

Farmland and Wildlife

Newsletter of the Delta Farmland & Wildlife Trust

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Delta Farmland & Wildlife Trust

The Diversity of Arthropods in Grassland Set-asides

When thinking about wildlife, it's easy to forget about the smaller organisms. A cursory look into the undergrowth reveals an abundant diversity of life. Arthropods, a group of animals that includes insects and spiders, perform a variety of roles in ecosystems. Some spread pollen between flowers, aiding the sexual reproduction of plants. Others break down organic matter in the soil, thereby recycling nutrients that are used by plants again. Many arthropods are predators, and have developed unique ways to catch their prey, and conversely, arthropods are also an important food source for a variety of wildlife, especially birds.

Grassland Set-asides planted through the Trust's stewardship programs provide habitat for many species of

arthropods.

To determine the value of Set-asides as arthropod habitat, the Trust partnered with the BC Ministry of Environment (MoE) to conduct inventories of these grasslands. Of specific interest was finding arthropods that are threatened, including the western bumblebee and the night stalking tiger beetle. **Continued on back page.**

From left: yellow-faced bumblebee; white-lined sphinx (caterpillar); banded argiope spider; woodland skipper; Virginia tiger moth (caterpillar). Photos by Laura Parkinson.



Trust Program Increases Clover Acreage

The DF&WT is encouraging local farmers to seed more clover as a cover crop. Clover can provide a variety of benefits within agroecosystems. It creates nodules on its roots to house bacteria, that in turn fix nitrogen from the atmosphere. Its wide tap root can pierce compacted soil, aerating and increasing drainage. Pollinators, such as bumblebees, benefit from its blooms which last well into early fall. Clovers tendency to grow runners along the ground means that migratory waterfowl can feed on its vegetation without completely exposing the soil to rain erosion.

Clover is not a new plant to farmers, however its use in crop rotations has declined in recent decades. To increase the acreage of clover planted in Delta, the Trust has purchased seed, and in partnership with River Side Welding, a special seeding machine is being used to over-seed clover into local grain crops. The machine is commonly used in cranberry bogs and has been modified to seed clover. Once the grain

crop is harvested, the clover will quickly grow to form a dense cover crop.

Through this project, over 250 acres of clover has been seeded on Delta farms this year. DF&WT field technicians will monitor these fields for waterfowl use during the upcoming winter. Counts of fecal pellets in each field will allow the Trust to quantify the waterfowl carrying capacity in relation to other crop types.

In addition to waterfowl monitoring, BCIT students and the Trust will establish small mammal monitoring grids on the clover fields to measure the abundance of small mammals. Observations of clover fields established during the 2010 pilot year revealed that Townsend's voles were making extensive tunnels within the vegetation. The presence of voles attracted a variety of raptors, including Northern Harriers, which were frequently spotted hunting over clover fields.

The Trust will continue its clover project in the coming years. Funding for this year's program, including the clover seeding, was provided by the Delta Agricultural Society, BC Waterfowl Society, Ducks Unlimited Canada, the Vancity enviroFund, Habitat Conservation Trust Foundation, the Corporation of Delta and Environment Canada.



Relay cropping a clover cover crop with grain.



Barn Owl Boxes for Delta Farms

With the help of dedicated volunteers, DF&WT has begun installing new Barn Owl nest boxes on farms across Delta. The boxes were constructed by John Toochin, Ken Hall, and Peter Ward (all members of Nature Vancouver) in Peter's Vancouver home using a Californian design that was modified to suit local conditions. The trio places their unique "Cascade" logo on each of the boxes they complete.

The finished boxes were installed with the help of local Barn Owl expert, Sofi Hindmarch. This requires climbing precarious wooden ladders into the rafters of old barns, often more than 50 feet up. Sofi's studies of Barn Owl populations has given her insight into the most ideal locations for the boxes.

Barn Owls are warm weather birds and do not have enough feathery insulation to withstand temperatures below freezing. The Fraser River delta is the farthest north this owl will range. These curious night flyers will search out cavities (both natural and human-made) to lay their eggs and raise young.



