

Farmland & Wildlife

The Delta Farmland & Wildlife Trust Newsletter

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The Changing Face of Delta's Wildlife

by Anne Murray

The Fraser delta is renowned for its bird life. Looking at the prolific and growing flocks of ducks, geese and swans in recent years, it is easy to believe that bird populations generally are thriving. On a global basis, however, this is definitely not the case, and even in Delta, the presence of large numbers of some species is masking the decline of others. When the full range of wildlife using the local landscape is considered, the picture is much more complex. While some adaptable generalists like the northwestern crow and the black rat are thriving, other species, such as the short-eared owl, sandhill crane, and western spotted skunk, have declined as the original delta habitat changed from wet prairie to farmland and then to industrialized rural-suburban. The world's biological diversity is in crisis. Of the 45,000 evaluated species world-wide, one in five mammals, one in eight birds, and one in three reptiles and amphibians are threatened. Even a conservative estimate of global species' loss puts the extinction rate at 100 times higher than natural levels. This is biocide on a massive scale.

In the floodplain of the Fraser, extirpations (local extinction of a species) have been occurring since the late 1800s, and include Roosevelt elk, grey wolves, snowshoe hares, and more recently, the western spotted skunk and red fox. Douglas' squirrels are confined to a few woodland parks and have been replaced in suburbs by the introduced eastern grey squirrel. Streaked horned larks, western bluebirds, nighthawks, yellow-billed

Experimental Trial with Winter Wheat

DF&WT, in collaboration with local farmers, is conducting a trial of winter wheat planted in mid-August as a means of accommodating wintering waterfowl on Delta farmland. Winter wheat is a commonly used cover crop but is generally planted after September 15. These "late-planted" cover crops are usually consumed by birds early in the fall. DF&WT wanted to see if planting winter wheat early would improve its ability to attract and hold waterfowl. Several fields have been "early-planted" and are being monitored for waterfowl use. A project update will be provided in our July 2010 newsletter.✂

cuckoos and meadowlarks no longer nest, and only the meadowlark still occurs with any regularity. Sandhill cranes are down to just a few pairs. Hunters remember flocks of two or three hundred band-tailed pigeons; now it is rare to see more than twelve or fifteen together. Ruffed grouse that were common in cottonwood groves are gone. Oregon spotted frogs have been extirpated, and few red-legged frogs or painted turtles remain. Instead,



Red-legged frog (photo by KQED Quest) 

non-native, introduced species, like bullfrogs and red-eared slider turtles, have taken over wetlands. Forty percent of the plant species in the lower Fraser Valley's landscape are non-native and once common flowers like blue larkspur, dog violet, and pink fawn lily are now very rare.

Rescuing species from extirpation requires the protection of essential habitats, prevention of incidental and direct killing, and an understanding of wildlife needs in adapting to changing climate and

landscape. All these factors have played a role in the rebounding of the wintering Fraser-Skagit lesser snow goose population, the recovery of the once-endangered trumpeter swan, and the soaring numbers of bald eagles nesting and wintering in the Lower Mainland. The presence of large numbers of these charismatic species shows that solutions to extinction are possible. The quiet disappearance of the western spotted skunk, the western bluebird, meadowlark, and ruffed grouse suggests much, much more could be done to protect our native species.✂

Anne Murray is a naturalist and author of two books on the Fraser delta: "A Nature Guide to Boundary Bay" and "Tracing Our Past ~ A Heritage Guide to Boundary Bay." She is also proud to be a Director of the Delta Farmland and Wildlife Trust.

Winter wheat is drilled into the soil in mid-August. DF&WT biologists will monitor this field for waterfowl use.



Former Trust Biologist Continues to Serve

Markus Merkens was the Wildlife Coordinator at DF&WT for 9 years, during which time he managed the Trust's stewardship programs, conducted research, and educated the public about the importance of farmland for food production and wildlife habitat. In January 2009 Markus resigned his position and took a new job as a natural resource management specialist with Metro Vancouver's West Area Parks.

