

**Duration**

1–2 periods

**Grade Level**

4–8

**Group Size**

any

**Glossary**

indigenous, native species, ecosystem

**Key Concepts**

3a; 3b

**Materials**

- class copies of [The Star Husbands](#) story, pp. 89–90, and [First Nations Food Feasts](#) Student Page, p. 49
- field guides  
Pojar and MacKinnon (1994), Turner (1995) recommended (see [Appendix 17](#), p. 116)
- posters and pictures of Garry oak ecosystem plants

**Season**

anytime

**Setting**

classroom, outdoor optional,

**Skills**

analysis, communication, description, discussion, researching, writing

**Subjects**

Social Studies, Science, Language Arts

**Activity 8****Food, Fire and First Nations****Objective**

To understand how the Garry oak ecosystems provided food and supported local First Nations culture and heritage.

**Learning Outcomes**

It is expected that the student will:

- 1 appreciate the First Nations' use of native plants and animals to sustain their culture;
- 2 learn about camas, an important Garry oak ecosystem food plant for First Nations peoples;
- 3 understand and describe the traditional role and motivation First Nations peoples had for sustaining Garry oak ecosystems through the use of fire.

**Method**

Students will read a First Nations story about harvesting camas, brainstorm foods we eat today and compare them with foods traditionally eaten by First Nations from the Garry oak ecosystem. They will also review information in groups, create food advertisements or posters, and plan and conduct a "Food Festival".

**Background**

The blue camas (*Camassia quamash* and *Camassia leichtlinii*), a lily commonly found growing in Garry oak ecosystems, was a significant root food plant for many coastal peoples. Camas bulbs were an important carbohydrate in the diet of the Central Coast Salish, who otherwise relied primarily on sources of protein from fish and seafood. The story [The Star Husbands](#) (Saanich traditional tale, pp. 89–90) emphasizes the importance of camas in the culture and traditions of coastal First peoples. By reading the story and Student Pages "First Nations Food Feasts", and comparing foods we eat now to traditional First Nations foods, students will better appreciate the importance of these food sources and ecosystems to first peoples. Students will also explore the use of fire as a management technique used by traditional Aboriginal cultures, and how fire contributed to the maintenance of Garry oak ecosystems.

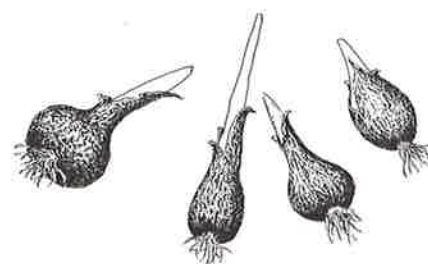
### Procedure

- 1 Read the story [The Star Husbands](#) with students to introduce the topic of camas harvesting. Ask students where the food they eat comes from, making a list of their ideas. Ask students what kind of food they think First Nations traditionally ate before the colonization of this area and where it came from, and generate a second list.
- 2 Pass out copies of the [First Nations Food Feast Student Page](#) to students, and have them work in pairs to list Garry oak ecosystem species that sustained First Nations Peoples. Then have them create a comparison chart showing what each item could be represented by in our present diet (fruits, nuts, green vegetables, roots, inner bark).
- 3 Have students research other food plants of coastal First Nations, following the outline in the Student Page: identifying
  - the type of plant and its scientific name
  - what nutritional role it played in First Nations diets and
  - how it was harvested, prepared and stored
- 4 Have students create food advertisements or “Food Festival” posters profiling some of the food items identified.
- 5 Plan a “Food Festival” and choose a menu using substitute food items available from the grocery store. You may want to include introduced species such as Himalayan blackberry and dandelion (also use the opportunity to discuss or mention the impacts such introduced species have had on natural ecosystems (see [Ecosystem Invaders!](#), p. 53). Research how food was traditionally prepared and brainstorm ways that you could simulate this for your Food Festival. See resource books for menu ideas.

Sample menu: wild greens salad , steamed onions, potatoes, sweet potatoes, blackberries.

### Optional

- research elements of First Nations celebrations and include some of these in your Food Festival
- create digging sticks such as First Nations might have used and create a simulated dig with representative items from the grocery store.
- invite others to join in your festival and help to educate them as part of the celebration. Place posters or advertisements of traditional native foods over the representative foods.



