



CONSERVATION PROGRAMS IN PRISONS

The Sustainability in Prisons Project's conservation programs are among our most complex and rewarding endeavors. Each program represents a collaboration between an Evergreen graduate student, a faculty member, the SPP Program Manager, at least one science adviser from a partner agency, correctional staff, and inmate technicians at the Washington Department of Corrections (WDOC). Each member of the team plays a critical role which allows our unique science, conservation, and restoration work to be successful.

POLLINATORS: HONEY BEES & BUTTERFLIES

The Sustainability in Prisons Project (SPP) has engaged the patience and diligence of inmate technicians to achieve great success with pollinating insects. Several prisons cultivate honey bees, bolstering struggling populations of this crucial crop pollinator. Various rare and endangered butterflies are the subject for developing SPP rearing programs, and our prairie plant programs grow numerous species that provide food and habitat for these ephemeral beauties.

Our flagship pollinator program is with the Taylor's checkerspot butterfly (*Euphydryas editha taylori*), a federally threatened species that once flourished from southern British Columbia to central Oregon. Currently there are only a few small, isolated populations of the butterfly remaining, the largest of which is in Washington on the Artillery Impact Area at Joint Base Lewis-McChord. The SPP captive rearing facility at Mission Creek Corrections Center for Women (MCCCW) adds to the scope and resilience of recovery efforts and bolsters the original rearing program at the Oregon Zoo.

In 2012 and 2013, inmate technicians, students, and corrections staff reared and released more than 4000 Taylor's checkerspot butterflies and achieved survivorship rates of over 95%. We release the caterpillars twice a year, both before and after dormancy, and we release adult butterflies in May or June. Inmates and Evergreen students are engaged in critical research on the plants these butterflies prefer for laying their eggs, and this will lead to better understanding of their habitat needs.

HERPETOLOGY: OREGON SPOTTED FROG & WESTERN POND TURTLE

The Oregon spotted frog (OSF; *Rana pretiosa*) is a state-listed endangered species and a candidate for federal listing; this warm water marsh specialist has vanished from an estimated 70% of its historic range. From 2009 to 2012, SPP partnered with the OSF recovery group: scientists and conservation leaders from the Washington Department of Fish and Wildlife, the US Fish and Wildlife Service, and three zoos. With support of the recovery group, SPP participated in a 5-year pilot to head start OSF in captivity and release them to wetlands at Joint Base Lewis-McChord (JBLM). SPP inmate technicians proved to be excellent at captive rearing, contributing to high rates of survival and on average the largest, most mature frogs of all four rearing



facilities. Inmates, staff, and students worked together to successfully raise more than 550 OSF at Cedar Creek Corrections Center (CCCC).

The OSF recovery pilot ended in 2012 and the head-starting program was put on hold during recovery plan updates. Field surveys in 2013 revealed OSF egg masses at JBLM, providing evidence that captive-reared and subsequently released OSF are successfully reproducing in the wild. Captive rearing may begin again in 2014, and in the interim CCCC is adapting their rearing facility to care for Western pond turtles (*Emys marmorata*), another state-endangered species, that are suffering from a shell disease.

PLANTS: RARE & ENDANGERED SPECIES

SPP is planning programs for heirloom crop seed saving and growing shrub-steppe species native to central Washington. Our main focus to date has been our prairie plant conservation programs, which now include three separate nursery sites: Stafford Creek Corrections Center, Shotwell's Landing Nursery, and the newest nursery at Washington Corrections Center for Women. SPP works closely with the Center for Natural Lands Management and Joint Base Lewis-McChord in a coordinated effort to restore the remaining prairie habitat of the south Puget Lowlands. The native plants grown by SPP are critical to such prairie-dependent species as the Taylor's checkerspot butterfly, mardon skipper, and zerene fritillary.

We produced more than 600,000 native plants of 26 species from 2009 to spring 2012. With increased capacity, we plan to produce more than 400,000 plants of 50 or more species annually. Each fall, our plants are out-planted to restoration sites or cultivated beds for seed production.

Conservation partners and SPP staff provide training and education to several inmate crews in prairie plant cultivation and restoration ecology. Inmates, SPP staff and students, and conservation partners are also engaged in scientific research relevant to the propagation of native plants. They track germination, establishment, and responses to environmental conditions and various cultivation techniques; these data result in invaluable propagation protocols for difficult-to-grow species.

SPP NETWORK

Newly launched SPP teams in other states across the country have already begun creating their own conservation programs; please visit our website for more details!

Photos: Benj Drummond (front), Cyril Ruoso (2nd from top); all others by SPP staff

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