Since leaving, Markus has continued to stay active with DF&WT, volunteering his time to attend community events and editing the DF&WT website. Markus is currently working with the program coordinator to publish a research paper on raptors that incorporates 10 years of data, much of which he collected.

We asked Markus what he enjoyed most about DF&WT. "The most rewarding part of working with DF&WT was the contact with all the great people who worked hard to make the integration of agricultural and wildlife management effective in meeting multiple objectives. There was not always consensus on all issues, but everyone contributed to advancing the combined goals of farmland and wildlife conservation."



Markus spent many hours in the field, observing wildlife on farmlands so we asked him what his most memorable wildlife experience was. "Perhaps my most memorable wildlife encounter occurred while I conducted a raptor survey from my car at the edge of a large grassland set-aside. It was late in the day and I had been gathering data on the many short-eared owls hunting low over the prey-rich field. My car was parked at the field entrance with my door roughly in line with the ditch at the field edge. I watched in amazement as an owl fluttered across the field with the erratic wing beat that short-eareds use, turned and flew along the ditch line directly towards my car, only swooping upward to land on the roof directly above my head. Mesmerized by the large yellow orbs of its eyes, I had no urge to reach my camera from the back seat. I missed a great photo opportunity, but the image will likely be etched into my memory for the rest of my life."

And what does Markus hope for the future of farmland in Delta? "I would hope that in the future, farming families will continue to be recognized and supported as good land stewards providing multiple benefits to the community in which they make their living. A diversity of fresh and healthy locally grown food, productive soils, breathtaking landscapes and opportunities to appreciate much of the wildlife on the delta can only be achieved through the conservation of family farms."

Many thanks to Markus for his 9 years of service and his continued support of DF&WT!✈

Remarkable Changes to Snow Goose Habitat Use

Within the last few years, snow geese have moved into the city of Richmond, feeding on the lush grass of residential lawns and sports fields. This year, snow geese have changed their patterns again. Large flocks have been seen in fields far east of their traditional Delta feeding grounds. For birds that tend to use traditional areas, this is a remarkable change in behavior. What might be causing this range expansion?

Only 30 years ago it was uncommon to see flocks of snow geese feeding in fields on a regular basis, but in the 1980's they began to feed on the farms of west Delta. Since then, large flocks of these herbivorous waterfowl make the daily trip from their roosts on the foreshore marshes of Roberts Bank to the farms of Westham Island and around Brunswick Point. Why has it taken the geese 30 years to move their feeding further inland?



Snow Geese (photo by David Shackleton)

Part of it might have to do with the traditional behaviors of adult birds combined with the exploratory nature of juveniles. Adult geese tend to return to the same wintering areas each year; studies of several wild goose species, including our own snow geese, have shown this. Juveniles, however, are more exploratory and will move to new areas in search of food. This year juvenile numbers appear high; over half of the snow geese seen on the farm fields are sporting the grey plumage of a first year bird.

It is hard to pin-point exactly why the snow geese have changed their habitats this year. Other factors like hunting pressure and food availability could be influencing the bird's movements. Whatever the reason for this new behavior, fields crops in central and east Delta, including winter cover crops enrolled with DF&WT, will play a vital role in providing food for snow geese.✈

Co-operative Education with DF&WT

Since its inception in 1993, DF&WT has worked with post-secondary institutions to provide students with real-world experiences while gaining credits towards their education. Here's what students have been working on in 2009.

Student Interviews Farmers and Learns About Cover Crops

Kiara Jack, a 4th year student in the Faculty of Land and Food Systems at UBC, spent the summer speaking with Delta farmers about how they cover crop their farm fields. The interviews were conducted as part of a directed study in her Global Resource Systems program and are important because they provide DF&WT with valuable feedback from the farmers who cooperate in the winter cover crop program. The information has already given DF&WT a better understanding of the role cover crops play in various crop rotations on Delta farms and will help refine the management of the program.✂

Short-eared Owl (photo by Hank Tseng)



BCIT Students Study Grassland Set-asides

Three students in BCIT's Fish, Wildlife, and Recreation (FWR) Program are working with DF&WT to monitor short-eared owls and small mammals in grassland set-asides this winter. Pascal Gauthier, Kang (Ken) Huang, and Jakob Karpik will be undertake this project as a continuation of the initial short-eared owl evaluation that DF&WT carried out last winter. Studies will be conducted in fields enrolled in the Trust's Grassland Set-Aside Program and old field habitats. Using small mammal live-traps, the students will determine the relative abundance of the short-eared owl's prey, the Townsend's vole.