John, Ken, and Peter with a completed nest box.

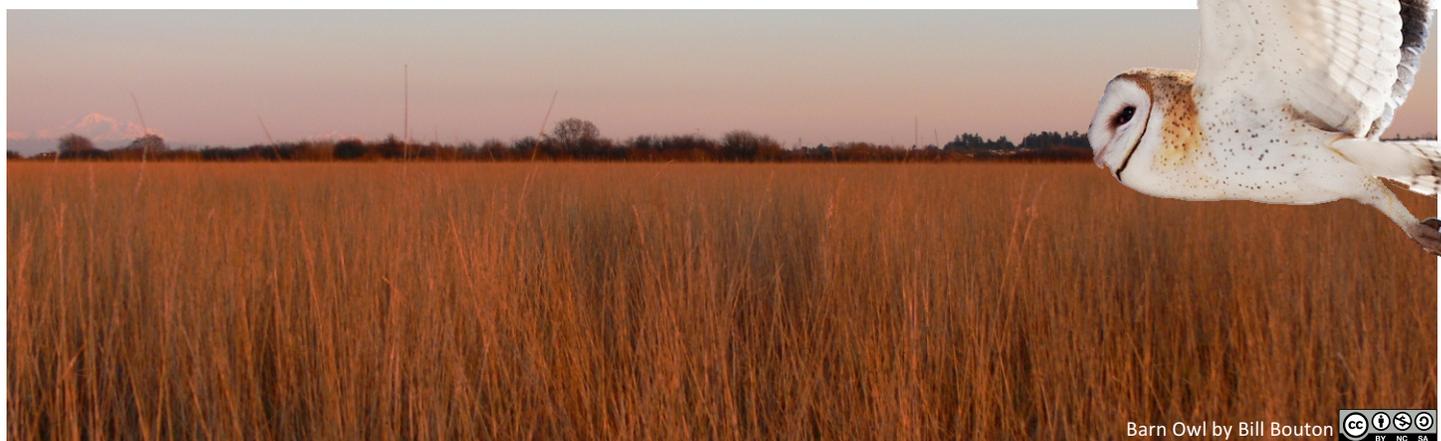


Barn Owl chicks in a nest box (S.Hindmarch).

Historically, they would have sought out old cottonwoods, however, barns provide an excellent alternative for escaping the cold and building a nest.

Once hatched, the young owls are voracious feeders and their parents must hunt frequently to sate them. One of the most important prey for the Barn Owl is Townsend's vole. Sofi's research has shown that Barn Owls fledge more offspring when the young owls are fed a diet of voles instead of rats or starlings. Rats and starlings are more abundant in urban areas, whereas voles are abundant in farmland habitats, especially grasslands.

To date, eight nest boxes have been installed across Delta. The Trust would like to thank John, Ken, Peter, and Sofi for the work they committed to helping this unique species of owl. If you are aware of Barn Owls nesting in your area, please call our office and let us know.



Barn Owl by Bill Bouton 

Grassland Set-asides contain dense populations of Townsend's voles, making them ideal hunting habitat for Barn Owls. As the grass in a Set-aside matures, the older grass lays over and creates a dense litter layer. This layer provides cover for voles, which feed on the seeds, stems, and

corns of the grass and clover. Small mammal population surveys conducted by DF&WT have shown that Set-asides contain up to 365 voles/acre. Set-asides also provide habitat for shrews (insectivorous mammals), songbirds, and large insects, all of which can be prey for hungry raptors.

“Raptors & Roots” Fundraiser a Big Success

The DF&WT held their Summer Solstice Fundraiser on June 24th at Roddick’s century old barn on Westham Island. The theme of the event was “**Raptors & Roots,**” which acknowledges the interplay between maintaining our farmland for food and the landscapes capacity to conserve the magnificent array of internationally-recognized wildlife our region supports. The 300 attendees dined on fine cuisine prepared by Bruno Marti and Tobias MacDonald and their team of culinary students.

