

COLUMBIA LAND TRUST

SUMMER 2017

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Conserving and caring for vital lands, waters, and wildlife of the Columbia River region through sound science and strong relationships.

# Fieldbook



## SPECIES SPOTLIGHT

**pg. 4**

Marbled Murrelet  
(*Brachyramphus marmoratus*)



## 02

## Land with Integrity

A New Tool Allows Our Land Stewards to Better Measure Ecosystem Health

## INSERT

## Annual Report

Board Letter

Project Highlights

A Year in Numbers

Financial Report 2016

## 04

## Species Spotlight

Marbled Murrelet

## 05

## Be Fearless

Events and Tours

## The Language of Summer

One July many years ago my partner Sue and I awoke to incessant chatter from the birdhouse above us on the outdoor sleeping porch. Over the ensuing hour, we watched rapt as two chickadees fledged, taking their first awkward flight. By sleeping outside we have been witness to the thrumming wingbeat of mating grouse, a pileated woodpecker plunging its beak deep in to a rotten snag, and many a brilliant sunrise. Some sights seem beyond words.



And this is literally true! Native American languages have words to describe natural phenomena that we simply don't have in the English language. For the Potawatomi people, *puhpowee* describes the force which causes mushrooms to push up from the earth overnight.

I recently learned that there are only a few Klickitat Indians who still speak the Klickitat language, and each of them are getting older by the day. I fear that in the coming years we may lose unique perspectives gleaned from thousands and thousands of years of observations and experiences. As we go about our work, we are committed to understanding traditional ecological knowledge and language as well as the data collected through our ecological integrity assessments. As you will read about in this newsletter, in order to be good stewards of land, it is critical that we are careful observers and that we cultivate language that reflects what we see and learn.

## PUHPOWEE

A word from the Potawatomi people for the force which causes mushrooms to push up from the earth overnight.

Our Northwest summers are so verdant, filled with life in so many forms. As you go about your summer, immerse yourself in the coolness of a deep forest glade, notice those morning clouds that burn off midday, pay attention to the emergence of insects on certain nights in certain places. Consider what we may be missing because we haven't paid attention, because we haven't developed the language.

Rather than fear what may be lost, let's better understand what we have and who we are. Let's better understand our own human nature and the nature of the Northwest. And let's act to conserve our places and experiences.

Glenn Lamb, Executive Director



Columbia Land Trust has earned accreditation from the Land Trust Alliance, which recognizes land trusts that adhere to national standards for excellence, uphold the public trust with rigorous ethical standards, and take steps to ensure that conservation efforts are permanent.

Columbia Land Trust conserves and cares for vital lands, waters, and wildlife of the Columbia River region through sound science and strong relationships.

Cover photo: Marbled murrelet (breeding plumage).  
Photo by Mike Danzenbaker  
Inside cover: View of Mt. Adams from Centerville, WA.



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# LAND WITH INTEGRITY

A New Tool Allows Our Land Stewards  
to Better Measure Ecosystem Health

BY JAY KOSA

To the eye of an average hiker, the cold, rushing rapids at Columbia Land Trust’s Hood River Powerdale property are a sight to behold. Mount Hood stands tall in the distance over orchard lands, and birds sing as the sun peeks into the forests on the hillside. The setting is timeless in its beauty. To the trained eye of an ecologist, the towering pine trees, native plant understory, and watershed tell a deeper story about the health and history of the landscape.

With field notebooks and reports in hand, Jen Zarnoch, Land Trust natural area manager, is joined by senior vegetation ecologist Joe Rocchio and vegetation ecologist Tynan Ramm-Granberg, both with the Washington Natural Heritage Program (WNHP). Together, they’re testing a new tool they hope will radically improve the Land Trust’s ability to answer some complex but critical questions: How healthy are the lands we steward? How effective are our restoration efforts at improving habitat? How should we prioritize our efforts moving forward?

The tool, dubbed the Ecological Integrity Assessment (EIA), is a standardized methodology for evaluating the health of a landscape’s ecology compared to its historic natural condition. Key ecological attributes help ecologists and land

managers determine where a site lies on the continuum from functional and thriving to degraded and ailing.

