

## What to expect from this educational packet

This worksheet invites you to consider the world of migratory birds, their epic capacity for long-distance travel, and their keen sense of home. We'll explore ways humans can help steward the habitats of these incredibly diverse and dynamic beings. In this packet, you'll:

- Learn about some species of migratory birds and their unique gifts
- Explore Indigenous cultural connections to our winged neighbours
- Access texts and activities to strengthen vocabulary and understanding
- Reflect on what you've learned with scientific inquiry prompts and discussion questions

#### Introduction

If you are lucky enough to live in a place where there is bird song, you are most fortunate! The sounds of migrating birds are a symphony that mark a time of change, both in the fall when many birds fly south to find warmer weather, or in the spring when thousands of birds return to the west coast. Whatever the season, it's a great chance to grab your binoculars and see if you can spot any winged neighbours in your community!

Migratory birds spend some parts of the year in one habitat, and travel, often with a group, to another location for a different season or stage of their lifecycle (e.g. mating, hunting, nesting). These birds experience the challenges associated with deforestation, habitat loss, despeciation and human development firsthand. They navigate changing landscapes with grace and incredible consistency as many of them travel unimaginable distances to exploit diverse niches and increase their chance of survival.

Migratory birds attract the attention of many people who recognize these delicate beings as messengers about the health of our planet. Read on to learn about some fascinating species and stewardship projects working to protect the beautiful and varied landscapes migratory birds call home.

what do you you know about hilgratory bird s							
Write down some facts you know about these species, and come back at the end of the worksheet to see what you can add!							



# Meet some migratory birds!



#### **Lewis's Woodpecker**

Despite the name woodpecker, the eating and flight habits of *Melanerpes lewis* are considered quite odd for a bird of this family. They circle high in the air, and swoop in an acrobatic fashion to snatch bugs out of the air! This uniquely colored being can be found living in pine forests, woodlands and burned forests. Depending on where they live within their range, Northern-born woodpeckers often migrate south, while Southern residents often move short distances in tune with seasonal availability of resources.



#### **Western Sandpiper**

These adorable shore dwellers gather in spectacular flocks along the Pacific Coast. Nearly the whole breeding population has been observed passing through the Copper River Delta in Alaska over a few weeks each spring. They nest and raise their young there in the northern ranges of North America, the continent referred to by some Indigenous and non-Indigenous communities as Turtle Island. You can find these colourful foragers avoiding predators and searching for food on tidal flats and muddy lakeshores.



#### Merganser

The word Merganser comes from the latin name "plunging goose" which suits these beings that spend a whole lot of time beneath the water! What do you think they're doing down there? If you guessed hunting or searching for food — you guessed right! Commonly found in wooded lakes and rivers, mergansers travel in the late fall and early spring in small groups.





#### **Brant**

Few travel as far as Brants! Known to fly at altitudes of several thousand feet in the air as they cross the ocean, these beings can be found nesting in the Northern-most parts of Turtle Island/North America and spend their winters on the East and West Coasts of Canada. In Hul'qumi'num, Liimus (May) is known as the time when wild geese fly in a V formation. The oldest recorded Female Brant was 27 years old; she was identified in Alaska and later found in Washington. If you live on Vancouver Island, you may have heard of or celebrated the Brant Wildlife Festival, an event that celebrates local biodiversity and seasonal changes.



#### **Great Blue Heron**

These beautiful and stoic large birds have an extremely varied diet which allows them to adapt to a vast range of landscapes including Eastern subtropical mangrove swamps, and the frozen inland waters of the North. Most northern populations fly south for the winter, while others permanently reside on the temperate coastline of the Pacific Northwest. They express many migration patterns, flying by day, night, in flocks or in solitude.



## **Blackpoll Warbler**

Don't be deceived by these tiny beings, warblers are incredibly capable flyers! They cover an average of 2,900 km over about 3 days of nonstop flying to get to their wintering grounds! To fuel this journey Blackpoll warblers eat enough to double their body mass, which they will lose during travel. In 2023 the combination of warming temperatures and drought caused one of the most devastating fire seasons Canada's boreal forests has experienced. These forests are an important habitat for this warbler species, whose population has seen a decrease of almost 90% over the last 40 years. Canada has taken steps to protect large areas of boreal forests which will preserve mass amounts of habitat for Blackpoll warblers and other beings whose lives depend on these places.





