

Western Canada Bat Network Newsletter



Issue No. 34 Spring 2019

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Updates by region

Alberta

Provincial update

Lisa Wilkinson, Species at Risk Biologist,
Alberta Environment and Parks lisa.wilkinson@gov.ab.ca

NABat Monitoring – We continue to monitor grids, some of which are in their fifth year of monitoring. We will also be adding many new grids, primarily in the parkland region. Summary reports for each year of monitoring will soon be available on the AEP website (there has been a hiatus on social media due to the election, and also the website has been going through a transition).

White nose syndrome – I’m hoping to have a more comprehensive WNS info page on the AEP website soon. The Alberta WNS preparedness plan is being used as an internal guidance document, and I’m

working to have it formalized and posted. We are asking the public to submit bat carcasses found between Dec-June and are expanding promotion of the 'stow-away' bat campaign.

Hibernacula – Our primary hibernacula continues to support a fairly consistent number of bats (and still no signs of WNS). We continue to work with the caving community, and a new hibernacula was recently reported.

Maternity Colonies –The Alberta Community Bat Program is actively looking for and tracking maternity colonies. This program is invaluable and AEP promotes it as much as possible.

Outreach – The new Alberta bat poster was printed this spring, along with magnets, bookmarks and stickers to give out to the public. These materials are shared with the Alberta Community Bat Program for all their excellent outreach work.

Field plans – In July, we will have a four night session trying to catch *M. ciliolabrum* in southeastern Alberta, to verify some new acoustic call observations (let me know if you are able to join us).



The new Alberta Bat poster

Alberta Community Bat Program

Cory Olson, AB Community Bat Program Coordinator and Susan Holroyd, Alberta Community Bat Regional Coordinator

Winter 2018/2019 was a busy one for the program. Over the winter, we updated our “Bats in Buildings” Guidebook and initiated the development of a Bat Ambassador Training Program for Alberta. The program will consist of a guidebook for Bat Ambassadors, a “bat trunk” loaded with materials to assist with outreach and education (including a set of Echometer Touch bat detectors and tablets for use during bat walks). The program will be initiated with Alberta Parks interpretive staff. If successful, we

will expand the program for next year, possibly including “Bat Ambassadors” from other non-profit groups or the general public. The goal of the Bat Ambassadors project is to expand the reach of our bat education program and to promote participation in the citizen science project across Alberta.

In March 2019, two of our coordinators presented a poster at the Alberta Chapter of the Wildlife Society Meetings held in Canmore, AB. The information presented was a summary of the citizen science data collected, including roost reports and guano sample results. Results to date indicate that most bats reported in Alberta are Little Brown Myotis; Big Brown Bats are also commonly reported but much less frequently. The poster may be viewed at www.albertabats.ca/2018ACTWSPoster.



In April 2019, one of our coordinators attended the “Bat Matters: Chiroptera Conference” in Peachland, BC, which included many people involved with the BC Community Bat Program, as well as others involved in bat conservation from across BC. There was some great information sharing regarding both education and outreach as well as bat house monitoring methods and bat house design changes. It was an excellent meeting. We continue to find new opportunities to collaborate with our BC Community Bat Program counterparts for the delivery of new and enhanced bat conservation programming for western Canada.



Quiet Hills Ranch Bat Condo installed spring 2019.

The bat condo project we initiated in 2016 was completed in 2018 and was installed during the spring of 2019, prior to the return of bats. The condo—now named the Quiet Hills Ranch Bat Condo—was purchased by a private landowner as mitigation for a colony of >1,100 Little Brown Myotis that needed to be excluded from a home. The family subsequently modified the condo to use concrete roof tiles identical to those used by the bat colony on the main home. We installed several temperature and humidity dataloggers in the condo, and we plan to monitor occupancy over the next few years.

The Alberta Community Bat Program, in collaboration with Alberta Environment and Parks (AEP), are now encouraging the public to report dead bats found between December and June to an AEP office so they can be considered for white-nose syndrome surveillance in the province. A notice from AEP can be found at www.albertabats.ca/2019batcarcassnotice.

