

## TREES

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role in the early transfer of nitrogen out of the woody material and back into the soils, the study has indicated. Nitrogen is an essential nutrient in conifer forests.

The research also has found that different tree species decay at different rates, and may be decaying at a slower rate than earlier thought.

Environmentalists and the timber industry have been locked in an intense battle over the region's remaining old growth forests, the primary habitat for the northern spotted owl. Harmon said incorporating old growth characteristics into new forests may aid efforts to save the northern spotted owl by making newer forests more habitable for the birds and other species.

The project began four years ago on the experimental forest, which is a joint project of the Willamette Nation-

al Forest and OSU. The \$100,000 study of rotting logs is financed mostly by a grant from the National Science Foundation, which also funds many other projects in the H.J. Andrews Experimental Forest.

Harmon's crew brought in 530 20-foot logs and placed them in a part of the forest with old growth characteristics. Each log is about two feet in diameter. Douglas fir, silver fir, hemlock and red cedar are being studied.

Each fall, Harmon and his team of researchers cut off several slabs from each species. On Friday, Harmon, OSU researcher John Moreau, and Chen Hua, who's a visiting researcher from China's Institute of Applied Ecology, cut off several "cookies" and carted them back to the experimental forest's headquarters, where they will be cut into smaller pieces and examined for decay.

Eugene R.G.

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staff photo by Joe Wilkins III

Visiting researcher Chen Hua puts tape around a section of log to protect the bark until the slab can be taken from the experimental forest to an OSU lab for analysis

# Study shows rotten trees also valuable

By LANCE ROBERTSON  
The Register-Guard

BLUE RIVER — Waiting 200 years for logs to rot might seem like the forest equivalent of watching paint dry, but not according to Mark Harmon.

"Every year these logs look different," said Harmon, an Oregon State University researcher who's leading a study of how fast fallen trees decay in the Northwest's old growth forests. "It's not at all like (watching) paint drying."

Now in its fourth year, with 196 more to go, the project already is yielding some useful information about old growth ecosystems, Harmon said.

The study, conducted at the Willamette National Forest's H.J. Andrews Experimental Forest northeast of Blue River, also may have some value for how commercial

## Decaying logs give trees vital nutrients

timberland is managed on the Northwest's public and private forests.

For example, findings so far from the study are encouraging U.S. Forest Service managers to change some of their previous forest practices. Instead of removing most decaying wood during logging operations, the study so far indicates that at least some woody debris ought to be left on the ground after logging to help provide a new crop of trees with nutrients, Harmon said.

The Eugene-based Willamette National Forest already has experimented with timber sales in which woody debris

is left on the ground after harvest. "A clean, tidy logging site" is not necessarily the best for a healthy forest, Harmon said.

"Dead trees are a significant part of the forest," Harmon said. "Today, there's a feeling that we should make the new forests a more complete ecosystem. This study will help us find ways to incorporate characteristics of old growth into more managed new stands."

As fallen trees rot, they release important nutrients that help new trees thrive, and they serve as a host for fungi and other organisms that benefit new growth, Harmon said. Snags, or standing dead trees, are important because they provide habitat for woodpeckers and other animals needed to keep a forest ecosystem humming, he added.

Mushrooms growing on fallen logs also play a critical

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