#### **Sooty Shearwater**

Shearwaters are one of the most abundant pelagic (open ocean) sea birds. They can hunt prey by flapping their wings underwater. Their migrating patterns often trace a figure 8 as they travel from the Northern to Southern Hemisphere covering up to 1,000 miles in a single day! These social beings flock in impressive numbers up to the hundreds of thousands. Watch for stiff straight wings and long fast glides to distinguish them from the flappy bent wings of gulls.



#### **Osprey**

These talented anglers can be spotted gliding high above coastlines waiting for the opportune moment to dive into the water and retrieve their meal of choice: fresh fish! If you live near water, you could consider building a nesting platform to attract a mating pair of these impressive birds of prey. According to the Cornell Lab of Ornithology (the study of birds) a single osprey may travel more than 250,000 km during it's 15-20 year lifetime... that's around 17 round trips from coast to coast in Canada!



#### **Tanager**

These vibrant yellow, red and green songbirds often hide out in the canopy of western forests. Western Tanagers tend to nest in coniferous forests, but during migration they can be found in a wide range of habitat from grasslands to deserts to suburban neighborhoods.



#### **Snow Goose**

These geese often gather in immense flocks, looking like a sea of white feathers. They can be found in open fields and bodies of water while wintering. During spring and fall migration "Snows" will often use stopover points along the four major North American Flyways to rest and refuel for their long journey.



# **Exploring Indigenous** cultural connections

When learning about environmental science, cool places and the plants and animals that inhabit them, we believe it is equally as important to understand the ways humans have lived in relationship with these lands and beings since time immemorial. Indigenous stewardship has adapted in many ways with increased climate impacts across the landscape. Sierra Club BC aims to honor Indigenous voices and to ensure that unique Nations and worldviews are respectfully acknowledged.

While we've shared some publicly available resources below as a starting point, it's best to engage with local Indigenous communities. Each Nation has distinct perspectives, cultures and governance systems, meaning that different communities will have different connections with migratory birds. Many Nations have websites with a wealth of publicly shared knowledge that you can check out, or you could attend a public event hosted by the community. If you don't know whose territory you live on, you can visit Native-Land.ca to learn more.



This next section includes website links for deeper learning. To explore these resources, please visit <u>sierraclub.bc.ca/migratory-birds-resource</u>



### Spring bird migration and the Indigenous stewardship that sustains it

Read or listen to the reading of the <u>article</u> above written by Dr. Jeff Wells and Dr. Fritz Reid for the National Audubon Society, an organization that uses advocacy, research, education, and on-the-ground conservation to protect birds and bird habitat in the Western Hemisphere.

After reading discuss the following in the box below!

- Locate the Boreal Forest on a map
- What is meant by "North America's Bird Nursery"?
- The article urges that "humans should find ways to ensure that birds have intact and healthy forests, wetlands, lakes, and rivers that they need." What are some ways you can keep bird habitat safe? Or help bird habitats in your community?



