

COLUMBIA LAND TRUST

FALL 2015

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Fieldbook

Conserving and Caring for Vital Lands, Waters, and Wildlife of the
Columbia River Region Through Sound Science and Strong Relationships.



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*Columbia Land Trust conserves
and cares for vital lands, waters,
and wildlife through sound
science and strong relationships.*

*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.*



Island Lake, Pacific County, Washington

Vision & Planning

Sue and I had a vision: a deck big enough for us to sleep outside. We wanted it made of wood with a railing and a clear view of the garden. Sue and a friend conceived of the design, bought materials, and built it. In six days. It was terrific fun seeing vision become reality. Last night we had dinner in the expanded space.

Columbia Land Trust has a vision: The Pacific Northwest is a vast fabric of vital, productive lands and waters that are conserved, connected, and cared for, ensuring a thriving diversity of life. Nature and our lives intertwine, and people know, love, and respect the beauty and importance of the natural world. Human communities, including neighborhoods, businesses, farms, ranches, and working forests, complement the natural world. Natural areas provide all people well-being and an unrivaled quality of life. Constructing this reality is a little more complicated than building a new deck.



There are two critical parts to this vision: conserving lands and intertwining nature in people's lives. One can't happen without the other.

Our new strategic plan lays out our approach. In the coming months, in addition to our urgent conservation work, we will collaborate with residents to identify our most critical natural places, be they on public or private lands. At the same time, we will identify the actions that not only conserve these important places but also strengthen the nature-people intertwine.

At the heart of our plan is our most important strategy of all: listening. We will only succeed in identifying the right lands and intertwining actions if we start by hearing the challenges and opportunities that the lands and people face. When we listen, we bring a willingness to develop new approaches based on what we hear. We'll add new tools, like helping family foresters keep their lands in forestry through a new corporate partnership, or helping conservation districts expand their outreach to landowners to support conservation. We're not abandoning our traditional tools, and our mission stays the same. In the months ahead we'll tell you more about our new plan. We'll ask for your help!

So come on over; we're expanding the space for people. To sleep on our deck, and to conserve our great places.

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[a]

Lichen & Oak

When Microorganisms Have Macro Implications

BY SARAH RICHARDS

It's easy to walk over, past, and under lichens without ever noticing them. But in detail, these complex organisms reveal intricate textures of varying hues and sizes. Lichens are comprised of fungi and photosynthetic green or blue-green algae, also known as cyanobacteria, and are found from the poles to the tropics.

They line Earth's forests, grow on cooled lava formations, and cling to bare rocks. Some 13,000 to 17,000 species are known, but many still await discovery.

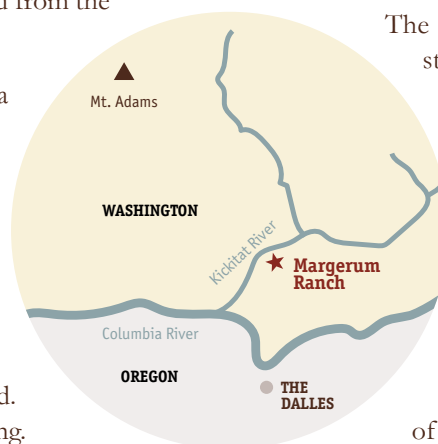
Earlier this year, a lichen, which is either very rare or potentially an undescribed species, was found by rare plant botanist Kathryn Beck on Columbia Land Trust property near the Klickitat River watershed. Research to determine its identity is ongoing.

"The unknown still exists, even close to home," said Beck. In 2010, the Land Trust hired Beck to conduct a vegetation survey of a property conserved in 2008 and located northeast

of Lyle, WA. The ranch's 302 acres bear dramatic rolling hills, old-growth Douglas-fir and ponderosa pine, Oregon white oak woodlands, riparian habitat, and upland prairies with mountain range and river views.

The site has some of the region's last remaining stands of mature Oregon white oaks (*Quercus garryana*), or Garry oaks, which offer the only known substrate for rare, slow-growing species of lichens.

Used as food, shelter, and nesting material, lichens in Pacific Northwest forests are critical for squirrels, birds, deer, bats, and invertebrates such as wasps and butterflies. Lichens are ecological indicators, susceptible to changes in air quality. They thrive in regions of high air quality and can be absent from cities due to air pollution. In forest canopies, lichens can moderate humidity and temperature and enrich soil content, allowing neighboring plants to thrive.



