



MARYS RIVER WATERSHED COUNCIL

SUMMER 2014

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NEEDS YOUR SUPPORT
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(See Page 4 for details)

THE MILL RACE SERIES, PART TWO: A PHOTO ESSAY

GLIMPSES OF AN URBAN STREAM

CORVALLIS MILL RACE WINDS THROUGH SOUTH TOWN MOSTLY UNSEEN

By Lee Sherman
MRWC Board Member

Editor's Note: This is the second installment in a three-part series on the Corvallis Mill Race.

On an overcast Saturday in March, I met up with Dave Eckert at the South Co-op for a first-hand look at the Corvallis Mill Race. Eckert, who leads the Water Action Team of the Corvallis Sustainability Coalition, had contacted the Council a few weeks earlier to say, "Hey, how about doing a story on the Mill Race for your newsletter?" My reaction was, "What Mill Race?" When I learned that it's a 160-year-old urban channel running smack-dab through the center of South Corvallis, I wanted to go see it for myself.

Eckert led the way. From the co-op, we walked through the BMX Park on S.E. Chapman, where kids on dirt bikes zoom up and down packed-earth hummocks. Along the eastern edge of the track, a riparian corridor was growing thick with willow and underbrush, blocking the view of the stream from above. Holding onto a length of nylon rope that we had anchored to a tree, we half-slid down a steep embankment tangled with Himalayan blackberry. I saw deer tracks in the mud at my feet. At the bottom of the thicket ran a thin, brown trickle. This was the last leg of the



Dave Eckert photographs the Mill Race near its confluence with the Marys.

Mill Race, which begins in the Marys River near the Cub Scout Lodge at the end of Allen Lane and, after flowing about two miles, re-joins the mainstem Marys just before it enters the Willamette at Shawala Point.

Next we headed upstream toward the headquarters of specialized glass-fiber manufacturer Hollingsworth and Vose, the very spot where the Mill Race originally powered a sawmill in the 1800s and later drove three waterwheels for Fischer Flouring Mills. We skirted



Debris floats in the Mill Race at Hwy 99.

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A bumblebee gathers nectar.

SAVING NATIVE POLLINATORS

EXPERTS ON BEES, BUTTERFLIES AND WILDFLOWERS
VOICE CONCERN

Two endangered butterfly species native to the Willamette Valley — the Taylor's checkerspot and the Fender's blue — depend on native wildflowers for their survival. But those native plants — Indian paintbrush, wild strawberry, Kincaid's lupine, rose checker-mallow, Oregon sunshine, camas, tough-leaf iris, to name a few — are disappearing under pressure from farming, housing, grazing, invasive plants and natural succession. Without butterflies and bees, which transport fertilizing puffs of pollen as they flit from flower to flower collecting nectar, ecosystems suffer.

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URBAN STREAM, CONTINUED FROM P. 1

around the factory's chain-link fence and then dropped again to the stream bank south of the plant. We could see the stream flowing through rusty culverts under the roadway. On the banks, wild roses grew, their red hips bright against the dull day. Where Crystal Lake Drive crosses the stream, duckweed choked the bed.

On the bridge at Hwy 99, we stood and looked down at old bottles and bits of scrap lumber floating on the water. A few yards upstream, a pair of mallards swam. "Route 99 near Bridgeway floods during heavy storms," Eckert told me. "That's the point where lots of stormwater enters the stream from storm pipes draining all the development and roads to the north and south of that point. If we treated some of that stormwater onsite at each property, like the South Co-op has done, it would ease the localized flooding issues that people often blame on the stream itself."

At Marysville Golf Course just south of Avery Park, we watched the Mill Race flow under an old railroad trestle. We turned around at this point and headed home. But MRWC board member Jeremy Monroe and another local environmental steward, Jay Thatcher, report that several years ago they walked all the way to the "uppermost reaches of the watercourse," which they found to be densely overgrown. "At the end of the Mill Race near the Cub Scout lodge," Thatcher said, "an old concrete abutment stands on the banks of the Marys River. We think it probably held the head gates of the Mill Race, which was dug in the 19th century."

The Council is working to piece together the story of the Corvallis Mill Race. If you have information to share, please contact Xan at the Watershed Council, xan@mrwc.org or 541-758-7597.



The Mill Race runs under several culverts in South Town.



Wild roses cling to a tangled bank.



At Marysville Golf Course south of Avery Park, an old railroad trestle crosses the Mill Race. (Photos: Lee Sherman)



ASSESSING THE MILL RACE

In September 2012, the City of Corvallis conducted visual assessments of the Mill Race at Bridgeway Avenue and Crystal Lake Drive Bridge at S.E. Third Street. Here are some excerpts from those reports:

Bridgeway. The channel is very straight and wide, with steep banks. There are signs of erosion on the banks, including exposed banks with little exposed roots at the bottom and slumping. Mill Race was created in the 1850s and is not a naturally occurring stream, which is probably why it is such a straight channel. [An 1851 vegetative survey indicated that there was a natural watercourse in the area of the Mill Race prior to the channelized drainage ditch that exists today.] The riparian area is restricted by developed properties on all sides. Any efforts would depend on neighboring property ownership. Additional riparian area may help with shading and bank stabilization.

Crystal Lake. The water was cloudy and there was a lot of algal growth and macrophyte. Upstream of the bridge, there were signs of concentrated flows. It appears that blackberry control has occurred, but blackberry is returning. The upstream channel appeared eroded, with exposed banks. Further upstream the channel appeared to either narrow, or large parts of the banks had fallen in. There were large patches of blackberries in some areas. The riparian areas were thin for the whole reach, with some areas that had no coverage or only blackberries. The riparian area could be improved in many areas depending on the ownership of the neighboring fields. Upstream of the bridge, the channel form is strange with a drastic change from narrow to wide with signs of erosion. Downstream of the bridge, it appears the drainage from the culverts under the bridge is causing downcutting of a smaller channel within the main channel, and the water is nutrient rich causing algal growth. Some way to slow the water coming

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POLLINATORS,

CONTINUED FROM P. 1

That's why the Watershed Council has partnered with local landowners, along with agencies such as the U.S. Fish and Wildlife Service, to restore wild plants to the upland prairies in the community of Wren and the surrounding hills and draws.

