

# Farmland and Wildlife

Newsletter of the Delta Farmland & Wildlife Trust

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## Winter Cover Crop Study Results

Winter cover crops are a staple food for the migratory waterfowl that use farmland on the lower Fraser River delta each year. Cover crops can also attract waterfowl away from farmer's hay and pasture (forage) fields by providing an alternative food source for the hungry birds.

DF&WT has been encouraging farmers to plant cover crops since the early 90's but there is still basic information about waterfowl ecology that we don't understand.

For instance, if you plant a cover crop, how many ducks and geese will come to feed on it? And how does cover crop management impact the number of waterfowl supported? If you plant it earlier, will there be more food for the birds to eat? These are the questions that DF&WT and local farmers attempted to answer this past winter. Winter wheat was planted as a cover crop



beginning in late August until early October and the fields were surveyed throughout the winter. DF&WT researchers wanted to see if more waterfowl would be attracted to the earlier planted fields. We were also interested in seeing how well cover crops lured waterfowl away from hay and pasture fields.

The researchers counted waterfowl fecal pellets to determine how many ducks and geese were using each cover crop field on a weekly basis. Fecal pellet counting may seem like a disgusting way to learn about birds, but it is a cheap and easy way to keep track of waterfowl that may feed on fields sporadically, or even at night. Once the cover crops were planted, the biologists donned their rain gear and headed into the field to see what they could learn. After 6 months of field work, the results are in!

A variety of different ducks and geese used the fields during our study, including Snow Geese, White-fronted Geese, American Wigeon, Mallard, Northern Pintail, and Trumpeter Swans. Based on the fecal pellet counts, the winter wheat fields that were planted in late August attracted more waterfowl throughout the winter than the ones planted in late September. The graph of the total number of waterfowl pellets accumulated on each field throughout the study compared to the planting date illustrates this point. The

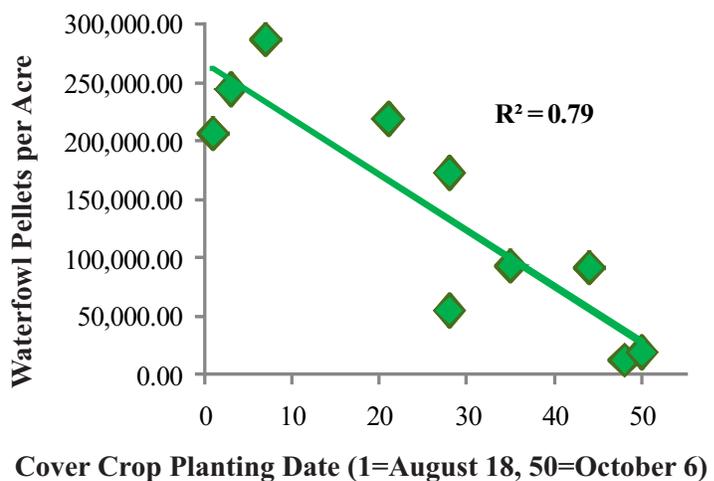
earlier planted fields attracted greater numbers of waterfowl because they had longer to grow, and therefore provided more food for the birds. The cover crops appeared to attract waterfowl away from the forage grass for a while, but eventually the ducks and geese couldn't resist the lush grass and began grazing

those fields as well. However, waterfowl continued to use cover crops, offsetting some of the damage that would have otherwise been inflicted on the forage grass.

With these new results, DF&WT has restructured its Winter Cover Crop Stewardship Program to provide a greater

cost-share to farmers who plant winter wheat in late August. In this way, we can ensure that cover crops reduce some of the impact waterfowl have on farmland and waterfowl while still supporting these internationally important wildlife populations. 

A copy of the research report produced during this study is available from our website [www.deltafarmland.ca](http://www.deltafarmland.ca).





