

Kootenay Bank Swallow Survey

Issue #7: Spring 2023



Photo by Joachim Bertrands.

Kootenay Bank Swallow Survey Update

By Janice Arndt, Project Coordinator

The Bank Swallow is a federally-listed Threatened species in Canada, due primarily to significant declines in abundance. Recent Breeding Bird Survey trend data show that numbers in British Columbia continue to decrease. The Kootenay Bank Swallow Survey (KBSS) has been documenting breeding colonies in the southeastern region of the province since 2015.

More than 40 Bank Swallow colonies were visited by volunteers in 2022. Numerous additional sites were not visited due to high water that persisted well into July. Several new colonies were reported. There are still areas of the Kootenays that have not been visited since KBSS started in 2015. Please continue to monitor known colonies and document new sites. Historical data are also valuable and welcomed.

Two of the primary goals of KBSS are to provide up-to-date information on the locations and sizes of Bank Swallow colonies in the Kootenays for use in national recovery efforts and to better understand habitat requirements and general ecology. In the past year, two nation-wide documents have been published that used data collected through KBSS. The first is the "Recovery Strategy for the Bank Swallow (*Riparia riparia*) in Canada", an important report summarizing what is known about the species in Canada and the proposed efforts to reverse its decline. See the article by Marc-André Cyr on page 3 for more details.

The second publication is a paper entitled "Natural and human-made nesting habitat use by Bank Swallow

(*Riparia riparia*) in Canada" which was recently published in The Canadian Field-Naturalist. In it, we examined how the proportion of natural and human-influenced habitat used by breeding Bank Swallows has changed since a similar study was published in 1979. The difference in British Columbia is significant: the proportion of breeding sites used in human-impacted habitat has decreased. Historically, road cuts were the highest reported nesting habitat in BC. Standards for transportation corridor development have changed, however, with requirements for gentler slopes in effect along road and railroads. These gentle slopes are rarely used by Bank Swallows, which prefer vertical or near-vertical banks for nesting. This underscores the importance of protecting suitable natural sites.

Assessing and monitoring regional numbers of a nationally threatened species

Recent publications

KBSS data were used in two national and one regional documents in the past year:

Environment and Climate Change Canada. 2022. Recovery Strategy for the Bank Swallow (*Riparia riparia*) in Canada. *Species at Risk Act* Recovery Strategy Series. Environment and Climate Change Canada, Ottawa. Available [here](#).

McPherson, S. and J. Schleppe. 2023. Arrow Lakes Foreshore Integrated Management Planning. Prepared for Living Lakes Canada. Prepared by Lotic Environmental Ltd. and Ecoscape Environmental Consultants Ltd.

Pelletier, N, J.E. Arndt, R. Darvill, and M.A. Cyr. 2022. Natural and human-made nesting habitat use by Bank Swallow (*Riparia riparia*) in Canada. *Canadian Field-Naturalist* 136:228-236. Available [here](#).



Violet-green Swallow adult and nestling. Photo by Ian Adams.

What can you do to help Bank Swallows?

If you are a landowner or land manager, you can protect habitats that are important for birds, insects, and other wildlife. Key habitat types include grasslands, wetlands, and riparian areas. Consider decreasing or eliminating your use of pesticides. Availability of flying insect prey is critical for Bank Swallow and other at-risk aerial insectivores such as Common Nighthawk and Black Swift.

Monitor Bank Swallow colonies. If you have ready access to breeding sites, particularly large and persistent colonies, please consider reporting counts of adults and burrows every year. The recovery strategy states that: “Important declines in areas that have historically supported high numbers of Bank Swallows might be indicative of population declines at a broader scale.” July is the best time to monitor colonies.

Report new colonies. Help fill the gaps in regional coverage and make the database more complete. The need to identify new Critical Habitat units will be reassessed in 2027, which means that areas that were missed in the first round could be formally recognized in recovery documents in the future.

Bird species diversity at Bank Swallow colonies

Which bird species are known to nest among Bank Swallows at their colonies? Northern Rough-winged Swallows are the most frequent cohabitants of breeding sites, followed by Belted Kingfishers. In my experience, Cliff Swallows are also found at Bank Swallow colonies. This past year, Ian Adams documented two additional species, both at the expansive colony at the Wardner bluffs: Violet-green Swallow (confirmed nesting; see photo at left) and Northern Flicker (possibly nesting). What birds or other wildlife have you seen at Bank Swallow colonies?

Federal Recovery Strategy for the Bank Swallow in Canada

*Marc-André Cyr, Senior Regulatory Analyst
Canadian Wildlife Service – Environment and Climate Change Canada*

For additional information, readers are invited to consult “What is critical habitat?” in the Kootenay Bank Swallow Survey [Newsletter Issue #5: Spring 2021](#).

