempts to undermine public confidence in forestry. Why or how such a beautiful forest could be the scene of so much angst is a mystery to us. After 40 years of harvesting, it remains a place of timeless beauty, with a bounty large enough for all to share.

Other stories in this issue deal with new information concerning how owls are using private industrial forest lands, a story detailing the national implications of the President's proposal, an article describing how environmentalists and forest industry people in southern Oregon are forging new territory in

ecosystem management with a grass roots proposal called "The Applegate Project," and our back page opinion piece, which discusses the appalling behavior of certain members of the President's ecosystem assessment team.

We regret there is still not much to report concerning implementation of the President's proposal for protecting this region's forest ecosystems.

We can report that the Forest Service has submitted the President's plan to Seattle federal district court judge, William Dwyer, as its supplemental environmental impact statement to the regional planning guide. Judge Dwyer is not expected to rule on the 1,500-page proposal until January or February, 1994.

Whether the President's proposed 1.2 billion board foot annual timber sale target can be met is not known. What will happen to so-called volume under contract, timber the federal government has already sold to Northwest mills, is also unknown. For now, Judge Dwyer's order blocking its harvest is still in force.

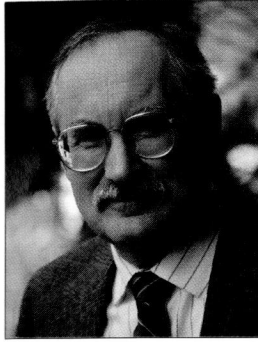
Within the forest products industry, there is great disappointment over the Clinton Administration's decision to go back on its promise to ask Judge Dwyer to lift this injunction, though no one can say for sure how the judge would have

ruled on such a request.

There is also disappointment over the Administration's decision not to legislate its plan. Such a law would have made it more difficult for groups to file frivolous lawsuits based solely on questions of legal procedure. As things now stand, many say the President's plan is little more than a lawyer full employment act. Beyond the courts, there is wide disagreement over the economic impacts of what the President has proposed. As is always the case when dealing with the federal government, the devil is in the details.

At this writing, it appears unlikely any federal timber will be offered for sale before late 1994. Moreover, it appears unlikely Congress will intervene, at least not this fall. Earlier, there was speculation Congress might craft its own legislative solution after the Labor Day recess, as it did in 1989.

The U.S. Fish & Wildlife Service has asked the Forest Service to delay another 96 timber sales, while a search is begun for marbled murrelets. The murrelet is a tiny sea bird that is thought to burrow in the moss in tall trees along the coast in Oregon, Washington and northern California. How this new bit of biological diversity will affect the President's plan for the Pacific Northwest is not known. What is known is that hundreds of thousands of murrelets



Dr. Jerry Franklin

already live in Alaska, and more still live in British Columbia. *So What!*

Separately, the Oregon Natural Resources Council has petitioned the USF&WS to list as endangered 83 different kinds of snails that live in forests. ONRC says its petition is designed to show the President's plan is more politics than science.

Meanwhile, the Clinton Administration is trying to convince the Sierra Club Legal Defense Fund to allow the harvest of several timber sales enjoined by Judge Dwyer. In exchange for SDLDF's blessing, the Administration has reportedly agreed to oppose efforts to restrict timber sale appeals.

Now there is something new to contend with. It is called "the 4-D rule," and it concerns a section in the Endangered Species Act that gives the federal government a say in how private forest lands are managed where habitat for threatened species is a concern.

What powers the government holds is a question lawyers seem destined to test in a court case with wide ranging constitutional implications. For now, the 4-D rule might best be described as a bargaining chip in spotted owl habitat discussions involving the federal government and the nation's biggest forest landowners. We may soon learn where the Clinton Administration believes the limits of government end and the rights of private property owners begin.

The dizzying pace of all this surely adds to the perception this region's forests are coming apart at the seams. Reprinted nearby, for whatever calming influence they may provide, are some facts concerning the nation's forests. The source here is the U.S. Forest Service, which has been monitoring activity on all U.S. forest ownerships for more than 40 years.

Onward we go, in the hope good science can someday demonstrate to policy makers that it is possible to protect biological diversity without dismantling this region's forest economy ■

— Jim Petersen, Editor

Some Facts About America's Forests

There is a widely held perception the nation's forests are in decline, a result of too much harvesting and general mismanagement.