The Trust presented 3 awards during the evening. The Ellis Family received the Stewardship Award for their commitment to farmland awareness. Each year, the Ellis’ host “Day at the Farm,” a free community event co-presented by DF&WT to educate the public about the importance of farmland. John Malenstyn was awarded the Service Award for serving a total of 12 years as a Trust Director. Colin Haskins accepted a Special Award on behalf of the Kiwanis Club of Ladner/Tsawwassen for their contribution to the Trust's office operations. The event raised net proceeds of \$51,500 towards our stewardship programs. Thank you to all of the businesses and individuals in the community who supported our cause.

Trust Receives National Conservation Award

DF&WT was recognized with the National Blue-winged Award for their contribution to migratory waterfowl and wetland species conservation.

Les Bogden (Ducks Unlimited Canada) and Barry Smith (Environment Canada) presented the award to Trust Chair, Mary Taitt, and program coordinator David Bradbeer.

The Blue-winged Teal Award was created through the North American Waterfowl Management Plan (NAWMP).

“The NAWP, which is signed by Canada, the US and Mexico, has been in place since 1986. It relies on partners, such as the DF&WT, to help achieve its goal of returning waterfowl populations to their 1970s levels by conserving wetland and upland habitat," says Barry Smith, Regional Director for the Pacific Yukon region of the Canadian Wildlife Service and chair of the BC Pacific Coast Joint Venture, a group created to implement NAWMP. "This award is very prestigious and proves that not only is DF&WT providing significant benefits to bird habitat regionally, but they are a role model for other agriculture-conservation partnerships across Canada."



Thank you to the “Raptors & Roots” Event Sponsors:



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The Blue-winged Teal Award



Wildlife Tidbits by John Hatfield

Crows and Magpies can be a nuisance! One of our spring studies on the prairies involved walking through grasslands and bushes looking for waterfowl nests. This was to determine the species of waterfowl present in a given area; the number of nests, eggs per nest and the hatching success. We soon discovered that Magpies and Crows had been watching us and were visiting the area after we left. As a result, eggs were destroyed by pecking and being eaten. After that, if we saw Crows or Magpies nearby we just kept walking past the nest and came back later when the coast was clear. This is just one example of the many detrimental activities of these clever corvids.

Recognizing a Long-time Supporter

The Trust would like to recognize Rita Butterfield for her contributions to our Stewardship Programs. Rita's past contributions have been allocated to the Trust's five programs. In 2010, Rita's support made it possible to plant a further 500 m of trees and shrubs, and helped the Trust maintain a total of 5.5 km of hedgerows across Delta. Thank you Rita for your contribution to wildlife and farmland conservation. If you would like to direct a donation towards one of the Trust's stewardship programs, please contact our office (604-940-3392).

Delta Farmland & Wildlife Trust

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Margaret Paterson Office Coordinator	David Bradbeer Program Coordinator
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Farmland & Wildlife welcomes articles and letters. If you would like to contribute your agriculture-wildlife story, please let us know. For more information or to be put on our mailing list, contact us at the address or telephone number listed below.

Make a donation towards farmland conservation today!

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Vancity

DF&WT receives Vancity enviroFund

The Trust has been awarded Vancity's enviroFund for Ecosystem Restoration. With the grant, the Trust will be able to establish Grassland Set-asides as habitat for animals listed under Canada's Species at Risk Act, including Barn Owls, Short-eared Owls, and Great-blue Herons, on farms across the lower Fraser River delta. Thank you to Vancity for recognizing the value of Grassland Set-asides to the conservation of regional biodiversity.



Arthropod Diversity, continued from front page:

The researchers were also interested in locating native pollinators, because of their importance to food production.

MoE technicians used various techniques, including sweep netting, pitfall traps (to catch ground dwelling arthropods) and Malaise traps (designed to catch aerial insects), to conduct the inventory. No threatened arthropods were located during the inventories.

Native pollinators, however, appeared to be abundant within the Set-asides. The inventory revealed several different bumblebee species, some of which were found nesting in abandoned birds nests and vole burrows. The flowering clover in the Set-aside mix makes these fields rich feeding areas, and the tall grass provides refuge for nesting.

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