



# ***Sky Islands Forester***

Society of American Foresters  
*Growing better all the time*

May 19, 2008

**NAU Student\*\*New Mexico\*\* Northern Arizona\*\* Palo Verde\*\*Southern Arizona\*\* NMHU Student Chapters**

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## **Message from the Chair**

*Mike Williams SWSAF Chair –May 2008*

Spring is well under way, field season is here, fire season is off to a brisk start across the Southwest, and Southwestern foresters are just plain busy! Thanks to those who came to all or part of our SWSAF Spring Meeting in Albuquerque on April 21-22. If you took in some of the New World Biomass Conference workshop on the first day, you heard some thought-provoking ideas about accomplishments, opportunities and challenges facing future woody biomass utilization. SAF members were well-represented among the organizers, speakers and attendees of that workshop. One of the really important things we did at our Spring Business Meeting that evening was to recognize some SWSAF members for their accomplishments and contributions to SAF and the profession of forestry over the past several years. We celebrated the achievements of Molly Pitts as Young Forester of the Year, Craig Wilcox as Forester of the Year, Cheryl Miller as Outstanding Forestry Communicator of the Year, and Ray Wrobley as Forest Manager of the Year. Our award for Outstanding Contribution to Forestry was presented to Pete Fulé. Congratulations to each of these folks for the well-deserved honors.

Elsewhere in this newsletter, you will find a report from our SAF Council member Rod Brevig. I appreciated Rod joining us for the Spring Meeting and sharing what's happening with Council and at the national level of SAF. Thanks especially to Alan Kelso, East Zone Silviculturist on the Cibola National Forest, for the excellent field trip to the Ojo Peak fire area on the Mountainair Ranger District. There were about 16 of us who took advantage of a beautiful spring day to be in the woods and have some good dialogue about forestry and fuels management practices as they intersect with fire ecology. If looking at impacts of the Ojo Peak Fire from November of last year on the ground weren't enough, the air tankers passing over us that afternoon as they worked the Trigo Fire just to the north of us served to reinforce the need to accelerate forest management.



**Spring Meeting Fieldtrip on April 22: Alan Kelso tells the story of the Ojo Fire in the Manzano Mountains east of Mountainair, NM. (Photo contributed by Alan Kelso)**

Your SWSAF Executive Committee has met monthly by phone since the beginning of the year to carry out the business of the Section. One accomplishment I'm especially proud of was the Committee's decision to offer several scholarships to our members to attend the national SAF Leadership Academy that just took place April 26-29 back in Maryland. Three of our members were awarded a \$500 scholarship each to take part in this leadership training opportunity. Ben DeBlois (Northern AZ Chapter) Jessica Ouzts (New Mexico Chapter) and Mary Stuever (SWSAF Executive Committee) have all recently returned from the Academy with ideas and tools to become leaders and a commitment to seek and serve in SAF leadership positions. We hope to provide more of this kind of financial support from SWSAF to help develop our future leaders.

One annual challenge we're facing right now is membership renewal. As of April 30, 58 members within our Southwestern SAF have not renewed their membership for 2008. We know that a few of these have transferred out to other SAF state societies due to job

transfers or other relocations, but most have not moved. The good news is that more than 332 members have taken care of paying their dues, and we appreciate that. If you've overlooked your dues statement, please know that we value your membership and participation in SAF and hope you'll take care of this soon. The membership roll is purged on July 1st. Our SWSAF membership goal for 2008 is 380 – just one more than the 379 members we had as of December 31, 2007. If each of us would invite just one forester who is not yet an SAF member to a chapter meeting or activity, then invite them to become a member, we'd far surpass our goal even if half of them decided not to join. How about giving it a try?

The National SAF Convention is in Reno, Nevada, on November 5-9 this year. This is closer geographically than the average national meeting is to us, and with a provocative theme like "Forestry in a Climate of Change". I hope you're saving the dates and planning to go. Many employers recognize the value that this annual meeting contributes toward professional development of their employees, and are willing to support some employees' attendance. So, start talking to your boss about it now – the results are usually better if you plan ahead.

What's on your mind about forestry in the Southwest, or anywhere else in this country for that matter? We'd like to know. Have an idea about a position on forest management we should be taking or a forestry policy we should be supporting or trying to change within SAF? I'm interested. Call me at 505-842-3240 or send an email with your thoughts to [mrwilliams01@fs.fed.us](mailto:mrwilliams01@fs.fed.us).

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## District IV Council Report –May 1, 2008

*Rod Brevig, District IV Council Representative*

### **SAF Council Meeting March 8-9, 2008**

This report covers the March council meeting where a number of items that I believe are of high interest to members of the SW SAF Section were discussed and acted upon.

