

# Marshnotes®



**BRITISH COLUMBIA WATERFOWL SOCIETY  
FALL 2024**

# BRITISH COLUMBIA WATERFOWL SOCIETY

Managers of the George C. Reifel Migratory Bird Sanctuary Since 1963

*dedicated to the conservation and study of migratory waterfowl*

## Marshnotes:

Editor: Kathleen Fry  
Assistant Editor: Marissa Sasaki

The contents of Marshnotes may not be reprinted without written permission of the Editor.

Circulation: 1,800. Published four times a year.

*Recommended citation for this issue:*  
**Marshnotes Fall 2024**, (K. Fry, Editor).  
*British Columbia Waterfowl Society.*  
*Published October 25th, 2024.*  
[www.reifelbirdsantuary.com/marshfall2024.pdf](http://www.reifelbirdsantuary.com/marshfall2024.pdf).

Submissions for Marshnotes may be sent to the email and postal addresses below marked for attention of the Marshnotes Editor. Deadline for the next edition: January 15th, 2025.

The British Columbia Waterfowl Society  
5191 Robertson Road  
Delta, British Columbia  
V4K 3N2

Telephone: 604 946 6980  
Facsimile: 604 946 6982  
Website: [www.reifelbirdsantuary.com](http://www.reifelbirdsantuary.com)  
Email: [bcws@reifelbirdsantuary.com](mailto:bcws@reifelbirdsantuary.com)

Marshnotes, Snow Goose Festival and the Snow Goose logo are all registered trademarks of the British Columbia Waterfowl Society.

## George C. Reifel Migratory Bird Sanctuary:

**Prices: (effective September 1st, 2022)**

### Daily Admission:

Adults: \$8.00  
Seniors: \$6.00 (65+ years)  
Children: \$6.00 (2-14 years)  
**Bird seed:** \$2.00/bag

### Annual Memberships:

Family: \$100.00  
Individual: \$ 50.00  
Life: \$1,000.00

## Executive:

President: Jack Bates  
Vice President: Barney W. Reifel  
Treasurer: Kenneth I. Thompson  
Secretary: George C. Reifel

## Directors:

Jack Bates  
Clayton Botkin  
F. Wayne Diakow  
Kevin Husband  
Mark McDonald  
Stephen Matthews  
Barney W. Reifel  
George C. Reifel  
Liam Reifel  
Kenneth I. Thompson

## Committee Chairs:

Buildings/ Grounds: Barney W. Reifel  
Community Relations: George C. Reifel  
Interpretation/Education: F. Wayne Diakow  
Outreach: George C. Reifel

## Staff:

Sanctuary Manager: Kathleen Fry  
Assistant Manager: Evan Gogal  
Gift Shop Manager: Varri Raffan  
Biologist: Marissa Sasaki  
Education: Dani McRobbie  
Maintenance: Phoenix Black  
David Manning  
Field Technicians: Kristina Breit  
Kiera Fritsch

## Hours of Operation:

Reservations are required for all visitors.  
Open 9:00 a.m. to 4.00 p.m. every day except Mondays. (closed Mondays)  
Entry is closed at 3pm, visitors need to leave by 4 pm.  
The Sanctuary is wheelchair accessible



We now send out a tweet from our Twitter (X) account @ReifelSanctuary when it looks like there is a weather alert, all reservation spots are full, or something interesting has been seen. Facebook account BCWS2023 has also recently been set up.



**The 2025 Calendar is now available**



The 2025 Sanctuary Calendar, featuring photos contributed by our members, is now available at the Gift Shop for \$23.

Each summer for the past 23 years, we have encouraged people to submit their photos, and the resulting calendars sell quickly in the fall.

Text: Varri Raffan  
Gift Shop Manager

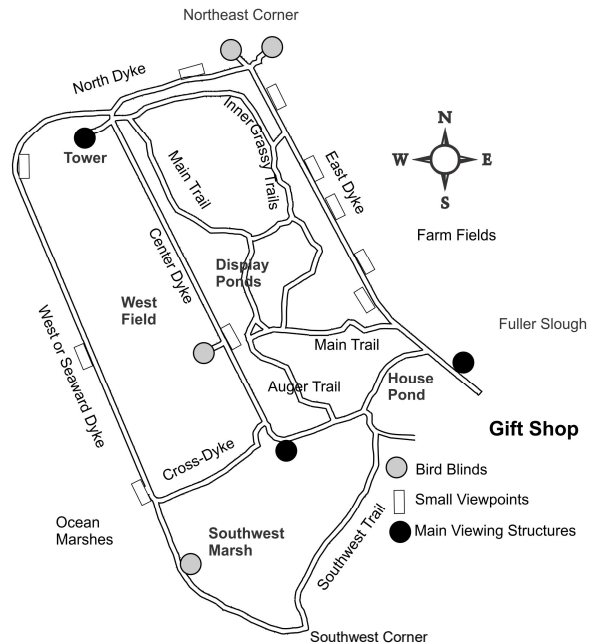
**Sanctuary Locations Map**

Please refer to the location map to the right to locate place names used in the Marshnotes articles.

**About Our Covers**

- Front Cover: 2024 Sandhill Crane Colts  
© Jim Martin
- Back Cover: Snow Geese  
© Lou Lehmann

Marshnotes is issued four times a year but is now available only in electronic format on our "Archives" page at [www.reifelbirdsantuary.com/archives.html](http://www.reifelbirdsantuary.com/archives.html). If you would like to be notified when a new edition is posted, email [memberships@reifelbirdsantuary.com](mailto:memberships@reifelbirdsantuary.com).



