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Seaside Birds-foot Lotus

# Doing the Groundwork Together

## Restoring Garry Oak ecosystems

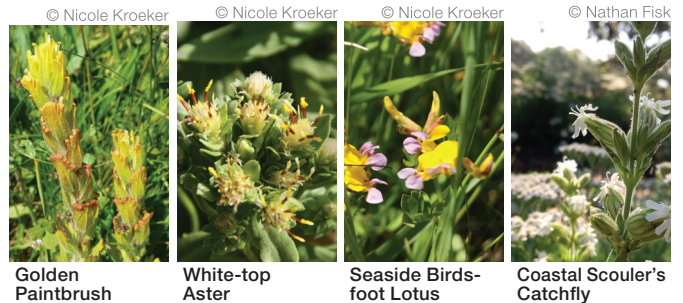


Deltoid Balsamroot

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Garry Oak ecosystems, with their shady woodlands and open meadows, are among the most threatened environments in Canada. Found in and around Vancouver Island and the Gulf Islands, Garry Oak habitats contain over 100 species at risk, some of which are not found anywhere else in Canada. These ecosystems have been greatly reduced by settlement and ongoing urban development, challenges that have been compounded by subsequent invasion of aggressive alien species.

Gulf Islands National Park Reserve and Fort Rodd Hill National Historic Site of Canada provide refuge for the plants and animals that depend on Garry Oak ecosystems. Parks Canada is doing the groundwork needed to help these species survive, in partnership with thousands of volunteers who contribute to habitat improvement, protection, and species translocation efforts.



### Busy as Bees

The endangered **Deltoid Balsamroot** (*Balsamorhiza deltoidea*) is a stunning native sunflower that once grew abundantly in Garry Oak woodlands. Now restricted to eight small natural populations, it is one of five plant species at risk that Parks Canada is working hard to recover through species translocations.

As part of recovery planning efforts at Fort Rodd Hill, Parks Canada staff discovered that this small population produces very little viable seed. And so staff got busy as bees: using tweezers, they collected pollen from flower heads in a nearby population, buzzed back to Fort Rodd Hill, and carefully transferred the pollen by hand. This cross-pollination experiment was a success, yielding more than 100 viable seeds (up from 1-3 seeds in previous years) that have been propagated and replanted on the site.

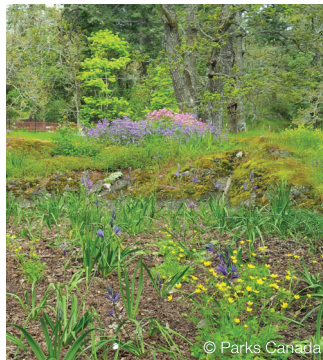
Parks staff are also working to establish new populations of other plant species at risk at both the park reserve and historic site. Since 2009, parks staff, partners and volunteers have propagated and outplanted hundreds of **Golden Paintbrush** (*Castilleja levisecta*), **Coastal Scouler's Catchfly** (*Silene scouleri* ssp. *grandis*), **Seaside Birds-foot Lotus** (*Lotus formosissimus*) and **White-top Aster** (*Sericocarpus rigidus*). Plants are protected from herbivores and monitored to better understand these species and their long-term needs.





Before

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After

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Gulf Islands National Park Reserve and  
Fort Rodd Hill National Historic Site of Canada

## Nature's Classroom!

The Garry Oak Learning Meadow was initiated in 2010 to restore a heavily impacted area in the historic site. The one-acre site includes an area of woodland with an existing canopy of majestic Garry Oak trees, a broad sunny meadow and a small rock outcrop. By restoring native species to these habitats, the project aims to both improve ecosystem health and engage the public in hands-on activities that will help attract birds, butterflies and local nature-lovers alike.

The centerpiece of these efforts is the **Common Camas** (*Camassia quamash*) and **Great Camas** (*Camassia leichtlinii*) - iconic wildflowers in Garry Oak ecosystems that have special significance to the First Nations in the region. With their spectacular purple blossoms, camas create an unparalleled spring wildflower show.

In order to generate plants for the re-vegetation effort, a native plant nursery was constructed on-site in the fall of 2010. It is now bursting at the seams with over 100,000 three-year Common and Great Camas bulbs raised from seeds collected on-site, as well as 30 other species of native shrubs, forbs, and grasses.

After extensive mulching and construction of a seven foot deer fence, re-vegetation of the site began in earnest in the fall of 2012. Since that time, close to 40,000 native grasses, forbs, shrubs, ferns, vines, annuals and perennials have been planted, including over 18,000 bloom-size bulbs of Common and Great Camas.

Park staff has also installed a fully accessible gravel walking path that winds its way around the picturesque rock outcrop and through a portion of restored meadow. Visitors can now enjoy spectacular views of spring wildflowers while learning more about Garry Oak ecosystems and the restoration project as a whole.



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## Many hands make light work

One of the most striking things about the Garry Oak restoration project is the way it has attracted so many passionate volunteers willing to get their hands dirty to protect nature. More than 300 individuals have contributed over 1000 hours to the Garry Oak Learning Meadow alone. With so many helping hands, even planting 18,000 bulbs can go quickly!

Volunteers are also an active part of other restoration projects at Parks Canada sites. These volunteers work as part of a team and develop new skills such as native plant seed collection, seed cleaning, seed sowing, cutting selection and propagation, planting, and invasive plant removal. In return, Parks Canada and the places it protects benefit from their passion, their energy, and their green thumbs!

According to volunteer Gladys Ogilvie, "When you volunteer with Parks Canada it's such a great learning experience. You learn something new every time and it makes you want to go back and volunteer again. It's exciting, and it makes me want to share that with other people."

While much work remains to help Garry Oak ecosystems bloom brightly once again, Parks Canada staff are hopeful as they look to the future. And with so many passionate volunteers with them every step of the way, they have more than enough reason for optimism.

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