



Rich Hatfield/The Xerces Society via AP  
**This undated photo provided by Rich Hatfield shows a western bumble bee (*Bombus occidentalis*) landing on Canada goldenrod. The Pacific Northwest Bumble Bee Atlas for Idaho, Oregon and Washington that started this month aims to accumulate detailed information about bumblebees with the help of hundreds of citizen scientists spreading out across the three states.**

# Bumblebee blues: Pacific Northwest pollinator in trouble

By KEITH RIDLER  
Associated Press

BOISE, Idaho (AP) — Hundreds of citizen scientists have begun buzzing through locations across the Pacific Northwest seeking a better understanding about nearly 30 bumblebee species.

Bumblebees, experts say, are important pollinators for both wild and agricultural plants, but some species have disappeared from places where they were once common, possibly because of the same factors that have been killing honeybees.

“It’s really important for us as humans to study these species systems for animals that are the little guys that make the world go around,” said Ann Potter of the Washington Department of Fish and Wildlife, one of the entities in three states — Oregon and Idaho are the others — participating in the three-year Pacific Northwest Bumble Bee Atlas project.

Researchers hope to accumulate enough information to recommend ways to conserve bumblebees and their habitat.

“There’s more and more interest in restoring habitat for pollinators,” said Rich Hatfield of the conservation group, the Xerces Society.

Citizen scientists are being dispatched to selected 2.5-acre (1-hectare) sites with insect nets, plant and bee guides, and an app for smartphones so findings can be recorded, photographed, mapped and sent to a central database. Researchers say just more than 200 have signed on to visit 400 sites through the end of August. More volunteers are needed, Hatfield said, especially to work in more remote areas.

Bees are captured and put in a chilled cooler so they go into a state of lethargy. Diagnostic photos are taken, and the bees are released unharmed when they warm up.

Bumblebees, unlike honeybees, don’t overwinter in a hive. Bumblebees build nests, typically in holes in the ground, and generally only number a few hundred individuals by the time fall arrives. Any honey they produce

they consume.

With the arrival of winter, all bumblebees die except a few fertilized queen bees that in the spring head out alone to start a new nest and produce worker bees, beginning the cycle over.

“Here’s a species that spends a big part of its life as a vulnerable queen,” said Andony Melathopoulos of Oregon State University. Bumblebees have “this really fascinating solitary phase.”

Honeybees are imports from Europe brought in as agricultural workers to pollinate crops. Native bumblebees also help pollinate crops. But when it comes to native North American plants and some crops, the more robust bumblebee with its ability to “buzz” pollinate by grabbing onto an entire flower and shaking the pollen loose is for some plant species the only insect up to the task.

The Western bumblebee, once considered common and widespread, has disappeared from much of its former range. Clues as to why Western bumblebee populations have plummeted are being sought in the current study.

“We really don’t know a lot about them,” said Ross Winton of Idaho Fish and Game. “The more we learn, the more concerned we get.”

The Pacific Northwest Bumble Bee Atlas could ultimately be an example for other states interested in learning more about how bumblebees are doing.

“It is a model for other states,” Melathopoulos said. “I think everyone is looking at the Pacific Northwest and this initiative as a test case.”

The study is being paid for by the U.S. Fish and Wildlife Service in Idaho and Washington, and in Oregon by another government entity called the Foundation for Food and Agricultural Research.

Collaborators include the Washington Department of Fish and Wildlife, Idaho Fish and Game, Oregon State University, The Oregon Bee Project, the Oregon Department of Agriculture and the Xerces Society, an environmental group that works to conserve invertebrates.



Rich Hatfield/The Xerces Society via AP  
**This undated photo provided by Rich Hatfield shows the white shouldered bumble bee (*Bombus appositus*) visiting yarrow in the Columbia Gorge National Scenic Monument.**

# Researchers hope to reduce eagle deaths caused by turbines

By STEPHEN HAMWAY  
The (Bend) Bulletin

BEND (AP) — On a Monday afternoon, a captive audience watched a 14-year-old golden eagle named Walter fly from branch to branch outside the High Desert Museum, gobbling up bits of dead quail as he went.

However, the demonstration was not part of the museum’s well-known Raptors of the Desert Sky show. Instead, it was a piece of an ongoing Oregon State University project using the museum’s collection of eagles to help model behavior and flight patterns to develop technology that ultimately reduces the number of golden eagles killed by wind turbines.

“It is critical to help the species survive,” said Roberto Albertani, associate professor of mechanical engineering at OSU’s Corvallis campus.

In May 2017, Albertani and the team at OSU received a 27-month, \$625,000 grant from the U.S. Department of Energy Wind Technology Office, aimed at developing a technology for detecting and deterring golden eagles that fly too close to the blades of wind turbines.

Albertani said the project will have three components, which can be used independently and can be added to existing wind turbines.

