

REGAINING LOST GROUND  
**ECOLOGICAL**  
**RESTORATION**  
FALL 2003 **NEWS**

## Forest Service Awards ERI \$1 Million

A vote of confidence for forest health research has arrived in the form of \$1 million. The Forest Service is awarding the money to the Ecological Restoration Institute at Northern Arizona University to continue building upon the scientific knowledge of ponderosa pine ecosystems in the effort to restore millions of acres of degraded forests.

"The work of the ERI brings solid research to help solve a major issue confronting our community and the state of Arizona," said NAU President John Haeger. "This unique opportunity to continue and expand the important work of the ERI is because of the hard work of Senator Jon Kyl and Representative Rick Renzi."



*As the intense debate over massive tree thinning for forest health continues in the national spotlight, Wally Covington and the ERI continue to press for urgent restorative action. Shown here with Time Magazine photographer Bill Campbell, Covington was featured in the publication's August 18 issue in an article by J. Madeleine Nash, Fireproofing the Forests.*

Rodger Zanotto, Coconino National Forest stewardship staff officer, said there is potential for some of the money to be used to identify important places in the forest for management on a landscape scale—places that include endangered species habitat, watersheds and old growth. 🌲



## Fire Scar Research to Determine Fire Frequency in the Forest



Megan Van Horne

Anyone who has used a chainsaw to cut firewood can appreciate the work of Megan Van Horne. The NAU graduate research assistant has examined some 1,500 cross-sections of ponderosa pines—cross-sections that she cut from old stumps and trees with help from her Ecological Restoration Institute co-workers.

Van Horne is mostly interested in the fire scars that she finds on tree samples taken from old stumps remaining in the forest—some dating back as far as 1420—and primarily the frequency in which they occurred.

“When you see a fire scar on a tree, nobody argues that a fire burned that tree in that year, but what does that mean for the rest of the landscape?” said Van Horne. “We have been criticized for overestimating the number of fires that naturally burned through the forest. This study is aimed at resolving the question of fire frequency.”

Through decades of forest research, the ERI has long maintained that, historically, low-intensity fires burned naturally in the ponderosa pine forest on an average of two to seven years. ERI researchers say these fires crept along the forest floor, burning up dead debris and small trees. Research reveals that the forest was far more open than it is today, with an abundance of grasses, shrubs and wildflowers.

Van Horne’s research covers some 250 acres in NAU’s Centennial Forest near Flagstaff and is the most comprehensive study on historic fire frequency to date.

“The real contribution of this research is that this is by far the most detailed look at the way we collect samples and what it means in fire history,” said Pete Fulé, ERI associate director of ecological research. “In the past we have only collected data from trees that have numerous fire scars, but Megan is sampling every single scarred tree.” 🌲



## USDA's Top Honors Go To Parks Partnership Members

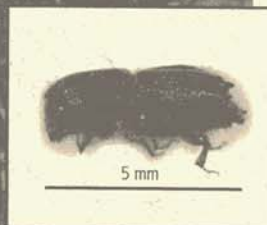
**T**he ERI's Charlie Denton and Doc Smith were among those honored with the USDA's Honor Awards, the most prestigious awards given by the Department of Agriculture. Denton, Smith and other members of the Greater Parks Fuels Reduction Project received The Honor Award for Maintaining and Enhancing the Nation's Natural Resources and Environment. The award recognized partnership efforts that resulted in thinning some 100 acres of private property, reducing the threat that wildland fire poses to communities.

"The Honor Awards highlight the dedication and talents of USDA employees who contribute in so many ways to improving the world around us," said Agriculture Secretary Ann Veneman.

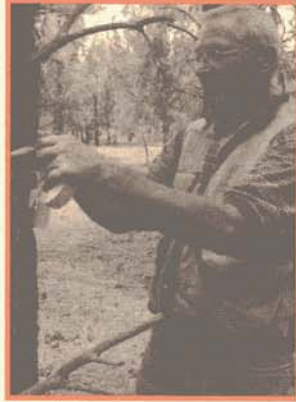
Other team members include Susan Skalski, Annie Hanson and Jacqueline Denk of the Forest Service; Art Matthias and Tom DeGomez of the University of Arizona; Kevin Boness and Dave Sewall of the Arizona State land Department; Coconino County Supervisor Matt Ryan; and John Dobrinski and Jim Driscoll of the Coconino County Public Works and Emergency Services Divisions. 🌲

### ***Signs of bark beetles***

*The numerous globules of sap on this tree are evidence of bark beetle infestation. Ponderosa pines use resin to pitch the beetles out and clog up the hole.*



## Denton is ERI's Agent of Change



Charlie Denton

**F**or Charlie Denton, witnessing the way people change their minds about what they consider to be a good-looking, healthy forest is one of the most rewarding parts of his job at the Ecological Restoration Institute.