Unlike most owls, short-eared owls are active at twilight (animals active at twilight are called crepuscular). The students will survey the owl's behavior at dawn and dusk to determine how short-eared owls use habitats in relation to prey abundance.

A Market for Wildlife-friendly Crops?

by Melanie Thompson and Jennifer Law Six UBC students from the faculty of Land and Food Systems, are working on a UBC-based Community Food Assessment Project for their Land and Food Systems 350 class. The goal of this project is to determine whether consumers are willing to pay more for wildlife-friendly crops.

The first step was to determine if there is a market for wildlife-friendly crops in the Metro Vancouver region. A trial survey was designed and 50 shoppers/ consumers were surveyed at two locations (IGA on West 4th Avenue and Granville Island Market), asking them what factors influenced the vegetable produce they purchased. 51% identified "quality" as the most important factor, 17% identified both "locally-produced" and "cost" as an important factor and 10% said "wildlife-friendly" would influence their purchase.

Interestingly, 78% of participants said that they would be willing to pay more for local, wildlife-friendly vegetables if they knew the details of the wildlife conservation, with price remaining an important factor.

Future student groups will continue the study by distributing a revised survey to the majority of grocery stores in Metro Vancouver. Ideally, the end result will see an eco-label, or a seal of approval developed to signify that the product is a locally produced crop that also contributes to wildlife conservation. This in turn may allow farmers to receive a higher return on their crops.✂

In the past, BCIT students have worked on a variety of different projects with DF&WT, including studies of diurnal raptors (e.g., northern harrier), grassland mowing, and trumpeter swans. This collaborative partnership is mutually beneficial. DF&WT receives valuable field work that helps to continually monitor the effectiveness and management of its stewardship programs. The students gain real-world experience in conservation work, exposing them to new sampling techniques and knowledge. They can then build their understanding of ecology in relation to human activities and relate their findings to conservation management, better equipping them to enter the environmental work force.✂



Ken, Jakob, and Pascal pull a late shift studying short-eared owls in a grassland set-aside.

A Day at the Farm 2009

Westham Island Herb Farm and Ellis Farms once again partnered with the Trust and opened up their farms for another successful "A Day at the Farm" on September 12. Attended by 2500 people from all over the lower mainland, the event showcased 30 agriculturally focused organisations to the community. We would like to extend a huge thank you to Sharon Ellis and Gordon Ellis and to the local farmers who provided livestock, knowledge and farm equipment for the day.✂

Thank you to the event sponsors!



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Wildlife Tidbits
by John Hatfield

All trees have a life span. It doesn't matter what size they are. They die from disease, age, forest fires, or strong winds.

When they fall onto the forest floor, they provide habitat to many forms of wildlife. When a tree falls over, the

branches deteriorate, and then the trunk of the tree touches the ground and slowly deteriorates, too. As the trunk rots and gets soft various insects, reptiles, and amphibians move in to take advantage of this "new" habitat. Carpenter ants find it easy to penetrate the rotten wood and create tunnels throughout the trunk. They in turn attract insect-eating reptiles and amphibians. Bears are attracted to this feast, ripping the trunks apart and exposing the rotting wood to the weather.

In the Okanagan I have seen where grouse have taken advantage of dry, rotten wood to create dust baths for themselves. When a large tree's roots rip up, it can create a large hole. Bears will sometimes take advantage of this and dig out a hollow where the roots were to create a deep shelter for the winter. So even fallen trees can provide great habitat for wildlife.✂

Delta Farmland and Wildlife Trust

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Delta Farmland and Wildlife Trust is a non-profit, charitable society whose mission is to promote the preservation of farmland and associated wildlife habitat in the Fraser delta through sustainable farming and land stewardship.

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