

Plant Survey  
for  
Threatened and Endangered Species  
  
Broughton's Landing  
Redevelopment

Underwood, Washington

By Krista Thie, Consulting Botanist  
1549W. Jewett Blvd.  
White Salmon, Washington 98672

509.493.2626  
krista@gorge.net

March – July, 2006

Botanical Survey of the  
Broughton Landing Redevelopment Project  
Underwood, Skamania County, Washington

**Project Location:**

The proposed redevelopment is in T03N R10E within parts of Sections 21, 22, and 28, situated between basalt cliffs and the Columbia River at the Broughton Lumber mill site. The railroad tracks and State Route 14 run east and west through the project.

**Habitats:**

Habitats include basalt cliff, wetland (perhaps part of the river cutoff by the Highway 14 embankment), the Columbia River, vernal wet meadow, oak woodland, mossy basalt outcrop, Big-leaf maple and Douglas fir woodland. The lumber mill has extensive paved surfaces and acres that were once heavily used industrially and are now covered with non-native plants. There are embankments along Highway 14 and the railroad and homes surrounded by cultivated gardens.

**Results:**

**There are no threatened and endangered plants on this project site.**

**There is no high quality ecosystem acreage within the redevelopment area. There is high quality ecosystem acreage outside the redevelopment area.**

This report details the sensitive plant survey I conducted to satisfy the National Scenic Area Act and management plan for the Columbia River Gorge protection requirement for:

**“Sensitive plant species:** Plant species that are (1) endemic to the Columbia River Gorge and vicinity, (2) listed as endangered or threatened pursuant to federal or state endangered species acts, or (3) listed as endangered, threatened or sensitive by the Oregon or Washington Natural Heritage Program.

**Methods:**

To survey, first I located existing rare plant reports from the Washington Natural Heritage Program (WNHP) database and checked for updates to their county list of possible rare plants to focus the survey to particular habitats and blooming season. I also checked any possible rare plants in plant list booklet of the Native Plant Society of Oregon (NPSO) for the Columbia River Gorge as well as Russ Jolley’s maps on file with the planning commission and his wildflower book.

The SE Development Group provided me with maps of the existing buildings and proposed development and told me that the area for study is defined and outlined on the ground by pink and black survey ribbons. I noted any land outside the ribbons, the nearby accessible rocks, cliffs, wetland and embankments, and checked there as well for rare species. This included the wetland, the edges of the gravel pit and roadsides to the “hut” and around the reservoir. Mike Usen, of the SE Group, also met with me at the mill to clarify any questions about their plans.

Then I conducted a field survey to identify existing habitats to help narrow the plant search to those most likely to be found at Broughton's Landing and began systematic searching, walking the project in a pattern of about a 30-foot grid focusing on less developed and disturbed ground. I also engaged another botanist, John Davis, for his expertise in mosses, lichens, and fungi.

#### **Site Visits:**

March 20 Hiked the road to the reservoir to get an overview of the project and to ascertain the current blooming stage.

March 22 Walked the east end of the project and circled the entire study area looping through the Broughton's Beach.

April 6 Covered the area west and north side of Highway 14 and surveyed the hillside and cliffs near the reservoir and proposed hut.

April 19 John Davis and I viewed the project from the car and discussed potentially interesting sites to survey for rare mosses, lichens or fungi.

May 1 checked out the "pond" by Highway 14

May 3 met with Mike Usen at the cone burner

May 13 Checked overall for any new species in bloom

July 4 Checked wetland to determine if there is a need for late summer identification of wetland species and noted Penstemon and Lathyrus in bloom to add to plant list.

July 27 looked in particular for Hieracium longiberbe – Long-beard Hawkweed a CRG endemic and did a general summer survey to check for July blooming species.

#### **Discussion:**

Washington Natural Heritage Program (WNHP) staff searched their information system for rare plant species and high quality ecosystems in the vicinity of Broughton Lumber Company lands between Drano Lake and the White Salmon River.