"People move to these mountain communities because of the trees, but they often have an aversion to the fact that in order to protect the trees, we need to cut a lot of them. Of course, what we've found in places like Flagstaff and Ruidoso, N.M., is that once they start cutting, they see how much better the forest looks. They can see through the forest, and wildflowers and grasses come up. Then they want to cut more."

Denton is the ERI's agency coordinator. "My job is to pass information along to land management agencies dealing with restoration activities. I take the information that our researchers are finding and help people apply it in a practical manner on the ground.

After 34 years with the Forest Service, 18 as a district ranger, Denton says his position with the ERI allows him to continue working with people he's known for years in agencies throughout the Southwest and helping communities restore ecosystems.

"There are a lot of restoration projects under way; a lot of groups have been looking at things for a number of years, but it's only been in the last one-and-a-half or two years that people have really started doing something around the communities. The fires and the bugs have gotten everybody's attention."

What's got Denton's attention is Ruidoso, N.M., a community that's struggled for more than 20 years with what to do about the fire threat. "After being evacuated three or four times during a fire season, that community has really gotten to work." In less than two years, Ruidoso, in partnership with the state of New Mexico, the Forest Service, the Bureau of Indian Affairs and the Mescalero Apache Tribe, has been able to treat 17,000 acres inside and around the city.

"We're moving in the right direction, but Mother Nature's going to beat us to the punch in a lot of these places. We're going to continue to lose a lot of acres to insects and fire because the problem is way bigger than we've got time, people or money to solve. We've got to pick our priorities really well and do the job effectively," he said. 🌲

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### ECOLOGICAL RESTORATION NEWS Regaining Lost Ground

is a newsletter from NAU's Ecological Restoration Institute. The intent of this publication is to share information, discoveries and successes in the work being done to restore the southwestern forests.





## Alumni Corner

**T**wo former ERI researchers and School of Forestry alumni have been working on restoration treatments for Northern Arizona University's Centennial Forest.

As forestry technicians, Chris Hayes, '03, and Walker Chancellor, '00, have been marking trees for a 200-acre thinning project.



*Walker Chancellor and Chris Hayes*

Hayes also has been assisting in bark beetle research. "We've baited different size trees with pheromones that attract the beetles. We are trying to determine if one diameter size is more susceptible to beetle attacks than others."

Meantime, Chancellor has been involved in mapping and management planning for another 500 acres on the Centennial Forest.

Both Hayes and Chancellor spent their undergraduate summers working in the ERI lab. "That experience broadened my horizons beyond what I could learn in the classroom," said Chancellor, who plans to go on to graduate school. "The ERI crosses disciplines and organizations, so I was able to see how this whole collaboration thing works."

*ERI alumni, let us know what you've been doing. Send a note to [bonnie.stevens@nau.edu](mailto:bonnie.stevens@nau.edu). 🌲*

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## State Legislators Tour the Forest

**O**n a July visit to Northern Arizona University, State Representatives Jack Jackson, Jr., Clancy Jayne, Tom O'Halleran, and Colette Rosati had the opportunity to join in a forest tour at the Ecological Restoration Institute's Lone Tree research site. Hosted by the ERI's Diane Vosick and Charlie Denton, the group discussed forest health and the plight of the ponderosa pine forests. 🌲



## Kudos to Steven Martin

**S**teven Martin, ERI turkey roost researcher and senior biology major, has won the award for best undergraduate poster at the National Wildlife Society Conference in Burlington, Vt. Martin is shown here with one of the hazards of working in the woods: moths. 🦋

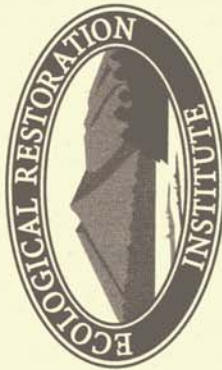


*Steven Martin (and moths)*

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