**The SAF Headquarters property sale** continues to move forward. The potential buyer, Nation's Academy, is proceeding with the necessary work with the county on zoning and other issues. The relocation task group, headed by John Moser, reported that the group had met a number of times to consider options for the new location of the national office. Based on the criteria that council had provided, the task force recommended that the office be located in the Washington area (including DC, Maryland, and Northern Virginia). Council approved this recommendation. SAF will work with a commercial firm to look at suitable properties in this area.

**Insurance:** Michael Goergen reported on the work our insurance agent is doing related to supplemental insurance for chapter, state, division, and national

meeting field trips and other activities. It is very important that all SAF units identify and plan activities, not included in the national blanket policy, as far ahead as possible. Given some units' experiences, coverage can be low or even at no additional cost with adequate pre-planning and communication with the agent. One example is Oregon SAF, which you may want to contact for more information. The national office will develop a checklist for units to use to facilitate work with the agent. At this time, SAF will not buy a national supplemental insurance policy for field trips.

**Fellows Awards:** I know that there have been some concerns over the recognition of Fellows. Council agreed local units will be notified of elected Fellows and certificates for awards provided to those units so that there will be proper recognition of the new Fellows by their local unit. In addition, there will be a Fellows Breakfast at the 2008 SAF National Convention in Reno for those Fellows that can make it to the convention. This is a new activity and we hope that it provides a special event for our Fellows.

**Standard Minimum By-Laws:** Council approved the revisions to the standard minimum by-laws for SAF units. Units can adopt these minimums as they make changes to their by-laws. The biggest change is the addition of the option for electronic voting. The document can be found at:

<http://www.safnet.org/members/member-pw/leadertools.cfm>

**CFE Requirements:** We heard that there has been confusion and concerns about the new CFE process. Louise Murgia said there will be an article in April's *The Forestry Source* on the new requirements to award CFE credits, which should help answer questions for those who provide activities eligible for credits.

**Federal Employee Participation in Leadership Positions in SAF:** Michael Goergen reported on a letter sent to the Office of Government Ethics, signed by a number of professional societies, and a meeting that was held with people from the Government Ethics office. The bottom line is that there are different interpretations by federal agencies of the applications of the law, but the Office of Governmental Ethics cannot influence those opinions at the Departmental level. They said that the solution will have to lie with a change in the underlying statute. Michael Goergen will work with the other professional societies to try to develop a strategy for new legislation. For the complete copy of the letter, see [http://www.safnet.org/policyandpress/documents/ogehics\\_121707.pdf](http://www.safnet.org/policyandpress/documents/ogehics_121707.pdf)

**National Convention — November 5-9, 2008.** The theme is "Forestry in a Climate of Change" and it looks like it will be a terrific opportunity for SAF members to learn, network, and expand your professional knowledge and experiences. Please put it on your calendar. Registration is available now on the SAF website.

As always, please feel free to contact me at rbrevig@tax.idaho.gov or 208-334-7733 (wk) or 208-841-0033 (cell).

**Rod Brevig, CF/FCA**  
**District IV SAF Council Representative**  
**PO Box 36**  
**Boise ID 83722**

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## Southwestern SAF Awards

*Mike Williams SWSAF Chair –May 2008*

Five exceptional members of the Southwestern Society of American Foresters received awards for their accomplishments during the Society's Spring Meeting in Albuquerque on April 21.

**Molly Pitts – Young Forester of the Year** Molly has been an active member of SAF for the past 11 years, beginning with her Student Chapter days at Northern Arizona University and continuing with the Northern Arizona Chapter after graduation. She's currently Executive Director for the Northern Arizona Wood Products Association, a non-profit organization that promotes the value-added utilization of small-diameter wood. In 2006, Molly was appointed to the Arizona Governor's Forest Health Advisory Council and is now co-chair for the combined Forest Health Council. She has served as SWSAF Treasurer since 2007.

**Craig Wilcox – Forester of the Year.** Craig is currently a silviculturist for the Coronado National Forest, with past service as Forest Manager for the San Carlos Apache Tribe. He's been an active member of SAF for nearly 30 years, serving at the chapter and state society level, and has made many valuable contributions to the forestry profession. Craig currently serves as SWSAF Communications Committee Chair and editor of our outstanding SWSAF "Sky Islands Forester" newsletter. His leadership in southwestern forest restoration and commitment to communicating forestry to professionals, partners and members of the public alike demonstrate high dedication to the advancement of forestry.

