

NABCI IN CANADA

Bird Conservation Region 5: Sustaining a Delicate Balance in the Fraser Delta

By J. Alexander (Sandy) Burnett

One look at the birds feeding in an October stubble field on the flat floodplain of British Columbia's Fraser Delta and you know why they're called Snow Geese. They blanket the ground as if, in this one area of three or four acres, the autumn rains sweeping in from the Pacific had encountered a sudden cold front and covered the muddy ground with pristine drifts of white. Move a little closer and the illusory snowdrift takes flight, as 20,000 waterfowl spread their black-tipped, white wings, filling the air with beauty and with noise. The high-pitched chorus of honking voices, audible more than a kilometre away, speaks of the urgency, risk and excitement of life on the edge.

On the edge of what? In this case they're literally on the edge of the George C. Reifel Migratory Bird Sanctuary and the Alaksen National Wildlife Area. These two protected properties constitute a coastal habitat complex of close to 500 hectares of low-lying wetland, intertidal saltmarsh and seasonally flooded fields on the south shore of the Fraser River where it empties into the Strait of Georgia. They're also on the edge of the third largest urban centre in Canada. On the other side of a raised levee at the end of the field, fishing boats, freighters, and heavily laden barges chug up and down a busy commercial waterway. In plain view a few kilometres to the north, wide-bodied jet aircraft land and take off in a steady procession at Vancouver International Airport.

Few, if any, locations in Canada better illustrate the challenge of accommodating a burgeoning urban community without sacrificing natural environmental values. Few, if any, locations in Canada provide a better opportunity to test the ability of the recently established North American Bird Conservation Initiative (NABCI) to foster a healthy balance between the ambitions of the human species and the urgent needs of the biosphere as a whole.

Less than a century ago, the Fraser River Estuary was a tangled maze of low-lying islands, brackish intertidal marshes and hardwood swamps — a paradise for nesting songbirds, waders, waterfowl and birds of prey. Every year, millions of migrating waterfowl and shorebirds stopped there on their southward journey, to rest and refuel.

When the flood of European settlement reached the West Coast, however, things began to change. It wasn't long before the agricultural potential of the delta lands became apparent. Ditching, dyking and draining soon transformed much of that fertile marsh and floodplain habitat into orderly fields containing some of the most productive farmland in Canada.

This in itself was not a serious blow to wildlife. Traditional, soil-based, agricultural practices still left ample space for migratory waterfowl and shorebirds to feed and roost. The fields, in effect, became surrogate seasonal wetlands. Juvenile waders of species such as the Great Blue Heron honed their hunting skills in the sheltered drainage channels. Songbirds nested in the hedgerows. Shorebirds continued to feed and roost on the intertidal foreshore.

In the half-century since the Second World War, however, the swelling population of Vancouver has spilled over into a cluster of sprawling suburban municipalities: Richmond, Ladner, Delta and Surrey. The concrete and asphalt of highways, malls, parking lots, railway yards, shipping terminals, and airports now cover much of the floodplain. Today, about 2.5 million people live in the Fraser Delta. By their presence they have transformed more than 70% of the original estuarine wildlife habitat into the residential, commercial, industrial and agricultural periphery of a modern, high-tech metropolis. Even the face of farming is changing. Highly profitable, non soil-based operations such as hydroponic greenhouses, tree nurseries, sod-farms and berry farms are rapidly replacing the open fields of traditional, wildlife-friendly, market gardening.

About 60,000 Lesser Snow Geese, approximately half the breeding colony of Wrangel Island in the Siberian Arctic, pass through the Fraser Delta every fall between October and December. They are just one of many bird populations that follow the Pacific Flyway. Transient ducks, geese and swans spend a cumulative total of about 25 million waterfowl days per year in the Delta. If the loss of habitat were to continue at its present rate of some 600 hectares per year in the Greater Vancouver Area alone, little or none would remain by 2025.

Fortunately, the threat of habitat loss in the Fraser Delta has not gone unnoticed. A solid keystone for conservation and restoration in the area emerged as much as 30 years ago with the establishment of the Reifel Sanctuary and Alaksen Wildlife Area by the Canadian Wildlife Service (CWS). Since then, many government and non-government partners have joined in proactive conservation initiatives.

In 1987, Ducks Unlimited Canada, the Nature Trust of British Columbia, Wildlife Habitat Canada, and the provincial government launched the Pacific Estuary Conservation Program (PECP). As the program proved its effectiveness, CWS and the federal Department of Fisheries and Oceans joined the team.

The focus of the PECP extends far beyond the Fraser Delta to encompass dozens of critically important estuaries along the entire British Columbia coast. In its first 12 years of activity the program directly acquired 1,515 hectares of key estuarine habitat and facilitated conservation designation of 45,000 additional hectares of adjacent intertidal Crown land. These totals included the acquisition of Kirkland, Rose, Gunn, and Williamson Islands in the Fraser Estuary and the designation of 5000 hectares of nearby intertidal marshes and mudflats as the Sturgeon Bank Wildlife Management Area.

