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MARK YLEN/DEMOCRAT-HERALD

OSU grad students Barbara Han, left, and Catherine Searle make one of a series of UV light measurements while starting Searle's research on tadpoles.

Save the frogs

Valley observations back up call to preserve amphibians

BY IAN ROLLINS
ALBANY DEMOCRAT-HERALD

Frogs and other amphibians around the world are being threatened or wiped out. That might not be the most interesting thing in the news, but it could be the "canary in the coal mine" for larger problems ahead.

According to a nationwide group of scientists, if frogs and salamanders start dying in large numbers, the results might include more insect pests. It might also signal climate changes that could affect other life on Earth.

And Oregon is not immune. Some amphibian species here are doing fine while others are not, said Andrew Blaustein, a biology professor at Oregon State University.

Blaustein recently co-authored a statement, on behalf of 50 biology experts across the country, which recommends massive action.

"In the Willamette Valley, the red-legged frog used to be much more common," Blaustein said. "The bullfrogs, which were imported in the late 1800s as a food source, are all over now. They're not native. What they're doing, they seem to compete with and eat the



Cascade tadpoles ready for release into the mesocosms at the Lewis Brown Horticultural Farm.

red-legged frogs. They also give diseases to them."

Blaustein's students are studying one of those diseases, a fungus called chytridiomycosis. Bullfrogs carry it without any problem, he said, but they pass it on to other frogs, which can get sick and die from it.

Barbara Han, a fourth-year graduate student, is doing laboratory studies to see how frogs with the fungus behave, to see if their behavior is a factor in the fungus being spread.

"We're studying how it affects the behavior of the hosts, and through that, how it affects transmission in the field," Han said.

The western pond turtles aren't doing

well, either, Blaustein said, because "the bullfrogs eat baby turtles."

More bullfrogs and fewer native amphibians can be good and bad, he said. Bullfrogs eat pests, such as rodents, that other frogs don't. But they also eat other animals, like birds and lizards.

As far as other species go, tree frogs and salamanders are doing fine, Blaustein said. But the spotted frogs in the Cascades are hurting.

"We don't know why, but the populations are declining," he said.

Catherine Searle, a first-year graduate student, is researching whether an increase in natural ultraviolet light is harming them. She is growing tadpoles in large mesocosm containers at OSU's Lewis-Brown Horticultural Farm east of Corvallis.

Some of the containers have filters that block all ultraviolet light, and some have filters allowing ultraviolet light to penetrate. Searle said the experiment is only a few weeks old, so it's too early to know what the results will be.

"There's been a volume of literature that ultraviolet is detrimental to amphibians' life stages," Blaustein said. "It depends on the context and the species."

What does all this mean? "It's a biodiversity crisis," Blaustein said. "We're losing animals at rates that are unheard of."

Aside from being a "biological control for bugs," Blaustein said amphibians

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'People just need to be aware of the fact that we're losing species.'

ANDREW BLAUSTEIN,
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