

# Camas at the Confluence: Where Ecology and Culture Meet at Kp'ítl'els

By Valerie Huff and Eva Johansson

In 2012, the Kootenay Camas Project was created to highlight the occurrence and significance of common camas (*Camassia quamash*) in the West Kootenay. In the process, we found what appears to be the largest concentration of this native lily in southeastern British Columbia, the remnants of a rich cultural landscape and hints of a dispersal corridor mediated by aboriginal peoples, likely for centuries.

## Background

The common camas that blooms profusely in the spring on southern Vancouver Island is characteristic of the endangered Garry-oak ecosystem. The bluish-purple flowers grace the meadows and rock outcrops where they are a persistent, if ephemeral, reminder of the cultural landscape that long predates European settlement in the mid-1800s.

In southeastern BC, the presence of camas is less well known, and somewhat bewildering. In fact, it doesn't merit a mention in the popular guide *Plants of Southern Interior British Columbia and the Inland Northwest*, and is only represented by a handful of occurrence dots on the Electronic Atlas of the Flora of BC map. Large remnant populations located in Millennium Park adjacent to the Kootenay River in Castlegar, on the rocky bluffs in nearby Brilliant, and in the South Slokan are known to local native plant enthusiasts, but land managers and the general public are not aware of the local range of camas and its importance in the region's heritage and ecology.

The current distribution pattern of common camas – which at first glance seems a botanical anomaly in BC – makes sense when areas south of the US/Canada border are considered. Common camas occurs throughout the Columbia Plateau, and its presence here may be better understood once the cultural heritage of camas, including the role of the bulbs as a staple root food and trade commodity, its associated traditional land management practices and the widespread use of rivers as a means of transportation is taken into account. Camas bulbs were one of the most important root foods for First Nations throughout and beyond their range in the Pacific Northwest. With the notable exception of the Sinixt (also known as the Lakes Peoples), southern interior British Columbia First Peoples had access to camas only through trade. There are ethnographic accounts of intentional planting of camas beyond its core geographic range, although one molecular biology study did not reveal a detectable imprint of indigenous transportation for camas west of the Coast Mountains. A pattern of indigenous

*Kootenay camas, continued on page 4*



*Camassia quamash*: not just found in Garry oak ecosystems  
Photo: Valerie Huff

*Kootenay camas, cont. from page 3*

management practices, akin to land cultivation, have been documented that appear to maintain and likely even enhance the productivity, availability, and quality of camas bulbs at a resource site, including selective harvesting, replanting of smaller bulbs, transplanting of bulbs into new locales, weeding, tilling, sowing of seeds, and, after the harvest is completed, intentional burning.

*The Kootenay Camas Project*

The Kootenay Camas Project (KCP) was initiated to raise awareness about camas in the West Kootenay. We have enlisted the public in helping to find and document camas populations as well as to salvage camas from sites intended for development. In the long run, we hope to ecologically restore several local camas sites; we recognize that public participation and stewardship are key to a successful, long-term conservation and restoration program.

The KCP mapped potential camas habitat based on herbarium specimens and known locations using the Vegetation Resource Inventory. We attempted to relocate all historic collections from the West Kootenay and surveyed areas of high habitat potential. Help from the public was garnered through public presentations, personal contacts and a website. We distributed mail-in "report cards" for describing camas sites and collaborated with iNaturalist, a free mobile phone and web app.

Public response has been enthusiastic, and we received accounts of camas sites from many places we would not have found otherwise. We followed up on all volunteer reports received during the spring 2012; camas has been confirmed at each site, even the most unlikely.

We measured established and flowering plant density using Upper Columbia Basin Network Inventory and Monitoring Program protocols in a variety of habitat types. In addition to these inventories, we brought an enthusiastic class of Grade 11 biology students from Stanley Humphries Secondary School to Millennium Park for a quick introduction to camas and to conduct a camas count.



Photo: Valerie Huff

**A lighter shade of pale:** A field of *Camassia quamash* blooms at the town of Brilliant, BC, near Castlegar.

*Camas in the West Kootenay*

With the help of local residents, the Kootenay Camas Project has documented the largest concentration of common camas in the BC Interior.

