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Do call it a comeback – how the checkerspot butterfly found salvation in a women’s prison

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You may have heard about how the honey bee's decline is threatening the world's food crops. Well they're not the only pollinators in trouble. The Taylor's checkerspot butterfly was also facing extinction in the face of its shrinking prairie habitat. But thanks to an innovative breeding program at a women's prison outside Seattle, it's making a comeback. Special correspondent Cat Wise reports.



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HARI SREENIVASAN: Now to a remarkable story of transformation and the unlikely allies of an endangered butterfly.

A recent U.N. report warned some 40 percent of pollinators, birds, bees and butterflies, are at risk of extinction. Humans are the driving force behind the decline.

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Special correspondent Cat Wise reports on a unique effort in the U.S. that leads to more than flowers blossoming.

CAT WISE: The artillery practice range at Joint Base Lewis-McChord near Seattle, Washington, is not a place you would expect to be ideal habitat for an endangered species. But it is.

Meet the Taylor's checkerspot butterfly. Ten years ago, this beautiful insect was on the brink of extinction; 99 percent of its native prairie habitat in the Pacific Northwest and British Columbia has been lost to urban and agricultural development. The only location it could be found was here on the artillery range.

Why? Well, it turns out that bombs actually benefit this butterfly.

DAN GROSBOLL, Biologist, Joint Base Lewis-McChord: If you're an individual butterfly that has an artillery shell land on you, it's bad, but if you zoom out from that small-scale impact, and look at the way that the training ignites fires across the landscape, and improves the habitat across the landscape, overall, it is likely good for the butterfly population.

CAT WISE: Dan Grosboll is an insect biologist at the base who has to be very, very careful when he's out looking for butterflies amid artillery shells.

DAN GROSBOLL: They have a very brief adult life span. And the rest of the life span, the whole rest of the year, they're eggs or larvae.

CAT WISE: Grosboll and a team of other government scientists are now working to boost the numbers of butterflies here, but there's only so much they can do when this land is needed for other purposes.

DAN GROSBOLL: The base is here in order to support troops training, so the troops are ready to go and fight. The fact that we also can provide habitat for endangered species is a really good thing, but it's important that all of the preservation of endangered species is not borne by the base.

CAT WISE: So, the military sought out help from an unlikely group who happen to have a lot of time on their hands.

On a recent morning, a small team of inmates at the Mission Creek Corrections Center for women walked into a greenhouse, known as the Butterfly Lab, and quickly got to work. The greenhouse, which sits just outside the walls of the minimum-security prison, was built five years ago with funding from the Department of Defense.

Now these women, whose lives have all taken a wrong turn at some point, have become leading experts in the field of captive butterfly breeding.

Susan Christopher ended up here after making some bad decisions to support a gambling habit. Now, after going through some extensive training on butterfly rearing, she's fully engaged in a more productive and important endeavor.

SUSAN CHRISTOPHER, Inmate, Mission Creek Corrections Center: We came up with this diagram so that we could keep our major lines separate through our breeding program. The male from this line will get bred to females of this line, so we continue to move through that circle, so that we never breed the same line to itself.

CAT WISE: And why is that important?

SUSAN CHRISTOPHER: For genetic reasons. We want to have as much genetic diversity, and not have the chance of interbreeding.

CAT WISE: The women, who are called butterfly technicians, are raising the insects throughout their multiple life stages, so they can be released back into the wild. It takes a lot of patience, and a loving touch.

WOMAN: And that's honey solution on the Q-tip.

CAT WISE: And they have been very successful. More than 30,000 Taylor's checkerspots have been raised for release by this facility and the Oregon Zoo, which has a similar breeding program.

WOMAN: I have gone one, two eggs for sure.

CAT WISE: On the day we visited, Cynthia Fetterly (ph) and Jessica Stevens (ph) were working together on a very delicate project, harvesting the tiny eggs that a female Taylor's checkerspot had recently laid.