The 2019 summer season is looking to be busy. We plan to offer several bat walks throughout the province and to continue with our education and outreach programming. Thanks to a grant from the Edmonton Community Foundation, we are expanding our programming in the Edmonton Region, and will

be collaborating with the Edmonton Area Land Trust and other agencies to expand monitoring and citizen science projects in the Edmonton region. Through the summer of 2019, we plan to continue to promote our citizen science project to encourage more participation by the public. Anyone who is aware of a bat roost anywhere in Alberta is encouraged to report it to the Alberta Community Bat Program.

This program is possible through the contribution of our regional coordinators (Susan Holroyd, Mike Kelly, Erin Low, Christine Godwin, Darcey Shyry), Alberta Environment and Parks (Lisa Wilkinson), volunteers, collaborating organizations, donors, and support from our parent organization, WCS Canada (Cori Lausen and others). We are grateful to the Edmonton Community Foundation, Alberta Ecotrust Foundation, Alberta Conservation Association, Chawker's Foundation, R. Howard Webster Foundation, and The McLean Foundation for providing major grants needed to develop this program.

Barclay Bat Lab

Dr. R. Barclay, University of Calgary

This summer the Barclay lab will be involved in four projects.

Erin Low, a new MSc student will be starting her project investigating the effects of the 2017 Kenow fire in Waterton Lakes National Park, in collaboration with Parks staff. She has access to three years of pre-fire acoustic data and there will be two to three years of post-fire data to compare.

Lisa Sims, MSc candidate, will complete her field work on the effects of hurricane Maria on the bat community of Dominica in the Caribbean. This is again a pre/post comparison.

Mariana Quintero, honours BSc, will continue our project in Calgary looking at abundance of bats and whether anything has changed since a previous survey (acoustic and netting) in 2006-2008. We are particularly interested in the abundance of migratory bats in light of fatalities at wind energy facilities.

Lara Hiles, will complete the third year of our study on bat houses in Calgary and what characteristics bats are selecting.

Alberta Arousal Data Completes Input Data - White-Nose Syndrome Survivorship Models Near Completion

Cori Lausen, Wildlife Conservation Society Canada

Cory Olson, Dave Hobson, Dave Critchley, Greg Horne and several others braved the cold again this winter to deploy temperature-sensitive transmitters on bats in Cadomin Cave, Alberta. Two datalogging Lotek receivers were deployed to record the transmitter pulse rates throughout the latter part of winter. Deployment took place in January and the Loteks were retrieved in April. Large banks of batteries were flown in and out by helicopter. This is the final year in a two year study to obtain respirometry and arousal rate data from Alberta Little Brown Myotis. A comparison of physiology and hibernation

microclimates at 3 latitudes -- Montana, central Alberta, northern Alberta – are enabling modelers from Massey State University in New Zealand to examine the role that latitude may play in susceptibility of bats to WNS.

WCS Canada and the Alberta crew thank the many volunteers who helped with this project, and the main funders – US Fish and Wildlife Service and Alberta Conservation Association. This is part of a larger project to examine species-specific susceptibility of western bat species to WNS. For more information, visit the project website: www.science4bats.org.



Alberta biologists arrive at Cadomin Cave in January 2019 to count bats, and attach radiotransmitters and modified ibuttons to bats for logging frequency and duration of arousals during hibernation. Photo: C. Olson.

British Columbia

Northern Myotis Maternal Roost Project (Northeastern BC)

Brian Paterson and Inge-Jean Hansen

Northern Myotis (*Myotis septentrionalis*) is a federally endangered bat species that requires mature forest habitats to birth and rear young. Blue-listed provincially, Northern Myotis have experienced dramatic die-offs (>90% population level declines) in eastern North America due to White-nose Syndrome (WNS). As WNS spreads to central and western North America, it is important to refine the distribution and habitat requirements for this species, especially in core parts of their range such as northeastern British Columbia (B.C.), consistent with a schedule of short-term studies outlined in the finalized Recovery Strategy (ECCC 2018) for Northern Myotis.

During Year 1 of the Northern Myotis Maternal Roost Project (PEA-F19-W-2668) funded by the Peace Region Fish and Wildlife Compensation Program (FWCP), we analyzed bat detector data from 28 locations, in part to inform capture locations targeting Northern Myotis.