**Contents**

|      |    |   |                |
|------|----|---|----------------|
| Page | 3  | 2025 Calendar   | Varri Raffan   |
|      | 4  | Bird Highlights                                       | Varri Raffan   |
|      | 8  | Manager's Report                                      | Kathleen Fry   |
|      | 9  | George C. Reifel recognized by Ducks Unlimited Canada |                |
|      | 10 | The Volunteer Corner                                  |                |
|      | 10 | Why be a Member                                       |                |
|      | 11 | Update on Tracking The Wild Geese                     | Kathleen Fry   |
|      | 12 | 2024 Native Plant Projects                            | Marissa Sasaki |
|      | 14 | 2024 Hummingbird Nests                                | Kristina Breit |
|      | 15 | Bats in the Bird Sanctuary                            | Evan Gogal     |
|      | 15 | 2024 Christmas Bird Counts                            |                |

## Bird Highlights

July 2024 ended with a 94 bird species list.

### June 30 – July 6

On July 1<sup>st</sup> we spotted the first Belted Kingfisher since the 3<sup>rd</sup> week of April. They nest in excavated burrows in sandy cliff sides that both the male and female create. The Belted Kingfisher is so-named because of the belt of blue-gray feathers across its white breast. The females have an additional rusty breast band. The first Sora since the middle of January was spotted this week. These birds are very elusive, especially when it comes to nesting time, and easily hide from view among the reeds, cattails and grasses of the marsh. American White Pelicans are still being seen north of the Observation Tower and the male Eurasian Wigeon is still present.

### July 7 – July 13

The Merlin and American Kestrel are 2 of the 3 falcon species we see at the Sanctuary. The 3<sup>rd</sup> one is the Peregrine Falcon. As shorebirds move into our area, so does the Peregrine Falcon. Often you will be trying to identify a flock of shorebirds when suddenly they are all airborne with a Peregrine hot on their tails. An early returning juvenile Pectoral Sandpiper was seen among a flock of Yellowlegs and Dowitchers. By the beginning of May, most shorebirds head north

to nest, but as quickly as the middle of July, we see the adults already returning south with juveniles to follow. A Dark-eyed Junco showed up much earlier than expected. It was only seen once, but by the middle of September these birds will return to our area for the winter.

### July 14 – July 20

Although we had only 65 species recorded this month, there were still some good highlights like Pied-billed Grebe, American White Pelican and Great Horned Owl. The Sandhill Crane family is still doing well and the 2 colts are approaching 1 month of age. Birders are hard pressed to find any duck species other than Mallards at this time of year, but 1 or 2 Northern Pintails and 10 Gadwall are still here but in eclipse plumage. Warbler sightings have slowed down, with only Yellow-rumped Warblers, Yellow Warblers, and Common Yellowthroats present. A single Spotted Sandpiper was located in the House Pond on the 18<sup>th</sup>. Its genus name "*Actitis macularia*" is well named as "*Actitis*" is Greek for "coast dweller" and *macularia* is Latin for "spot". In the "The Birder's Handbook" by Paul Ehrlich, David Dobkin, and Darryl Wheye, I found it interesting that the female Spotted Sandpiper will mate with numerous males and have up to 5 different active nests. She will only incubate one of those nests, leaving the other nests for the males to incubate. This reproductive strategy seems to be highly successful, as the Spotted Sandpiper is the most widespread sandpiper in North America.