Henry Storch is one of the driving forces behind this push, along with MRWC landowner liaison Karen Fleck Harding. As a leader in the local "Nectar Network," Storch works tirelessly to collect and sow seeds up and down the Marys River watershed. In April, he shared his knowledge and his passion as one of three speakers at the MRWC Quarterly Forum, where he regaled listeners at the public library with his wide knowledge of Benton County's original bees, butterflies and flowers.

The other presenters — Sarina Jepsen of the Xerces Society and Kathleen Prudic, a post-doctoral researcher in integrative biology at Oregon State University — also shared their perspectives on Oregon's native pollinators.

"Eighty-five percent of flowering plants require pollinators," Jepsen noted. "One-third of food crops—including 90 percent of vitamin C crops like oranges and lemons—also rely on pollinators." Explaining that there is a "huge suite" of 4,000 pollinator species native to North America, she said there are 25 species of bumblebee in Oregon alone. One-third of bumblebee species on the continent are facing risks. In fact, 75 of those species are listed as threatened all the way up to critically endangered. Pathogen spillover from commercial bees, pesticides, habitat loss and climate change are among the dangers Jepsen cited. She encouraged people to support the "Saving America's Pollinators Act," co-sponsored by Oregon Congressman Earl Blumenauer and currently making its way through Congress.

Urging concerned listeners to become "citizen scientists," Jepsen suggested joining Bumble Bee Watch at www.BumbleBeeWatch.org where you can help track bees. Planting forage plants, protecting nest sites, conserving un-mown areas, and avoiding pesticides are steps people can take on their own land to bring back the bees.

For her part, Prudic talked about the "amazing diversity of form and function" among the 800,000 known species of insects, entrancing the audience with slides of "nano-scale" wing colors on insects, which she described as "like miniature feathers." She lamented the loss of habitat such as milkweed in the Midwest and forests in Mexico, which is pressuring species like the giant swallowtail to move northward. Extreme weather driven by climate change also is disrupting butterfly lifecycles. Like Jepsen, Prudic advocated for citizen science through eButterfly at www.e-butterfly.org, which builds on the "long history of amateur butterfly folks" by aggregating data from local observers as well as from museums and other non-profit organizations.



Oregon sunshine



Wild strawberry



Rain-drenched foliage of Kincaid's lupine, host plant of the Fender's blue butterfly.

MILL RACE, CONTINUED FROM P. 3

from the culverts might help reduce the downstream erosion seen in the channel.

In 2002, the City of Corvallis Stormwater Master Plan made the following findings:

The 350-acre Mill Race drainage basin presently contains a mixture of residential, industrial and undeveloped property. From the Willamette River to Evanite Culvert [now Hollingsworth and Vose], city staff reported: "There is good vegetation along the stream, but the top of the bank needs shade trees. This reach would be a good candidate for an adopt-a-stream program, since a lot of trash is tossed into the channel." Field observations noted: "The lower stream banks show signs of erosion, and the channel bottom consists of stagnant pools interrupted by stretches of dry sediment deposits during dry summer months."

A member of the public noted that from Hwy 99 to Allen Street, "Mill Race is disgustingly dirty, especially in lower flows (algae, pollutants, mosquitoes, and people dump into it." City staff reported: "Old tires

and metal have been dumped into the stream and need to be removed. The water quality impact of runoff from the Marysville Golf Course should be considered." Field observations noted: "A low spot in the channel just upstream of Hwy 99 contains a long length of stagnant water with plentiful algae growth. An abundance of trash throughout this reach indicates that dumping is a problem. The stream banks show signs of lateral erosion. The outfall pipe from Marysville Golf Course discharges into the Mill Race drainage basin from under Allen Street. The channel downstream of Allen Street is eroded toward the bottom of the banks. The channel has little natural habitat value because it lacks woody debris or vegetation." Recommendations for watershed management included:

- Establish stream buffers and plant trees in the lower reaches of the Mill Race drainage basin to provide shade to the channel
- Stabilize stream banks with log structures to prevent erosion in the upper reaches of the Mill Race drainage basin
- Replace the culvert under Allen Street

COME JOIN US! DYNAMICS OF FORESTS AND WATER

EXPERT PANEL TO SHARE SCIENCE OF WATERSHED

WHAT: MRWC Summer Forum

WHEN: Wednesday, June 4, 2014,
6:30 – 8:30 p.m.

WHERE: Corvallis Public Library,
Large Meeting Room

Everyone's invited to attend the Watershed Council's Summer Forum, which will feature several expert panelists on forests and water. Arne Skaugset of the Forest Engineering, Resources & Management Department at Oregon State University and Brad Withrow-Robinson of OSU Extension will be among the speakers. Juice and light refreshments will be served. For more information, please call 541-758-7597. We hope to see you there!

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Are you interested in Marys River Watershed Council making a presentation to your group or organization? _____

\$25.00 individual \$45.00 household \$10.00 student \$_____ additional contribution

Any contribution establishes your annual membership. Please check here if you do **not** want public acknowledgement of your support.

I would like information about: Volunteering Committee service Planned giving

Make checks payable to: Marys River Watershed Council or donate online at www.mrwc.org

Marys River Watershed Council is a nonprofit organization under IRS 501(c)3. All contributions are tax deductible.

Thank you!

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