They report "high quality terrestrial ecosystems" in the south half of the southwest quarter of Sections 26 in T03N R9E and the south half of the northwest quarter of section 29 in T03N R10E. Section 26, which is above Drano Lake. These are west of Sections 21, 22 and 28 and the proposed project.

The criteria for inclusion in this category are determined by the characteristics of any particular ecosystem type. Native plants need to dominate, especially in the tree layer, with the shrub and herbaceous layers composed of at least 80% native plants, with non-native plants being insignificant. WNHP lists a high quality Douglas fir and Oceanspray, Oregon White Oak and Snowberry and Oregon white oak and fescue to the west of the redevelopment project. If trails are developed later, the lands with over 20-100 acres of mostly native tree/shrub cover could be inventoried at that time.

There are sixteen Columbia River Gorge Endemics (plants that only live within the Gorge). Of these sixteen, four are most likely to be found in the habitats of cliffs or rocks found at the redevelopment site. I did not locate any of them here. Of the forty-four sensitive plants listed by WNHP for Skamania County, four would most likely be found here, but I did not find them. For sixty-six Klickitat County possibilities there are eight most likely here. None of these were located within the project area.

When ecologist John Davis observed the redevelopment project, he did not see habitat that he felt needed closer examination for rare mosses, lichens or algae. The wet cliff habitat for the lichen, *Dendriscoaulon intricatum*, mentioned in the WNHP report would not be affected by development here and we did not see habitat for this.

**Conclusions:**

I did not find any rare plants within the proposed project. The land that is least developed and most likely to support rare plants is removed from proposed development, making this truly a “redevelopment” project. I checked the easily accessible lands within about 200 feet of the proposed new development. I did not find any rare plants within the redevelopment project or within the 200 foot buffer land.

In nine site visits I located 150 different species of plants. The highest diversity of native plants was found in the cliffs, vernal meadows, island balds, and wetland, i.e. the areas not heavily used for the mill.

The landowners have an opportunity here to preserve some large oaks, an excellent wildlife tree. Western white oak populations, through development, are being drastically reduced in the northwest. This oak, the Garry Oak, grows from BC to Oregon and eastern Washington through the Columbia River Gorge.

There are also maples and Oregon ash, large for this latitude in the gorge, with its south facing exposure and desiccating winds. There is also a small camas meadow with other native plants to the east of the mill.

## Recommendations:

1. Preserve all native plants remaining within the old lumber mill site. This is an opportunity to preserve Western white oak, which is particularly well suited for this site and provides valuable wildlife habitat. There are also some large Douglas fir, Big-leaf maple, Oregon ash and willow. This is a harsh, exposed, windy spot where it will be difficult to establish new trees of any species. Native trees are best suited to grow in these conditions and maintaining the current forest should be the first priority.

Reason: Having access to diverse native plants provides society with sources for genetic and chemical building blocks to create medicines, foods and technological advances. Native plants are frequently destroyed in development and replaced with less diverse commonly cultivated horticultural specimens. Native plants can survive in the climate conditions of their local habitat and supply food and shelter for wildlife.

2. Use native plants for gardens and new green spaces. Weed free native plant seed is available from a business such as Milestone Nursery, located in Lyle, Washington. This reduces need for irrigation. This helps maintain the ecosystem providing shelter and food for wildlife.

3. Keep machine blading of the ground to the absolute minimum to reduce potential new weed infestations. Reseed promptly all disturbed areas with native plant seed collected within roughly fifteen miles of the site. This reduces the germination and growth of wind and animal borne invasive seed

4. Continue with the successful Scot's Broom control project. There are just a few remaining plants and young seedlings of this invasive that at this stage could readily be removed. There is only a little knapweed on site now. Establish a long-term monitoring and removal program to ensure that noxious weeds do not become a bigger problem.