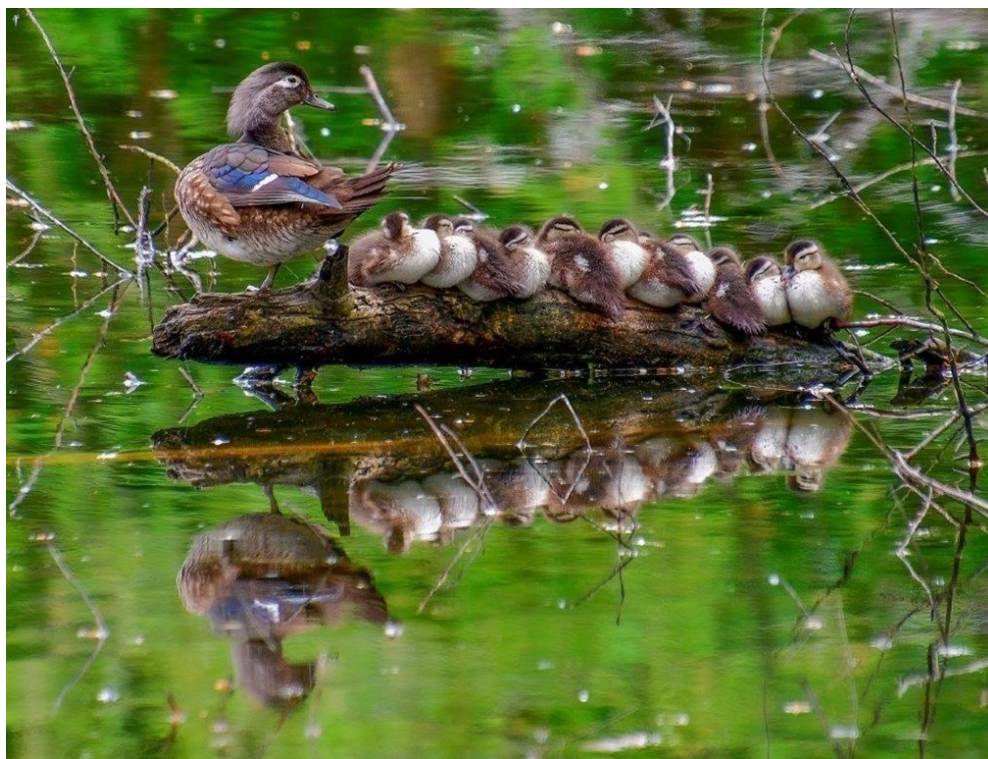
Female Belted Kingfisher

Photo: Jim Martin



Male Belted Kingfisher Photo: Nedrick Nicholas





*Wood Duck hen and her ducklings*

*Photo: Ted Gough*

July 21 – July 27

Out of the list of species this week, 13 were shorebirds. Young broods of Mallards, Gadwalls, Wood Ducks and Cinnamon Teal are more noticeable this week. On the Sunday morning bird walk on the 21<sup>st</sup> they had a tally of 2 Cinnamon Teal families, 7 broods of Mallards and 2 broods of Gadwall. This later showing of young could be due to predation on their first nests, thus pushing back hatching time. Another young family spotted was the Virginia Rail. The young rails are all black in color and spend most of their time walking between the thick vegetation of the marsh but can swim if need be. Being able to spot these rails has a lot to do with being at the right place at the right time in order to see them quickly dart from one stand of reeds to another. Along with the 13 shorebird species, Barn Owl, Great Horned Owl, Merlin, Hutton's Vireo and Warbling Vireo were highlights from this week's list of 83 species.

*In August we continue to have good viewing of shorebirds and swallows. The month ended with 106 species not counting non-bird species such as mink, river otters, common carp, coyotes, squirrels, turtles and garter snakes.*

July 28 – August 3

With minimal rainfall and no puddles to bathe in, I noticed sparrows and robins taking dust baths instead. After a while the oil that keeps their feathers pliable and

weather proof builds up. When they take a dust bath the particles bind to the excess oil and after much preening and fluffing of feathers they are now more efficient in flight. So the next time you see a songbird on the ground flapping its wings, fanning its tail feathers, kicking and rocking back and forth in the dirt it is taking a dust bath. Throughout August and into September a few Western Tanagers have been located mainly along the East Dyke and the driveway. Plumage is brightly colored for both the male and female. Males have a red head, yellow belly, a black tail and wings. Females are yellow below with dull olive above with one yellow and one white wing bar on each wing. Eventually they will be heading to Mexico and into Costa Rica for the winter. Best time to look for these colorful birds here is in May, June, August and September. From the list of 79 species seen this week, Cackling Geese, Mew Gull, Vaux's Swift and Fox Sparrow were notable additions.

August 4 – August 10

August 4<sup>th</sup>, way out in the marsh, 26 American White Pelicans were sighted from the Seaward Dyke. A Bank Swallow, an uncommon bird for the Sanctuary, was found on the 5<sup>th</sup>. They are best seen here between August and September. The first Wilson's Phalarope to return from their nesting grounds in the prairies and western USA was on August 7<sup>th</sup>.

*(...../continued page 6)*

(Continued from page 5)



Great Egret

Photo: Lauren Nicholl

The first sighting of Eurasian Collared-Doves at the Sanctuary was back in August 2007. They are now seen year round but as fall approaches they grow in number. I think they know that seed feeders will be put up soon. The seasonal drawdown of House Pond always attracts shorebirds. Long-billed Dowitchers, as well as Greater and Lesser Yellowlegs focus on this pond to feed on Three-spine Stickleback fish and small invertebrates. The spines on the Stickleback's back can be raised in defense when caught. Once the Yellowlegs catch a Stickleback, it is interesting to watch them line up the fish in order to swallow it the right way. American Coot have been absent from the Sanctuary since the first week of May but 1 lone bird has shown up this week and was one of many noteworthy birds on this week's list of 84 species.

#### August 11 – August 17

Wilson's Snipe can be seen throughout the year. But like Rails and American Bitterns they are an elusive bird. It is best to scan edges of ponds and reed beds as this is where they like to probe with their long beaks searching for worms, insects and small crustaceans. They are one of a few bird species that forms pellets of indigestible parts. With buff stripes along its back and head, and an overall body color with rusty brown tones, it's a striking bird. An adult Great Horned Owl was spotted perched in a conifer tree along the East Dyke on the 14<sup>th</sup>. Shorebird viewing remains very good, especially when the tide is high. As the fore-shore becomes too deep for them to feed in they move into our attractive shallow ponds.

#### August 18 – August 31

In this 2 week reporting period all 6 Swallows species from the Sanctuary checklist were present. There was another sighting of the Great Horned Owl on the 23<sup>rd</sup> this time along the trail to the Ewen Slough Blind. A

Townsend's Warbler was seen along the Inner Grassy Trail on the same day. On the 24<sup>th</sup> 3 Red-necked Phalaropes and 3 American Wigeon were found. Waterfowl seem slow to return to their colorful plumage after going through a molt over the summer. Occasionally a few visitors ask "Where did all the male Mallards go?" Well they are still here but they have lost their green heads and rich brown chest and tend to look like the females. If you look at the beaks, the males have a khaki green beak and the females have a 2 tone orange and black beak. The highlight for this period was having a Great Egret appear on the 25<sup>th</sup>. It mainly kept off shore but did a quick touchdown giving visitors time to get a few quick photos before it moved on. August 28<sup>th</sup> 10 Sandhill Cranes were spotted poking around in the farm field off the East Dyke. August 29<sup>th</sup> & 30<sup>th</sup> a Barn Owl was seen in the Holly bushes on the north side of the trail to Ewen Slough. August 30<sup>th</sup> there must have been an insect hatch, of possibly Carpenter Ants, because we noticed a large mixed flock of Short-billed Gulls, California Gulls and Glaucous-winged Gulls all circling overhead. The last Rufous Hummingbird seen at the Sanctuary was in the last week of August. They will return from their winter home in Mexico around the middle of March, but we'll have the Anna's Hummingbirds throughout the year.

