Study: Cougars essential to balanced system

By Stefanie Knowlton

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Picture two valleys in Utah's Zion National Park.

One teems with large cottonwood trees, wildflowers, butterflies and so many frogs you need to watch your step along the stream. The other offers fewer cottonwood trees, wildflowers and only a handful of varieties of frogs, butterflies and lizards.

If you ask renowned OSU professor Bill Ripple, the more abundant landscape can be traced back to cougars.

Ripple and OSU Professor Robert Beschta, known for their work on predator, prey and plant relationships, found that cougars play an essential role in maintaining biodiversity. Ripple's latest study with colleagues outlines how smaller predators fill in the gaps left by dwindling larger predator populations and cause bigger financial and environmental headaches.

Ripple will discuss his cougar studies Oct. 22 during the first lecture in the Environmental Learning Center's annual series.

It's a timely topic, said Lisa Olivares with the Friends of Straub Environmental Learning Center.

"We've heard a lot about top predators and the public's fear about having them in our environment," she said.

But this lecture looks at the environmental consequences of removing them, she said.

There have been at least three cougar sightings in the Salem area this summer. And the Oregon Department of Fish & Wildlife recently expanded the cougar-hunting season to year-round starting in January in an effort to meet quotas.

Ripple declined to comment on Oregon's management of cougars and

Straub Environmental Lecture Series

All lectures begin at 7 p.m. Thursdays in the Loucks Auditorium, Salem Public Library, 585 Liberty St. SE, Salem. For more information call (503) 391-4145.

Oct. 22: OSU professor Bill Ripple shows how the decline of cougar can set off an ecological chain reaction affecting everything from deer numbers, to trees and flowers and butterflies.

Nov. 19: Navigating Clean Tech: An Overview of Emerging Developments and Green Job Opportunities

Jan. 28: Wildlife author and scientist Ron Hirschi shows how plastic has gone micro in the marine environment using examples from a recent trip to Papahanaumokuakea Marine National Monument.

Feb. 25: Michael Skinner, a professor in the School of Molecular Biosciences at Washington University, will talk about how environmental factors such as chemicals can change the expression of our DNA.

March 18: God is Green: Intersections of faith and environmental stewardship with Luke A. Gascho with Merry Lea Environmental Learning Center of Goshen College.

April 22: Oregon's coastal carbon cycle: the good, the bad and the acidic with OSU professor Burke Hales.

May 27: Glacier change and the future of sea level rise with Andrew Fountain of Portland State University Department of Geology.

Cougar study links

http://oregonstate.edu/dept/ncs/newsarch/2006/Oct06/cougars.html (OSU article about study)

how it might effect the landscape.

His research in National Parks shows that when an ecosystem loses top predators such as wolves and cougars there are major effects on plant communities extending to the entire ecosystem.

"I think the studies speak for themselves," Ripple said.

So how do cougars affect ecosystems down to butterflies and frogs?

The study in Zion National Park shows that areas where cougars are scarce, the population of mule deer explodes. The deer, unchecked by predators, eat many of the young cottonwood trees, shrubs and wildflowers. Those plants no longer provide habitat and food for butterflies, frogs and lizards.

In addition, plants help slow erosion of the stream banks, which keeps the streams narrower, deeper and provides better habitat for fish. Without them, there's erosion, which sends sediment into the streams, effects water quality and widens of channels.

"The basic lesson here is the plants are the basic glue that holds biodiversity together," he said.

And the top predators keep watch over the entire ecosystem.

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www.cof.orst.edu/cascades (Ripple's Web site)

http://www.cof.orst.edu/leopold/papers/cougar_cascades_ripple_beschta_2006.pdf (complete study)

Latest predator study

Top predators in North America, including wolves and cougars, are disappearing throughout the world — allowing smaller predator populations such as coyotes to grow unchecked, according to a study published this month in BioScience, and written in part by OSU professor Bill Ripple.

These smaller predators have higher density populations and are more difficult and more costly to control, according to the study. The negative environmental effects have been documented all the way down to plants and butterflies.

For more information about the study, go to www.cof.orst.edu/cascades/index.php and click on scientific articles on the left-hand side and then click on "The Rise of the Mesopredator."