

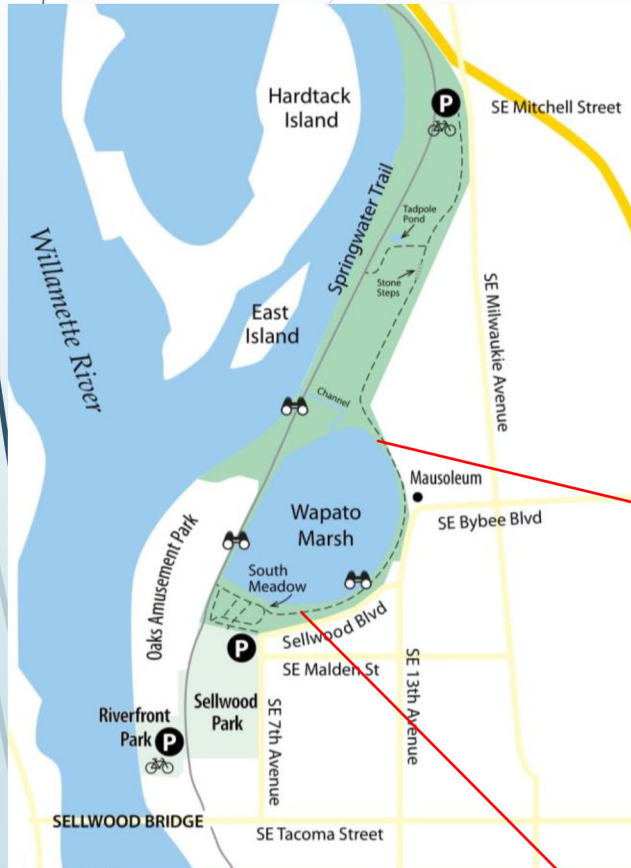
Dead and Brown is Good! A Purple Loosestrife Success Story



Portland Parks and Recreation (PPR)
Bureau of Environmental Services (BES)
Oregon Department of Agriculture – APHIS (ODA)



Background



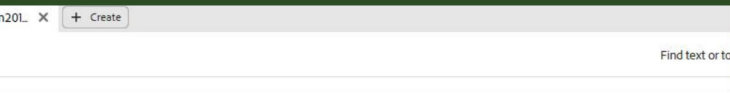
- Oaks Bottom Wildlife Refuge (OBWR) is a 200+acre natural area in SE Portland
- Purple Loosestrife (*Lythrum salicaria*) is native to Eurasia and displaces native plants and wildlife.
- *L. salicaria* thrived at OBWR since the early 1990's, when a water control structure was used to flood the 60-acre ponded wetland, Wapato Marsh.



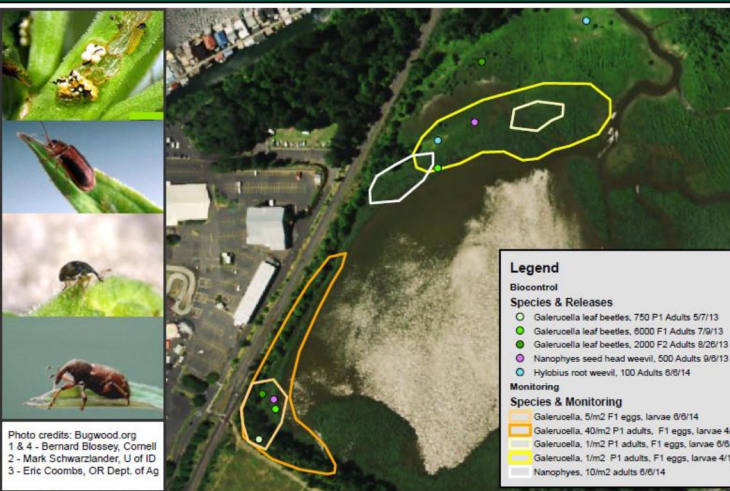


Response

- ▶ Starting in 2001, PPR and BES partnered with ODA to annually release thousands of three different species of biocontrol beetles throughout the wetland:
 - ▶ *Nanophyes marmoratus* → Seed Weevil
 - ▶ *Hylobius transversovittatus* → Root Boring Weevil
 - ▶ *Galerucella* spp. → Defoliating Beetles



USDA United States Department of Agriculture Purple Loosestrife Biocontrol, Oaks Bottom Wildlife Refuge, 2013.



How Government-Released Beetles Invaded a Portland, Oregon Neighborhood

Beetle Releases by Year

Release Year	<i>N. marmoratus</i>	<i>H. transversovittatus</i>	<i>Galerucella</i> spp.
2001	350	--	8,000
2002	500	140	11,750
2003	500	600	3,000
2004	--	300	10,000
2005	350	100	10,000
2006	500	140	11,750
2007	500	600	3,000
2008	--	300	10,000
2009	500	100	8,750
2010	--	200	--
2012	--	100	--
2013	500	--	6,750
2014	--	200	--
2016	--	100	--
2019	--	800	3,000
2020	--	--	1,800
TOTAL Released	3,700	3,680	87,800

- Unnatural flooding from human-built infrastructure resulted in annual reproductive and overwintering failure for the beetles.
- EXCEPT– the Great Gallarucella Migration of August 2015!!!

PORTLAND

Sellwood beetle infestation should be short-lived, experts say

Updated: Aug. 12, 2015, 8:01 p.m. | Published: Aug. 12, 2015, 7:01 p.m.

Beetle swarms invade Portland neighborhood

Originally published August 12, 2015 at 6:36 am | Updated August 12, 2015 at 7:19 am

Beetles are invading areas of Portland and it turns out the government really is to blame.

By [The Associated Press](#)

2018 – Tidal Restoration Project

- ▶ In 2018, the Army Corps of Engineers, BES and PPR partnered to restore the natural hydrology of the refuge, allowing biocontrol to take a foothold.
- ▶ Regular monitoring of 5x 1-meter plots along each of 5 transects throughout the wetland occurred 2015-2023



Results

- ▶ In just the 5 years since that tidal restoration project concluded, nearly 100% of the *L. salicaria* has been eradicated.
- ▶ The biocontrol beetles can now successfully overwinter in the wetland, making future beetle releases unnecessary.



Typical defoliating damage by *Galarucella* beetles at OBWR

In summers 2020, 2021, and 2022, 95% of Loosestrife was defoliated and started to die

Today



2014



2023

Next Steps

- Complete eradication of the *L. salicaria* is NOT the ultimate goal
- The next 5 years will be a time of great replanting of native trees, shrubs, and emergents to restore this 60-acre wildlife refuge to its former health and floral diversity.

To better understand the history of OBWR and what it can be, watch the 30min documentary “Riparian” at:



<https://www.youtube.com/watch?v=gQgrq9qf3Ck>

Thank you

- This project wouldn't have happened without the long-term support of PPR, ODA and BES staff and volunteers who assisted with the release and monitoring of the site.
- **Volunteer with planting Wapato Marsh!**
 - Find out about planting events Spring 2025 at: www.portlandoregon.gov/parks/nas/events
 - Contact: Laura Guderyahn
 - Natural Area Ecologist, Portland Parks and Recreation
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