*September brings a variety of sparrows and waterfowl from the north along with a diversity of birds of prey. The total list for bird species in September 2024 was 109. This total was very comparable to the 2023 list which also had 109 species and 108 species in 2022.*

#### September 1 – September 7

A late sighting of a Western Tanager was on the 1<sup>st</sup>. On the 6<sup>th</sup> of September we spotted the first 3 Snow Geese mixed in with a flock of Canada Geese. By the end of September expect to see larger flocks of Lesser Snow Geese moving southward from their breeding grounds on Wrangel Island, Russia. Now that cooler temperatures are beginning, insects aren't so plentiful so the majority of swallows will leave our area for the warmer climates of South America where they will have further Insects to eat. Three species of falcons, American Kestrel, Merlin and Peregrine, were all present this week that had a total of 75 species.

#### September 8 – September 14

From the Observation Tower we can still see American White Pelicans this week. A Townsend's Warbler was reported from along the North Dyke on the 10<sup>th</sup>. Orange-crowned, Yellow and Yellow-rumped Warblers are still present but by the end of this month they will be heading to Guatemala, Mexico to Peru, and Panama respectively for the winter. Golden-crowned Sparrows and Dark-eyed Juncos made their first appearance for the fall.



September 15 – September 28

There was another sighting of a Great Egret as it flew over the parking lot on the 21st. As we move into fall birding really picks up with many species returning to spend the winter on the south coast. The following list of birds were new arrivals for this 2 week period: Ring-necked Pheasant, Osprey, Sharp-shinned Hawk, Sharp-tailed Sandpiper, Barred Owl, Hammond's Flycatcher, Northern Shrike, Pacific Wren, American Pipit, Lincoln's Sparrow, White-throated Sparrow, Great Egret and Gray Catbird.

A group of 4 Sharp-tailed Sandpipers were spotted at the south end of the West Field on the 21<sup>st</sup>. These shorebirds are rare visitors from Asia. To have 4 was quite the attraction for visitors. Also on the 26<sup>th</sup> a flock of 55 to 60 Greater White-fronted Geese were located in the farm field off the East Dyke and a Western Meadowlark at the front gate. Visitors were happy to find a Barn Owl at the Northeast Corner on the 27<sup>th</sup>. A Barred Owl turned up at the Center Dyke Bird Blind on the 28<sup>th</sup> and 16 Killdeer in same farm field as the Greater White-fronted Geese. But the real highlight for the 28<sup>th</sup> was a Gray Catbird seen along the East Dyke trail.

A big surprise near the end of September was the discovery of an Anna's Hummingbird on a nest just off the parking lot. They are known to have more than one family per year so this could have been her second nest for the season or maybe just a late bloomer.

Just as some species move into our area some will be continuing their migration such as Cinnamon and Blue-winged Teal, most of the shorebirds, Caspian Terns, Purple Martins, Yellow and Wilson's Warblers, Brown-headed Cowbirds and the remaining few American White Pelicans.

If visiting in October onward, expect to see the return of Lesser Snow Geese, Trumpeter Swans and a large variety of duck species returning from the North.

Text: Varri Raffan  
Gift Shop Manager



*Sharp-tailed Sandpiper (juvenile)*

*Photo: Kathleen Fry*



## Manager's Report

Visitor numbers were up slightly from last year for July, August and September, with about 16,000 people over the three months. This is up marginally from last year (15,219) , but similar to 2022.

The “hot months” of July and August usually average the same number of visitors from year to year. Both months tend to be quite warm, with September being a bit cooler. Most of the first three weeks of July was very hot, with temperatures peaking on the 17th at 28 C Celsius at Vancouver Airport. The first part of August was also very hot, as was the first week of September. The weather was quite variable between these heat waves, and just a little cooler and wetter overall than in the past few years. Most of July’s rain fell in a short very intense squall on the 29th. August had some rain spread over 9 days, with half of it falling just on the 24th. In September, there were some days of steady rain, with the heaviest on the 25th, combined with some very gusty winds at the end of that month.

The weather has a big influence on our water quality and how we manage the ponds. Hot temperatures, low flows and high nutrient loading by big spring flocks of ducks all encourage algae growths. Initially, the first obvious mats are bright green and float. They are not harmful blooms and are full of invertebrates so we see

duckling broods swimming through them getting natural protein-rich foods. After prolonged hot days, though, other bacteria-based algae multiply and grow into a surface skin. We then start bringing in fresher water and transferring through controls to other ponds to keep it circulating until the fall rains help improve quality. We managed to avoid last year’s almost 100 % surface coverage of Southwest Marsh, but there were big mats that were hard to disperse this year. House Pond was drawn down to let some of these mats to decompose faster and to allow seasonal shallow feeding conditions for shorebirds.