In April, 2022, Environment and Climate Change Canada (ECCC) published the final [Recovery Strategy for the Bank Swallow in Canada](#). The development of the recovery strategy began in 2017 with the creation of a species expert working group, which included representatives of provincial, territorial and federal governments, as well as Indigenous groups and environmental NGOs.

A notable challenge in the development of the recovery strategy was the identification of critical habitat, but the working group was up for the task. ECCC collected information on colony locations from close to 40 different sources, including the Kootenay Bank Swallow Survey and the Upper Columbia Swallow Habitat Enhancement Project. Various iterations of critical habitat were evaluated to best capture the location of Bank Swallow colonies, which are dynamic in nature, as well as foraging areas around those colonies. The location of suitable nesting sites along a waterbody can change from one year to another, however Bank Swallows return to the same general nesting area. Because the maps that may contain critical habitat are a snapshot in time and the location of nesting habitat changes from year to year, areas that may contain critical habitat were identified within 5 km of colony locations reported between 2001 and 2017. This ensures that undisturbed shorelines are available from year to year, in areas previously or actively used for nesting, for natural erosion processes to maintain or create nesting habitat.

The areas that may contain critical habitat also include foraging habitat within 500 m of shorelines. This iterative process resulted in critical habitat identified at 289 locations, covering more than 8,000 km of shorelines from coast to coast. Protection of critical habitat will be key to achieving the recovery goal of stabilizing the Bank Swallow population trend by the early 2050s.

The recovery strategy for the Bank Swallow provides a roadmap for the conservation of shorelines, wetlands and grasslands on which the species depends for nesting and foraging – and will surely benefit other wildlife and our own adaptation to climate change. The road to recovery has only begun! ECCC invites the public to report nocturnal roosts of Bank Swallows, which are important habitats used at the onset of the fall migration. In Ontario, more than 100,000 Bank Swallows were reported at a single roosting site, with nocturnal roost sizes generally ranging from hundreds to thousands of individuals. Despite the key importance of roost sites for Bank Swallow, the location, size and availability of those habitats are mostly unknown. If you have seen a roost, you can share your observation with the [B.C. Conservation Data Centre](#). This will contribute to understanding the role of those habitats in the recovery of the Bank Swallow.

ECCC would like to acknowledge and thank all the individuals and organizations that provided information on the species and comments on the recovery strategy.

Summary of Achievements: Upper Columbia Swallow Habitat Enhancement Project

Rachel Darvill, Biologist
Goldeneye Ecological Services

The Upper Columbia Swallow Habitat Enhancement Project's monitoring and data collection efforts have wrapped up for 2022! Thank you to all our volunteers.

To date we have erected 5 large Swallow Condos for Barn Swallows: 1 of these produced 4 chicks in August 2022. We worked with Environment and Climate Change Canada's Canadian Wildlife Service (ECCC CWS) and BC Parks to install 4 Motus Wildlife Tracking Stations in the region and subsequently tagged 50 Bank Swallows at 2 colonies near Invermere in June 2022. This will provide unprecedented information on post-breeding habitat and the Bank Swallow migration route.

We helped restore Bank Swallow colony habitat within Windermere Lake Provincial Park, removed vegetation blocking Bank Swallow flightpaths at a Blaeberry colony, assisted with a barn roof replacement that provides significant Barn Swallow habitat in Invermere, and installed about 50 nest cups on pre-existing buildings and artificial nesting structures (giving swallows a head start on nest building). We have additional enhancement projects underway. We engaged 70 volunteers in 2022 for swallow monitoring, provided 15 training sessions, had 15 private landowner visits regarding co-existence and potential enhancements, and spoke with several individuals/stakeholders regarding strategies to co-exist with swallows. We contracted the Ktunaxa Nation and Secwepemc Nation (Shuswap Band) who researched their traditional Indigenous perspectives on swallows and provided us with this content (to be used on interpretive signage soon). We developed posters, videos, website/social media content, press releases, attended events and gave presentations on the project.

We have recorded 160 swallow colonies in suitable Bank Swallow habitat (e.g., near vertical, friable soils) from Canal Flats to Donald; about 100 of those have been confirmed as Bank Swallow colonies.

Our data have helped identify the area between Canal Flats and Edgewater (think Columbia Lake and Lake Windermere) as Critical Habitat for Bank Swallows, which was drafted in the federal Recovery Strategy for this species. More data on achievements and the project will be in the Final Report to be released later spring 2023. For more information, please contact project biologist, racheldarvill@gmail.com.

