

## How Inmates, Scientists, and Government Workers Are Teaming Up to Save This Butterfly

*The effort to restore prairies in Washington state before they disappear.*



*Sarah van Gelder* posted Oct 27, 2017

At Joint Base Lewis-McChord, a base serving both the Air Force and Army near Tacoma, Washington, the mission is all about preparing for war. Among the training activities is the firing of heavy artillery; shells travel as far as 6 miles before exploding in open country.

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Ironically, these artillery firings have helped protect some of the most delicate species in the Pacific Northwest—including the Taylor's checkerspot butterfly, a federally endangered species, and the streaked horned lark, which is listed as threatened.

Here's how. Grass fires are inadvertently sparked by these ordnance, burning the trees and shrubs that would otherwise have encroached on these open lands. This has helped maintain a prairie ecosystem that has disappeared in other parts of Western Washington and Oregon, where fire suppression practices have allowed conifer forests to flourish. Without fires, conifer forests quickly grow in this region, crowding out open habitats and the creatures that live there—like the Taylor's checkerspot butterfly and streaked horned lark. Cities, suburban sprawl, and agriculture have also contributed to prairie habitat loss.

But on the Lewis-McChord base, some of the region's last native prairie lands remain, thanks to these accidental fires, according to Fawn Trey Harris, a local ecologist. And now, a motley collection of prison inmates, Native ecologists, and military base contractors are working to restore prairie ecosystems before the species that depend on them disappear.

## Fire and ecosystems diversity

Fires have been much in the news for months, especially in the western part of the United States. The 2017 fire season was deadly, lasting months, costing billions in firefighting costs and in damage to homes, businesses, and wild lands.

Historically, fire played an important role in shaping this region. For thousands of years, Native tribes actively used fire to manage a patchwork of prairies and forests. Throughout the region, tribes used controlled burns to maintain open areas where favorite foods could flourish and where grazing animals would find abundant fodder.

## **Native people weren't allowed to practice their fire-setting ways of managing ecosystems.**

"Fire setting was part of indigenous traditional ecological knowledge," Harris told me. She is of Miniconjou Lakota descent, although she lives on the Suquamish tribe's reservation, just west of Seattle.

With the arrival of settlers, Native people weren't allowed to practice their fire-setting ways of managing ecosystems, she said. "The propaganda of Smokey the Bear had a huge negative impact. It was a real failure in science; they didn't know enough about how forests and prairies worked."

Western science has caught up. Today, fire ecologists know that when fires are suppressed or eliminated from landscapes completely, living and dead plant matter build up, providing fuels for bigger and more devastating wildfires—like those experienced this summer.

## Indigenous ecological know-how

Harris is familiar with both traditional indigenous knowledge and modern science. She holds a master's degree in environmental studies and works as a wildlife rehabilitation technician at a shelter.

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Before that, though, her work centered on a project aimed at restoring the prairie habitat found on Joint Base Lewis-McChord—habitat that supports the endangered Taylor's checkerspot butterfly.

In graduate school, Harris worked with teams of inmates at the Washington Corrections Center in Shelton, Washington. Through the Sustainability in Prisons Project, inmates there grew early blue violets, a flower used to help restore prairie ecosystems in Washington. The inmates were selected for this project by prison staff because they'd experienced brain injuries or had cognitive deficits. Under Harris' guidance, they raised blue violets and gathered and distributed their seeds for use in restoration projects at Lewis-McChord. Through this program, inmates have also raised Taylor's checkerspot butterfly caterpillars which have been used to establish butterfly populations on the base, according to Karen Reagan, an endangered species biologist with the U.S. Fish and Wildlife Service.

## **“Native people have stories that go back thousands of years.”**

Harris speaks with pride about the healing she saw, inside the prison walls as well as outside. The inmates told her the plant nursery where they worked was the most peaceful place in the prison, Harris said. “A few said they wanted to pursue science when they got out. A lot of them felt proud to be contributing to something bigger than themselves.”

Meanwhile, Harris said the state of Washington is also turning to controlled burns for habitat restoration—often working in collaboration with area tribes.

That collaboration has long-term implications, Harris says.

“Scientists are looking to traditional ecological knowledge for how to maintain ecosystems through climate change,” she said. “Habitats have always changed. But we scientists don't have data sets that go back that far.”

But there are people living in this region whose oral traditions span ecological upheavals across generations. “Native people have stories that go back thousands of years.”

*Editor's note: A previous version of this article said the Sustainability in Prisons Project helped establish populations of Oregon silverspot butterflies on Joint Base Lewis-McChord. This was incorrect. In fact, the Sustainability in Prisons Project raised caterpillars of the endangered Taylor's checkerspot butterfly to establish populations on the base and elsewhere in the south Puget Sound region.*