Acoustic monitoring yielded several important observations including:

- Acoustic records suggest the presence of Northern Myotis at 10 sites in the Dinosaur, Peace, and Finlay subregions of Williston Reservoir;

- Confirmation of multi-species bat hibernacula along the northern side of the Peace Reach of Williston Reservoir (Big-brown bats previously recorded in winter, Little-Brown Bat tracked to the bluffs in October, and high myotis acoustic activity in early spring and late fall including both Long-eared and Northern Myotis);
- Documentation of Eastern Red Bat (*Lasiurus borealis*) migration in mid-May 2018 (single night with 76 detections);
- Documentation of regional migration timing (late April) of Hoary (*Lasiurus cinereus*) and Silver-haired bats (*Lasionycteris noctivagans*);
- Acoustic evidence of Eastern Red Bat, Hoary Bat, and Northern Myotis in the Finlay subregion of Williston Reservoir; and
- Acoustic evidence of high Silver-haired Bat activity on the west side of Williston Reservoir and very low Big-brown Bat (*Eptesicus fuscus*) activity, consistent with suspected provincial distributions.

Capture efforts for Northern Myotis occurred over seven nights between July 12 and July 18, 2018 and a total of 29 bats were captured including four Northern Myotis, despite some poor weather conditions. VHF transmitters were affixed to two lactating females; however, the transmitters were either groomed off shortly after deployment or not relocated. One of the lactating females was tracked to a stand of aspen on the north side of the Peace River; however, the following day her transmitter was found, groomed off, on an island near the Peace Canyon Dam. A single lactating female Little Brown Myotis was also tracked to a natural tree roost located in a fire-scarred, mature aspen with approximately 60% bark remaining. The aspen was one of a number of deciduous trees remaining in a mixed-stand cutblock post harvesting.

Capture efforts also suggest a Long-eared Myotis (*Myotis evotis*) maternal roost in rock bluffs along the north side of the Peace Reach of Williston Lake where several lactating female Long-eared Myotis were captured immediately after emergence.

An important lesson from the first year of this project is the poor adhesion strength of Skin-Tac, a water-based adhesive that we used instead of latex-based Skin-Bond or Perma-Type adhesives that are no longer available. Skin-Tac does not seem to be a suitable alternative to these products despite seeming to cure adequately on the bats. Presently, the best solutions are likely Osto-Bond and Torbot, which, according to testing conducted by Dr. Tim Carter (Carter 2009), have the same properties. While Osto-Bond and Torbot are probably the best adhesive products currently available based on discussions with Dr. Tim Carter, Dr. Cori Lausen, and Kim Livengood (Titley Scientific), these products have inferior adhesion and re-adhesion properties and will not last as long as previously available products such as Perma-Type, which may be available again in the future. An interesting trial from Dr. Carter regarding the adhesion strength of several products is provided as a reference below (Carter 2009).

Another year of this program will continue in the Peace Region in 2019 with funding provided by the Peace Region Fish and Wildlife Compensation Program and the Habitat Conservation Trust Fund.

Carter, T., Sichmeller, T.J., and M.G. Hohmann. 2009. A field and laboratory-based comparison of adhesives for attaching radiotransmitters to small insectivorous bats. *Bat Research News*, 50(6), 81-85.

Little Brown & Northern Myotis Habitat Assessment & Enhancement in the in Taku River & Upper Yukon Watersheds, the traditional territory of the Taku River Tlingit First Nations

Brian Paterson, Inge-Jean Hansen, Cori Lausen, Taku River Tlingit First Nations

With the support the Taku River Tlingit First Nations (TRTFN) and the Aboriginal Fund for Species At Risk (AFSAR) we conducted year-round bat inventory (acoustics and capture) in the TRTFN territory in 2017-2018.

Acoustic sampling

Bats were recorded as soon as detectors were deployed in mid-August 2017. The latest seasonal bat recorded, a Little Brown Bat, was recorded on October 8, 2017. No bats were recorded during the winter. Little Brown Bat was the most frequently recorded species. Notable acoustic species detections include:

Hoary Bat (n=3 passes);

Silver-haired Bat (n=3 passes);

Long-eared Myotis (n=6 passes);

Yuma Myotis (n=3 passes).