The Sandhill Crane family with their two colts that hatched in late June, were a significant draw for summer visitors. With the help of a volunteer team we kept track of them for three months until they were flying. They spent their first two weeks near the nest site in parts of Display pond and particularly resting in the cool, juicy pads of Silverweed at Triangle Garden. When hot weather made the ponds a warm stew of algae in that area, they amazed onlookers by walking their chicks on a very hot march to the parking lot July 10th to find some clear, cooler water in Robertson Slough. From then onwards, their daily routine often included some morning time near the center of the ponds, then a walk to exciting parking lot habitats to dig up the grass and to cool off. At one point, most of the grass around the septic hill picnic tables, parking

(...../continued page 9)



*Sandhill cranes hunting through floating algae mats in late July. Photo: Kathleen Fry*

## George C. Reifel Recognized by Ducks Unlimited Canada



*Ducks Unlimited Canada staff and directors with George Reifel (center)*

*Photo: Miguel Eichelberger*

A commemorative cairn was put in place on the Seaward Dyke for a Ducks Unlimited Canada (DUC) event on September 23rd to recognize the lifelong dedication of George C. Reifel to waterfowl and wetland conservation. George is featured in the center behind the cairn surrounded by DUC staff and Directors, and the event was a well-orchestrated surprise for him. A gathering of more than 30 people representing DUC's national and local offices, Environment and Climate Change Canada, Reifel family members, Tsawwassen First Nation, our own

Society staff and Directors, and other community groups made for a significant crowd up on the dyke to honor the occasion. In addition to his longtime dedication to conservation initiatives and service as a DUC Director and past Chairman of the Board and President, George has served as a volunteer Director of our British Columbia Waterfowl Society since 1978. He is also a past Director of both the Nature Trust of BC and the Pacific Salmon Foundation.

*(Continued from page 8)*

lot logs and even under the propane tank had been thoroughly investigated for possible foods in the ground and other items such as rodents, grasshoppers and moths. From August 10th onwards, there was a lot of flapping, gliding, short flights, long flights, and by early September, a series of family "road trips" to get the young colts flying effectively around the Sanctuary. Nearly all extended September ventures still seemed to result in one colt landing faraway from the other 3 were, and having to be "found" after much calling. It is still a work in progress even in October!

All throughout the summer, staff have been working on improving plant diversity, repairing a few things and monitoring some of the Sanctuary's nesting bird species. This issue of Marshnotes has some extra pages to accommodate reports on these by staff.

For most of July, the ponds and trails had a mix of young of the year and /or moulting and flightless waterfowl, with the shady sections of Inner Grassy Trail being a popular loafing spot. In mid-August, we started to see big flocks of shorebirds such as Dowitchers and Yellowlegs in the outer shallow ponds. In with these were diverse other smaller sandpiper species, which drew in a few birders looking for rarities. On September 21st, four Sharp-tailed Sandpipers were discovered, and they remained here for a week or so.

In mid-September, minor fall weather fronts started bringing birds to the south coast and Delta. There were flights of 30 or more Sandhill Cranes flying around Westham Island, and by late September, more than 60 of these had gathered in fields west of Burns

*(...../continued page 10)*

*(Continued from page 9)*

Bog. One pair in this flock had a colt with them, and it was a nice surprise to see the female was a long-term local research bird wearing colour bands (dark blue over orangey-red) on one leg. This bird was banded in 2009 in Richmond as a yearling, and was also fitted with a satellite transmitter and battery pack on the other leg. Last fall it was in these same fields, and its transmitter had finally fallen off, leaving just the colour bands.

Late September also marked the beginning of stronger weather fronts bringing flocks of northern waterfowl into the Fraser Delta. Our waterfowl species list tripled from just the Gadwall, Mallard, Wood Duck and Canada Goose of summer months to include big incoming flocks of other dabbling species and some diving ducks. There have been large flocks of Snow Geese here and in the Skagit River estuary in Washington since September 24th, and flights of Canadas, Cackling Geese, and Greater White-fronted geese all moving around the Fraser Delta seeking places to rest and feed on winter grasses and leftover crops.

Text: Kathleen Fry, R.P. Bio,  
Sanctuary Manager

### ***A special thank you to everyone!***

*At the end of December, I will be retiring as the Sanctuary Manager and also as the Editor of Marshnotes, so this is my last newsletter. Working here at the Sanctuary has been my favourite job of my wildlife biologist career. I will miss this place, the staff, directors and volunteers, the regular visitors (and even the "irregular ones), and of course my favourite birds, the little crane "people".*

*Many thanks to everyone!*

*Evan Gogal has been Assistant Manager this past year and will be taking over as Sanctuary Manager in 2025.*

*Marissa Sasaki, (with help from Varri Raffan) will be the Editor of future Marshnotes editions, and has helped to put this issue together.*

*Kathleen*

---

## **The Volunteer Corner**

### ***Special thanks to:***

- ◆ Mary Taitt for leading our Sunday Bird Walk, and helping with gardens.
- ◆ Jim Martin and Brian Self for their year-round hosting of visitors on weekends.
- ◆ Brian Self, Peter Candido, Ben Lambert, Wayne Diakow, Janice White, Dirk Fleming and Sabine Jessen for helping with bi-weekly bird surveys.
- ◆ Margaret Gorham for hosting visitors at the Museum every Sunday.
- ◆ Our hard-working volunteer Directors.
- ◆ Our summer volunteers: Kristen Vilbrunt, TK Tom, Amy Huestis, Carmen Prang, Lisa and Jonathan Fainstein, Syd and Vivienne Barber, David Pawliuk, Jamie Mochizuki, Teresa Masset and Farah Farinha, who all helped watch over the Sandhill Crane family, and helped keep our trail edges tidy.

## **Why be a Member?**

*As a Member, you receive the following benefits:*

- FREE admission for a year to the George C. Reifel Migratory Bird Sanctuary .
- Quarterly issue of the BCWS publication "Marshnotes".
- A 10% discount on purchases in the Sanctuary Gift Shop.
- Membership in one of British Columbia's most respected conservation organizations.

***With your support, the British Columbia Waterfowl Society is able to:***

Staff, maintain and expand facilities at the Sanctuary for the benefit of its visitors and members; provide interpretive and education programs, including guided tours for organized groups of all ages; contribute towards important scientific research on waterfowl to determine their life cycle needs for survival; and provide support for like-minded organizations who are working on waterfowl related projects.