Coming up in 2023:

Over 50 artificial nest cups for Barn Swallows have been installed on private lands in the Columbia Valley with 25 more to be installed in 2023; these are used to entice breeding pairs of Barn Swallows to existing sites by making them more suitable for nesting. Effectiveness monitoring will occur at all enhancements during all years of the project (until 2026). Monitoring natural nests will help with placement of future structures and nest cups, and allow us to learn about occupancy in the valley. We will train volunteer citizen scientists who will be monitoring Bank and/or Barn Swallow colonies and artificial nesting structures. Previous years of swallow conservation efforts have identified additional opportunities for habitat enhancement or restoration and we will continue to work with people (e.g., private landowners, industry, provincial and municipal governments) to develop opportunities to conserve important swallow habitat. All data will continue to be submitted into the provincial data warehouse and to the federal government to assist with the identification of Critical Habitat for the recovery of Bank/Barn Swallows. Outreach will be aimed towards conserving swallows and their habitats (e.g., promoting Best Management Practices for swallows) and on soliciting public information regarding the location of any new nest or roost sites. With ECCC CWS we will tag another 50 bank swallows in 2023 to assist with learning about their migratory pathway taken. We will also aim Motus tagging efforts in the Upper Columbia towards identifying important roost sites.

Repeat visits from year to year

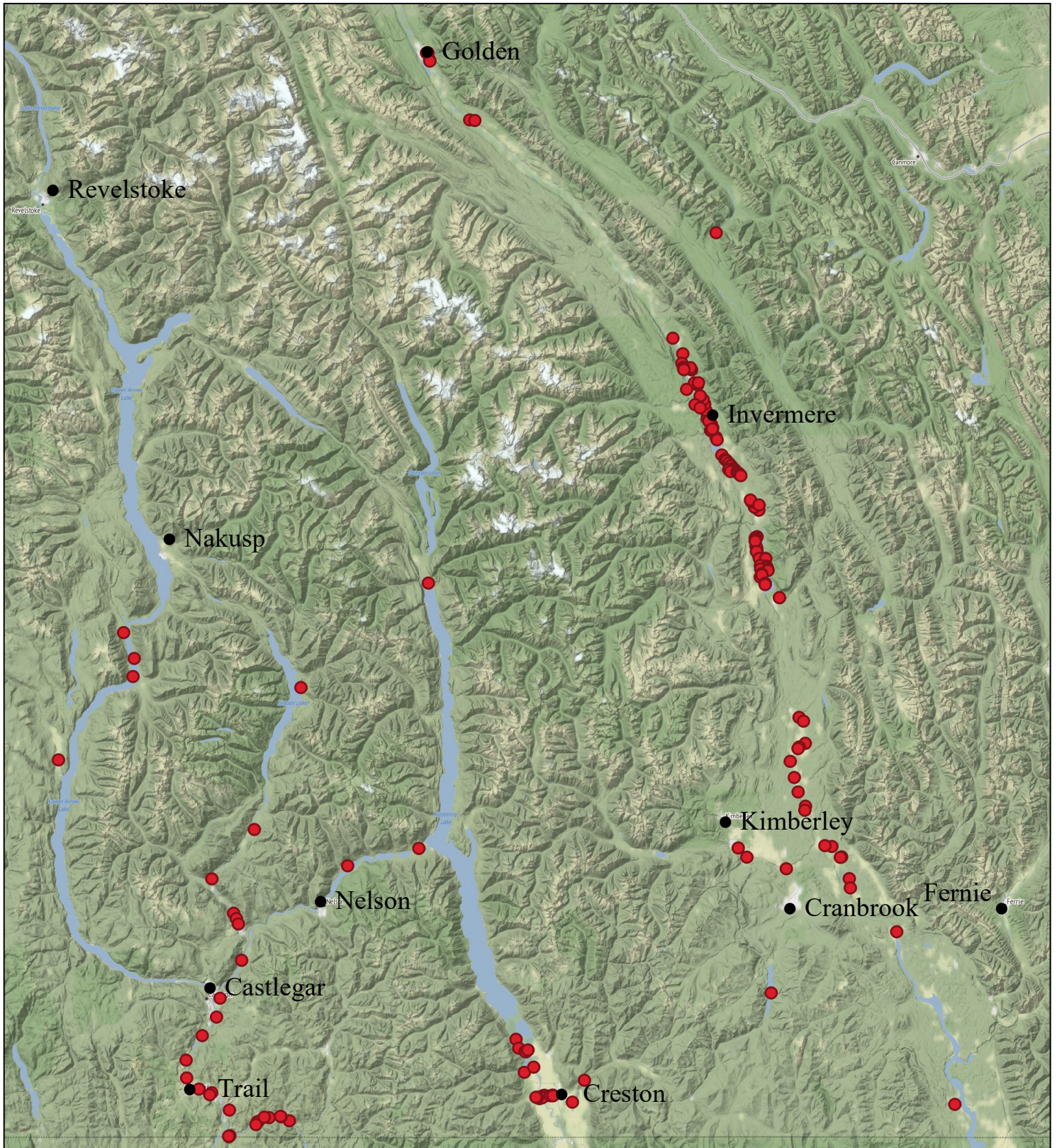
Repeat visits to your local colonies - or to those you might frequent as part of a birding trip - can reveal important changes from year to year or even within a season. The images to the right show the same location in 2018 (above) and 2022 (below). While interannual changes are not always this striking, this example demonstrates the value of annual site visits. Written documentation is sufficient to capture most changes, but photographs make it even easier to illustrate their magnitude, whether due to habitat alteration or disturbance, or fluctuations in the number of burrows present. (KBSS file photos).