The most detections at a single monitoring location (n=2,545 passes, likely all Little Brown Myotis), occurred along the Tagish River over three nights of sampling, followed by a detector on the edge of Atlin Lake (n=926 detections over 182 nights including winter 2017/2018).

Capture

Over ten nights of capture between August 7 and August 16, 2018, at ten different sites near Atlin, BC and the southern Yukon, we captured 65 bats of two species (n=63 Little Brown Bat and n=2 Long-eared Myotis). Both Long-eared Myotis captures were confirmed via genetic testing of wing biopsy punches taken during capture. All Little Brown Bats were placed in a holding bag and gently shaken to elicit echolocation pulses to distinguish whether they are Little Brown Bats or the morphologically similar Yuma Myotis. Two voucher specimens provided by Atlin community members in 2017 and 2018 were provided to the project team; however, due to the desiccated nature of the specimens, species ID was not possible in-hand. Subsequent genetic testing confirmed both specimens as Little Brown Bat.



Mistnetting with Land Guardian Trevor Williams on Pine Creek, near Atlin, BC; Photo credit: Brian Paterson.

Habitat creation and outreach

All 15 bat houses were installed in the Atlin community or surrounding area. Three of the 15 were distributed to homes that were planning on conducting exclusion of bats from homes and outbuildings in the future. This is consistent with and supported by BC Community bat programs (www.bcbats.ca). Homeowners who accepted bat houses were also provided with guidance and information on proper timing for exclusion as well as tips for success from project biologists, who are also members of BC Community Bat Programs. Follow-up and monitoring of bat houses will continue to be conducted by the TRTFN land guardians and occupied bat houses on public or TRTFN lands will be registered with BC Community Bats. Homeowners who accepted bat houses will be encouraged to do the same.

Discussion

This project provides the first capture and genetic records of Long-eared Myotis in northern BC. Long-eared Myotis are not known to occur in the Yukon and are known from few locations in northern BC. The closest capture location prior to our inventory is approximately 400 km east from our capture site (east of the Cassiar Mountains) and was not confirmed genetically (Vonhof *et al.* 1997). Several acoustic recordings of Long-eared Myotis were also made at the southern end of Atlin Lake during this project. Given the availability of suitable habitat and lack of geographical barriers, it is likely that this species also

occurs in the Yukon. Long-eared Myotis has been genetically confirmed along the Nahanni River in the Northwest Territories (Lausen *et al.* 2014) and in southeast Alaska, where they used to be called Keen's Myotis prior to a recent taxonomic revision (Lausen *et al.* 2019).

Hoary Bat was recently confirmed acoustically in the Yukon (Slough *et al.* 2014) and has been confirmed acoustically from northeastern BC near Fort Nelson (BC Conservation Data Centre 2019). Our diagnostic recordings of Hoary Bat extend the known range of Hoary Bat in BC by approximately 600 km westward, across the Cassiar Mountain Range.

Silver-haired Bats are known to occur in southeast Alaska (Alaska Department of Fish and Game 2019). No definitive acoustic records have been recorded in the Yukon (Slough *et al.* 2014). Silver-haired bats have been captured in northern BC west of the Cassiar Mountains near Liard River (BC Conservation Data Centre 2019). Recordings from this inventory provides evidence that Silver-haired Bats occur more than 400 km west in BC than previously known. The presence of Silver-haired Bat in Atlin is supported by low slope echolocation pulses (<4 octaves per second (OPS)), "singing" sequences that may be associated with mating behavior (unpublished data), and confirmed presence in southeast Alaska (Blejwas *et al.*, 2014).

Yuma Myotis have recently been confirmed in southeast Alaska (Olson *et al.*, 2014) but are not known from the Yukon or northern BC. Yuma Myotis are known to occur between Hazelton and Prince Rupert, BC (BC Conservation Data Centre 2019). We recorded four potential Yuma Myotis calls near Atlin during this inventory, adding to the previously recorded Yuma Myotis calls recorded in 2015-6 at Warm Springs made by C. Lausen (unpublished data).