# Tracking the Wild Geese



BRITISH COLUMBIA  
WATERFOWL SOCIETY



*Fall 2024 Update on the Snow Geese and the Canada Geese tracking project that began in 2023.*

*Special research collars gather regular, detailed data from satellites about the locations of individual birds, but do not download the data unless they are somewhere near cell towers. See our website page for a project overview and partners involved. [www.reifelbirdsanctuary.com/trackingwildgeese.html](http://www.reifelbirdsanctuary.com/trackingwildgeese.html).*

The following update has been compiled with input from Dr. Sean Boyd, one of the primary researchers.

## ***Some Canada Goose collars re-deployed 2024***

This summer, 7 refurbished satellite telemetry collars were re-deployed on flightless Canada Geese that were captured in early July off Westham Island. Like last year, one interesting finding from tracking these geese is the late summer movement of some to overwintering areas in Washington, Oregon and even California.



2024 Canada Goose catch Photo: Sean Boyd

## ***Waiting for the collared Snow Geese to “Check in”***

This spring, Snow Geese were marked with satellite telemetry collars, and 13 individuals were tracked as they headed north to their nesting grounds on Wrangel Island, Russia. Tracking stopped when the geese moved into remote northern locations out of cell tower range. It was not until late September that these marked geese moved south and were detected again.



All but one of the 13 geese were banded in the Skagit delta WA in February 2024. As of mid-October, 10 of the 13 geese have been located, with their northern migration routes, movements around Wrangel Island, and their southern migration routes mapped. We are still waiting for the one Fraser Delta goose and two other Skagit geese to show up on the tracking system.



As expected, 9 of the 10 detected geese returned to the Skagit delta this fall. Some of these geese followed the coast during their north and south migrations (see X29 map), but 5 used a spring route through Alberta and a fall route along the coast, with some flying across a large part of the Pacific Ocean. The 10th bird is still near Brooks, Alberta and is the one bird that took a route through Alberta for both north and south migration (see X21 map).

Each of the routes represents the spring and fall migration patterns of 10s to 100s of Snow Geese as they tend to fly in small, tight flocks.

It's always interesting to track birds!

Text: Kathleen Fry, R. P. Bio  
Sanctuary Manager

## 2024 Native Plant Projects

The past year has been an eventful year of introducing patches of native plants into the Sanctuary. Sanctuary upkeep projects such as the replacement of Fuller dyke culvert and dredging of cattail in the parking lot in 2023 left two lovely big patches of bare and disturbed soil for us to introduce native plants. We were particularly excited about the potential of these areas, as areas like these without intervention would normally over time be colonized with invasive plant species. This was an opportunity to establish instead some native plants that benefit the local wildlife and the ecology of the Sanctuary.

### Why worry about invasive plants?

In the initial development of the Sanctuary in the 1960's, part of the area (Display Ponds) was landscaped, with ponds and trails created from land that had been farmed since the 1930's. This, combined with the dredging of the outer marshes to create the Seaward dykes and ponds, left much of the property with big areas of disturbed soils generally devoid of native plants. The blank slate of disturbed and bare soil allowed the colonization of what is now invasive plants. Invasive plants are defined as plants that are growing outside of their native range that have a negative impact on the ecosystem they are growing in. Although there are several ways invasive plants can impact the ecosystem, the biggest concern lies in their aggressive growth into monocultures, reducing the potential for native plant diversity.

### Why is native plant diversity important?

Since every animal has different needs for survival, a high diversity of plants can ensure there is something for everyone. High diversity of plants provides variety of cover for animals to take shelter from weather and predators, and variety of food such as fruit, seeds, and bugs. Since the Sanctuary is home to thousands of residents and migratory birds, it is imperative to maintain a strong and diverse ecosystem to be able to support them for years to come.



Main trail near Triangle Garden in 1973 Photo: Archives



Cattail stands growing into Robertson Slough prior to the 2023 dredging work Photo: Kathleen Fry



The same area as above photo once the Cattail had been dug out to reclaim the clogged channel and the organic matter had been consolidated and buried in the native silts. Photo: Kathleen Fry

### The process

Planting our native plants took place at the end of April 2024. We decided to enhance the two sites by planting a variety of native shrubs and herbaceous plants with the main focuses on plants that will produce flowers and fruits at different times of the year. The staggering of the flowering and fruiting periods will ensure that the revegetated areas will be able to provide food for wildlife throughout the year. However, when deciding what to plant, we had to work with the soil conditions and sun exposure each site had to offer.

Once we determined the conditions of each garden, we purchased some plants from a nursery. We also collected seeds and cuttings from around Sanctuary property to reduce cost. Although propagating our own plants is cheaper, this method takes longer for plants to establish and survival rates are generally lower when directly planting cuttings into the ground.



### ***Native plant species used for project areas***

Western Red-Cedar (*Thuja plicata*)  
Red Osier Dogwood (*Cornus ceracea*)  
Ocean Spray (*Holodiscus discolor*)  
Red-flowering Currant (*Ribes sanguineum*)  
Oregon Grape (*Berberis aquifolium*)  
Hardhack (*Spirea douglasii*)  
Salmonberry (*Rubus spectabilis*)  
Snowberry (*Symphoricarpos albus*)  
Willow sp (*Salix species*)  
Lyngbye's Sedge (*Carex lyngbyei*)  
Baltic Rush (*Juncus balticus*)  
Pearly Everlasting (*Anaphalis margaritacea*)  
Yarrow (*Achillea millefolium*)  
Large-leaved Lupine (*Lupinus polyphillus*)  
Fragrant Fringecup (*Tellima grandiflora*)  
Sword Fern (*Polystichum munitum*)



*Parking lot garden on June 17, 2024*  
Photo: Marissa Sasaki

#### **How the gardens are doing**

Out of the two gardens, the parking lot garden is performing better, likely due to being higher in organic matter and lower in clay content. This soil will provide best growing conditions as its likely rich in nutrients, hold on to soil moisture and allow for roots to penetrate soil easily. It is also closer in elevation to the slough water levels. Most plants seemed to have survived their first summer despite the drought and wildlife use from ducks, geese, and cranes. Since the re-evaluation, we went into the garden and planted bare spots with more cuttings of plants to give them a head start for the next growing season.