Five years ago, Beck trekked the grassy hillsides at Margerum Ranch to document plant diversity and became intrigued with the land's rich lichen assortment. She plucked a sundry of lichen samples, placing them into a paper sack to tote back to her personal lab for further examination.

The palpable interconnectedness of macro- and microorganisms, like the relationship between lichens and oaks, is a reminder that conserving land is essential to keeping the natural world's most wondrous, complex, and beautiful examples of symbiosis intact.

That winter, Beck sat down with her dissecting and compound microscopes to examine one species she had found on the bark of a mature Oregon white oak. She recognized the sample as pin lichen, a crustose or crust-like lichen with minute pin-shaped reproductive structures. Unable to key out the species with certainty, she sent the lichen sample, the size of a dime, to a pin lichen specialist. The specimen was determined to be *Calicium quercinum*, a slow-growing pin lichen found only twice in North America, in Illinois and Oregon, and in forests at least 100 years old.

In 2013, that sample was also examined by Oregon-based lichenologists Daphne Stone and Amanda Hardman, who had previously found what seemed to be the same mysterious pin lichen in another location in the Columbia River Gorge. They thought Beck's lichen sample was similar to *Calicium quercinum* but had some differing characteristics.

So, Beck returned to Margerum Ranch in 2015 with the lichenologists on a quest to relocate the species again, not knowing which oak tree in the hundreds of acres it had been collected

from in 2010. The three biologists came upon five enormous, deep-furrowed oaks with populations of the elusive pin lichen.

"The samples are either an unknown species, endemic to the Columbia River Gorge, or a known but very rare species found in only two other places in North America," said Beck.

The next step in determining the identity of the lichen is genetic sequencing, a laboratory procedure for which there is currently no funding. The silver lining, perhaps, is that the discovery has a deeper implication.

"These species of rare lichen speak to the value of preserving ancient oak stands and oak individuals," said Beck.

Oak woodlands and savannas in Oregon's Willamette Valley have declined to less than 15 percent of pre-European settlement numbers and oak stands in Washington are also limited. Rife development, wildfire suppression, invasive non-native species, and grazing impacts on soil have devastated many of the region's remaining oak habitats, along with any organisms depending on them, making oak protection a conservation priority.

The palpable interconnectedness of macro- and microorganisms, like the relationship between lichens and oaks, is a reminder that conserving land is essential to keeping the natural world's most wondrous, complex, and beautiful examples of symbiosis intact.

Columbia Land Trust will continue to conserve lands like that of Margerum Ranch so that unexpected curiosities and discoveries of our region may endure. 🌿

[a] Staff and volunteers hike the steep terrain at Margerum Ranch

[b] Amanda Hardman (left) and Daphne Stone (right) at Margerum Ranch

[c] Pin lichen on Oregon white oak. Photo by Daphne Stone



[b]



[c]

Wild Concoctions

On The Long Beach Peninsula, Conservation and Cranberries Go Hand In Hand

BY JAY KOSA

On a warm, sunny summer day, the Starvation Alley area of Washington’s Long Beach Peninsula is more bucolic than the name suggests. The moniker dates back to the Depression era, when day laborers from nearby oyster and cranberry farms built a shantytown along the peninsula’s interior. Today, the region’s rich cranberry farming tradition endures amidst a colorful patchwork of garnet-red bogs, narrow blue lakes, and lush spruce forests.

While the 28-mile stretch of beach is often the center of attention, Long Beach Peninsula and Willapa Bay also form one of the most ecologically diverse regions in the Pacific Northwest. “Along the Pacific Flyway, this region provides a crucial stopover site for more than 100 migratory bird species,” said Columbia Land Trust Coast and Estuary Conservation Manager, Nadia Gardner. In addition to the federally listed western snowy plover (*Charadrius nivosus nivosus*) and the streaked horned lark (*Eremophila alpestris strigata*), the area is home to black bear and elk, along with Chinook, coho, and chum salmon.

Columbia Land Trust has been working on Long Beach Peninsula since 2001, when we purchased Island Lake Forest from the Glenn family north of the town of Long Beach. The 360-acre acquisition safeguarded the fragile interdunal lake, wetland, and mature forest habitat from development pressures. It also helped the family preserve their cranberry farm. Since that time, the Land Trust has worked with partners to grow the conserved acreage to 1,030 acres. Today, the protected area surrounding Island and Loomis lakes helps ensure cranberry farmers throughout the region can draw from a fresh, healthy, and intact island aquifer to sustain their operations.



