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Committed to the Environment

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Nancy Broshot

Committed to the environment



Nancy Broshot, left, measures a sapling in Portland's Forest Park with help from Tanya Helm '08, right. Broshot's ongoing commitment to students and research has earned her the Edith Green Distinguished Professorship. The award is made annually to a Linfield faculty member who has demonstrated outstanding performance in teaching and related faculty roles.

Her friends call her a tree hugger, and that's fine with Nancy Broshot, associate professor of biology at Linfield College.

"You have to hug them in order to measure them," she said with a laugh.

Broshot, chair of Linfield's health sciences program and this year's Edith Green Distinguished Professor, has been measuring trees in Portland's Forest Park since 1993, when she began a comprehensive research project to study the effects of urbanization upon a naturally forested area.

Established in 1948, Forest Park covers 5,090 acres and is the largest wooded park within city limits in the United States. Broshot found it to be the perfect setting for her research.

"It allows me to look at one contiguous forest area and there are parts of it right next to downtown Portland and other parts that are still pretty remote," she said.

In 1993, Broshot chose 25 sites, scattered throughout the park, to measure the plant and bird communities. One site lies adjacent to the Pittock Mansion parking lot, while other sites are farther from the urban area. She returned to re-measure the 25 sites in 2003.

"The research I did in 1993 showed there were dif-

ferences between the city and the far end," said Broshot, a Friends of Forest Park board member for 12 years. "One of the things I found most alarming is I didn't see many young trees coming up in the forest. That has been magnified with the second set of data in 2003. Seedlings and saplings present in 1993 are gone, and many of the larger trees are dying."

To find out why, Broshot, in conjunction with Portland Parks and Recreation, planted several hundred western red cedar saplings in the park in 2004. Last summer, Tanya Helm '08, Katelyn Selzer '08 and Robin Walker '08 worked with Broshot to monitor growth. They took soil measurements and samples, measured saplings and collected seeds. Back in the lab, they analyzed the seeds and soil to gain clues about the saplings' decline.

So far, they have learned that deer and elk are grazing some branches, but they do not appear to be responsible for tree death. They are trying to find out whether lack of moisture, pollution or soil changes are to blame.

At the heart of Broshot's work is her passion for working with students.

"I like connecting with the students and I love turning students on to the research process," she said.

Students call Broshot knowledgeable, patient and accessible.

"She's engaging and she knows her stuff," said Helm, a health sciences major who hopes to pursue medical school. "She's not one to just hand you an answer. She makes you go through the possibilities, find the answers for yourself and become more reliant on your own critical thinking skills."

"Microbiology is not my strong point, but she made it very easy to understand," added Walker, a nursing major.

At Linfield since 1984, Broshot maintains a passionate environmentalist ethic as a scholar and educator, according to Barbara Seidman, dean of faculty.

"Her ongoing research in urban natural environments like Portland's Forest Park is a model of the reach of academic inquiry beyond the campus itself and into the life of the community encompassing it," Seidman said.

Looking ahead, Broshot already knows where she'll be during the summer of 2013.

"I'll be in the woods measuring all my trees and counting birds again," she said.

— *Laura Davis*