Fuller Dyke faced some challenges compared to the parking lot garden. The dyke there is mostly



*Parking lot garden on October 19, 2024*  
Photo: Marissa Sasaki

composed of compact clay and little organic matter. Clay is not ideal soil for planting since most plants have a hard time absorbing nutrients and establishing roots. Another problem with Fuller Dyke has been the wildlife use. For example, grass seeds used on top of the dyke to control erosion were foraged by various sparrows. Any surviving grass seeds that germinated were mowed down by ducks and geese. Geese during their annual moult liked to climb up and down the planted slopes, disrupting some of the plantings. Many cuttings were also eaten and pulled out by a beaver resulting in poor establishment. Unfortunately, frustrating wildlife use of our native plant gardens is inevitable, although there is something ironic about native wildlife destroying a native plant garden that is made for them.

We will continue to maintain and monitor all native plant gardens in the Sanctuary. Because invasive plants are stubborn and native plants take a long while to grow, these enhancement areas are a labour of love and require many years of nurturing until they can maintain themselves.

Keep an eye out in the next coming years to see how the native plant gardens change over time, and how they become a popular hub for bugs and other wildlife! If you are interested in the process that is involved in creating a native plant garden, or would like to volunteer in maintenance of one of the gardens, please send me an email.

Text: Marissa Sasaki  
Biologist

Email: [marissa@reifelbirdsanctuary.com](mailto:marissa@reifelbirdsanctuary.com).



## 2024 Hummingbird Nests

Since 2022, we have been monitoring hummingbird nests. Many nests are incidental finds rather than the result of systematic nest surveys, but nest discovery has improved now that we know certain behaviors and sounds indicate a nest is nearby. That being said, it still sometimes takes days and repeated site visits to pinpoint a nest location. The number and locations of nests are somewhat biased, but nonetheless give us an insight into their nesting ecology.

2024 has been an exciting year for this project. 23 Anna's and 10 Rufous hummingbird nests were found. One additional nest was not identified to species, as it was already finished and no bird was observed around the nest.



*A map showing concentrations of the nests of Anna's Hummingbirds (blue dots) and Rufous Hummingbirds (red dots) in just part of the Sanctuary.*

|              | Total | Mar | Apr | May | Jun | Jul | Aug | Sep |
|--------------|-------|-----|-----|-----|-----|-----|-----|-----|
| <b>Nests</b> |       |     |     |     |     |     |     |     |
| Anna's       | 23    | 8   | 7   | 3   | 2   | 2   |     | 1   |
| Rufous       | 10    |     | 5   | 5   |     |     |     |     |

*Table showing timing of the nesting of Anna's and Rufous Hummingbirds at the Sanctuary in 2024.*

The overall nesting success of Anna's Hummingbirds was good. Of the 23 nests, 18 fledged, three nests were predated, one nest was lost during a storm, and the outcome of two nests is unknown. Nests were found as early as March 7<sup>th</sup> and as late as September 21<sup>st</sup> (fledging October 12<sup>th</sup>). The September nest was the latest active nest we have been able to document so far. On March 12<sup>th</sup>, we observed a female already feeding young. Calculating back, she must have

started nesting by mid-February. This female had three nests this year, of which only one fledged while two were predated. We noted that she started to build her second nest while already feeding nestlings, and while those young fledged, she was already incubating eggs in the second nest. We have noted this behavior a few times over the last years and it seems to be not uncommon.

The nesting success for the Rufous Hummingbirds was much lower. Of the 10 nests observed, only five nests fledged, four nests were predated and one nest outcome remains unclear. The first nest was found on April 15<sup>th</sup> with the female already incubating two eggs. The last nest was found on May 31<sup>st</sup> but was predated by June 15<sup>th</sup>. Those dates are consistent with observations of previous years. The lower number of Rufous' nests found is likely related to the fact that Rufous nesting starts when vegetation already has started to grow leaves. This makes finding nests much harder, especially as Rufous females tend to behave more inconspicuously around their nests.

Vegetation preferences are similar for both species, with nests primarily found in Red Alder and Pacific Crabapple trees. We also discovered several Anna's Hummingbird nests in Douglas Fir and birch trees while Rufous nests were also found in Himalayan Blackberry. Nests active at the same time and being incubated by different females can be as close as about 11m. This seems to be the closest distance acceptable to Anna's females during nesting, as is confirmed by observations from previous years with similar spacing. This data comparison also starts to show nest clusters, which could indicate that some females might return to certain areas or trees to nest. More study is needed to confirm this, however.

Two other observations stand out this year. In the first case, a female had laid eggs but abandoned the nest in 2023. As spring arrived, the nest was still in place and the eggs had disappeared. On April 20<sup>th</sup>, a female was observed renovating the nest and sitting on two eggs. She successfully fledged two young around May 25<sup>th</sup>. The second nest was built by an Anna's female in 2023 on Inner Grassy Trail and had successfully fledged one young. The nest had mostly deteriorated but on April 15<sup>th</sup>, a female Rufous Hummingbird was seen renovating the old nest-base and building a new nest on top of it. The female fledged two young on May 31<sup>st</sup>. Nest-reuse is fairly rare, as the delicate nests are often worn out after the chicks fledged.