In 2008, Jared Oakes returned to his childhood home directly south of Island Lake with his partner, Jessika Tantisook, to help his parents manage five acres of cranberry bogs. Along with Alana



[a]

Kambury and Alex Mondau, they founded Starvation Alley Farms in 2010. Together, the group set out to accomplish something many said was impossible: growing, processing,

Today, the protected area surrounding Island and Loomis lakes helps ensure cranberry farmers throughout the region can draw from a fresh, healthy, and intact island aquifer to sustain their operations.

and marketing pure, cold-pressed juice made from organic cranberries. “Tell Jessika something’s impossible, and she’s likely to show you otherwise,” said Kambury.

The transition to organic farming required a holistic approach, through which healthy plant systems would be rebuilt gradually with compost and minerals as opposed to traditional applications of chemical fertilizers. Fungicides, herbicides, and pesticides needed to be replaced with non-polluting alternatives.



[b]



[c]

“Having clean, abundant water is huge,” said Tantisook, “especially on an organic farm where flooding is one of only a few methods of pest and weed control available.” Beyond daily irrigation, Jessika and Jared rely on Tap Lake, which sits on their property, to flood the bogs twice a year—once in the spring to drown pests and again for the fall harvest.

The team at Starvation Alley Farms faced a steep learning curve as first-time farmers, and initial yields were low. During the transition to organic farming practices, cranberries succumbed to pests and fungi, and weeds such as horsetail crowded the cranberry vines. While some local farmers remained skeptical, many helped Jared and Jessika by sharing neighborly advice.

Through hard work and local support, Starvation Alley Farms achieved Washington State Department of Agriculture (WSDA) certified-organic status for its fall 2013 harvest. The farm also became a Certified B Corp®, affirming that the company’s goals included social and environmental benefits. Starvation Alley gradually built a niche market for pure, organic juice for craft cocktails in the Portland and Seattle restaurant scenes. Today, the team is sharing its experience to help other local farmers make the transition to organic.

At the Starvation Alley farmstead, nearby conserved habitat and healthy bogs help blur the line between farmland and wilderness. Black bears routinely swim across the lake as ospreys circle

above. Frogs, butterflies, and weeds intermingle with cranberry vines, creating a rich, tangled tapestry of vivid reds and greens. Cranberry bogs and conserved lands make good neighbors. Columbia Land Trust is proud to help support both. 🌿

Frogs, butterflies, and weeds intermingle with cranberry vines, creating a rich, tangled tapestry of vivid reds and greens.

For more information about Starvation Alley Farms, visit starvationalley.com, and follow them on Instagram for beautiful photos.

[a] American cranberries (*Vaccinium macrocarpon*).

[b] Co-Founder Jared Oakes and his nephew Jayden Turner baling berries. Photo by Giles Clement

[c] Starvation Alley Farms cranberry juice. Photo by Kyla Yeoman



Tualatin Two-Step

Metropolitan Work Expands with the Conservation of 286 Acres Along the Tualatin River

BY JAY KOSA

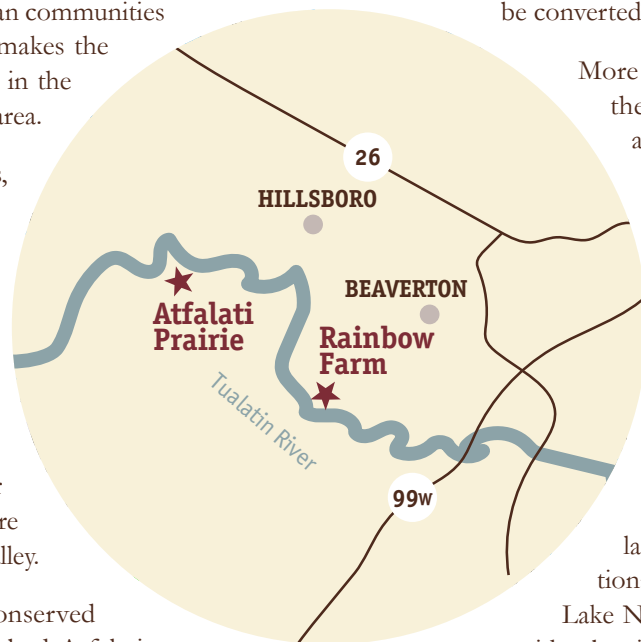
It may lack the notoriety of the Willamette or the sheer magnitude of the Columbia, but the Tualatin River is no slouch. In fact, its 712-square-mile basin, which meanders from the Coast Range through the farmlands and suburban communities of Washington County, Oregon, makes the Tualatin the largest sub-watershed in the Portland-Vancouver metropolitan area.