**Pete Fulé – Outstanding Contribution to Forestry.** Pete Fulé is Associate Professor at Northern Arizona School of Forestry and Associate Director for Ecological Research with NAU's Ecological Restoration Institute. His research has focused on fire-adapted forests in the Southwest. He's published more than 50 peer-reviewed journal articles, and his work has advanced the understanding of wildland fire ecology and the use of fire as a tool for the ecological restoration of ponderosa pine forests. Pete's been active in the Southwestern SAF, most recently serving as Northern Arizona Chapter Chair in 2004.

**Ray Wrobley – Forest Manager of the Year.** Ray is a consulting forester and resource manager, founder and principal of Southwest Environmental Consultants, and

an active member of SAF for the past 40 years. Ray has actively represented the private sector and consulting forester perspectives in collaborative forest planning efforts throughout the Southwest, including the Four Corners Sustainable Partnership and the Greater Flagstaff Forest Partnership. Ray has been a leader in the forestry profession, having served as SAF's Northern Arizona Chapter Chair and Chair of the Four Corners Chapter of the Association of Consulting Foresters.

**Cheryl Miller – Communicator of the Year.** Cheryl Miller is the Research and Education Coordinator for the Centennial Forest, which is Northern Arizona University's 47,000-acre research and education forest. She graduated with a BS from the NAU School of Forestry and has worked for the Centennial Forest since its inception in 2000. As we were looking for ideas for funding our research and education goal for the Forest, Cheryl came up with the idea of getting students interested in forestry and natural resource management at a younger age. She started the Junior Forester Academy (for kids 9-16) four years ago as the first of our summer education programs and has since developed the Senior Forester Academy, Outdoor Leadership Academy, and other programs. More than 100 kids, have participated from as far away as Massachusetts and including underserved populations (for which she raises scholarship money to cover their costs) attend each summer.



Junior Forester Academy students practice orienteering at the 2007 camp. (Photo contributed by Maureen McGuire)

Cheryl also promotes forestry as a profession with visits to high school groups, science fairs, and professional environmental education organizations. Check out the website at <http://www.for.nau.edu/CentennialForest/> to see some photos and get a better idea of the types of activities that Cheryl does to promote our profession.

Awards were not given out this year for the **Outstanding Contribution to Forestry from Outside the Profession** or for the **Field Forester of the Year**. Be thinking about your nominations for next year. There certainly is a lot of good work going on out there that needs to get recognized!

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## Chapter News

### New Mexico Chapter and NMHU Student Chapter

Chair – Melissa Zaksek

Chair-elect – Kent Reid

Secretary-Treasurer – Todd Haines

The NM Chapter kicked off the year with a business meeting on February 22 in Albuquerque. At the meeting, members planned for the year ahead and covered regular business items. Activities for the upcoming summer and fall include participation in the 2008 NM Forestry Camp, a field trip to the Cibola National Forest's Stewardship Contract site in the Zuni Mountains, and participation in the NM Forest and Watershed Health Forum. The groups next scheduled event is a brown-bag lunch (co-hosted with the Society for Range Management, American Fisheries Society, and The Wildlife Society) with the new Southwestern Regional Forester, Corbin Newman, on Friday, May 30, in the Forest Service's Southwestern Regional Office. The Chapter is also looking forward to engaging with the national office in planning for the 2010 National SAF Meeting in Albuquerque. For more information on the NM Chapter, please contact the Chapter Chair Melissa Zaksek at [mzaksek@fs.fed.us](mailto:mzaksek@fs.fed.us) or Chair-Elect Kent Reid at [rkreid@nmhu.edu](mailto:rkreid@nmhu.edu).

Chuck Hagerdon, Fellow and longtime SWSAF member, retired for the Forest Service in April. He was the District Ranger on the Mt. Taylor Ranger District. I hear the elk are running scared. We look forward to many more years of Chuck leading our AMPF-SWSAF Biennial Reunions. Good luck and Marcia!

### Southern Arizona Chapter

Chapter Chair/Chair-Elect – Bill Lewis

Past-Chair – Martin Devere, CF

Secretary/Treasurer – Paul Shepard

Longtime member Craig Giffen passed away this winter. He had been member for 57 years. The Southern AZ Chapter met in February and April for lunch and a speaker. There next meeting will be the third Thursday in September. Contact Bill Lewis ([wmlewis@aol.com](mailto:wmlewis@aol.com)) for information.

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### Northern Arizona Chapter

Chapter Chair – James Allen

The Northern Arizona Chapter held regular monthly meetings from January through May, and is now entering its summer hiatus. While most of the meetings were held in the evening at our usual location in Flagstaff, a total of 32 people traveled to Eagar, Arizona, for the April meeting.

The Eagar meeting began with lunch, during which we were given an update on section activities by SWSAF

chair Mike Williams and a presentation on the proposed bioenergy plant in Eagar by Bill Greenwood, the Town Manager and President of the Northern Arizona Wood Products Association. The group then loaded up into vehicles and spent the afternoon visiting two forest products operations located just outside of town.