Bat migration in the southern Gulf Islands

Kyle Nelson, MSc Candidate, Victoria, BC

I'm working on a Master's at the University of Victoria, under the supervision of Dr. Brian Starzomski in the School of Environmental Studies. My thesis is focused on migratory movements in southwestern British Columbia, particularly looking at how the southern Gulf Islands serve as a corridor for bats moving between Vancouver Island and mainland B.C. and Washington.

Since the spring of 2018, I've deployed a number of SM4Bats at locations in Gulf Islands National Park Reserve that likely serve as jumping-off points for bats crossing between the Gulf Islands and the U.S. San Juan Islands. I'm using the data from those to get an idea of the timing of spring and fall migration in the area. This will help me time mist netting that I'm planning to do this fall. I'm aiming to get hair samples from individuals during their migration and use stable isotopes to trace them back to their place of origin.

To accurately trace individuals to their place of origin I need to develop a reference model of isotope distributions for B.C., using hair samples taken from bats after they've molted but prior to them migrating. I can use museum specimen for this, but where possible I'd like to use more recent captures. My ultimate goal is to create a robust stable isotope model that could be applied to migration studies anywhere in B.C. and Washington, but it's strongly dependent on the number of samples I can collect. If anyone wants to help with my research and is planning on capturing bats during July and August, or will have dead bats turned into them during that period, please get in touch with me (krnelson112@gmail.com).

Update on "Critical Assessment of Bat Boxes as a Conservation Tool" Research Project

Susan Dulc, Thompson Rivers University (TRU); Cori Lausen, Wildlife Conservation Society Canada; Leigh Anne Isaac, Kootenay Community Bat Project

Under the supervision of Dr. Cori Lausen (Wildlife Conservation Society, WCS) and Dr. Karl Larsen (TRU) - with additional support from Dr. Leigh Anne Isaac, Dr. Mark Paetkau (TRU) and other partners - the first field season for this collaborative project to investigate roosting ecology, roost characteristics and reproductive success/health impacts of boxes on bats is underway. We are grateful for project funding provided by the US Fish and Wildlife Service and a Mitacs Accelerate internship. Special thanks also to the Western Bat Working Group (WBWG) and Holohil – our project was awarded a Bob Berry Fund Scholarship at the WBWG biennial meeting in Tulsa, OK in April 2019!



Bat boxes...

We selected several anthropogenic structures at seven discrete locations within the Creston Valley (Kootenay region), BC for inclusion in our study. All sites were originally identified, and monitored on an ongoing basis, by the Kootenay Community Bat Project (KCBP). KCBP was instrumental in facilitating landowner contacts and partnerships and we are grateful for their assistance. All of these sites are known maternity colonies of Yuma and/or Little Brown Myotis and include three buildings (attics), six multi-chambered boxes, and two bat condos (one existing occupied condo and one newly installed this spring by the Creston Valley Wildlife Management Area (CVWMA).

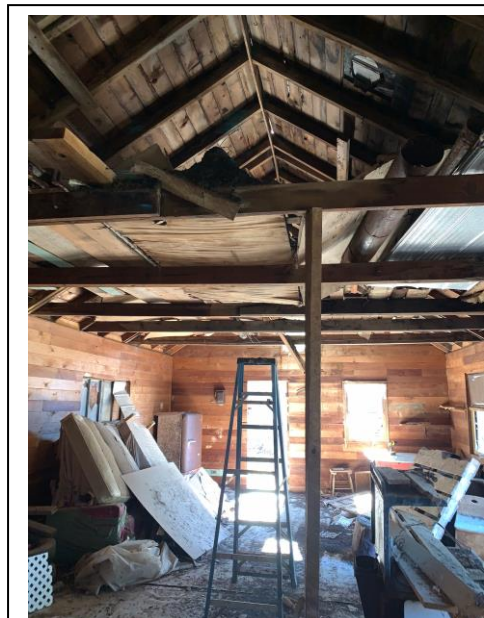
In late March 2019, we installed HOBO temperature/humidity loggers, programmed to monitor in 15-minute intervals, inside these roost structures; at each of the seven sites, an additional HOBO logger will record the ambient temperature and humidity conditions outside the roost structures, in the same

15-minute intervals. Passive data collection will continue throughout the summer at each of the sites using HOBOS (temperature/humidity) to characterize microclimates. Titley RoostLoggers will also record acoustic activity to assist in characterizing roost use. We expect to assemble and deploy infrared-based, passive occupancy monitors, designed by Jason Rae (WCS), at our sites for field trials beginning in June. We are hopeful these will provide effective continuous monitoring, as well as calibration and augmentation of our other occupancy data collection methods.