5. Establish plantings of Barrett's Penstemon in cliff and gravel areas. This is a gorge endemic, very popular with flower enthusiasts, and has a showy blossom in late spring with attractive foliage the rest of the year. Grows best in dry, exposed locations and is relatively easy to start and maintain. Explore other native plant options for plantings with native plant organizations and nurseries who are familiar with this part of the gorge. Many people visit the Gorge in the spring to enjoy the showy and unusual wildflowers. Planting some of them in the gravel pit would help restore it and engage the environmental community.

Some recommended local native plants for this site (check with me for further ideas if interested):

Preserve the Ocean spray and Mock orange and Ceanothus (summer lilac)

Several of the Desert parsleys would be lovely and do well in the gravel pit.

Lomatium suksdorfii

Lomatium columbianum

Pachystema – boxwood

Penstemon species

and many more

## Bibliography

- Columbia River Gorge Management Plan Glossary definition of Sensitive Plants.  
Davis, John. Personal communication. 2006  
Hitchcock & Cronquist. *Flora of the Pacific Northwest*. University of Washington Press. 1973.  
Hitchcock, Cronquist, et.al. *Vascular Plants of the Pacific Northwest*. Part 1-5. University of Washington Press. Seattle. 1955.  
Jolley, Russ. *Wildflowers of the Columbia Gorge*. Oregon Historical Society Press. 1988  
\_\_\_\_\_. Rare Plant Maps for the National Scenic Area planning staff, September, 1986.  
\_\_\_\_\_, Kemp, L., Thie, K., et. al. *Survey of Wildflowers & Flowering Shrubs of the Columbia Gorge*. Published by the Portland Chapter of the Native Plant Society of Oregon. 1989.
- Oregon Natural Heritage Program.  
University of Washington Herbarium, Seattle, Washington & online, 2005 & 2006.  
Washington Natural Heritage Program. *An Illustrated Guide to the Endangered, Threatened and Sensitive Vascular Plants of Washington*. 1981.  
Washington Natural Heritage Program. *Endangered, Threatened & Sensitive Vascular Plants*. 1997.
- Washington Natural Heritage Program Natural Heritage Plan Website – Plants found in Skamania & Klickitat County. 2005.

### Resume - Krista Thie

- Botany degree, Bachelor of Science, University of Washington, 1978.
- Professional organizations:  
Washington Native Plant Society  
Native Plant Society of Oregon  
Professional Trailbuilders Association
- Publications:  
*Rare Plant Survey to meet requirements for the National Scenic Area – Columbia River Gorge Management:*  
Klickitat County PUD – Lyle, Washington, Spring, 2006.  
Stevan & Wendy Herbst, Prindle, WA, July, 2006  
Steven Morgan, Dallesport, WA, May, 2006  
Klickitat County, Lyle Urban Area Expansion, Spring, 2005.  
Mid-Columbia Fire and Rescue and the Joint Communications Consortium, Fall 2004  
Klickitat County PUD – Lyle, Washington, Spring, 2004.  
Don L. Hanson, File C94-0105-k-g-11. Lyle, Washington, 1994.  
Robert Schmaltz. Rowena., Oregon, May, 1994.
- Rare Plant Survey, Lyon's Ranch development, for Don Struck, Husum WA July 2006.  
NPSO *Survey of Wildflowers & Flowering Shrubs of the Columbia Gorge*. Field surveyor.  
*Rare Plant Survey, White Salmon River*, Columbia River Gorge Scenic Area. US Forest Service, 1988.
- A Plant Lover's Guide to Wildcrafting: How to Preserve Wild Places and Harvest Medicinal Plants*, Longevity Herb Press. 66 pp. 1989. 1996.  
*Medicinal Plants of the Pacific Northwest: A Digest of Anthropological Writings about Native American Uses*. 250 pages, Longevity Herb Press, 1999.  
*Herbs Northwest* newsletters and business directory, 1990-1997.
- Profession:  
Contractor - trail / trail bridge construction. 1978 to present.  
Consultant - Botanical