Text: Kristina Breit  
Field Technician

## Bats in the Bird Sanctuary

In late September of 2023, there was an increase in bat activity at the Sanctuary on our trail cameras and in the bat boxes on the warming hut and our workshop. This activity manifested itself as piles of guano (bat poop) underneath the bat boxes. As many as 20 bats were counted in one of the boxes one afternoon. This prompted us to contact the Community Bat Programs of BC (BC Bats). BC Bats is a non-profit organization that is focused on the conservation of bats in British Columbia (BC). BC Bats also provides resources and guidelines to community members on how to co-exist with, as well as conduct citizen research on bats living in our communities.

This spring, a representative for BC Bats came out to the Sanctuary to assess our bat boxes and provide information about their 2024 community bat count. In June 2024, staff at the sanctuary conducted 2 summer roosting surveys at the Sanctuary, and also participated as volunteers on counts next door at the Alaksen National Wildlife Area where there is a maternity roost. Counts in summer focus on these roosts where mothers stay with the young from the spring of that year. Bats are counted as they leave roosts for the evening to begin feeding on insects. Bats flying overhead are not counted, as the purpose of the survey is to determine the number of bats at roost locations.

While staff only counted 2 bats leaving our own Sanctuary boxes, many were seen flying overhead. This may suggest that bats are using other unknown roosting sights in the Sanctuary. We have seen guano in areas around the buildings, not just at the roosting boxes, further suggesting this. The lack of bats in our boxes during summer surveys may also suggest that the Sanctuary offers roosting for primarily males or

non-maternal uses during spring and fall. The Alaksen roost hosts large numbers of females and pups during their summer surveys, so many of the bats from the Sanctuary may also use those sites during the summer. We plan to add more bat boxes here based on recommendations from BC Bats as we learn more about the bat usage of the property.

In addition to bat counts, guano samples were collected and sent to a lab for analysis as part of the BC Bats monitoring program. The analysis can determine what species of bats are using roosting boxes through DNA examination. There are 16 different species of bats known to reside in BC and another 2 species that have been recorded in the province. Understanding the species that reside in the Sanctuary will help us to manage our habitat and roosting boxes to best suit their needs. Bat conservation in the Sanctuary is important as bats are a vital part of our ecosystem. They help to control insect populations as well as provide very nutrient dense fertilizer for plants in the form of their guano. Bats, birds and other wildlife species all coexist together out here, so we need to do our part to make sure they have what they need to thrive.

We plan to continue working with BC Bats Community Programs to better understand our local bats, and to help researchers learn more about bat conservation through our data. If you would like to learn more about bats in BC or get involved in your own communities, go to BC Bats website at [www.bcbats.ca](http://www.bcbats.ca).

Text: Evan Gogal  
Sanctuary Assistant Manager

### 2024 Christmas Bird Counts

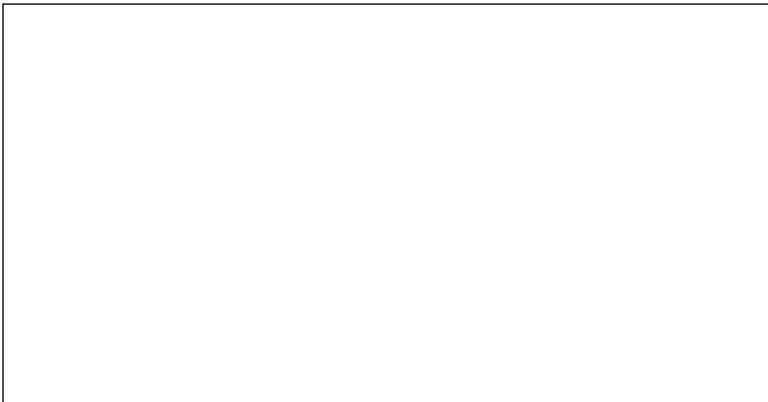
If you are interested in contributing to the science of tracking bird population trends, consider joining a Christmas Bird Count this year. Birds Canada coordinates the Christmas bird counts every year, and the names and contact information for compilers of some local count “circles” are listed below. Contact them before the start of December so that you can be added to the list of volunteers.

*“Started in 1900, the Christmas Bird Count (CBC) is North America’s longest-running Citizen Science project. People in more than 2000 locations throughout the Western Hemisphere participate in the CBC each year. The information collected by thousands of CBC volunteer participants forms one of the world’s largest sets of wildlife survey data. The CBC in each Count Circle is planned on a day between December 14 and January 5. Effort for each circle is organized by a Compiler, who is a fellow volunteer (or team of volunteers) at the local level, often supported by a birding club or naturalist organization.”* (Birds Canada website).

|                              |               |                |  |
|------------------------------|---------------|----------------|--|
| Vancouver:                   | December 14th | Peter Candido  | <a href="mailto:pcandido328@shaw.ca">pcandido328@shaw.ca</a>       |
| Ladner:                      | December 15th | Yousif Attia   | <a href="mailto:ysattia@gmail.com">ysattia@gmail.com</a>           |
| White Rock /Surrey/ Langley: | December 28th | Kristina Breit | <a href="mailto:cbcwhiterock@gmail.com">cbcwhiterock@gmail.com</a> |
| Pitt Meadows:                | January 3rd   | Jennifer Tayes | <a href="mailto:jtayes@shaw.ca">jtayes@shaw.ca</a>                 |

**BRITISH COLUMBIA  
WATERFOWL SOCIETY**

**5191 Robertson Road, Delta, British Columbia V4K 3N2**



*Snow Geese © Lou Lehmann*