



Photo by Marc-André Beaucher

Kootenay Bank Swallow Survey

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Kootenay Bank Swallow Survey Update

By Janice Arndt, Project Coordinator

The Kootenay Bank Swallow Survey (KBSS) was initiated in 2015 to address knowledge gaps regarding the status of Bank Swallows in southeastern British Columbia. This species was assessed in 2013 as threatened in Canada and officially listed under the Species at Risk Act in 2017 due to steep declines since the 1970s. The federal government's *Recovery Strategy for the Bank Swallow (Riparia riparia) in Canada* was finalized in April 2022. Colony information collected through KBSS was included in this document in the identification of

Critical Habitat in our region. The recovery strategy states that the most likely primary threats to Bank Swallow are declines in aerial insect prey populations that are resulting from broad-scale ecosystem modifications.

Estimates of the size of the breeding population in Canada range from 2.4 million, based on the Breeding Bird Survey (BBS), to 3.5 million, based on a combination of BBS data, breeding bird atlases, and habitat modeling. Trend information is also often based

on these types of sources. The BBS and other road-based surveys are known to miss certain habitat features such as natural cutbanks along rivers and lakeshores. Population size and trend data may be best gathered from targeted colony surveys in areas such as the Kootenays .

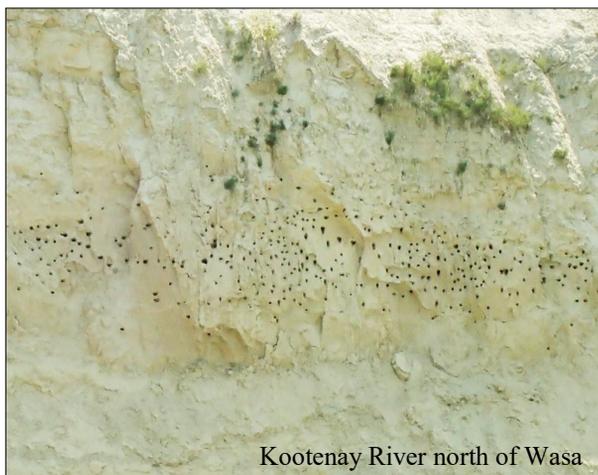
KBSS Activities in 2021

Despite challenges to field work in the summer of 2021, primarily due to heat and smoke, new colonies were reported and added to the growing KBSS database. *(continued on following page)*

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Many of these were found along a previously underrepresented stretch of the Kootenay River in the East Kootenay, which was traveled by canoe. Several others were added thanks to the work of the Upper Columbia Swallow Habitat Enhancement Project; see more on their work in the article by Rachel Darvill on page 3.

In addition to documenting new colony locations, monitoring selected known sites, and managing the regional database, KBSS provided information in response to questions regarding potential impacts to swallows from the use of Bti – a pesticide for the treatment of mosquitoes – and from disturbance of motorized watercraft. Data were made available on shoreline values for an updated Foreshore Inventory and Mapping document for Kootenay Lake. We shared information with conservation groups that are considering Bank Swallow habitat restoration and creation projects. KBSS was included in a Kootenay Conservation Program webinar entitled *Stewarding for Bird Nesting and Roosting Habitat* given by myself and Verena Shaw. The KBSS dataset was included in a Canada-wide analysis of habitat use by Bank Swallows which is slated to be published soon.



Kootenay River north of Wasa

What can you do?

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 Kootenay region (including the East and West Kootenays and Upper Columbia) has a relatively high concentration of colonies in the province (see Figure E-16 of the recovery strategy). 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 visit colonies, as this is the time that adults are feeding young in the burrows. Activity will begin declining at some colonies by the last week of July.

Report new colonies. Reports of previously undocumented colonies are already coming in for 2022. The need to identify new Critical Habitat units will be re-assessed in 2027, which means that areas that were missed in the first round could still be formally recognized in recovery documents. Please be reminded that eBird reports are not captured in the KBSS database, so it is important to send colony reports directly to KBSS.