Northern AZ Chapter tour Cheyenne Log Homes and their pressure treating borate operation.

Our first stop was at the Roundhead Valley Wholesale Lumber operation, where co-owner Terry Reidhead gave the group a tour of the sawmill and woodyard. Terry's operation uses logs that come primarily from surrounding Forest Service land, where it is being harvested under a forest stewardship contract. We then moved on to tour Cheyenne Log Homes, where we were hosted by co-owner Randy Nicoll. A highlight of the Cheyenne Log Homes tour was the opportunity to learn about Randy's approach to pressure treating some of the wood used in his homes, which uses a more eco-friendly approach based on borate, rather than more typical chemicals such as chromated copper arsenate (CCA). We all have Molly Pitts to thank for organizing this meeting for us, which was so successful that we hope to hold meetings in the White Mountain area on a more regular basis.



Chapter Chair James Allen presents plaque to Ben De Bois for his service to the Northern AZ Chapter

While it has been a good year for the Northern Arizona Chapter so far, it is with sadness that we said goodbye to our Secretary Treasurer, Ben De Blois, at our May meeting. Ben is completing his Master of Forestry degree at NAU this spring and will soon be leaving us for a job with the USDA Forest Service on the Lassen National Forest in California. Ben was recognized with a plaque for the great job he did for our chapter, most notably for all his help with meeting logistics, newsletter preparation and management of our finances.

**Northern Arizona University Student Chapter**  
NAU Forestry Club President – Elysia Zarate  
Faculty Representative – Denver Hospodarsky  
[denver.hospodarsky@nau.edu](mailto:denver.hospodarsky@nau.edu)



NAU Logging Sports Team with awards; from left to right John Hockersmith, Elysia Zarate, Audrey Martin and Andrew Nordquist.

For the first time in decades, the Northern Arizona Logger Sports Team competed. Four students traveled to Missoula, Montana, to participate in a four-day Associated Western Forestry Clubs Conclave.



Andrew Nordquist competed in the vertical hard chop (Photos contributed by Elysia Zarate)

The team left with many connections that will be beneficial in the struggle to return to what it once was, a powerhouse team. Not to mention, a couple event placing awards and two brand new chopping axes! The team is already in planning stages for next year's competitions and welcomes any support and/or any individuals who would like to come and share their knowledge and past memories of the Lumberjack Logger Sports.

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## Ft. Valley Forest Experimental Station Centennial Celebration Planned for August

*JJ Smith, Forest Manager, NAU Centennial Forest*

In August 1908, three men on horseback crossed the flooding Rio de Flag north of Flagstaff to inspect a ponderosa pine stand recommended to them by Coconino National Forest Supervisor Frank Pooler. A half-mile beyond the stream, one of the men, Raphael Zon, made the famous (at least locally) proclamation, "Here we shall plant the tree of research." Zon, Chief of Silvics for the newly formed U.S. Forest Service, was here with another of the riders, a young forester from Oregon by the name of Gus Pearson, to establish the nation's first forest experiment station.



Gus Pearson takes weather measurements at Ft. Valley. Photo courtesy of NAU Cline Library, Colorado Plateau Digital Archives.

Earlier that year, the Riordan brothers, owners of the Flagstaff Lumber and Timber Company, had suggested to Chief Forester Gifford Pinchot that northern Arizona would be a prime location for one of the new experiment stations that were being planned. Harvested stands in this area were exhibiting very low tree regeneration, so an important research question had already been posed.

Ponderosa pine regeneration remained an important research topic for Pearson, the station's director, and a

Ft. Valley researcher for over three decades. Recommendations for planting and tree nursery techniques stemming from Ft. Valley regeneration studies guided forest management in the Southwest for decades. Research conducted by Pearson and others in those early days also included vegetation distribution relationships with meteorological factors, expanding on C. Hart Merriam's famous life zones theory, and the potential for naval stores production from ponderosa pine.

By 1958, the station's 50<sup>th</sup> anniversary, Ft. Valley personnel had published over 100 articles. Some of these studies, such as the 1942 Journal of Forestry article on improvement selection cutting, shifted the forest management paradigm throughout the Southwest, and became nationally influential. Pearson's Management of Ponderosa Pine in the Southwest continues to be an important resource for researchers and managers working in ponderosa ecosystems.

The establishment of experiments in and around the Ft. Valley Experimental Forest Station is as important to early 21st century forestry in the Southwest as it was in the previous century. Research in the 1990s by Rocky Mountain Research Station and Northern Arizona University scientists, including W.W. Covington, has influenced yet another shift in Southwest forest management strategies. Ecological Restoration of ponderosa pine ecosystems has become broadly accepted as a cornerstone management technique and is being applied throughout the region.