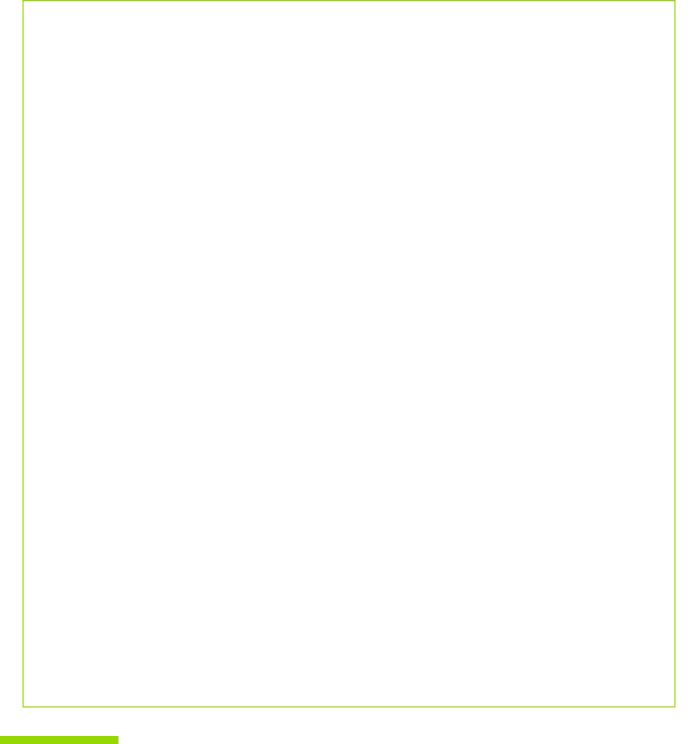


# **Activities**

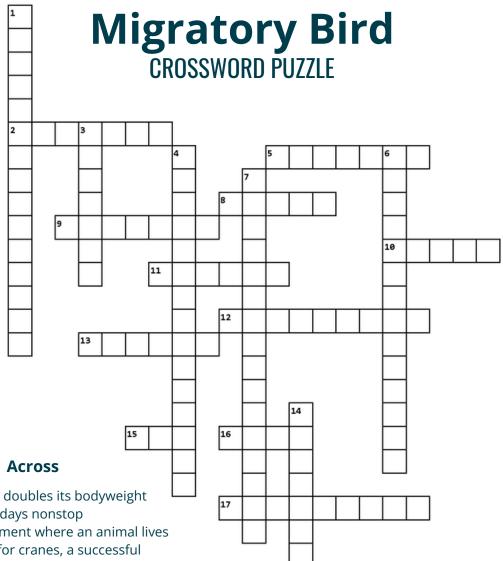


## Draw the migratory snow goose!

With this activity, we encourage you to draw migrating snow geese and their habitats. If you'd like a tutorial, we invite you to watch our Learn to Draw Snow Geese lesson with the QR code above or visit sierraclub.bc.ca/draw.







- 2. A small bird that doubles its bodyweight before travelling 3 days nonstop
- **5.** Place or environment where an animal lives
- 8. Often mistaken for cranes, a successful hunter with varied diet
- 9. A word that means to move from place to
- 10. A long-necked bird with a coastal island celebration named for its return
- 11. Travels up to 250,000 km in its lifetime
- **12.** Large white bird, travels in large flocks, often found in open fields
- **13.** Forest type growing from coast to coast in Canada in high-latitude environments
- **15.** An animal responsible for killing millions of migratory birds a year
- **16.** The acronym for Indigenous Protected and **Conserved Areas**
- 17. Latin name for 'plunging goose'

#### Down

- 1. A type of woodpecker with variable eating and flight habits
- 3. Placing a small tag on a bird's leg to track its movement and history
- 4. A bird that looks like a dark-coloured seagull, flocks in huge numbers
- **6.** American non-profit that is helping protect birds through research and advocacy efforts
- **7.** Small coastal forager, migrates in impressively sized flocks
- **14.** A small, songbird that is primarily yellow, green, or red

Migrate 10. Brant 11. Osprey 12. Snowgoose 13. Boreal 14. Tanager 15. Cat 16. IPCA 17. Merganser Answers: 11. Lewis Woodpecker 2. Warbler 3. Banding 4. Sooty shearwater 5. Habitat 6. Audobon Society 7. Western sandpiper 8. Heron 9.



# Discussion questions

## Write down your thoughts and reflections to the questions below.

- We are all connected. How are you connected to birds and their habitats?
- Many plants and animals are being lost from our communities because of climate change. What are the repercussions if a species becomes locally extinct? How can we fix this?
- How can we learn from leaders in migratory bird conservation? In what ways can we show dedication, creativity, and persistence in our daily lives?
- What are our responsibilities in protecting migratory bird habitat?
- Some birds travel incredible distances to increase their chances of survival. What lessons can we learn from these beings?
- What is a belief or worldview that is dissolving in you to make room for a caring future?
- What messages do you receive about birds? How can we share stories of migratory birds with our friends and families?

# Keep learning with us!

We want to express our sincere gratitude to all those who helped breathe life into this work.

To explore our resource list and additional learning materials, we invite you to visit <u>sierraclub.bc.ca/migratory-birds-resource</u>

