

Ripple receives Spirit of Defenders Award for Science

Professor accepts prestigious award among well-known wildlife supporters

Carly Dougher

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By Carly Dougher

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OSU professor William Ripple, who hails from the department of forest ecosystems and society, has recently received a prestigious award from the national organization Defenders of Wildlife for his work on the study of trophic cascades involving large predators, large herbivores and plants.

For the past three years, the Defenders of Wildlife have presented four awards: a science award, legacy award, public service award and citizen advocacy award. This September, Ripple stood among distinguished wildlife supporters and was awarded the Spirit of Defenders Award for Science. Ripple flew to Washington, D.C. and was presented the award on Sept. 24.

"I feel honored and humbled that they would provide me with this award," Ripple said.

Others recognized at the ceremony were Senator Sheldon Whitehouse, who received the organization's public service award; Terry Pelster, who received the award for citizen advocacy; and CNN founder and philanthropist Ted Turner, who received the organization's legacy award for a lifetime of conservation work.

According to the dean of the College of Forestry, Hal Salwasser, Ripple's receipt of such a prestigious award brings great pride to OSU.

"OSU is distinguished by Dr. Ripple's contributions to science," Salwasser said.

Ripple's study on trophic cascades emphasizes the importance of large predators in the delicate balance of ecosystems.

"Dr. Ripple is leading a team of collaborators on some of the most significant ecological research underway at this time," Salwasser said.

Ripple's primary work focuses on the effects of predators on ecosystems, specifically the effects of wolves on the arbor landscape in Yellowstone National Park.



Media Credit: Contributed Photo
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BAROMETER William Ripple,
winner of the Spirit of Defenders
Award, poses with CNN's Ted
Turner..

His work on this project began in 1996 when he learned from his OSU colleague and soon-to-be collaborator, Robert Beschta, that aspen trees in Yellowstone National Park were disappearing. Ripple and his graduate student at the time, Eric Larsen, set out to determine why the trees were declining. They visited Yellowstone in 1997 and took core samples from some of the remaining aspen.

Upon counting the rings from the samples collected, Ripple and Larsen noticed that the aspen stopped regenerating soon after the U.S. government killed the wolves in the park in the 1920s. They hypothesized that when wolves were in the park, they controlled the elk population by preying on them, scaring them and keeping them on the move. When the wolves were removed from the park, the elk were able to graze more freely on aspen tree sprouts, which in turn prevented their growth.

If their hypothesis proved to be correct, then the recent reintroduction of wolves into the park should reverse the process and aspen should begin to grow again.

Now that the wolves have returned to the park, Ripple and Beschta have been working to monitor the region's plant growth. Their analysis shows that the aspen, cottonwood and willows are starting to recover. The improving condition of the park's ecosystem upon the reintroduction of wolves strongly supports their hypothesis.

"It just so happens that [aspen, cottonwood and willows] are doing better in places, so we think that the wolves are having an effect on these plants. This is all consistent with our theory that there is a cascade of effects resulting from the reintroduction of wolves into the park," Ripple said.

Ripple and Beschta have since expanded their study to five other major western national parks to see if the trophic cascade effects are universal. They completed studies in Yosemite, Zion, Wind Cave, Jasper and Olympic National Parks. They now believe that the cascading effects of large predators are widespread.

"In every case, we found that the presence or absence of large predators, either wolves or cougars, likely make a big difference on the status of the woody plants and possibly biodiversity," Ripple said.

In addition to his close colleague, Robert Beschta, Ripple would like to acknowledge his past graduate students who have worked with him on this project including Eric Larsen, Andrea Laliberte, Tad Larsen, Jeff Hollenbeck and Josh Halofsky. His current OSU graduate students working on the project include Trent Seager, Cristina Eisenberg, Diana Raper and Luke Painter.

Carly Dougher, staff writer

737-2231, news@dailybarometer.com