Today, the Gus Pearson Natural Area, adjacent to the station, has become a focus for cutting edge research in soil biogeochemistry, forest understory ecology, forest health, and fire ecology. The Experimental Station itself is listed in the National Register of Historic Places, and the old buildings are being slowly restored. Educators and community members, who recognized the station's cultural and historical significance, have been instrumental in preserving its legacy. The value of this regional landmark for, among other things, science and environmental education, is slowly being discovered by the Flagstaff community.

As foresters in the southwestern U.S., we are a part of Ft. Valley's legacy, and now have the opportunity to be involved with its 100-year anniversary celebration to be held August 7-9, 2008. Conference activities will include music, guest speakers, field trips, Dutch-oven cooking and more. The Southwestern Society of American Foresters will be participating, and there is plenty of room for others to become involved with the conference events, or to just come for the fun. For more information on Ft. Valley and the 100-year celebration visit: <http://www.fs.fed.us/rm/centuryofresearch/>

## **New Mexico Forestry and Climate Change Workshop – November 2008**

*Sponsored by the Forest Guild and New Mexico Forestry and Watershed Restoration Institute and the NM SAF Chapter*

**Statement of the Problem** - Climate change and forests are inextricably linked in New Mexico. The state's wide-ranging forested ecosystems are already experiencing climate change effects and will likely continue to do so at greater levels in terms of extreme wildfire risk, altered patterns of precipitation, invasive pests, and species migration.

Managers need knowledge and tools so that forests may adapt to a changing climate. This is critical for maintenance of species diversity, water quality, carbon sequestration capacity, and recreational opportunities while also maintaining rural economies and renewable sources for energy and wood products. However, little forest adaptation knowledge exists in a usable form for on-the-ground managers. While climate change projects including research into ecological impacts exist in New Mexico, much of the science is still conceptual, in process, or at a scale too large to be useful to on-the-ground managers. The best available climate change science needs to be brought to these managers in a way they can apply to their work to help New Mexico's forested ecosystems adapt in the face of climate change.

**Program Description** The Forest Guild is developing a workshop on forestry and climate change, scheduled for mid-November 2008, which will provide foresters and other natural resource practitioners/managers in New Mexico with information that will enable them to incorporate climate change and its projected impacts into their forest management decision making. Partners that have already agreed to collaborate on this workshop include New Mexico Forest and Watershed Restoration Institute (NMFRI) at New Mexico Highlands University, Pritzlaff Ranch/Biophilia Foundation, The Nature Conservancy, New Mexico Division of Forestry, New Mexico State University's Mora Research Center, New Mexico Game and Fish, New Mexico Chapter of the Society of American Foresters, U.S. Forest Service Region 3, U.S. Fish and Wildlife Service, and Bureau of Land Management. Other partners are being recruited.

The workshop is being organized around a recently published framework for managing forests in the face of climate change (Miller, C.I., N.L. Stephenson, and S.L. Stephens. 2007. Climate Change and Forests of the Future: Managing in the Face of Uncertainty. Ecological Applications. 17(8), pp. 2145-2151). This framework stresses adaptation options organized around the following themes:

- **Resistance** – forestalling impacts and protecting highly valued resources
- **Resilience** – improving the capacity of ecosystems to return to desired conditions after disturbance

- **Response** – facilitating transition of ecosystems from current to new conditions

The Millar et al. framework also emphasizes the importance of priority-setting approaches (e.g. triage) appropriate for rapidly changing conditions and where needs are greater than the available capacity to respond.

Four working groups – each comprised of researchers and forest managers focusing on one of New Mexico's dominant forest types (bosque, piñon-juniper, ponderosa pine, and mixed conifer/aspens) – will be formed in March 2008 to apply this framework and present the results in consecutive sessions at the workshop. Combined with the distillation of other relevant research and projections, these sessions should provide practical on-the-ground knowledge and management considerations for use by resource managers. The leaders of each working group will be part of the workshop steering committee, ensuring communication between the working groups. For more information about this workshop or to serve on a working group, please contact:

Howard Gross, Executive Director, Forest Guild  
[howard@forestguild.org](mailto:howard@forestguild.org) 505-983-8992, x42 (office)

Ken Smith, Director, New Mexico Forest and Watershed Restoration Institute, New Mexico Highlands University  
[kensmith@nmhu.edu](mailto:kensmith@nmhu.edu), 505-426-2081 (office)

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## Gray Vireo Update

*Kent Reid, New Mexico Forest and Watershed Restoration Institute*

Over a mid-April weekend, the New Mexico Ornithological Society held its annual meeting, which focused this year on the gray vireo, the juniper-obligate bird that is the subject of a Recovery Plan being prepared by NM Game and Fish. An earlier issue of the Sky Islands Forester contained a report on this effort, and not much more is known about the bird's biology since that earlier report. It is not a cavity nester, and some surveys seem to indicate a preference for smaller trees. Surveys completed last summer in the Farmington area show territory preference is different there than in the rest of the state. There, gray vireos establish territories in rolling country and nest in species other than juniper.