The PECP has also been effective in promoting stewardship and habitat restoration projects. An early example was the rehabilitation of the Delkatla Slough at Masset in the Queen Charlotte Islands. Another was the Greenfields Project, an innovative partnership with the agricultural community to encourage farmers in the Fraser Delta to grow winter cover crops. The purpose of this still-active initiative was twofold: to enrich soils and protect them from winter erosion; and to provide additional food for overwintering waterfowl such as Lesser Snow Geese and American Widgeon, while luring the birds away from fields where they might damage more valuable crops.

Protecting waterfowl habitat is a major priority of another important partnership as well. The Pacific Coast Joint Venture (PCJV) was established in 1991 under the aegis of the North American Waterfowl Management Plan (NAWMP). The PCJV is a transborder initiative to help ensure the long-term viability of coastal wetland ecosystems from northern California to Alaska. In British Columbia, the membership and the objectives of PECP and PCJV overlap to a large extent. This has frequently enabled the two programs to pool financial resources and technical expertise and to expand the scope and effectiveness of their activities.

This spirit of collaboration has been further enhanced since the late 1990s by the launching of the North America Bird Conservation Initiative (NABCI). NABCI is a tri-national initiative of Canada, the United States and Mexico to develop and implement plans for the long-term health of all native bird species in all habitat regions of North America. Its rationale is simple. Birds are numerous, highly visible, economically significant and ecologically essential components of the biodiversity of all three countries. If all the continent's bird populations are in good health, abundant, and distributed throughout their known ranges, relative to historical norms, it can be inferred that the environmental health of North America is good. If not, then like the celebrated canary in the coalmine, those species in trouble will serve as indicators of an urgent need to take remedial action.

To facilitate the initiative, the natural habitats of the continent have been mapped into 67 Bird Conservation Regions (BCRs). The resulting spatial framework has been in use by NABCI since late in 1999. Its units have nothing to do with political boundaries. Rather, each comprises a set of related and contiguous ecosystems. The Fraser Delta and, indeed, the entire area covered by the PCJV, falls within BCR 5, the Northern Pacific Rainforest.

Whereas NAWMP has concentrated on waterfowl, NABCI extends its interest to all bird species. This has not hindered PCJV involvement in all-bird conservation. On the contrary, the PCJV partnership provides a ready-made and effective framework for delivery of NABCI programs and projects in BCR 5. Rather than dissipate resources on a duplication of effort, it integrates its existing efforts with the goals of other emerging conservation programs such as the Colonial Waterbird Plan, the Canadian Shorebird Conservation Plan; and the landbird conservation strategies of Partners in Flight.

Although strategic conservation action plans are often described in terms of broad-stroke, regional and landscape objectives, NABCI goals are most often achieved on a local level,

one step at a time. With the bulk of Fraser Delta agricultural land under private ownership, it follows that any move to purchase, lease, or otherwise secure properties for conservation purposes must depend on successful negotiations with individual owners.

A positive outcome to such transactions may take any one of several forms. Outright purchase of a property by a conservation agency or land trust is the surest, but most costly way to ensure that conservation values will be protected in perpetuity. Already, public and non-government partners have acquired almost half the minimum acreage required to guarantee maintenance of an adequate supply of bird habitat.

The Singh Farm, a 34-hectare property adjacent to the Alaksen National Wildlife Area, is a good example of this strategy at work. The farm was purchased under the PECP and then leased back to the former owner. The terms of the lease include certain operating requirements with regard to the maintenance of winter cover and planting schedules to ensure that the land will remain suitable for complementary wildlife and agricultural needs.

Placing a conservation covenant or easement on a piece of land is another way to secure habitat values without an outright purchase. In this case, the landowner donates or sells certain rights, thereby establishing permanent, legally binding restrictions on present and future use of the property. As such a covenant can significantly reduce the re-sale value of the property, landowners who participate may be compensated either by a cash payment or, in the case of a donated easement, by a substantial tax credit.

A less costly, temporary variant of this approach entails the signing of farm agreements to apply sound conservation practices for specified periods of time under the Greenfields Program. Agriculture Canada and CWS are collaborating to establish appropriate subsidies for landowners who will make this type of investment. In fact, many farmers genuinely prefer to sustain traditional methods of land management if they can afford to and are, themselves, keen supporters of conservation.

The Delta Farmland and Wildlife Trust is doing a great deal to encourage them. This local partnership has the backing of CWS, Ducks Unlimited Canada, and the University of British Columbia's Faculty of Agriculture. The British Columbia Wildlife Society and the Delta Agricultural Society have also contributed to its support.

On the one hand, the Trust works to educate nearby city-dwellers about the environmental benefits of traditional, soil-based farming. On the other, it brings together farmers, conservationists and scientists to identify, develop and promote farm stewardship programs within the agricultural community. Projects include cover cropping, maintenance of grassy field margins and hedgerows, the re-establishment of small farm woodlands, and the placement of barn owl nestboxes.

In the Fraser Delta, habitat for farmers and birds alike is under a lot of pressure. The Trust enables farmers to demonstrate their love of land and wildlife in a tangible way.

Through public meetings, demonstration projects and open house sessions, it promotes conservation of soil, habitat, and a valued way of life. It's an excellent example of how effectively the NABCI ideal of bird conservation partnerships can work.

J. Alexander (Sandy) Burnett, naturalist and environmental writer, wrote this article as one in a series on Canadian Bird Conservation Regions, commissioned by NABCI Canada.