### Thank you to Long-term Funders

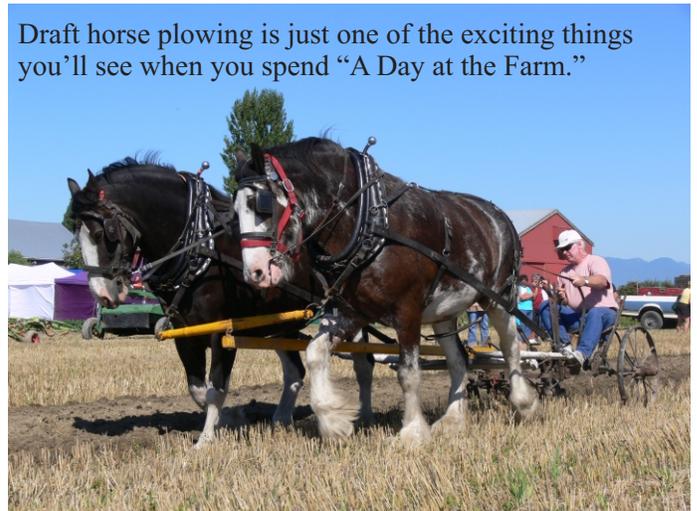
DF&WT would like to extend a sincere thank-you to three of our long-term supporters. The Delta Agricultural Society, Ducks Unlimited Canada, and the British Columbia Waterfowl Society have provided consistent funding to the Trust's stewardship programs for over a decade and a half. In 2009, these organizations provided funding that was critical to maintaining the Grassland Set-aside and Winter Cover Crop Stewardship Programs in the face of reduced funding from our endowments. Thank you for supporting the Trust's mission to conserve wildlife and support local farming!

### Day at the Farm 2010

Agriculture is an important part of our communities, to spread the word DF&WT is excited to invite you to our 5th annual "Day at the Farm" community event. This event gives people the chance to learn all about agriculture in the Lower Mainland. We have enlisted the help of over 30 agriculturally related groups who will explain every facet of local agriculture, including vegetable and berry production, urban and rural farming, organic and conventional farming, and much more. Learn about post-secondary education opportunities in agriculture and how "Ag in the Classroom" is teaching children about where their food comes from. Enjoy live bluegrass and folk music while watching a dairy milking demonstration and peruse the static equipment display to see the largest tractor in Delta and a bizarre blueberry picker. There will also be freshly prepared food as well as an event favourite, a farm tour led by 3rd generation farmer, Gordon Ellis. If you fancy yourself a green thumb, bring your biggest home grown tomato and enter it into the Titanic Tomato Contest or bring along your finest looking jar of preserved veggies or fruit and enter it into the Old Time Canning Contest. Please join us at Westham Island Herb Farm on 11th of September between 10 AM and 4 PM for "Day at the Farm." For more event details, visit our website [www.deltafarmland.ca](http://www.deltafarmland.ca). 🐦



Draft horse plowing is just one of the exciting things you'll see when you spend "A Day at the Farm."



### Invertebrate Sampling Commences in Grassland Set-asides

Since the inception of the Grassland Set-aside program in the mid-90's, DF&WT has made significant progress in documenting the role of these fallow fields in supporting vertebrate biodiversity.

However, little is known about invertebrates; to date, no assessment has been made in set-asides of the most diverse and abundant group in the animal world. All that is changing this summer. DF&WT has partnered with BC Ministry of Environment biologists to begin measuring invertebrate biodiversity in set-asides.

The work will target arthropods, which include insects (such as bees, beetles, butterflies, moths, and flies) and spiders. Arthropods play many important roles within ecosystems, including pollination, pest control and food for larger animals (e.g., birds). Of particular interest is the presence of native pollinators, such as the western bumblebee. Decreasing numbers of pollinating insects is a growing concern for fruit growers and GLSA may assist with providing refuges for these important invertebrates.

MoE biologists will use pitfall traps to catch ground dwelling arthropods and large tent structures called Malaise traps to capture flying insects. Once collected, the arthropods will be identified in a lab. With information on their abundance, we hope to have a better understanding of how to manage grassland set-asides for arthropod conservation. 🐦

✎ DF&WT partners with many conservation organizations to share information and expertise. Insights from research conducted in other regions can be important to understanding conservation here on the lower Fraser River delta. Researchers in Ontario are also working on Short-eared Owls, with the goal of understanding more about their habitat requirements and the status of their population in North America.

## Owls That Don't Give a Hoot!

### Kristen Keyes

In my opinion, the species I am studying for my Masters project is far from your 'typical' owl. It doesn't nest in trees, but rather nests directly on the ground in the middle of a field or another open area. It doesn't really appear to be a serious predator while in flight, but rather a giant, floppy moth. And it doesn't regularly hoot - it barks!



