



April 2008

Coming OWIC events:

April 24-25: **Selling Forest Products** Corvallis, OR

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## OWIC - What Do We Do?

So, what do you do? That's a pretty common question. And it's particularly common for us given that the Oregon Wood Innovation Center is still fairly new. We recently created a page on our website that briefly describes our resources, products, and services; we hope the site will serve to spark your thinking for ways we might be able to assist you.

### Resources

Under resources, you will find links to personnel, including OWIC staff, extension faculty, and research faculty in Wood Science & Engineering. Resources also include a list of facilities and equipment by topic area - anatomy and wood quality, biodeterioration, chemistry, composites, computer-aided manufacturing, wood drying, and timber engineering. Within each of these areas is a list of equipment as well as links to photos of lab spaces.

### Products & Services

Here we include links to publications, short courses, and workshops, as well as information on types of technical assistance we can provide. Our faculty can assist with technical questions on a wide variety of topics such as strength properties of various species, kiln schedules, durability of different species, etc.

A major service provided by the Oregon Wood Innovation Center is to provide entrepreneurs with assistance regarding new product development. The services available include product testing, product optimization, evaluation of competing products, and market assessments.

Other services include both short- and longer-term research. For example one of our students might assist you with short-term, problem-solving research. All of our undergraduate students conduct a senior project focused on helping a company to solve a specific problem. You can use a form on the website to provide a description of a project that might be suited for short-term research (<http://owic.oregonstate.edu/jobs/srprojects.php>). Examples of current senior projects include a market assessment of wood flooring from local sources and a feasibility study of wood pellet production from western juniper.

We can also assist with longer-term and more complex projects via research conducted by faculty and graduate students.

'Brokering/ market connections' are also listed. These are the most common types of requests we receive, for example, who

buys walnut logs in Oregon?; where can I find a list of firms that do custom lumber drying?; where can I find a source of certified lodgepole pine logs? We developed and maintain the Oregon Forest Industry Directory for just these sorts of questions – and more! Do you have a product you need to sell? The Oregon Forest Industry Directory has a Classified Ads section where you can post your products. We encourage you to search the directory for your company and update your listing if it is out of date or add your company if you are not listed. And best of all, it is available - free of charge. The Oregon Forest Industry Directory is available at <http://www.orforestdirectory.com/>.

Finally, we provide a series of online discussion forums. These forums cover a variety of topics related to the forest products industry including sawmilling, green building, statistical process control, and woody biomass utilization. You can view the discussion forums at <http://owic.oregonstate.edu/bboard/>

Please visit the site at <http://owic.oregonstate.edu/services.php> and let us know what you think.

# Featured Researcher: Connie Love

The featured researcher for the month of April is Connie Love. Connie, faculty research assistant in the Department of Wood Science and Engineering at OSU, grew up in the Midwest working on her family's farm. She never imagined that she'd end up in the tall timber of the Pacific Northwest, working in wood preservation. "In that area of Kansas, there were a lot of trees, but certainly not softwoods—and very few people were concerned with wood preservation," she says. "Frankly, I don't think many people even notice the effort that goes into maintaining utility poles. I really didn't either, until I started working on them, myself."

Love did not come directly to the field of wood preservation, however. She obtained her B.S. degree in Soil Science from the University of Wyoming, and then went on to earn an M.S. in Plant Pathology from Washington State University. "I first came to OSU in 1985 to work in Crop Science on their wheat breeding project," she says. "They hired me before I'd finished my degree, so I actually completed it while I was here and working, which was difficult."

Eventually, that position ended, and Love began working in the College of Forestry for Professor Jeff Morrell (Wood Science & Engineering) on the wood biodeterioration and preservation project. "This job was supposed to last six months, and here I am, working twelve years later," she says with a grin.

Much of Connie's day-to-day work takes place in the field, her research directed by the Utility Pole Research

Cooperative, which she describes as, "a consortium of utility companies, wood treaters, and chemical companies that supply remedial treatment for utility poles." Her research involves conducting tests on poles that are on existing utility lines, as well as on pole stubs that have been installed in the test plots at Peavy Arboretum.

This research is necessary because there is still much that can be done to improve the performance of poles that are currently in service. "We've learned to protect the bottom of the pole fairly well, but now we're seeing that as the poles age, it's the top that's starting to fail," Love says. "Even treated wood eventually fails. You can protect it for years and years, but decay will find the weakest point. It's particularly troublesome that we're noticing decay near the top of the poles because they get the least attention."

Love's work involves testing different methods for preventing decay and insect attack in wood. In all of her work, the primary goal is to reduce the need to replace the wood in a utility system. "The wood used in utility poles comes from the best trees that they can find. Poles have to be straight, strong, and free of defects, so they are really valuable once they're treated and in place," she notes. "It saves a lot of time and money to keep the poles in service—and if we don't have to replace them, it also saves the wood resource for another use."