Project Achievements: 2021 Upper Columbia Swallow Habitat Enhancement Project (UCSHEP)

By Rachel Darvill, Biologist, Goldeneye Ecological Services

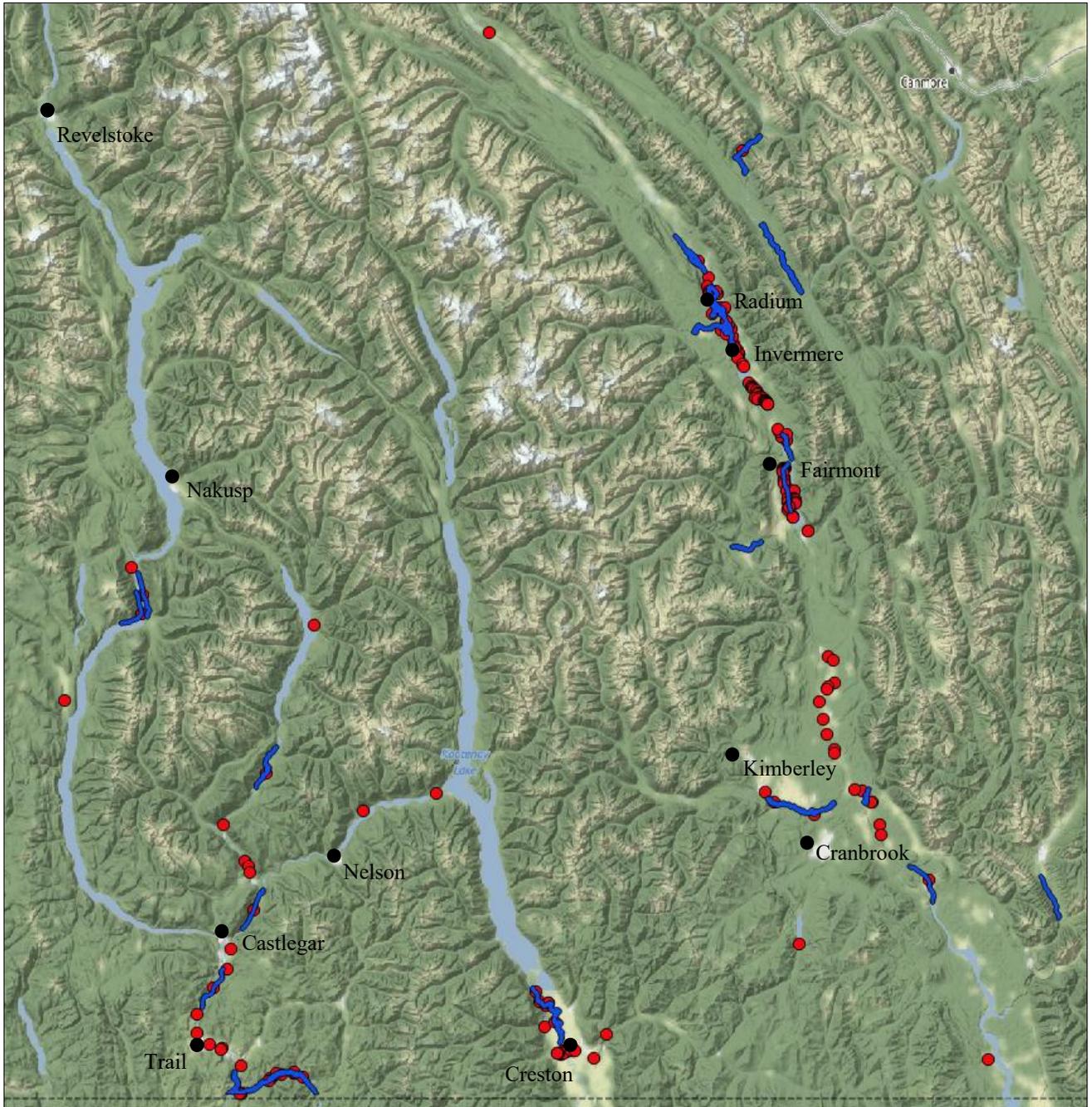
Human interactions with birds have been identified as one of the most readily recognized wildlife interactions that most urban and rural residents experience regularly, and have been linked with benefits to psychological well-being and a sense of connectedness to nature. In 2021, 67 volunteer citizen-scientists contributed to swallow monitoring. We engaged with Indigenous groups and had a Shuswap Indian Band (SIB) member monitor Bank Swallow (BANS) colonies on SIB land. We engaged with the Ktunaxa Nation and funding permitting, we have an agreement with both the Ktunaxa and SIB to have the Indigenous perspective on swallows be on interpretive signage next year. We helped identify the area between Canal Flats and Edgewater as Critical Habitat for BANS, which was drafted in the 2021 federal Recovery Strategy for BANS. We have recorded 151 swallow colonies in suitable BANS habitat (i.e., near vertical, friable soils) from Canal Flats to Donald; 96 of those were confirmed as BANS colonies in 2020. The colony at Windermere Lake Provincial Park faced negative impacts (e.g., sticks in borrows, enlarged entrances, unauthorised trail through the colony). In 2021, we restored the habitat at that provincial park; we worked with BC Parks and placed ropes around the colony (intended to keep people away from the colony) and interpretive signage at the site (with funding from BC Parks).

