UC SANTA BARBARA

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ENDANGERED BUTTERFLY NEEDS SPECIAL ENVIRONMENT

Developing a park system that helps to restore endangered species is not as simple as setting aside land. Endangered species like the Fender's Blue butterfly have specific requirements that must be met before they can thrive.

Cheryl Schultz, a post-doctoral fellow at the National Center for Ecological Analysis and Synthesis at the University of California, Santa Barbara, has been studying Fender's Blue since 1993, and will present a talk on the topic on Tuesday at the annual Ecological Society of America meeting in Tucson. (See contact information below.)

Fender's Blue is a species that used to thrive in the prairies of Oregon, until its habitat was disturbed by farming and development. Only one half of one percent of this grassland remains in its native form.

Prairies were the earliest areas that were settled and farmed in Oregon, and few natural areas remain, explained Schultz. Now a coalition of environmentalists and planners are looking to restore Fender's Blue habitat in an area near Eugene, Ore., as part of a larger restoration project.

The Kincaid's lupine, a threatened wildflower that provides food for Fender's blue caterpillars, will be planted in restored areas. Other native grasses and wildflowers will be added so that the patches of land will function as native habitat.

Schultz and her collaborator, Elizabeth Crone, of the University of Montana, reviewed possible restoration sites to see if the butterfly would thrive. The Nature Conservancy is helping to choose sites that could potentially be bought and restored, a combination of public and private land.

Schultz and Crone evaluated 150 patches in all. "We analyzed whether or not patches would be colonized and how they might add to the overall system," said Schultz.

Patch size and connectivity interact, said Schultz. A small patch could contribute to the population if it is close to other patches. And if a patch is too far away from neighbors, it will never get colonized. Large and connected patches are those that do best, said Schultz. "That's not surprising, but we had to figure out how close and how big the patches need to be."

Schultz and Crone found that restored patches no more than three-fourths of a mile apart, and at least seven to 25 acres in size, benefit Fender's Blue butterflies far more than smaller or more isolated patches.

The Fender's Blue only live ten to fifteen days and during that time must find a place to lay enough eggs.

Only about one in a hundred Fender's Blue eggs survive to become adult butterflies.

"If the patch isn't big enough, then it might not replace itself by laying enough eggs," said Schultz.

Schultz also explained that it is not clear if captive rearing is necessary to restore the Fender's Blue to the area, or if with the right environment they will repopulate an area on their own.

Cheryl Schultz can be reached on Sunday through Wednesday at the Radisson Tucson City Center, telephone 520-624-8711. She will give an oral presentation in the Graham Meeting Room at 2:45 on Tuesday, August 5. At UC Santa Barbara her phone number is (805) 892-2529.

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