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Weir One Year Old! The Rithet's Bog Restoration Project

**BARA Bugle (Broadmead Area Residents Association Newsletter),
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It's been a year since the weir was installed and the willows were cut from the Chatterton fields. To the casual observer it seems obvious that the restoration project has been a success: waterfowl were abundant on the Chatterton and Dalewood fields last winter and spring, and pools of open water lingered until the end of July, in spite of the driest summer on record. But what actually happened in terms of measurable objectives? Here is a brief rundown of some of the project goals, and the results to date.

Water Quantity – Were Higher Water Levels Maintained?

The project's overall objective was to improve the ecological function of the bog by raising water levels and reducing water level fluctuation. Water levels were measured in two ways: the height of the water at the weir, and the depth of the water table below the ground surface in the central bog.

Height of water at the weir

Goal: To maintain water level at 90 centimeters (overflowing) for the winter months, and not have it drop below 40 centimeters in the summer months.

Results obtained: The weir reached 90 centimeters on December 11, 2002 and continued to overflow until May 30, 2003. Water level then dropped steadily through the exceptionally dry summer and reached its lowest point this September 3rd : 38 centimeters, only 2 centimeters lower than the minimum desired height. The record-breaking rainfall of October 16 raised it to 35 centimeters above overflow!

Goal accomplished? Yes, especially considering the drought experienced this summer.

Depth of water table below the surface

Goal: To maintain the water level in the central bog at ground surface in the winter and not have it fall more than 50 centimeters below ground surface in the summer and fall.

Results obtained: No measurements were taken in the winter months, but it is assumed the water table was at the ground surface in the central bog, since the top of the weir is at the same elevation as the bog, and the weir overflowed from December until the end of May. In the summer, water table depth was measured bi-weekly at three dip wells. The lowest depths, recorded on September 28, were 35.5, 45 and 58 centimeters below ground level, respectively. The one dip well which exceeded the 50 centimeter maximum desired depth was located on a hummock (mound) of Sphagnum which raised it above the surrounding bog and increased the distance down to the water table by the height of the mound.

Goal accomplished? Yes – so far, so good, and dip wells are in place to continue monitoring next year.

Creating Waterfowl Habitat – Was the Open Water Used?

Several hectares of open water were created when willow was cut from the Chatterton fields. The water was over a meter deep in some places, and lasted until well into July. Weekly waterfowl counts were conducted over the winter to assess the number and species of waterfowl making use of the habitat, and waterfowl breeding surveys were completed monthly in the spring to determine whether successful breeding took place.

Wintering and Migrating Waterfowl

Twenty-seven species of waterfowl and shorebirds were observed on the wetlands between November 2002 and May 2003. There were ten species of ducks, and as many as 300 individuals were seen at a time. Mallards, wigeon and shovelers were by far the most common, but ring-necked ducks, bufflehead, gadwalls, pintails, cinnamon teal and blue-winged and green-

winged teal were also regularly seen. Other frequently observed waterfowl included Canada geese, great blue herons, Virginia rails, snipe and soras. Shorebirds, including several species of sandpipers, killdeer, and greater and lesser yellowlegs appeared in the spring as water levels began to drop. The sighting of two extremely rare species, the green heron and yellow-headed blackbird, were exciting events recorded on the Victoria Natural History Society's Rare Bird Alert.

Verdict: The Rithet's Bog wetlands provided habitat for a significant number and variety of waterfowl – and attracted many happy birders!

Breeding Waterfowl

Ten species of waterfowl were seen on the wetlands during the March to July breeding season; five of these were observed to successfully rear broods of chicks. Mallards were again the most common (11 broods, including one of 12 chicks), with Canada geese next most abundant. A single family of American coots was an unusual sight on such a small wetland, and sora and Virginia rail broods were sufficiently rare to be mentioned repeatedly on the Rare Bird Alert.

Verdict: The wetlands were a productive waterfowl nesting site – and a good spot to watch ducklings.

What Else Has Been Happening?

Restoration work is a process, not a one-time event, and a lot of follow-up activity is necessary. This fall may not have been as dramatic as last year's weir installation and willow cutting, but two significant events did take place.

Army Cadets Clear Chatterton Fields of Willow Debris

After Chatterton field was cleared, acres of willow debris were left lying on the ground. It had to be removed: it became malodorous as it decomposed, compromised water quality, prevented larger waterfowl such as swans from landing in the water, and, most important, it had the ability to sprout and take over the fields again.

On September 27, the military came to the rescue. More than 80 cadets from three cadet corps spent the morning hauling willow debris from the field as part of their Caring for Canada environmental service program. These hard-working cadets removed a pile of willow branches that covered the width of the Chatterton trail and was almost 100 feet long! They also treated us to a colorful parade as two pipers lead their unit out to chow down on 250 hot dogs donated by Thrifty Foods.

Many thanks to the members and leaders of the 11th Service Battalion Cadet Corps from the Vanalman Ashton Armoury ; the 2289 Royal Canadian Army Cadet Corps, 5 th BC Field Artillery, from the Bay Street Armoury; and the 2136 Royal Canadian Army Cadet Corps (Canadian Scottish Regiment), also from Bay Street Armoury . You did a great job!

Thanks also to Davey Tree Services, whose staff donated their Saturday morning to chip all that willow debris and remove it from the site.

EDS Global Volunteer Day Broom Bash

The wetlands aren't the only thing being restored at Rithet's Bog. Broom is slowly being cleared and Garry Oak trees planted on the surrounding rocky uplands, which were once part of an open, dry Garry Oak forest. On Saturday October 18 we received a giant helping hand with this work when staff from the local office of EDS (Electronic Data Services) chose Rithet's Bog as the site for their Global Volunteer Day project, an annual event during which they perform community service. Erwin Lee and 20 of his co-workers cleared a mountain of broom from the hill below the Foxborough complex and cut down dozens of poison hemlock stems. They also removed blackberry and dug holes for the Garry Oaks to be planted at the Dalewood/Chatterton corner on November 2 nd, our annual Tree Planting Day.

Thank you, EDS! You did a terrific job and your volunteer service program is a real inspiration.

What's Next?

Watch for us on the Web - Rithet's Bog should have its own website before the next issue of the Bugle is out. It will feature natural history, species lists, reports, maps, photos, human history, and other material. If there is anything you would like to see, let us know.

Upcoming Volunteer Events

- **Fifth Annual Tree Appreciation Day:** Sunday, November 2, 9 AM to noon. Meet at the corner of Chatterton and Dalewood and help plant Garry Oak trees. Snacks and drinks provided.

- **Bird surveys:** the first Saturday of every month, 9 AM to noon. Meet at kiosk at the corner of Dalewood and Chatterton at 9 AM. Bring your binoculars; we'll warm up with a coffee afterwards.
- **Broom clearing:** Not regular, but held Sunday afternoons, 1 PM. Watch for signs on the kiosk, or sign up for notification by email.

If you have questions about any of these events, or would like to be placed on an email list for volunteers, please send a message to info@rithetsbog.org

Happy Bog Walking!

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