Kristen Keyes

Unfortunately, among all of the owl species in Canada, the Short-eared Owl is also rather unique in that it has displayed some of the most drastic population declines. According to Breeding Bird Survey data, the Short-eared Owl suffered a mean annual decline of 4.6% from 1966 through 2005 across North America, which corresponds to a cumulative loss of about 85%. In Canada, the species has had Special Concern status since 1994, although the updated 2008 status report by COSEWIC indicated that it nearly meets the criteria for Threatened status.

It is unclear what exactly has caused this population decline; due to its cryptic nature, important aspects of the owl's biology remain poorly understood. One of the main obstacles to assigning the species a higher conservation status and to implementing a management plan is the inability to develop accurate population estimates and identify critical habitat. Therefore, a better understanding of Short-eared Owl movement patterns is necessary, in part to determine the extent of nomadism versus site fidelity and migration. As well, while breeding season habitat use has been well documented, winter habitat use has not been carefully studied.

Thus, the two primary goals of my research project are to investigate continental movement patterns through the use of

stable isotope analysis, and habitat use across seasons in a local population.

To address the first goal, I have been collecting feather samples from across North America since September 2008, and will continue to do so until the end of the summer. The basic premise of stable isotope analysis is that once a feather is grown, it is biologically inert and acts as a forensic recorder of the general area, along a latitudinal gradient, where it was grown. Therefore, no matter where the feather was collected, it is possible to determine approximately where the feather was grown, and thus where that individual owl may have traveled between its wintering and breeding grounds!

To address the second goal, along with the assistance of many eager volunteers from the Kingston Field Naturalists, I have been conducting weekly surveys on both Amherst and Wolfe Islands, near Kingston, Ontario, since last November. As a result, I am able to determine the areas used across seasons, and this summer I am conducting habitat surveys at such 'used' sites, to compare to 'non-used' sites, in an effort to gain a better understanding of the habitat required to support this species.

As the Short-eared Owl is found on every continent except Australia and Antarctica, it is hoped that the results of this project will contribute not only to management and conservation plans in Canada and North America, but also in other regions of its cosmopolitan distribution. It truly deserves our outmost attention and concern, since after all, when was the last time you witnessed a frog that meowed or a fox that quacked? ✎

*Kristen is collecting Short-eared Owl feathers in order to study the North American-wide genetics of this important grassland raptor. If you should come across a Short-eared Owl carcass, please contact her at [kristen@migrationresearch.org](mailto:kristen@migrationresearch.org).*





## Wildlife Tidbits *by John Hatfield*

I was fly fishing the Clearwater River in Wells Grey Provincial Park back in the 1950's. I already had a nice string of trout to provide a fresh meal for the survey crew I was working with. While fishing the river I noticed a movement out of the corner of my eye. I kept watch and almost immediately a mink appeared from behind a large rock. I noticed he was sniffing the air and hanging about so it occurred to me that he was trying to get at my string of trout but was hesitant to come too close. He continued to stay, running back and forth along the bank, eyeing the fish. Eventually I caught a small trout, dispatched it and left it on a nearby rock. At first the mink was tentative, but he soon lost his fear and zipped over to the rock, grabbed the trout and ran off with it. The mink left me alone after that – seemingly, all creatures great and small appreciate a treat now and then.🐦



A Marsh Wren, pictured here perched atop a Hawthorn, is one of the many songbirds that can benefit from hedgerows.

### Fall Tour of Farmland Considered

In the past, DF&WT has organized farm tours in the fall to showcase the diversity of agricultural production and migratory bird life that our region is famous for. We are currently assessing interest in a 2010 fall bus tour. If you would be interested in such a tour, please email us at [dfwt@dccnet.com](mailto:dfwt@dccnet.com) with "Fall Bus Tour" in the subject line.

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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.

### Environment Canada Grant Received

DF&WT was pleased to receive a fiscal year end funding grant from Environment Canada in March 2010. The grant has been allocated to several of the Trust's operational stewardship programs, including the Hedgerow and Grassland Set-aside Programs. With the money, DF&WT was able to purchase enough native trees and shrubs to plant over half a kilometer of new hedgerow in east Delta. Grass and clover seed was purchased and distributed to farmers that cooperate in the Grassland Set-aside Program. The seed was used to reseed set-asides that had been extensively grazed by Snow Geese over the winter.

The grant was also used to purchase equipment for winter monitoring, including 400 small mammal live traps (pictured below), that will be used to assess populations of Townsend's voles residing in Grassland Set-asides.

The collaborative relationship that DF&WT has with Environment Canada and other agencies allows us to access funding, as well as share other resources like data and man power.🐦



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