In recent years, local organizations, including the Tualatin Soil and Water Conservation District, Metro, and Clean Water Services, have coordinated efforts to improve water quality and restore wildlife habitat along the Tualatin. Columbia Land Trust saw an opportunity to bolster these efforts by working with willing land sellers in a manner that respected the rich farming culture of Washington County's Tualatin Valley.

In late August, the Land Trust conserved a 210-acre tract of farmland dubbed Atfalati Prairie. The property includes more than two miles of river frontage and is prone to seasonal flooding, which limits agricultural value. Once restored to native wet prairie and oak savanna, the land will offer vital habitat for fish and wildlife, including winter steelhead, western pond turtle, northern red-legged frog, and many sensitive bird species. "The Atfalati property is ideal for conservation for the same reason that it's less suitable for farming," said Land Trust Conservation Director Scott McEwen. "Restoration projects like this are more likely to succeed in flood-prone, marginal environments like historic river floodplains."

Downriver, the Land Trust also conserved a 76-acre property known as Rainbow Farm. The area includes 1 mile of river-

side forest and 51 acres of fallow farmland. The Land Trust plans to lease the land to a local farmer who will grow crops, control weeds, and fix the soil so the field can gradually be converted to wet prairie.



Both properties will serve as stepping-stones of habitat within a 1,500-acre complex of conserved lands between the Tualatin River National Wildlife Refuge and the Wapato Lake National Wildlife Refuge.

More than \$1.8 million in funding for the purchases and long-term stewardship efforts was provided by the Willamette Wildlife Mitigation Program, a program of Oregon Department of Fish & Wildlife (ODFW) that administers habitat mitigation funds from Bonneville Power Administration (BPA).

Both properties will serve as stepping-stones of habitat within a 1,500-acre complex of conserved lands between the Tualatin River National Wildlife Refuge and the Wapato Lake National Wildlife Refuge. Together with urban initiatives like the Backyard Habitat Certification Program,* suburban conservation projects support the Land Trust's broader mission to protect a diverse range of meaningful lands and waters across the Columbia River region in ways that benefit both people and nature. 🌿

*The Backyard Habitat Certification Program is a joint partnership between Columbia Land Trust and the Audubon Society of Portland.

[a] Flooded fields offer prime habitat for waterfowl

[a]

Labs on the Land

Growing the Next Generation of Conservationists

BY SARAH RICHARDS

Clutching the handle, arms tight, with fingers shaking close to the throttle, a red-haired young woman moved the saw chain near the tree. She leaned in, balanced her petite stature, exhaled, and then pulled the trigger for the first time.

In 2014, this woman, along with 24 classmates, participated in a chainsaw lab through the Mt. Hood Community College (MHCC) Natural Resources Technology program. The lab demonstrated forest thinning across 40 acres of stump-sprouted maple trees at Columbia Stock Ranch, a 960-acre property located north of Sauvie Island.

Columbia Land Trust has partnered with MHCC since 2013, training students in field techniques as preparation for natural resources careers.

"The skills taught in these courses are the skills that our land managers employ every day," said Land Trust Volunteer Coordinator Sam Schongalla. The associate of applied science degree through MHCC has two tracks in forest and wildlife resources technology. Choosing from courses in botany, fire ecology, forest insects, and diseases, as well as technical report writing, students are graduating with a well-rounded education in all things nature and tech.

The Land Trust has engaged more than 50 students and hosted 2 interns, who have contributed more than 350 hours of support. Plus, a dozen volunteers from the program regularly participate in plantings and ecological surveys. Supporting the

hands-on development of future land managers helps ensure the long-term stewardship of our conserved spaces.

"It was my introduction to the Land Trust that initially had me articulating my passions," said summer 2015 Land Trust stewardship intern and MHCC graduate Hannah Carlos.

Students have also participated in 2 controlled burns of 100 slash piles (natural forest debris left behind by forest management), and have created restoration plans for wildlife habitat and watershed protection on conserved lands. "Students light up with the realization that natural resources management can look like what we do: restoring floodplains and protecting local habitat," said Schongalla.

After having felled her first tree, the petite young woman was ready for anything. As she turned to her classmates, a grin stretched across her face and she prepared to test her new chainsaw skills once again. 🌿

[a] MHCC student during a chainsaw lab at Columbia Stock Ranch

[b] Land Trust summer 2015 stewardship intern Hannah Carlos at Indian Jack Slough



left [a]
below [b]

Supporting the hands-on development of future land managers helps ensure the long-term stewardship of our conserved spaces.