After a slight setback to the field season (I broke my ankle in late April), some of our plans for May field activities have had to be modified. With the dedication and help of a great field assistant (Emily de Freitas) and KCBP Bat Ambassadors (Donna Carlyle, Georgie West), exit counts have been conducted on a rotating basis at each of the roost sites since May 1, 2019.

Exit counts will continue throughout the summer, interrupted by capture events. We will be capturing bats at each of our sites to determine reproductive status of adults and track growth of volant juveniles over the season. By radio tracking some of our early season captures, we hope to identify some alternate roost sites for additional monitoring.

Guano samples will be collected from each roost site in early summer and again during periods of extreme heat.



and building roosts.

We anticipate these samples will be analyzed at the University of Saskatchewan (directed by Dr. Vikram Misra) for presence of shed viruses. The relative number of shed viruses detected in guano from the different roost types (boxes vs. buildings) will be compared as evidence of heat stress. We will also be collecting any carcasses of dead bats discovered at our sites for necropsy. If carcasses or organ tissues can be preserved in RNAlater soon after death, efforts to detect heat shock proteins may help verify whether bats succumbed to heat stress.

While our focal study area is the Creston Valley, we are also collaborating with Tanya Luszcz on temperature profiling of bat boxes that she initiated in the Okanagan region. Temperature/humidity monitors were installed into bat boxes in three provincial parks and at two private properties in the Okanagan in early April 2019.

Findings from this research project will help inform the new Best Management Practices guidance that is being drafted by various Canadian and US agencies and organizations via an international committee. To become involved in the development of this BMP, contact myself (susandulc@gmail.com), Cori Lausen (clausen@wcs.org), or Jordi Segers (jsegers@cwbc-rcsf.ca).

Special thanks to: all of the participating landowners in both the Kootenay and Okanagan regions; Marc Andre Beaucher and Julia Shewan, of the Creston Valley Wildlife Management Area (CVWMA) for their assistance with HOB0 installations in Creston; Tanya Luszcz (Canadian Wildlife Service) and Sara Bunge (BC Parks) for assistance with installations in the Okanagan; and Jared Hobbs (J Hobbs Ecological Consulting) for helping me with Creston installs and then stepping in to train my field assistant when I was unable to do so in May. Many thanks to our numerous project collaborators and volunteer participants.