A lot of time was spent discussing research that will answer questions about basic biology. That discussion led to interim guidelines for thinning operations, which may be issued within the next year and will be entirely voluntary. The first guideline would be to avoid working in potential habitat during the nesting season; nesting season was not defined here, but generally is considered to be May and June. The second guideline would be to avoid all activity inside a known territory, usually about 10 acres. Another potential guideline not

discussed, but that SAF could proactively promote, would be to conduct playback surveys before and after treatments in PJ. Little is known about the bird's territory selection; the possibility is very real that thinning, especially treatments that produce open woodland, might benefit the bird.

The meeting culminated with a field trip on Sunday morning to known gray vireo habitat on Kirtland Air Force Base. This was the surprise of the weekend. A similar-appearing area that might be familiar to the greatest number of readers would be the open canyons along NM Highway 4 between the Rio Grande and Los Alamos. From the beginning, the biologists had said the gray vireo preferred to nest in a band at the bottom of a slope, but the area visited was much more rugged and the slopes much longer than I had envisioned. The birds at Kirtland have territories at the base of slopes, and we were also shown last year's nest trees that were along adjoining arroyos. If this is preferred habitat, it leaves thousands of acres on the flat that could be thinned without affecting the bird in any way. Treatments carried out on the flat usually extend up the slope as far as the crew or the machinery can work, and thus could remove active nest trees if work was being carried on in May and June.

More information, including survey protocols, can be obtained from Kent Reid at the New Mexico Forest and Watershed Restoration Institute, [kreid@nmhu.edu](mailto:kreid@nmhu.edu).

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## Forest Insect & Disease News: Dwarf Mistletoe - Persistent Pathogens in Western Forests

*Dave Conklin Southwest Bugs and Cruds (Volume 6)*

### Biology and Effects

Dwarf mistletoes are parasitic plants that grow on pines and other conifers, slowing and distorting growth and leading to early death. Infection by these plants is the most common and economically damaging forest disease in most of the western States. Eighteen species of dwarf mistletoe are found in the western U.S., each generally affecting one type of tree. Trees most affected include ponderosa pine, Douglas-fir, lodgepole pine, true firs, hemlock, and western larch. One species of dwarf mistletoe affects spruce in the Northeast and Lake States and another in the southeastern Arizona.

Depending upon location, from about 15 percent to over 50 percent of conifer stands throughout the West have some level of infestation. Dwarf mistletoe spreads by means of explosive seeds, which can fly up to about 40 feet. Spread occurs from tree to tree and within the crowns of previously infected trees. Because of its rather unusual means of spread, the distribution of dwarf mistletoe in a forest is usually quite patchy. Infected areas vary in size from a few trees to hundreds of acres. Spread of the disease is slow, because it takes from six to 10 years for new mistletoe plants to produce seed. On

average, horizontal spread through a forest is only one to two feet per year; therefore, the overall incidence (acres or proportion of forest infected) changes little from year to year. This disease tends to be long-lived and persistent (unlike many insect pests, which “come and go”), and so is best described as a chronic condition rather than an outbreak or epidemic.

All ages and sizes of trees can become infected. Generally, once a tree becomes infected, the disease slowly intensifies until the tree dies. However, most infected trees can survive for several decades, with gradual decline in growth and vigor. Trees infected at a young age become stunted and deformed, rarely, if ever, becoming large trees. Losses in productivity from dwarf mistletoes have been estimated at over 400 million cubic feet of wood annually. Although more difficult to quantify, infestation also tends to increase forest flammability. Over time, this disease can have a profound effect on forest structure and composition.

Because of its persistent and destructive nature – and perhaps also because of the “witches’ brooms” frequently observed on infected trees – this disease was once described as a cancerous situation. Nonetheless, since effects are very gradual and less dramatic than those of many insects, dwarf mistletoes are sometimes overlooked by managers and decision makers. (Experienced, on-the-ground foresters know better.) Another reason for their relatively “low profile” today is that past efforts to control them – including clearcutting – became controversial. Moreover, it turns out that these parasites – like most other native diseases and insects – have roles in the ecology of the forest and are beneficial to some wildlife.