Camas was identified at 65 sites from the Fort Shepherd Land Conservancy in the south to just outside Nelson to the northeast. Camas occurs between 400 and 740 metres in elevation. The survey found camas in a wide variety of habitats: seasonally inundated sites, shallow soil pockets on rocky outcrops, dry grasslands and forested riparian zones.

The confluence of the Kootenay and Columbia rivers is the locale with the highest population density as well as the area with the most individual finds.

Eight collections were made and will be deposited in the herbarium at the Royal British Columbia Museum

In the Kootenays, camas flowers are typically pale bluish-violet, though they range from white to light purple. Tepals are slightly irregularly arranged, with the lowest petal pointing down, and the five remaining tepals near and above the mid-line. The anthers are always bright yellow, and the seed capsules are erect to slightly spreading stalks.

*At the confluence of culture and ecology: Kp'ítl'els*

Where the Kootenay River flows into the Columbia, near modern-day Castlegar, there was once a Sinixt village called Kp'ítl'els. The Sinixt, also known as the Lakes Peoples, are an Interior Salish indigenous group whose traditional territory is along both sides of the Columbia River from near Kettle Falls north to Revelstoke, including the Arrow Lake and Slokan Lake areas.

All Interior Salish peoples in British Columbia ate camas bulbs, though the Sinixt were the only peoples able to harvest it in their own territory. The current distribution of camas in the West Kootenay occurs within traditional Sinixt territory, and it suggests to us that Kp'ítl'els was once an important and productive camas resource locale. The ecological setting is reminiscent of the camas prairies in Idaho to the south, where the explorers Meriwether Lewis and William Clark reported that camas occurred in such abundance that the meadows appeared to be blue lakes.

The camas documented on the Columbia River south of Castlegar, as well as on the Kootenay River from Castlegar east to just outside *Kootenay camas, continued on page 6*

*Get involved, cont. from page 5*  
failures) with native plant gardening; write a book review, pen a note about a native-plant related project (maybe a restoration project or budding nursery in your community). If it involves native plants and BC, it's a great way to start a conversation! *Time*

#### *Kootenay camas, cont. from page 4*

Nelson, follows a First Nations' transportation route used for generations. We speculate that camas was transported along this route, where it was either deliberately transplanted or established inadvertently in appropriate habitats from bulbs transported for food. First Nations likely maintained populations of important resource plants, including camas, along major pathways and travel corridors to provide them with a ready supply of food when moving across the landscape.

#### *What next?*

We are looking forward to stewardship opportunities in Millennium Park and other West Kootenay locales. KCP is currently discussing camas stewardship projects with the City of Castlegar, Teck Metals Ltd., Selkirk College and FortisBC. We would like to conduct phylogeographic studies to help us understand whether the current distribution of common camas is based on transport by indigenous peoples or is the result of natural dispersal processes. The Kootenay Camas Project is funded by the Columbia Basin Trust Environmental Initiatives Program and the Columbia Power Corporation Terrestrial Compensation Program. *More information on the Kootenay Camas Project can be found at [growwild.kics.bc.ca/Articles/KootenayCamasProject/index.html](http://growwild.kics.bc.ca/Articles/KootenayCamasProject/index.html).*

#### *Acknowledgements*

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*commitment: As much as you want.*

#### **Project related coordination**

There are a number of projects that the NPSBC has been involved with or would like to be involved with, but at the moment, we are short on members who can help coordinate. Examples

include PlantWatch, social media such as Facebook, digitizing plant lists, coordinating native plant salvages, Millenium Seed Bank, etc. If you have an interest in any of these or have a native-plant project that you'd like to propose, please contact President Dawn Hanna at [dawnhanna@telus.net](mailto:dawnhanna@telus.net)



The "blue lake" of camas at Weippe Prairie, Idaho. The type specimen of *Camassia quamash*, credited to Lewis and Clark in 1806, comes from here.

*Photo: Valerie Huff*

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