Science: 'It's intrinsically valuable for our volunteers'

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"This work needs to be done, but there's just not enough capacity," he said. "If we weren't here? It wouldn't happen. This data wouldn't be taken."

A growing trend

Citizen science is nothing new. The Audubon Society's Christmas Day Bird Count has existed for almost 120 years, and for centuries natural observations have been recorded in resources like farmers almanacs.

Julia Parrish, a seabird ecologist with the University of Washington and founder of the COASST survey, gives presentations about citizen science around the country and has seen it spike in popularity, particularly in the last decade. Parrish started the group nearly 20 years ago while studying a colony of common murres on Tatoosh Island off the Washington coast.

She wanted to know if the reproduction and die-off patterns she was seeing were applicable to the entire species. But in order to know she would need data collected on more than one beach at a time.

"When you do that kind of research, you get a lot of information about one colony," Parrish said. "But it's hard to understand whether that one place is indicative of the whole range of the population, or if we are just seeing something that's going on right there."

When Parrish launched a pilot citizen science project near Ocean Shores, Washington, she never thought she would get enough volunteers willing to do the work. Now, there are more than 1,000 active in the program.

"It's hard to imagine more than 50 people at one time wanting to go sample dead birds on a beach," she laughed. "But I was wrong,



Colin Murphey/The Daily Astorian Eric Owen searches the beach for dead birds near Haystack Rock.

which is great."

Part of the rise has to do with technology, she said. Apps that help identify species and allow unprecedented access to information have driven interest up and removed barriers that would have otherwise made it harder to collect data without formal training. Another is the science community slowly coming around to accept citizen science. "I think there's a lot of reticence in the science community to use citizen science. There's some doubt the data collected is of the precision or accuracy that is needed to document phenomena," Parrish said. "But as it grows, the more standardized it becomes. What we're seeing right now is a lot of discussion in citizen science programs asking what they need to do to get to that level."

But a larger part, she said, is a growing passion in locals to study and protect their own communities that otherwise would not have regular research conducted.

"Haystack Rock Awareness Program is a fabulous example of local people saying 'Hey, this is our place. We want to collect the data, we want to know what's going on," Parrish said.

'A marriage contract'

While a general decline in federal funding for scientific research could play a factor in the science community's acceptance of using volunteer-collected data, Parrish said, regardless of funding, there are some projects only citizen scientists can accomplish.

An example was identifying the correlation between massive seabird die-offs and "the Blob," a large mass of relatively warm water in the Pacific Ocean that lasted through 2015. Millions of seabirds washed ashore from Alaska to California in seven mass extinction events since 2013 — a rate, Parrish said, that is 100 to 1,000 times more than normal, depending on the species.

"Now that we know that, we can dive into why the warm water was affecting them. What did it actually do to these birds?" she said. "We only know that because of the work the volunteers are doing, getting numbers on the carcasses."

Citizen scientists also were the ones to alert researchers to early warning data about invasive species, like when European green crabs started showing up on the West Coast in 2016. There have been multiple times Parrish has been alerted to rare seabirds washing ashore that otherwise would have gone unnoticed.

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"We don't do that with mainstream science because we don't have the money, the personnel to do it," she said. "To me it's a contract, like a marriage contract, between mainstream scientists and coastal citizenry to monitor coastal health."

Back in Cannon Beach, Owen sees the benefit going both ways with his volunteers. "It's intrinsically valuable for our volunteers. What they are doing, these issues, directly affect them," Owen said. "I

think they are realizing how accessible it is."

Session: Legislators tackled, health care, guns and net neutrality

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"Really, the session worked the way it should," said House Speaker Tina Kotek, D-Portland. "There were emerging issues. We dealt with them, and we did strategic investments for communities that needed some things. We balanced the budget. We also were able to take on some of the bigger issues facing the state."

Republican leaders Rep. Mike McLane of Powell Butte, and Sen. Jackie Winters of Salem said the short session remains "broken."

"Oregonians sent us here to adjust budgets, make minor policy tweaks, and respond to emergencies. Instead, the majority party introduced significant partisan policy changes that were impossible to properly vet in such a short amount of time," they said in a joint statement. "While thankfully many of these bills failed to make it to the governor's desk, it's hard to escape the reality that the short session is increasingly becoming more about political posturing than good policy making."

Health care

Lawmakers passed two bills aimed at understanding the high price of prescription drugs and shining light on coordinated care organizations, which provide government-subsidized health care to low-income Oregonians through the state's version of Medicaid.

House Bill 4005 requires pharmaceutical manufacturers to disclose reasons for increases in the price of prescription drugs when the increase exceeds 10 percent.

House Bill 4018 makes public the meetings of the state's 15 CCOs and requires the organizations to give at least three months' notice before ending a contract with the state, an effort to stabilize the health care system.

Guns

A bill to strip gun rights from convicted stalkers and intimate partners convicted of abuse passed both chambers. Known as closure of the "boyfriend loophole," the fix was a priority of Gov. Kate Brown for this session.

Housing

Lawmakers boosted revenue to fund affordable housing by raising the real estate document recording fee from \$20 to \$60. The fee is the state's only source of revenue dedicated to paying for affordable housing.

The increase is projected to generate an additional \$60 million every two years

Business taxes

Lawmakers eliminated a federal deduction for businesses on state tax returns.

While the state's income tax code is largely tied to federal code, business owners with "pass-through" income on their personal income taxes will not be allowed to deduct up to 20 percent of their income in 2018.

It was unclear Saturday whether the governor plans on vetoing the bill. She raised some concerns during session over the impact it would have on the state's small businesses.

The bill was intended to stem state revenue losses from federal tax reform late last year. The change is expected to result in \$244 million in tax dollars in the existing two-year budget than if the state had allowed the deduction.

Net neutrality

State lawmakers have no

authority to regulate internet companies. However, they can pass laws to use the state's buying power to encourage certain business practices.

In this case, they required that internet providers that contract with government entities in the state abide by the principles of net neutrality. That means contractors may not block, slow down or charge more for certain content.

Climate change

An ambitious proposal to enact a cap-and-invest program this year moved through the session without legislative action.

The program would have charged companies for emitting carbon dioxide into the atmosphere and invested the proceeds into projects designed to offset global warming.

Kotek and Courtney said they want to pass the legisla-

tion next year during the Legislature's longer session. They also announced the creation of a new Joint Legislative Committee on Carbon Reduction.

Lawmakers also added \$1.4 million to the state budget as part of the budget reconciliation bill to create a carbon policy office in the state Department of Administrative Services.

Health care

Portland Rep. Mitch Greenlick's third try to refer a constitutional amendment to voters to make access to affordable and effective health care a fundamental right was blocked in the Senate. Opponents were concerned about potential cost and litigation that could result from the constitutional provision.

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