Love's favorite part of her work is being able to help people. "Researching



wood treatment and preservation has a real effect on the way people live their lives," she says. "It's great to think that maybe my work has helped someone treat their deck or protect their boat, normal things like that. And I think what we do is fun!"

You can find more information about Connie's work on the Utility Pole Research Cooperative website at <http://www.cof.orst.edu/coops/utility-pole/startpage.html>.

Article by Bryan Bernart; photo by Gretchen Bracher, both of the Forestry Communications Group, College of Forestry, OSU.

# Ask the Expert



Have questions related to wood? The faculty of the Wood Science and Engineering Department at OSU can handle almost any question about wood. Simply submit your question using the Ask the Expert form (<http://owic.oregonstate.edu/askexpert.php>). In order to assure that your question is answered correctly, please be as specific as possible when submitting your questions.

The following are examples of recent 'Ask the Expert' questions:

**Question:** We are planning to treat lumber with saturated steam to homogenize the colour. We wish to know if the process has some effect on the durability of wood, especially if it improves the durability.

**Answer:** Steaming wood could either increase or decrease durability depending on species and duration of treatment. Steaming can degrade the hemicelluloses (a component of the wood cell wall structure) in wood and make the wood more durable (but also lower its strength properties). On the other hand, steaming can also damage the chemical compounds in wood that make it naturally durable and thereby lower its durability. That said, steaming is most often done on species like black walnut that are not naturally durable. The result is no significant difference in durability.

**Question:** I am a small cabinet manufacturer. I build an all-wood product and like to finish the exposed ends of my kitchens with solid glued-up panels to match the frames and doors of the specie used. I offer any species of wood.

The matching panels I'm attaching to the 1/2" plywood sidewalls are also 1/2" thick. I'm ripping the wood in 2" wide sticks and gluing together. (I am not paying any attention to the end grain as they are so narrow). Then I'm planing to 1/2", sanding to 0.490", and finishing with stain to match and 2 coats of a high solids catalyzed conversion varnish. We attach the panels with some wood glue and several 3/4" screws from inside the plywood box.

I'm concerned with the movement of the wood and any future problems it may present. Can you comment please?

**Answer:** Your concern for wood movement is certainly valid. Edge-gluing the wood as you're doing will help to randomize some of the movement, i.e., rather than concentrate it in one solid piece. Screwing the panels to the plywood backer should help to restrain the movement as well. Varnish will slow moisture gain and loss but not eliminate it. The concern would be that, in the summer months, high humidity could cause the panels to swell and buckle. However, air condi-

tioning will limit the humidity swings. The greater risk is probably in the winter - when cold dry air is heated the humidity can get quite low. In those conditions, the panels could shrink and split at the screws (which would take pretty extreme drying) or, more likely, glue joints might open up between the edge-glued pieces.

You can download a program we developed to help estimate shrink and swell in wood at <http://owic.oregonstate.edu/woodxlsform.php>. You can select from 100+ species, beginning and final moisture content (or temperature and humidity) and the size of the panel in thickness and width. For width, you could assume worst-case scenario and enter the full panel width (as if the panel were a solid piece). For grain orientation, you'd probably have a mix of flat-sawn and quartersawn and thus could choose mixed grain.

Have you considered installing the panel within a frame and allowing it to float? This is the usual approach taken with raised panels in stile and rail doors.

A comprehensive list of all the 'Ask the Expert' questions with corresponding answers is available at <http://owic.oregonstate.edu/askexpert.php>.

## Slow markets are a great time to hone selling skills!!!

Personal selling is the primary tool used in marketing most forest products. Yet, very few individuals in the industry have professional sales training when starting their career.

Those attending this short course will learn the basics of personal selling, methods of identifying new custom-

ers, and will analyze their personal selling profile.

The course is designed to improve the efficiency and effectiveness of sales personnel. It is intended for new sales and marketing personnel or those wishing to improve their selling skills in the forest products

industry.

More information on the course is available at: <http://oregonstate.edu/conferences/sellingforestproducts/index.html>.



April 24-25, 2008

Selling Forest Products

Oregon State University - Corvallis, OR

An Innovative Learning Experience

Presented by Oregon State University College of Forestry & College of Business

Are you an employer looking to hire qualified students?  
Post a position on our jobs board: <http://owic.oregonstate.edu/jobs/form.php>

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Contact us:  
Oregon Wood Innovation Center  
<http://owic.oregonstate.edu>  
119 Richardson Hall  
Corvallis, OR 97331-5751  
Fax: 541-737-3385

Scott Leavengood  
[Scott.Leavengood@oregonstate.edu](mailto:Scott.Leavengood@oregonstate.edu)  
541-737-4212

Chris Knowles  
[Chris.Knowles@oregonstate.edu](mailto:Chris.Knowles@oregonstate.edu)  
541-737-1438

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