WOMAN: The one I just got done finished doing was from the wild, and we weren't sure if we were going to be getting any eggs off of them because they already look like they have been pretty spent. So, getting that big cluster of eggs was really exciting.

It's very rewarding, and it's hard to explain when you can actually help bring back an endangered species. It's very humbling to be able to do that.

CAT WISE: The butterfly breeding program at Mission Creek is part of a larger effort in Washington state called the Sustainability in Prisons Project to connect inmates with science and nature projects while they are serving time. It's a joint endeavor by the Washington Department of Corrections and the Evergreen State College.

KELLI BUSH, Sustainability in Prisons Project: So, we have programs all across the state.

Kelli Bush is the program manager for the project, and she says the benefits go beyond the prison walls.

KELLI BUSH: It seems to be changing lives, not just the incarcerated individuals, but corrections staff, and biologists, that everyone involved seems to be feeling good about the work and the contributions that are being made through these efforts.

MARY LINDERS, Washington Department of Fish & Wildlife: Oh, yes, here, they're on this side. When the larvae hatch, they will actually just start feeding on those leaves that it's on.

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CAT WISE: One of those who is benefiting from the butterfly technicians' hard work is Mary Linders, a state biologist who has been spearheading efforts to increase the butterfly's habitat, and numbers, around Puget Sound.

She says, initially, she wasn't sure how it would be to work with inmates.

MARY LINDERS: It's very detail-oriented work. You really need a lot of consistency in the people that are actually working on it, so it was a risk. But it has proved to be a tremendous success. The folks at the prison have done just a fabulous job of running a top-notch facility.

CAT WISE: Linders and a group of scientists and volunteers recently gathered to release captive raised caterpillars in a wildlife area near Olympia, Washington.

And for the first time since the program began, they were joined by two inmates who had raised many of those insects.

MARY LINDERS: Bugs are — we have bugs in the car. Do you guys want to help get them out?

WOMAN: Yes, absolutely.

MARY LINDERS: There's your baby.

CAT WISE: After getting a tutorial from Linders about where and how to place the bugs...

MARY LINDERS: What you're going to do is release these in groups of two to five. So, you can go ahead and even just brush them right off the lid.

CAT WISE: ... inmates Michelle Dittamore and Eva Ortiz began to release their fuzzy friends, with mixed emotions.

MICHELLE DITTAMORE, Inmate, Mission Creek Corrections Center: I feel like it's a lot like your teenager flying the coop to go to college, and you're just like, I have literally bathed you, I have dressed you, I have done your laundry, I have packed your lunch.

But I have to have faith that there's been so many generations of just instinct bred into these little guys that they're just — they're going to get down there, and they're just going to know what to do.

CAT WISE: Also helping out at the release, Carolina Landa. Landa was released from the correctional facility last year after serving time for a drug offense.

But she's now enrolled in the Evergreen State College environmental science program, a big change of direction she attributes to her time spent with the butterflies.

CAROLINA LANDA, Student, Evergreen State College: Here is an endangered species, and the fact that they were saying, yes, we trust you, yes, we believe that you can do this work, and so that very much played a big factor in also me believing in myself, right, to start that path.

CAT WISE: The combined efforts of all the various individuals and groups are paying off. At this release site, the butterfly population has doubled since last year to several thousand.

And at Joint Base Lewis-McChord, the population has just been deemed to be self-sustaining, a significant milestone for the species.

Back at the prison greenhouse, Susan Christopher says she's learned some valuable lessons from the butterflies.

SUSAN CHRISTOPHER: When I watched the butterflies struggling to come out of their cocoon out of their chrysalis, it really makes me realize that, yes, we all do need to struggle to get to where we need to be.

CAT WISE: Christopher and her colleagues are now gearing up for a busy summer caring for some very hungry caterpillars.

For the "PBS NewsHour," I'm Cat Wise in Washington state.