The WNHP, housed within the Washington Department of Natural Resources, is charged with identifying the state’s rare species and rare and high-quality ecosystems. Rocchio and his colleagues spent the last decade evolving the EIA from a wetland assessment tool first developed by a network of natural heritage programs called NatureServe. They adapted the EIA so that a single set of criteria could be applied to every major ecosystem found in the Pacific Northwest.

“No matter the type or scale of the ecosystem,” Rocchio explains, “we’re primarily asking the same questions: which plant species are present, what is the structure of the ecosystem, what are the primary ecosystem functions of the area, and how well are they performing? Plant species are the primary focus of EIA measurements because they are closely tied to all other species and ecological processes, and because they are relatively easy and cost effective to measure.”

“This is a tool,” says Zarnoch, “that can help us look across all our lands in Washington and Oregon and determine how we’re doing.” Familiar with Rocchio’s work from her time

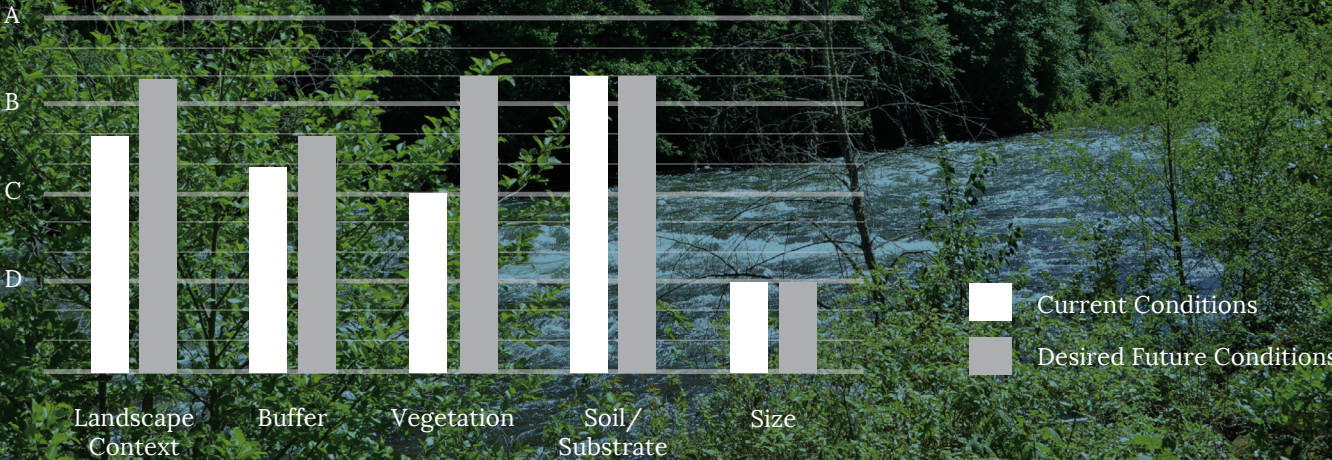


a |



b |

## POWERDALE SITE EIA RANKINGS



with Washington Department of Natural Resources, Zarnoch sees the potential for the EIA to serve as a structured, science-based approach to land management for Columbia Land Trust. For the first time the Land Trust’s natural area managers can use a single methodology to evaluate wetlands, upland forests, prairies, oak woodlands, riversides, sagebrush-steppe, and other habitat types represented across their 13,700-square-mile service area.

In addition to its versatility, the EIA allows land stewards to conduct assessments that are rigorous yet fairly rapid. By gauging characteristics of vegetation, hydrology, soils, and landscape context, a natural area manager can within a few hours assign an area one of four rankings: A (excellent), B (good), C (fair), or D (poor).

Plus, the EIA establishes shared protocols, allowing different land managers to formalize what traditionally have been more subjective views. The tool still requires professional judgment, including traditional ecological knowledge,

but land managers can at least point to a specific attribute where opinions differ and learn from there.

After trials at sites like the one at Powerdale, Washington DNR and the Land Trust will continue to refine and calibrate the EIA. The Land Trust plans to conduct EIAs on each of its 95 stewardship units over the next couple of years to establish baseline conditions. Future EIAs will then allow stewardship staff to determine whether a site’s habitat condition is improving, stable, at risk, or declining. These determinations will feed into the Land Trust’s adaptive management process, tell us how our sites are doing, and help us prioritize our work accordingly.

Our stewardship team is optimistic that efficient monitoring, paired with EIAs, will result in better data, more time for restoration work, and a tighter feedback loop to get the most out of every dollar spent on managing and improving habitat.

