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Doctoral student, professors research, reason for decline of Olympic marmot

By BETSY COHEN of the Missoulian

So Punxsutawney Phil is one groundhog credited with the ability to predict the length of winter. But on this side of the Mississippi, he's an underachiever.

Phil's cousin, the Olympic marmot, is on to more important tasks, such as helping University of Montana and Montana State University scientists understand global warming and the mysteries of animal movement from habitat to habitat.

With the help of nearly \$500,000 in grants from the nation's most prestigious science-funding agencies, Sue Griffin, a UM wildlife biology doctoral student; Scott Mills, a UM wildlife biology professor; and Mark Taper, a Montana State University ecology professor, have been studying the charismatic creatures for the past three years.

The marmots, which are found only in the high-elevation meadows of the Olympic Peninsula on Washington's coast, are declining in number and no one knows why.

Griffin hopes to reveal the source of the problem, and believes the quest will lead to other important revelations.

"How marmots respond to stressors, such as human impact and fragmented habitat, might give us some idea of how other species that are fragmented may respond as well," Griffin said. "Because they live in alpine environments, which are expected to be highly impacted by climate change, marmots may serve as sentinels, suggesting how other animals will respond to climate change."

The animals may also help identify recovery methods for other declining animal populations, such as lynx and bighorn sheep, Mills said.

Recently, Griffin was one of eight student scientists across the nation to land a \$78,000 Canon National Park Science Scholars Program Scholarship, to keep the project going.

This study and these particular creatures have garnered so much funding because they live in a restricted area, they don't live anywhere else, and they are easy to find and study, Griffin said.

"There is a lot of interest in how animals move through non-habitat - places that are not suitable for them to live in," she said. "The main thrust of our work is to develop new ways to measure how animals in general are moving between small isolated pockets and what are the population-level impacts of this movement."

Marmots are social creatures that live in colonies, comprised, typically of one breeding male, two or three adult females and their young.

Because the Olympic marmot population has slipped, and population is estimated to be around 2,000, Griffin is particularly interested in how isolated colonies get established, specifically the question, how do they get from place to place?

Do they follow geography or go blindly into the unknown?

Hopefully, answers will be found in Griffin's work, which takes place May through October in Olympic National Park, and includes genetic sampling of a large percent of the marmots and monitoring the cat-size animals with radio telemetry.

Although there is still much to learn about why the population is declining, Griffin believes it is tied to an increase in deaths caused by predators, mostly coyotes.

Perhaps, this coming field season, the marmots will tell Griffin the rest of their story, so that others will benefit.

"This project is not just about the marmot," Mills said. "We really think this will provide a template to study movement of all wildlife."