BC Community Bat Program

Mandy Kellner, BC Community Bat Program Provincial Coordinator, bcbats@gmail.com

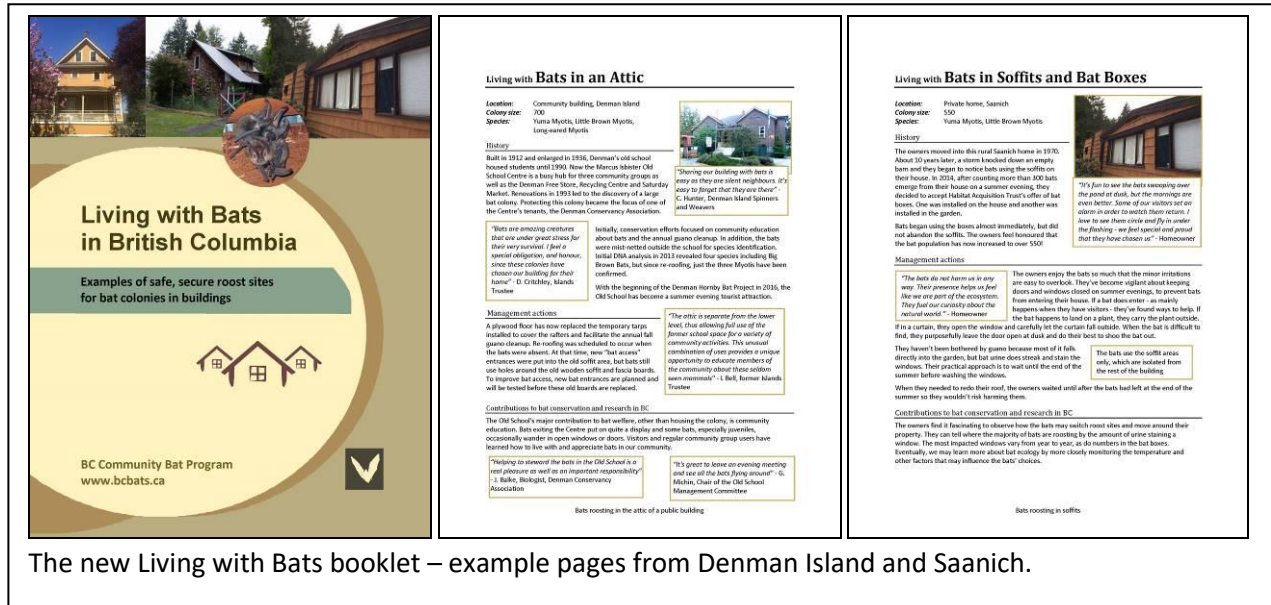
Bat-friendly communities

In early 2019, Peachland became BC's second Bat-friendly Community, and followed up this success by hosting their own "Bat Matters" Chiroptera Conference. The conference was focused on sharing information and approaches for developing bat-friendly communities, and hosted people from across the province, including a number of Community Bat Program Regional Coordinators and Bat Ambassadors. A press conference and wine and cheese, including samples from local wineries, opened the event. There are currently a number of other communities working towards bat-friendly status, including Summerland, Cumberland, and Richmond. Contact your regional bat program if you would like more information or to get involved.

Resources

This spring saw the Release of "Living with Bats", our latest booklet, which highlights a variety of situations where colonies are maintained in buildings. You can access the document on our website here: [Living with Bats](#).

We are currently working on updating BMPs for community bat programs, private landowners, and bat-friendly communities. These BMPs will incorporate recent knowledge from local bat projects and will address promoting, constructing, and installing bat houses. These BMPs will also be shared with the international Bat Box Subcommittee, who is taking a research-based approach to developing specific guidelines related to temperature and placement of artificial structures (see article below).



The new Living with Bats booklet – example pages from Denman Island and Saanich.

We are also working with Habitat Acquisition Trust to develop an updated outreach strategy for working with industries, particularly Pest Management Professionals, but also other groups who may encounter bats during regular work activities. Historically, regions have conducted personal outreach to local companies, with occasional workshops and presentations, and resources shared across the province. We are considering how to reduce overlap in efforts, as well as how to support or encourage industries to have bat information incorporated through their own professional organizations and training opportunities.

Annual Bat Count

The bat count is on! We continue to encourage bat counts and reports of new roost sites for our BC Annual Bat Count. Counts engage landowners, encourage stewardship, and contribute valuable data to our provincial population monitoring effort. We continue to explore adding our roost count data to the larger NA Bat Monitoring Program (see the NABat article below).

The BC Community Bat Program is funded by the Habitat Conservation Trust Fund/ Forest Enhancement Society of BC and Habitat Stewardship Program, in partnership with the Ministry of Environment and BC Conservation



Counting bats. Photo: Okanagan Bat Project

Foundation and local bat programs and land conservancies across the province. Visit the 'Contact Us' page on our website for a list of regional bat projects involved in the Community Bat Program in 2019/20. New this year are projects in Cumberland and Pemberton, as well as new coordinators in the Thetis, Thompson, and Okanagan regions.

Kootenay Community Bat Project Update

Elodie Kuhnert, Kootenay Community Bat Project

With the support of the CBT, RDEK, RDCK, HSP and HCTF; the Kootenay Community Bat Project will be involved in several exciting activities in 2019.