### **Historical Trends**

There is general agreement that a century or more of fire suppression/exclusion has resulted in increases in the abundance of dwarf mistletoe in many parts of the West. Fire has long been recognized as an important natural control of this disease. Following intense, stand-replacement fires, trees generally return to the burned areas well in advance of the mistletoe. The effects of low-intensity fire are more complex, but these often have a partial “sanitizing” effect within infested areas. In addition to these direct controlling effects, frequent fire keeps forests more open and park-like. Fire exclusion has resulted in denser forests, with fewer openings (natural buffers) to limit the spread of mistletoe. Poor logging practices in the past have also contributed to the mistletoe severity found on some sites today. Conversely, disease incidence may have been reduced in areas where clearcutting has been used extensively, particularly the lodgepole pine forests of the interior West.

### **Management**

Until late in the 20<sup>th</sup> century, management guidelines for dwarf mistletoes primarily addressed the sustained economic production of timber. In recent years, additional considerations have influenced management

on public lands. Some previously recommended practices (even-aged forest management, clearcutting) have needed modification to accommodate a broader array of concerns and objectives. Today, management continues to focus on cultural methods, primarily the removal of infected trees, but with increasing interest in use of fire. Opportunities for chemical, biological, and genetic control of dwarf mistletoe have been, and continue to be, investigated, but currently these options have limited practical use.

Management of dwarf mistletoe has always presented special challenges. On the one hand, the disease would seem relatively easy to control, since it spreads slowly and dies when infected trees are cut. However, not all infections are visible; moreover, following selective cutting and thinning, the remaining mistletoe tends to be stimulated. Without complete stand replacement, frequent entries (often uneconomical) may be needed to keep the disease at non-damaging levels, at least in areas with extensive infection. However, most lightly and moderately infested stands can be treated to satisfy a broad array of objectives (including an increase in productivity) by removing as much mistletoe as possible without sacrificing the best trees. Managing trees not susceptible to the type of mistletoe present can also be used to advantage on some sites.

A variety of cutting methods, in combination with prudent use of fire, appears to be the best strategy for managing this disease at the landscape level. Some infested areas might best be deferred from mechanical treatment—not only because they are more difficult to manage than areas without the disease, but also to maintain the unique wildlife habitat provided by infected trees and stands. In more actively managed areas, disease reduction can occur in conjunction with scheduled thinnings and fuels reduction treatments. Increased use of fire – both management-ignited prescribed burning and wildland fire use – would help to keep this damaging and persistent disease in check.

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## **Forester’s Log: Changing Woman**

© Mary Stuever, April 2008

At the Fort Apache camp, the spring winds are calm. The blue sky is crystal clear. Nearby, the East Fork of the White River runs cold and swollen from the abundant winter snowmelt. Buds burst forth on the cottonwood branches. Out on the dance grounds, several Apache families are celebrating one of the first Sunrise Ceremonies of the year.

Spring is in the air. We are reminded by this coming-of-age ceremony that change is a part of life. In Apache tradition, through this four-day celebration, the girl becomes a woman. She becomes Changing Woman. She is instructed on how to conduct herself through life’s stages. This weekend, the dance honors Ashley Kessay, the daughter of my field operations manager. In the

ensuing weeks ahead, there will be many changes for my staff. In a sense, Ashley is paving the way.



Ashley Kessay is painted by crown dancers during her Sunrise Dance. Photo courtesy of the Kessay family.

I have accepted a new job with the New Mexico State Forestry Division. I am leaving Whiteriver, Arizona, and moving back to Placitas, New Mexico. I once worked for State Forestry for six years, primarily as the Timber Management Officer for the Bernalillo District. Now, 16 years later, I am returning as the State Timber Management Officer. Many of programs I worked with then, such private landowner assistance, are still active. However, there will be plenty of new challenges and learning ahead: plenty of change.

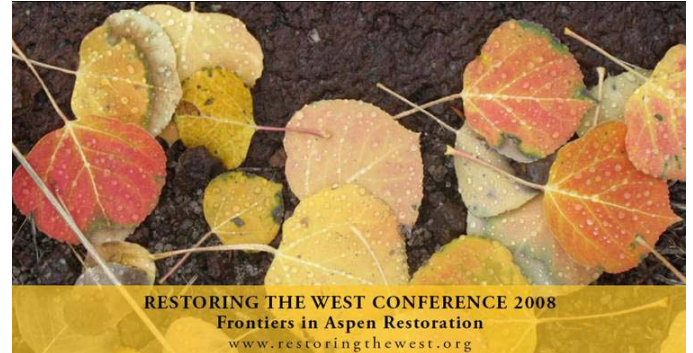
My time with White Mountain Apache Tribal Forestry, not quite five years, has been amazing. Although the majority of my energy has been focused on the Rodeo-Chediski burn rehabilitation, I have dabbled in almost every other forestry activity on the reservation including firefighting, prescribed burning, timber sales, thinning projects, fuels treatments, sawmill issues and greenhouse operations. More importantly, I have learned thousands of lessons from hundreds of people.

