

From <http://news.cahnrs.wsu.edu/2012/07/02/wsu-monarch-butterfly-project-underway-with-help-from-washington-state-penitentiary-offenders/>

July 2, 2012

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## **WSU Monarch Butterfly Project Underway with Help from Washington State Penitentiary Offenders**

WALLA WALLA, Wash.—Gilbert London stands in front of a blue plastic food-storage barrel converted into a Monarch butterfly-rearing cage. Inside, roughly two dozen opaque-green chrysalises hang from milkweed plants like living jewels. In roughly 10 days, the chrysalises London helped to raise will yield the iconic adult butterflies with orange-and-black wings. He and five other Washington State Penitentiary offenders will tag the butterflies soon after that, readying them for their release as part of a study by Washington State University entomologist David James. The Monarchs will be free to leave then; London will not.

London has been locked up at the penitentiary for 25 years of a life sentence. He doesn't say what he did to get there. Instead, he talks about what he likes best about raising the Monarchs. He refers to a passage from the Bible that describes shedding an old skin to become a new creature. London points to a small, shriveled, black husk at the bottom of the blue barrel, hardly worth looking at twice. Except that the Monarch once occupied this skin and then shed it to become something else. Something better.

"And that's what a lot of us are trying to do too," London says.

### **'Incarcerated Citizen Science'**



WSU entomologist David James (center) shows Washington State Penitentiary offenders a tagged Monarch butterfly. The inmates are raising 450 Monarch butterflies as part of a study by James on the insect's migratory path in the Pacific Northwest. Shown clockwise around James are Bruce Bushey, Preston Rogers, Gilbert London and Joshua Tucker. Photo by Nella Letizia. [Click image for a high-resolution version.](#)

David James, driving to the penitentiary earlier Friday morning, discusses the project that began in June. Fittingly, he's wearing a white T-shirt with Monarch butterflies on the front, the lightness of the shirt setting off skin tanned from many summer days in the field. In the backseat of his Prius, a small carrier enclosed in a dark bag houses a lone male Monarch with a tag. He will show the WSP offenders how to tag the butterflies they're raising when he arrives in Walla Walla.

James's expertise revolves around *Danaus plexippus*, the Monarch as it is scientifically known, which translates to "sleepy transformation" in Greek. He reared and tagged thousands of Monarch butterflies in Australia during the 1980s. Twelve research papers and his doctoral dissertation resulted from that experience.

"I have a long history with this creature," he says, his English accent softened and skewed somewhat by his time in the outback.

Many studies and tagging programs chronicle the migration of eastern U.S. Monarch populations, but not much has been learned about the butterfly's activities in the west. According to James, Pacific Northwest Monarchs likely spend their winters along the California coastline. Then in January and February, they begin flying north and east to establish breeding populations in milkweed patches mostly within California. These newly hatched Monarchs continue to migrate north and east in April and May into Oregon, Washington, Idaho and southern Canada and produce another generation or two before making their way back to California in late summer and fall.

No one knows why they go to California, James says. The theory is that western Monarchs use day length as their cue that winter is coming. But tagging programs done on this region's butterfly population have been largely confined to overwintering colonies in California. Tagging Pacific Northwest Monarchs while they are migrating will provide more answers. It's possible, too, that some end up in the famous Mexican overwintering colonies.

James's project may also help to determine why Monarch populations in California have substantially decreased in the last decade. The WSU entomologist has also noted reduced sightings of Pacific Northwest Monarchs during the summer—just a handful the past two years. The culprit for the decline appears to be loss of breeding habitat and milkweed because of increased agricultural activity and urban expansion. Droughts in the west may also be responsible for habitat loss. If scientists and the public want to

conserve and increase Monarch populations, they need to know where spring and fall butterflies fly to in the Pacific Northwest and what routes they take.



Washington State Penitentiary inmate Gilbert London stands next to a poster detailing the life cycle of a Monarch butterfly. London is one of six inmates helping to raise Monarch butterflies for WSU entomologist David James. Photo by Nella Letizia. [Click image for a high-resolution version.](#)

So why is James’s study starting at the penitentiary in Walla Walla? In Washington, bringing science and prisons together isn’t new. Since 2008, the Sustainability in Prisons Project, a partnership between Evergreen State College and the Washington State Department of Corrections, has teamed up inmates, prison staff and scientists to help restore endangered species and habitats. The program also promotes sustainable prison operations through energy conservation, recycling and more.

Inmates from four Washington correctional facilities have raised Oregon spotted frogs, Taylor’s checkerspot butterflies and native prairie plants—in addition to developing valuable job skills, confidence and a restored connection with nature.

Washington State Penitentiary isn’t among the four facilities participating in the Sustainability in Prisons Project, but Associate Superintendent Chris Bowman and other prison administrators have initiated sustainability efforts at Walla Walla nonetheless. After reading about the Oregon spotted frog success, Bowman asked Tamara Russell, clinical director of WSP’s Residential Mental Health Unit, about starting a butterfly conservation project with WSP offenders.

Russell learned about James’s work as director of WSU’s Vineyard Beauty with Benefits Project, which seeks to use native plants to beautify vineyards—and attract beneficial insects like native bees and butterflies as well as predators for pest control. She contacted James about whether he had a research project involving butterflies that WSP inmates could participate in. And that’s how “incarcerated citizen science,” as James dubs it, began for WSU and the penitentiary. Bowman couldn’t be more pleased.

“It’s been a really exciting program and has had a positive impact,” he says. “Our goal is to give the inmates something to look forward to when they wake up in the morning.”

“From a mental health standpoint, this has been very beneficial for the inmates,” Russell adds. “We know that having an activity that allows inmates to give back to the community helps alleviate depression from long-term incarceration. It gives them a focus and a purpose for their lives. They’re involved in something bigger than themselves that has meaning.”

### **The Butterfly Wranglers**



Washington State Penitentiary inmate Bruce Bushey shows a visitor pupating Monarch butterflies he and other inmates are raising. Photo by Nella Letizia. [Click image for a high-resolution version.](#)

Bruce Bushey remembers picking tent caterpillars from his grandfather’s cherry orchard as a kid, so handling the Monarch caterpillars at the penitentiary is familiar to him. He and other WSP offenders working with James and Russell have been careful to keep the Monarch containers clean and to not touch the caterpillars with their fingers when moving them, using paintbrushes and paper instead. The result is that out of the 600 Monarch eggs that James sent to WSP, about 450 caterpillars are now pupating. A great return for the inmates’ first time raising Monarchs.

“It’s so fast. It’s just a fascinating process,” Bushey says. “What I’ve learned, I’ll pass on to other inmates.”

More inmates are interested in participating in the Monarch-rearing program, though it didn’t start that way. Gilbert London admits that he took a lot of ribbing in the

beginning; some offenders asked him if he was going to add a butterfly tattoo to those he already has.

But now the men are asking London about the butterflies' progress. He and others involved in the project have a new nickname that reflects their newfound knowledge and skills: The Butterfly Wranglers. And like Bushey, London wants to transfer those skills to someone else.

"Maybe if I can do this, I can help other guys who come here, pass along a little bit of wisdom I attain here," he says. "If I can do something to help them, I'd like to do that."

*Note: The Monarch butterflies at Washington State Penitentiary are tentatively scheduled to be released the week of July 9. Individuals who spot a tagged Monarch are asked to email the address or call the phone number listed on the tag and note the serial number of the butterfly.*

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