*Camas bulbs*

### Useful References

Beckwith, Brenda (2002) Andrew MacDougall (2002): Articles on fire and camas harvesting in the Garry oak Ecosystems: contained in *Garry Oak Ecosystem Restoration: Progress and Prognosis* Proceedings of the Third Annual Meeting of the BC Chapter of the Society for Ecological Restoration, April 2002, University of Victoria.

George, Chief Dan. 1974. *My Heart Soars*. Clarke Irwin, Toronto.

Pojar, J. and MacKinnon, A. 1994. *Plants of Coastal British Columbia*. Lone Pine Publishing, Edmonton, AB.

Stewart, Hilary. *Wild Teas, Coffees, and Cordials*. 1981. Douglas and McIntyre, Vancouver, BC.

Suttle, Wayne. 1987. *Coast Salish Essays: Variation in Habitat and Culture on the Northwest Coast*. Talonbooks, Vancouver.

Turner, Nancy, J. *Food Plants of Coastal First Peoples*. 1995. Royal British Columbia Museum Handbook. UBC Press / Vancouver.

Turner, Nancy J. and Harriet V. Kuhnlein (1983). *Camas and Riceroor: Two Liliaceous "Root" Foods of the Northwest Coast Indians*. Ecology of Food and Nutrition, 1983, Vol. 13, pp. 199-219.

**Teaching Note** – Please use caution if exploring Garry Oak ecosystems for native plants, and ensure that students don't dig up camas bulbs or any other plants.

### Assessment strategies

Name three different native food plants found in the Garry oak ecosystem and their uses by First Nations.

Have students develop their own menu for a traditional "First Nations' restaurant" by reviewing the posters, food ads and resource books.

### Extensions

Wrap up by discussing impacts our present food choices may have on native plants and animals.

Take a trip to your local Garry Oak ecosystem and try and identify native plants that are food sources. Use field guides to identify plants and their associated ecosystems

Research how First Nations cultivated native plants and managed the landscape for sustainability.

Research other uses of native plants such as for medicines and ceremonies.

### Additional Resources

*Forests in Focus*, "Forest Food Webs", page 130

*Backyard Biodiversity and Beyond*, Module 3

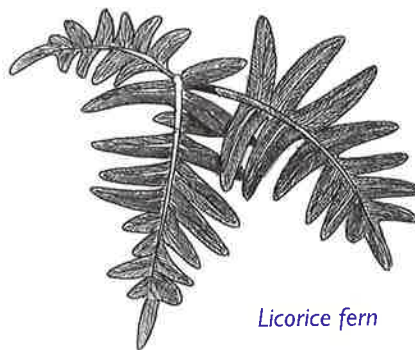
Project WILD, "Water We Eating?" page 276

*Ecozine Issue 3*. Ministry of Forests.

Fuller, M. 1991. *Forest Fires: An introduction to wildland fire behavior, management, firefighting, and prevention*. John Wiley & Sons.

1998. *Canadian Geographic* 'Fire Works' July/August issue.

A source for a story about fire is Loo-Wit, *The Fire Keeper* from *Keepers of the Earth* by Michael Caduto and Joseph Bruchac.



*Licorice fern*



## Student Page

### First Nations Food Feasts

Think back for a moment to what you had for breakfast this morning .... Some fruit, cereal, eggs and toast perhaps? Where did it come from? Probably the grocery store, or if you are lucky, a local farmer's market or even your own garden. Today most of our food comes from farms that are usually far away from our homes and communities. But what kinds of foods were eaten by different First Nations communities, who lived in this area long before settlers arrived?

**Indigenous**—*coming from a particular region or environment. Wild plants and animals that are native to a region.* First Nations made use of indigenous plants and animals to supply all their needs. The Coastal peoples relied heavily on protein from fish (especially salmon), shellfish, and sea mammals, yet they had great knowledge of native plants, and used over 200 species for food, medicine and other purposes. The basic types of food plants fall into several categories: **fruits** (especially berries, like gooseberries, salal, red currants, elderberries and salmonberries), **leafy green vegetables** (like thimbleberry sprouts, nettles, fireweed shoots, seaweeds), **underground parts of plants** (the roots of wild carrot and springbank clover, and **bulbs**, like camas, onions, and Indian Rice) and the cambium or **inner bark layer** from certain trees like hemlock and cottonwood.

