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Doctoral candidate Amelia Ritger receives award for women researchers

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Climate change is disrupting the natural world. But not every species, population or individual organism feels its effects to the same extent.

Investigating this variety of responses has earned UC Santa Barbara graduate student [Amelia Ritger](#) a \$20,000 Scholar Award from the P.E.O. Sisterhood. She is among 110 individuals in the U.S. and Canada selected to receive the award, which recognizes women doctoral students for their academic achievements and potential for positive impact on society.

“I feel incredibly humbled to be a recipient of the PEO Scholar Award,” Ritger said, who was nominated by the organization’s Chapter OK of Santa Barbara. “It is a huge honor.”

Ritger studies how variation within a species can make certain populations and individuals more or less vulnerable to the effects of climate change. For instance,

her work with strawberry anemones (actually more closely related to corals) is revealing how variation within a species affects a population's response to marine heatwaves. "Without diverse populations, we may see local extirpation as we get heatwaves that are hotter and happen more frequently," she said.

Ritger also studies the effects of ocean acidification on Pacific razor clams, a species of economic and cultural significance in the Pacific Northwest. More acidic water can disrupt shell formation, and tribal fishermen have observed more shells breaking during razor clam harvests. "My research will be directly helpful to ecosystem managers in understanding where and how climate change is impacting these important species," she said.

In addition to her research, Ritger is collaborating with engineers to create a low-cost pH sensor to expand access to ocean acidification monitoring. She's also developed apps to disseminate information on ocean acidification and biodiversity survey data from kelp forests in the Santa Barbara Channel.

Ritger worked with Olympic Coast National Marine Sanctuary assisting in their decadal sanctuary management plan review. She currently supports coastal ocean acidification monitoring at Olympic National Park.

The P.E.O. Sisterhood — founded in 1869 at Iowa Wesleyan College — is a philanthropic educational organization dedicated to supporting higher education for women. The Scholar Awards were established in 1991 to provide substantial merit-based awards for women in the United States and Canada who are pursuing a doctoral-level degree at an accredited college or university.

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