However, a close review of two important U.S. Forest Service reports suggest America's forests are in far better condition than many believe. The reports, from which the facts below were taken, include the agency's 1992 RPA Assessment, and a 1991 report titled *The Condition and Trends of U.S. Forests*.

- The nation's forest land area is still about two-thirds the size it was in 1600. This in spite of the conversion of 370 million acres of forest land to other uses, principally agriculture.

Add to this the enormous harvest that has been necessary to build this nation's homes, warm its citizens and fuel its early-day engines.

To this total, add all of the losses to forest fires, diseases and insect infestations. Even after all of this, the nation still has two-thirds as much forest land as was here when the Pilgrims landed.

- More trees are growing in America's forests today than at any time since the early 1900's.

- In 1900, forest growth rates were a fraction of harvest. Today, annual forest growth exceeds harvest by 37%.

- Net annual growth has increased 62% since 1952, and growth per acre has increased 71%.

- Nationally, standing timber volume per acre in U.S. forests is 30% greater than in 1952.

- Annual growth in national forests now exceeds harvest by more than 55%.

- 47% of the nation's standing softwood sawtimber inventory is located in federally-owned national forests.

- 70% of America's national forest land base is in land use categories where timber production is forbidden. 30% remains open to varying levels of harvest activity.

- There are about 6.2 million acres of old growth timber standing in national forests in Oregon and Washington. Of these 6.2 million acres, 3.2 million are set aside in areas where harvesting is forbidden. Another one million acres of old growth is standing in national parks and wilderness areas where harvesting is also forbidden.

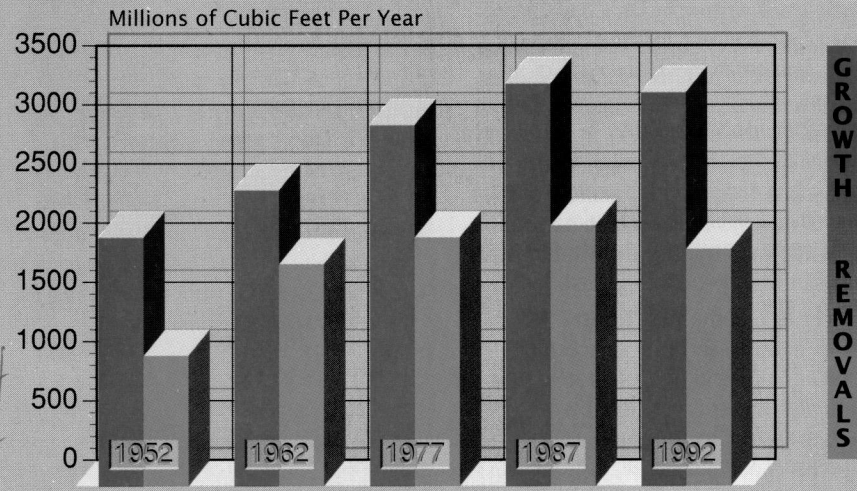
- 54% of all national forest land in Oregon and Washington... some 10.7 million acres... includes mature timber stands that have never been harvested. These acres are a focal point in the President's plan. The timber growing here does not yet meet the scientific definition of old growth, but much of it soon will if it is allowed to grow older.

Thinning these mature forest stands, as suggested by Dr. Chad Oliver in our cover story, would speed natural creation of more diverse habitat structures important to many plants and animals living in the region's forests.

The Evergreen Foundation has published a more complete review of these and other forest facts. Reprints of *The Great Forest Debate* can be purchased by calling or writing the Foundation.

Still a debate over volume

Timber Growth & Harvest



Growth in National Forests has exceeded harvest every year since 1952, and annual growth now exceeds harvest by more than 60%. In 1991, about 300,000 National Forest acres were harvested. Only about 30% of the total National Forest system is open to harvesting, and the 300,000 harvested in 1991 equal one half of one per cent of the National Forest harvest land base.

Sources: New Perspectives, 1992; Forest Statistics, 1987

These are trees, not forests



After a shelterwood harvest on the Siskiyou National Forest

What about roads, landslides, sediment.....?