Some Coast Salish groups ate Garry oak acorns. Acorns have lots of tannin in them, a chemical that makes a very bitter taste. The Vancouver Island Salish preferred them steamed, roasted or boiled for a long time to remove the bitterness. In Garry oak ecosystems, the most important and commonly eaten species was the camas bulb, a beautiful blue-flowering plant with an edible bulb. An early name for Victoria was "Camosun"—meaning "place to dig camas". Camas bulbs provided carbohydrates—a very important part of human diets that was in short supply. Carbohydrates or starches provide us with

food energy. We get these nutrients from foods like pasta, rice and potatoes.

Other Garry oak ecosystem food plants included: currants, rose-hips, Oregon grape berries, Hooker's onion, nodding onion, harvest brodiaea, chocolate lily, licorice fern, gooseberries, wild carrots, and springbank clover.



Nodding onion

#### Camas—An Important Food

Camas bulbs were dug out of the ground in the summer months (late May through August), after the flowers had faded but while the stalks and seed capsules could still be seen. The bulbs were dug using special pointed digging sticks made of hard wood such as yew or oceanspray. The bulb harvest was usually done by women, but sometimes whole families participated in the work, which could last for many days. Families would collect four or five 23 kg (50 lb) baskets or sacks of camas bulbs at a harvest. Among the Salish First Nations groups such as the Saanich, the best digging areas were owned by families who used them every year and passed them down from generation to generation. Harvesters had to be very careful not to confuse the blue camas bulbs with those of the white death camas, which grows in similar areas, and is very poisonous!



### Cooking Camas

Camas bulbs were traditionally cooked before being eaten, often in a steaming pit. A hot fire was lit in the bottom of a hole, and rounded beach rocks were placed in the fire until red-hot. A layer of plant materials like seaweed, fir branches and ferns were laid on the rocks, the bulbs were placed on top, then covered by another layer of vegetation. Water was poured in to make steam, and the bulbs were left to cook for 24 or even 36 hours. By cooking the bulbs, the carbohydrate they contain (called inulin) is converted to fructose, an easily digestible sugar, which gave the cooked bulbs a sweet and pleasant taste, making them a great treat at meals and feasts.

### Caring for Camas Meadows

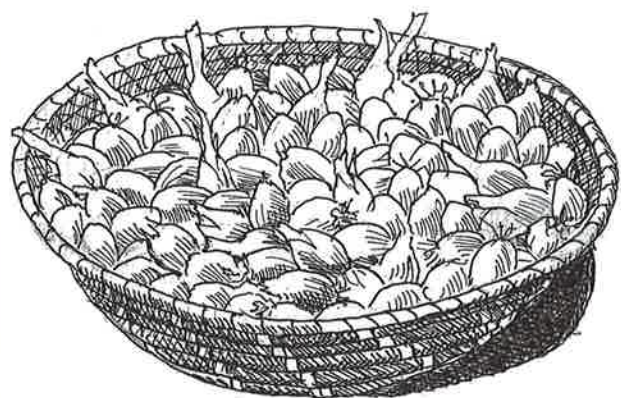
Camas meadows were cared for and cultivated in almost the same way a farmer takes care of his fields. They were cleared of stones, weeds, shrubs and brush. The grassy turf was lifted out in small sections and replaced after the large bulbs (3-6 cm across) were removed. The smaller bulbs were left behind to grow for the next season. The act of digging the bulbs and breaking up the soil also helped the camas to grow. But probably the most important thing First Nations did was to burn the camas beds every year.

**PLEASE DON'T DIG UP any camas bulbs from Garry oak meadows to taste—because of urban development there aren't enough left!**

### Fire in the Garry Oak Meadow

Fire? When we usually think of fire we think of it destroying things! However, fire played a unique role in maintaining the Garry oak ecosystem, as it was used by First Nations to maintain the large, open Garry oak meadow environment.

Camas beds were burned in a controlled way every year, probably just before the fall rains came. Since camas grow best in open, sunny places, away from big shady trees and shrubs, fires kept these plants from moving into the open meadows. Garry oaks have thick, corky bark that allows the larger trees to survive controlled fires. Fires can also rejuvenate and renew an ecosystem by speeding up the decomposition of dead leaves and branches, releasing nutrients in the soil and providing better conditions for new plant growth. After a fire, the landscape may appear blackened or dead, but it will recover quickly. The setting of intentional fires by First Nations was banned by early colonists, which has probably led to further loss of Garry oak ecosystems. (References: Turner and Kuhnlein, 1983; MacDougall, 2002, Beckwith, 2002)



*Basket of camas bulbs*