Ultimately, we’ll be able to move more land toward desired conditions for wildlife.

“...which plant species are present, what is the structure of the ecosystem, what are the primary ecosystem functions of the area, and how well are they performing?”

If the Land Trust’s early adoption of the EIA goes as planned, we are hopeful that the tool catches on with other land trusts. By creating a common language around ecological assessments, land trusts could provide a more complete picture of ecosystem health across the entire Northwest and beyond.

- a,b,d | Land Trust and WNHP staff review EIA criteria at the Powerdale site.
- c | This chart summarizes major ecological functions for a section of the Powerdale property. It illustrates how the Land Trust could set objectives based on what we can influence through management efforts.



# SPECIES SPOTLIGHT

Marbled Murrelet

BY SARAH RICHARDS

Scientific name:  
*Brachyramphus marmoratus*

The imperiled marbled murrelet is a cup-sized, coastal bird that few people have had the opportunity to observe. Columbia Land Trust has conserved more than 1,600 acres of tidal wetlands and old-growth forests along Washington’s Long Beach Peninsula and Willapa Bay in hopes that the small populations of marbled murrelets remaining will find safe harbor in the region’s protected areas.

### IDENTIFICATION

Short neck and tail feathers, small black bill and pointed wings. Breeding adults appear mottled brown and white. Nonbreeding adults have black napes, backs, and wings with white underbellies. Listen for their high-pitched *keer keer* calls.



e |

### LIFE

Travels up to 50 miles inland to nest in mature or old-growth forests. Lays a single egg in tree depressions covered in moss and lichen. Eggs are tinted green with brown specks. Both parents switch off incubation and feeding duties, and then after approximately 30 days in the nest, fledglings fly directly to the ocean to feed primarily on fish. Peak nesting season occurs around mid-July to August in Oregon and Washington.



f |

### STATUS

In 1992, marbled murrelets were federally listed as threatened under the Endangered Species Act in Washington, Oregon, and California. Critical habitat was designated in 1996, and revised in 2011. Populations have declined significantly due to deforestation, habitat fragmentation, nest predation, and marine environment disturbances such as gillnets and oil spills. 🌿

➤ Learn more about the Land Trust’s projects on Pacific Coast at [columbialandtrust.org/project/willapa-bay-long-beach-peninsula](http://columbialandtrust.org/project/willapa-bay-long-beach-peninsula)

e | Illustration by Laurel Mundy. [laurelmundy.com](http://laurelmundy.com)  
f | Marbled murrelet egg. Photo by the National Park Service

# BE FEARLESS

### Save the Dates

## ANNUAL MEMBERSHIP PICNIC

Saturday, August 5

VANCOUVER LAKE REGIONAL PARK

We invite you and your family to join Columbia Land Trust’s annual membership picnic at the Vancouver Lake Regional Park.

Learn more at:  
[columbialandtrust.org/picnic2017](http://columbialandtrust.org/picnic2017)  
or call Tanya Mikkelsen at (360) 567-1577

## WILD SPLENDOR

Thursday, September 14

MONTGOMERY PARK, PORTLAND, OR

Join our 2017 signature event and annual gala. Learn more on the back page.

Trout Lake, WA cornfield. Photo by Brian Chambers Photography

### Tour

\$80

## CANOES & COASTAL NATIVE PLANTS

Saturday, August 19

LONG BEACH PENINSULA, WA

Join conservation manager Nadia Gardner this summer on a canoe trip across Island Lake on the Long Beach Peninsula in Washington. Learn how the preservation of the interdunal lakes and wetlands of the area provides habitat to species from rare marbled murrelets to stunning trumpeter swans.

### Tour

\$75

## CRANES & CROPLANDS

Saturday, December 2

VANCOUVER, WA

In the Vancouver Lake Lowlands, Columbia Land Trust manages one of the only sandhill crane habitats within city limits in the United States. Join natural area manager Dan Friesz this winter on a tour of our Cranes’ Landing property and learn how Columbia Land Trust is experimenting with farmed crops that provide food and flat staging areas for this species.

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Share photos of the people, places, and wildlife that inspire you.

@ColumbiaLandTrust | #FEARLESSNATURE





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THURSDAY, SEPTEMBER 14



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