The drumming on the dance ground paces my heart beats, my steps, the movement of my body. Last night I was joined by a friend from a neighboring community. She pointed out that we were the only white people at the ceremony. Being among so many friends and colleagues, I had forgotten to notice. Yet, as I break the news that I am leaving to my staff and coworkers, I am greeted with congratulations and enthusiasm. There are no expectations that I would remain in this community that feels like a second home.

I sense a slight intrepidness from my leadership team. For years, we have worked toward this time when they will take the torch and strike out on their own. There is strength in their commitment; strength in their resolve to be the best that they can be. Our department is changing whether I leave now or not. Considering what we have accomplished in the last half decade of post-fire disasters, I have no doubt my staff will stand tall to any new crises they face.

I work the bread dough between my hands to make fry bread, tortillas, and *bañ ditanè*. Producing only one flattened piece for every four or five the Apache women put on the open fire, I still smile that I have finally learned to “make bread.” It is an incredible honor to stand in the early morning light, making bread and getting lessons in Apache language and culture.

I am also a changing woman. Although I am sad to be leaving my life on the Fort Apache Reservation, I am grateful for the friends, memories, and lessons I will hold next to my heart for the rest of my life.



## **RESTORING THE WEST CONFERENCE 2008: Frontiers in Aspen Restoration**

September 16-18, 2008 - Utah State Univ., Logan, UT

Interest in western aspen forests and their restoration and management remains high. This year we will build on the foundation laid by this conference in September 2006 where we discussed aspen management and restoration efforts going on throughout the West. We will cover aspen biology and ecology, possible effects of climate change on aspen forests, trends in aspen management, monitoring, human dimensions of aspen ecosystems, and other topics. It will appeal to managers and researchers, including public and private land managers, landowners, and others. This year's conference will include two full days (the 16<sup>th</sup> and 17<sup>th</sup>) of invited presentations with a poster session, and a final half day of roundtables/workshops to discuss how best to move aspen restoration efforts forward. Anyone can propose a poster presentation; a request for submissions, along with instructions, will come out mid-summer. For more information or to leave your email address for updates, visit our website: <http://www.restoringthewest.org>

This conference is organized and sponsored by Utah State University (Ecology Center, Wildland Resources Department, College of Natural Resources, and Cooperative Extension), the Western Aspen Alliance, and USDA Forest Service Rocky Mountain Research Station, and State & Private Forestry.

The Sky Islands Forester is now primarily sent via the internet. Paper copies will be continued to be mailed to those members who prefer or who do not have email. Mailing and email addresses are provided by the National SAF Office and not maintained by the editor. Corrections to addresses can be done on the [safnet.org](http://www.safnet.org) website. Next edition is scheduled for September 2008. Chapter and committee reports will be greatly appreciated. **Southwest Section website can be found at:** <http://www2.for.nau.edu/swsaf/>

**WANTED:** *Foresters who are interested in writing a column on Southwestern forestry for the newsletter! Many possible topics: forest history, southwestern silviculture, ecology, fire, book reviews, forest policy and editorials.*

Thanks to Mike Williams, Dave Conklin, Rod Brevig, Mary Stuever, JJ Smith, James Allen, Maureen McGuire, Melissa Zaksek, Elysia Zarate, Kent Reid, and Diane Drobka for their contributions to this issue.

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## Meetings

**Ft. Valley Forest Experimental Station Centennial Celebration.** August 7-9, 2008. For more info on the celebration: <http://www.fs.fed.us/rm/centuryofresearch/>

**Restoring the West Conference 2008: Frontiers in Aspen Restoration.** September 16-18 - Utah State Univ., Logan, UT <http://www.restoringthewest.org>

**Climate Change, Fire and other Hot Topics, Forest Inventory and Analysis Symposium 2008.** October 21-23. Park City, UT  
<http://www.fia.fs.fed.us/symposium>

**New Mexico Forestry and Climate Change Workshop** November 2008, Sponsored by the Forest Guild and NMHU, Forestry and Watershed Restoration Institute and the NM SAF Chap. Contact: [kensmith@nmhu.edu](mailto:kensmith@nmhu.edu)

**Fall 2008 National SAF Convention, *Forestry in a Climate of Change.*** November 5-9, 2008, Reno, NV  
<http://www.safnet.org/>

**Fall 2010 National SAF Convention.** Albuquerque. Volunteer Now!

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