Volunteers who made visits in 2022 to colonies they had reported in earlier years include Ulrike Sliworsky, Aileen Collings, Thomas Hill, Cecilie Letting, and Mike Zamara.



Photographs are Priceless

The images to the left demonstrate the usefulness of photos to document changes over a season. The first photo was taken on April 15 (2021) and the second on June 21 of the same year. (KBSS file photos).



The above map shows the locations of all active breeding colonies that have been reported since the project's inception in 2015. Do you know of a site that's not on the map? Please contact us!



Photo by Ian Adams.

Please contribute your observations in 2023!

Please report breeding colonies in the Kootenay region in 2023.

There are two ways to make reports:

- A) Use the data form provided on the following two pages; or
- B) Provide basic information such as date, location, number of adults, and accompanying photographs.

Submit reports and photos of Bank Swallow colonies to Janice Arndt, Project Coordinator at: kootenaybankswallows@gmail.com, or 901 Highway 3A, Nelson BC V1L 6J5.

Past newsletters are available at <https://kootenayconservation.ca/KCPStewardship/swallows-breeding>

The following people monitored colonies or provided information and other support to the project in the past year: Ian Adams, Joachim Bertands, Daryl Calder, Aileen Collings, Marc-André Cyr, Rachel Darvill, Alysia Dobie, Brenda Herbison, Thomas Hill, Marlene Johnston, Cecilie Letting, Kristen Murphy, Myrna McLay, Sherri McPherson, Marianne Nahm, Claire Paradis, Jason Schleppe, Ulrike Sliworsky, Mike Zamara. **Thank you!** Also, thanks to Creston Valley Bird Festival, Kootenay Conservation Program, and West Kootenay Naturalists' Association for continuing to promote the Kootenay Bank Swallow Survey through their websites.

Thank you for your interest in the Kootenay Bank Swallow Survey! Please provide as much information as you are able for colonies visited in 2023. If you have observations from previous years, you may include them as well. A separate form should be used for each colony.

Please submit data sheets and photos by November 30th to kootenaybankswallows@gmail.com or
 Janice Arndt
 901 Highway 3A
 Nelson BC V1L 6J5

Further instructions are provided in Section 3. Thank you!

Section 1. Required information.

Observer’s name(s) and contact information: _____

Site location (UTM, lat/long, or precise description): _____

Date of visit	# burrows observed	Counted (c) or Estimated (e)?	# adult Bank Swallows	# young seen at burrows	Estimated # of active burrows

Estimated # of active burrows is based on adults entering burrows or young observed at burrow entrances – June or July visits only.

Were Northern Rough-winged Swallows (NRWS) present? Yes ____ No ____ Unsure ____

If “Yes”, approximate number of NRWS observed: _____

Section 2. Optional information.

Site or colony name: _____

Site details (including notes on access, land ownership, etc.): _____

Habitat description: _____

Site history (year first discovered, fluctuations in numbers from year to year, etc.):

Site threats (Is the site an active quarry or construction zone?): _____

Additional comments: _____

Did you take photos? Yes ____ No ____

Section 3. Additional instructions for observers.

1. Key information includes location, date, and number of burrows present.

2. A visit to each site in June or July is encouraged to help determine whether a colony is active in the current year. However, colony locations and number of burrows can be reported at any time of year.

3. *Photos are extremely useful* and should show the entire colony. If the colony is large, include a photo of the whole site, and then additional shots of each portion of the colony that would allow a count of all burrows present.