A sensor that can be mounted on the tower of the turbine can detect a nearby bird and determine if it is an eagle in danger of hitting a blade. If it is, the sensor triggers another component of the project: a deterrence system on the ground, designed to scare the birds away from the turbine. The final portion of the project is a series of blade-mounted sensors designed to confirm that a bird did not collide with them.

To develop the detection portion of the system, Albertani and his team, which includes two other OSU professors and several graduate students, needed data on how golden eagles look, fly and generally behave.

Albertani reached out to the High Desert Museum last year about using its eagles,



Joe Kline/The Bulletin via AP  
**Walter, a golden eagle, sits on the glove of Curator for Wildlife Jon Nelson on June 11 at the High Desert Museum in Bend. A team of grad students was working with OSU associate professor Roberto Albertani at the High Desert Museum, recording golden eagle flight to develop technology that ultimately reduces the number of golden eagles killed by wind turbines.**



Joe Kline/The Bulletin via AP  
**Oregon State University associate professor Roberto Albertani photographs as Walter, a golden eagle, flies to a perch June 11 at the High Desert Museum in Bend.**

including Walter, to model behavior. The team set up a 360-degree camera that can track an eagle as it flies, transmitting data to a computer in real time. While the sensor is only capable of detecting eagles, Albertani said, the software can be adjusted to respond to any species of bird.

“The key point is to train the algorithm to automatically detect a certain species,” Albertani said.

If it’s successful, the project will help solve one of wind energy’s ongoing challenges: bird fatalities caused by turbines. A 2013 study notes that at least 140,000 birds are killed by wind turbines every year. While energy-industry groups dispute that total, Albertani noted that the true total has likely increased in the past five

years, as the industry has grown.

Jon Nelson, curator of wildlife for the High Desert Museum, said wind turbines are relatively low on the list of human-caused dangers to golden eagles, behind uncovered windows and power lines. But he said the eagles, which tend to prefer open areas like the sagebrush fields east of Bend, often fly near ridges and other areas that receive a lot of wind.

“And those are the exact types of places we like to build wind farms,” Nelson said.

While Albertani has worked with other eagles in other locations, he said working with the High Desert Museum has been a good fit, given the museum’s collection of trained birds of prey and proximity to Corvallis.

## BLOOMIN’ BLUES

# Sun never sets on the English Plantain

By BRUCE BARNES  
For The East Oregonian

**Name:** English Plantain  
**Scientific name:** *Plantago lanceolata*

English Plantain is one of five species of plantain in northeast Oregon, though it is more common in western Oregon. It is now considered a cosmopolitan weed throughout the world, though it originated in Europe and Asia.

The names “plantain” and “plantago” come from the Latin name *planta* which means the sole of the foot. “Lanceolata” is Latin for being lance-shaped or lanceolate, a current botanical term describing narrow leaves that are tapered at the base and tapered to a point at the tip.

English Plantain has a whorl of narrowly lanceolate leaves at the base of the plant, and no leaves on the stem. There are usually several slender stems about 6-20 inches tall, each with a headlike spike of flowers at the tip. The spike is 1-2 inches long, and is densely

covered with tiny white, 4-petaled flowers.

In England and Scandinavia, the plants were used in several children’s games, and the local folklore claimed that removing the stamens and putting the head under the pillow overnight would make wishes come true in matters of life and death or in love if new stamens appeared in the morning. Leaves of the plant were chewed and then placed on a severe cut to stop bleeding. In the northeast U.S. I found 35 common names used for the plant, from Black-Jacks to Pig-Grass.

One southeast U.S. tribe and another in southeast California had medicinal uses for this plant. It was used to treat headaches, dysentery, poison stings or bites, burns, blisters, skin ulcers, sore eyes, gynecological problems, snakebites, bloody urine and ear aches. Another California tribe fed the plant to cattle.

**Where to find:** The best chance to spot this plant would be along ditches, roadsides and hiking paths in moist forested areas. I’ve never seen it in town, but it wouldn’t surprise me if I did.



Photo by Bruce Barnes  
**English Plantain**

## OUTDOOR BRIEFLY

### Geology hike features East Moraine

WALLOWA LAKE — People are invited to participate in a guided hike on the East Moraine of Wallowa Lake.

One of North America’s

best preserved Pleistocene moraines, the East Moraine Geology Hike is Saturday, July 14 from 9 a.m. to noon.

Participants will have outstanding views and will learn about the moraine’s history and significance to the region.

There is no participation

fee, however, those planning to attend are asked to register in advance.

The program is presented by the Wallowa Land Trust and geologist Ellen Bishop. Donations are welcome, which helps support the Wallowa Land Trust.

A nonprofit organization, its mission is to pro-

tect the rural nature of the Wallowa Country by working cooperatively with private landowners, Indian tribes, local communities and governmental entities.

For more information or to RSVP, contact Ellie Reed at [intern@wallowalandtrust.org](mailto:intern@wallowalandtrust.org), 541-426-2042 or visit [www.wallowalandtrust.org](http://www.wallowalandtrust.org).