Results revealed that 66 buildings from Canal Flats to Donald were used by breeding Barn Swallows (BARS). At least 19 of the 66 buildings had a reduction in the number of

active barn swallow nests in 2021, compared to data from 2020. We put 45 BARS nest cups on pre-existing buildings to make them more suitable for BARS to nest. We also worked with The Nature Conservancy of BC on enhancing habitat for BARS in Edgewater. We have built 2 large Swallow Condos for Barn Swallows (in Donald and Invermere) and a third will be built this fall in the Town of Golden.

Monitoring movements of Bank Swallows

We are collaborating with Environment and Climate Change Canada's Canadian Wildlife Service to put up Motus Wildlife Tracking Stations in the Columbia Valley in 2022. We will tag about 100 BANS during 2022 and 2023. Motus will be used to identify the areas used during the breeding and post-breeding period (i.e., prior to fall migration) by Bank Swallows. This information is key for helping to protect Bank Swallows within the North Columbia/Upper Columbia, by learning what areas are important to conserve, enhance, or restore for Bank Swallows. In addition, using Motus receiving stations located throughout the western hemisphere, tagged individuals will be tracked during fall migration providing unprecedented information on migratory timing, routes, stopover locations, and winter areas. This information is key for forming international collaborations that will conserve and recover swallow habitats and populations throughout the year. For more information, please contact racheldarvill@gmail.com



Map. Active Bank Swallow colonies that were reported to the KBSS between 2015 and 2021 are shown in red. Critical Habitat (CH) identified in the federal recovery strategy is shown in blue. Some KBSS colonies were not included in CH because: 1) they were reported after 2017 (e.g., Lake Windermere, portions of the Kootenay River, Goat River in Creston); or 2) they occur in unnatural sites such as road cut-banks (e.g., West Arm of Kootenay Lake, Trail area, Slokan Valley). The presence of CH where there are no red colony dots indicates sites that were documented prior to initiation of KBSS in 2015 (e.g., from the BC Breeding Bird Atlas and other historical sources).



Contribute your observations in 2022!

Please report all new and previously known breeding colonies that you observe in the Kootenays in 2022. Valuable information can be gained from repeat visits to known sites, even if they are not active in the current year. Please report activity and any significant changes. Continue to document all new colonies encountered. A visit in June or July is ideal.

Where possible, please include the following with your report:

- colony location
- date
- photographs
- number of adults
- OR, request a data form from the Project Coordinator.

Contact Janice Arndt, Project Coordinator, for more information, and to submit reports and photos: kootenaybankswallows@gmail.com or 901 Highway 3A, Nelson BC V1L 6J5.

Past newsletters and the data sheet are available at this link:

<https://kootenayconservation.ca/KCPStewardship/report-breeding-colonies-of-bank-swallows-in-your-area/>

The following individuals reported information on swallow colonies or participated in monitoring in the past year: Ian Adams, Steve Arndt, David Beadle (historical), Brenda Beckwith, Aileen Collings, Carolee Colter, Rachel Darvill and Verena Shaw (Upper Columbia Swallow Habitat Enhancement Project), Thomas Hill, Valerie Huff, Gail Landon, Peter McIver, Gwen Nicol, Paul Prappas, Julia Shewan, Ulrike Sliworsky, Blaire Smith, Sachi Snively, Linda Van Damme (historical), and Mike Zamara. **Thank you!** Also, thanks to Creston Valley Bird Fest, Kootenay Conservation Program, and West Kootenay Naturalists' Association for continuing to promote the Kootenay Bank Swallow Survey through their websites. Marc-André Beaucher provided the image for the front page of this issue.