Grays River Gift

One Landowner’s Inspiring Donation

BY JAY KOSA

In August, Columbia Land Trust conserved 80 acres of forestland within the Grays Bay watershed, one of the most ecologically important areas in the Columbia River estuary. An anonymous, local landowner purchased and donated the property, which includes two tributaries of the West Fork Grays River, for the expressed purpose of permanent conservation.

“I’m just an old guy,” offered the landowner. “I’ve made my living off of natural resources in Alaska’s seafood industry. I’ve always loved the outdoors, and I just wanted to set aside one little piece of this world before I go.”

The upper Grays River and associated tributaries host one of the strongest chum salmon spawning areas left along the Columbia River, in addition to steelhead, cutthroat, coho, and Chinook. Remnant old-growth forests host marbled murrelet and Northern spotted owl. The acquisition of this Pacific County property builds on more than 1,500 acres Columbia Land Trust has conserved and is restoring throughout the watershed.

The upper Grays River and associated tributaries host one of the strongest chum salmon spawning areas left along the Columbia River, in addition to steelhead, cutthroat, coho, and Chinook.

On a clear day, the high-country West Fork Grays River property features views across a patchwork of forested hills, 20 miles southwest to the Astoria-Megler Bridge. The site’s young forest and streams host salmon, steelhead, cutthroat trout, Dunn’s salamander, and black bear; in addition abundant elk and deer. Moving forward, the Land Trust aims to restore forest habitat so the property can support species dependent on old-growth forests.

“I’m amazed that so few people have discovered Pacific and Wahkiakum counties, despite their being only two hours from both Portland and Seattle,” said the landowner. “But I know it’s only a matter of time. In 20 years, I’ll be gone and it will be up to the next generation to care enough to leave our natural places intact.”

Columbia Land Trust is grateful for the landowner’s donation, and its staff is continually amazed by the selflessness and insight of private landowners, donors, and volunteers who make a lasting difference through land conservation. 🌲

[a] View from the donated Pacific County property

[b] West Fork Grays River

[a]

[b]

Get Outside!

VOLUNTEER

Get Out for the Bird Count

Mid-December to early January 2016

MULTIPLE LOCATIONS

You’re invited to join the Land Trust staff in an awesome citizen science effort to gather critical data on bird population trends. Every winter, tens of thousands of volunteers throughout America take part in an event known as the Christmas Bird Count. Columbia Land Trust owns and manages conserved lands that fall within seven local Christmas Bird Count circles, and we want to support this grand effort. There’s hardly a better way to spend a December day.

VOLUNTEER

A Day with Willows

Tree Planting on the Grays River

Saturday, January 30

ROSBURG, WA

Stick a simple willow twig into the ground, and it can grow to become an immense tree. Here’s your chance to take part in plant’s incredible metamorphosis. This will be a wet and muddy affair that will have us collecting and planting in a former grazing field, which now gets inundated by the tide and hosts a growing wetland forest. For those interested in river restoration processes, this event offers the chance to see and explore these wild lands two years after the completion of a decade-long, multimillion-dollar habitat restoration project.

VOLUNTEER

Find the Frogs!

Amphibian Egg Mass Survey at Indian Jack Slough

Saturday, February 13

CATHLAMET, WA

It’s the size of a grapefruit, gooey like a brain, and nestled in a pond. You’ve just found an amphibian egg mass! Columbia Land Trust and the Southwest Washington Amphibian Monitoring Project (SWAMP) invite you and your family to join in a half day of amphibian monitoring at Indian Jack Slough. We’ll be looking for four species of northwest frogs and salamanders, with a half hour dedicated to introducing new surveyors to identification, safety, and best practices. The day’s findings will inform future decisions about how to restore and protect this wetland and its inhabitants.

Sign up to volunteer at:
columbialandtrust.org

TOURS

View 2015’s best-of tour season photos at **columbialandtrust.org/2015-tour-highlights** Be sure to watch for the 2016 tour schedule, posted in early December at columbialandtrust.org



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Thank you

to all the guests, sponsors, partners, volunteers, and supporters who made our special **25th anniversary** edition of *Wild Splendor* a night to remember!



Photos by Andie Petkus

LandShapesUs



Share your favorite outdoor places.




@philintransit

"Early morning on the Klickitat River before a long day of acorn foraging and planting along the @columbialandtrust haul road restoration site."

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