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Exploring Our Little Corner of the World with the Galiano Naturalists

by Pearl Roberts

Garry Oaks: A Rare and Special Habitat

Once they dominated the landscape in southern Vancouver Island, stately and gnarled, with thick grey bark that resists fire. In springtime, wildflowers carpeted the meadows beneath them. Bluebirds, larks and marbled butterflies found shelter in their sturdy limbs. These were the Garry oaks – the signature species for the city of Victoria and an icon of the Gulf Islands’ sunny slopes.

Since the 1970s, most of Victoria’s oak meadows have been lost to development, along with many animals and plants that favour oak and grassland habitats. But here on Galiano Island, we have preserved some lovely patches of this unique ecosystem. Thanks to generous islanders with an eye to the future and dedicated community groups, today we can wander through oak woodlands, grasslands, cliffs and bluffs. And if you live on a south- or west-facing slope, you can plant your own Garry oaks and support the survival of this special habitat.

Around the world, there are more than 500 species of shrubs and trees called oaks (*Quercus*), and for many of us, autumn brings memories of fallen leaves on oak-lined avenues in distant places. But in BC, we have only one native oak: Garry oak (*Quercus garryana*). The species was named by botanist David Douglas after his friend Nicholas Garry of the Hudson’s Bay Company, who helped him on his plant-hunting expeditions.

Garry oak ecosystems extend from southern Vancouver Island through

Washington, Oregon and down to California. Because we are at the northern edge of the range, the species that depend on this ecosystem are adapted to stressful conditions and their genetic pool could play an important role in future conservation efforts.

Before the last ice age, hardwood forests, including Garry oaks, were widespread in British Columbia. Garry oaks reached their peak in the warm, dry period that followed the retreat of the glaciers, about 5,000 years ago. But the wet and cool climate of recent history along with fire suppression, urban development and livestock grazing have left the species in extreme peril. Historical records show that, since 1800, 95% of the original Garry oak ecosystems in BC have been lost.

The Garry oak ecosystem is home to more than a thousand species of flora and fauna, supporting more biodiversity than any other terrestrial ecosystem in BC. As the Garry oaks decline, so do the animals and plants that depend on them for food and shelter. Federal and provincial government assessments have identified more than 100 species at risk in Garry oak meadows and bluffs, including golden paintbrush, band-tailed pigeon, peregrine falcon, sharp-tailed snake, endangered butterflies and grasses.

First Nations people on Vancouver Island and the Gulf Islands have long recognized the value of these ecosystems, and developed special methods for managing the oak meadows and woodlands. Through controlled burns, they removed competing vegetation to ensure repeated harvests of camas bulbs, an important food staple. Over the last 150 years, fire suppression has allowed competing species to crowd out Garry oaks and the species that depend on their ecosystem. Douglas fir, Scotch broom, Himalayan blackberry and

English hawthorne are some of the species that are choking their habitat.

With the advance of global warming, we can expect to see Garry oak rebound as our climate becomes increasingly Californian. The cedars will decline and the oaks will flourish, as long as we preserve enough healthy stands to seed our changing landscape.

Garry oaks are sun-lovers, and depend on a well-drained site with south or west exposure. They reproduce by sprouting from underground rhizomes or from acorns. Once established, they cannot tolerate shade, but young trees benefit from some shade while they develop the deep taproots that enable them to withstand drought. Most of the early growth occurs underground – a two-inch seedling can have an 18-inch taproot.



(Drawing of Garry oak from the book “Wild Trees of British Columbia” (1998), by Sherman G. Brough, with permission from the publisher, Pacific Educational Press.)

On a rocky cliff, Garry oaks often grow as shrubs, but in a meadow setting, they can reach a height of 36 metres. *Quercus garryana* can live more than 300 years.

Getting To Know Garry

On Galiano Island, there are several special spots to get to know the Garry oak. For easy access, visit Bellhouse Park, donated by an island family in 1964, with oaks, rare native grasses and camas in the springtime. Bluff Park, preserved through the efforts of the Galiano Club in the 1940s, features a narrow Garry oak meadow on a rocky ridge, home to chipping sparrows and other species that favour this ecosystem. Mount Galiano, also saved through the Galiano Club, is worth the hike to see the oak woodlands at the summit and on the side slopes. Dionisio Point, a BC Government park, is only accessible by boat, but has a spectacular Garry oak meadow on a sunny point facing Valdes Island.

There are also Garry oak protected areas on Galiano, not accessible to the public. These include Matthews Point, managed by the CRD, and the Mount Sutil Ecological Area, where the Galiano Conservancy is restoring a sensitive seven-hectare Garry oak grassland at the top of the mountain.

If your property has Garry oak stands, you can help them to thrive. Remove the invaders, like broom and blackberries, but preserve the native grasses and wildflowers. Take out young firs and plants that shade your mature oaks and be sure they don't suffer from too much water. Plant more Garry oaks, native shrubs and wildflowers.

Garry oaks transplant well. You can grow your own from acorns, or buy container plants from specialist nurseries. Fraser's Thimble Farms on Saltspring Island

sells Garry oaks in one and five-gallon pots. You can also obtain them from Russell Nursery in Saanich and Cedar Rim Nurseries in Langley. The Galiano Conservancy is growing Garry oaks in their native plant nursery and may also have a few available.

There are many organizations dedicated to preserving the Garry oak ecosystem. To find out more about how you can protect your Garry oaks, contact:

- Galiano Conservancy Association:
www.galianoconservancy.ca
- Garry Oak Meadow Preservation Society:
www.garryoak.bc.ca
- Garry Oak Ecosystems Recovery Team:
www.goert.ca
- Garry Oak Restoration Project:
www.gorpsaanich.com

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Natural Mysteries

August's mystery was: When it rains, do wet birds have trouble flying? Birds have no problem flying in moderate rain but avoid windy rainstorms. Bird plumage naturally repels rainwater because of the structure of the body and flight feathers and the way they overlap, and also because birds coat their feathers with oil from a special gland located at the base of the tail. Birds in a birdbath actually have to work hard to get thoroughly wet, by fluffing their feathers and splashing vigorously. After bathing birds will perch nearby and preen, i.e. use their bills to rearrange and comb their feathers and recoat them with oil.

This month's Natural Mystery: Do deer chew their cuds?

Have an answer? Send your thoughts to galianonaturalists@gulfislands.com. Have a Natural Mystery of your own? Let us know, and we'll try to answer it.

THE GALIANO NATURALISTS are a group of curious explorers who enjoy observing, marveling, and sharing information about the natural world around us. Come join us. (galianonaturalists@gulfislands.com)