Bat count workshops are happening in May throughout the region to provide bat count training and to pair up volunteers with candidate colonies. The objective of this initiative is to improve and increase the public's involvement so that the number and frequency of colony counts increase. We are also working on the development of an electronic tool for reporting bat count data with 2020 being the anticipated roll out date.

Several education and outreach events will occur in June and July throughout the region. The objectives are to increase the exposure of our program and to solicit public feedback about potential new colonies. We will continue with site visits this season to assist landowners.

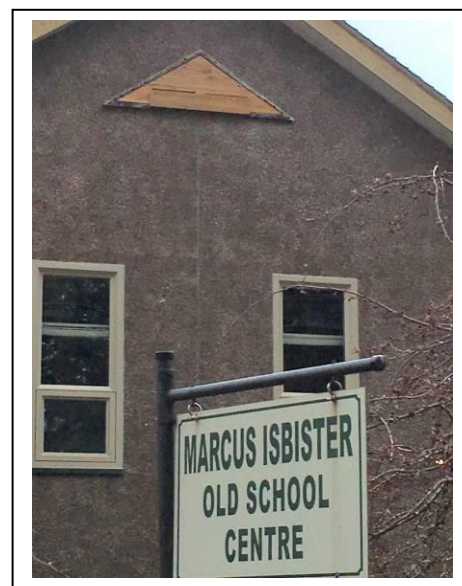
We have developed a new database system to improve efficiency, reduce entry errors and speed up data summaries and reporting. We plan on tweaking the database this year and if successful, this new database will be offered to other regions in BC.

To round out an eventful summer, KCBP will be hosting the joint BCBAT/ABAT meeting scheduled to occur in September.

Denman's Marcus Isbister Old School Centre has New Bat Entrances!

Jenny Balke, Denman-Hornby Bat Project

The large maternal bat colony in the attic of Denman's Old School community centre lost its traditional access to the attic when the old damaged roof was replaced. Despite the addition of new under-soffit bat-entrances, the colony of 700+ little brown, long-eared, yuma and big brown bats chose to use higher gaps primarily in the old rotting fascia boards as exits and these boards are also slated for replacement. Thanks to the very generous work of community volunteers, Michael Rapati and David Scruton,



the bats now have new alternative gateways for getting in and out of the Old School attic this summer. The task involved carefully drilling through the solid, one inch thick, 1960's stucco wall panel (without cracking it), as well as the four other wall layers that had been added over the last 100 odd years. Slits of ¾" and 1" were created in two odd-looking triangles that existed on the front of the attic dormers (origin unknown). The triangles were filled in to give the "louvered-look" and grooved cedar bat-landing boards were added both inside and out below the slits. Now, we wait to see if these entrances will meet with the bats approval!



BatCam is live in Metchosin

Paige Erikson-McGee and Christian Englesoft, Habitat Acquisition Trust



Habitat Acquisition Trust has a BatCam up and running! Footage captures Townsend's Big-Eared Bats in a portion of an old barn, modified to house the bats.

Cumberland Bat Collective Comox Valley, Vancouver Island

Tim Ennis, North Island Regional Coordinator northisland@bcbats.ca



In the spring of 2018, the Comox Valley Land Trust (CVLT) in partnership with the Cumberland Community Forest Society (CCFS) decided to jointly purchase an Echometer Touch 2 Pro. Our intention was to attempt to confirm the presence of rare-listed bat species on private lands which are the subject of our organizations' conservation land acquisition programs (Morrison Creek Headwaters and Perseverance Creek riparian area respectively). This was a part of a broader program

to inventory for rare species across all taxa (Western Screech Owl, Painted Turtle etc.) to support funding proposals for these land acquisition projects.

What we found was that we became quite addicted to going out with the Echometer, and so too did many of our friends and neighbours in the village of Cumberland. Our ad hoc group of bat enthusiasts branded ourselves as the Cumberland Bat Collective and began doing walking transects all over the Comox Valley, targeting lakes and wetlands, riparian areas, estuaries, alpine areas, mine vent shafts, bridges, older (1890's) neighbourhoods etc. We logged approximately 300 hours of mobile acoustic recording time (March – October, 2018), and recorded thousands of bat passes.

Through pestering regional bat biologists with our persistent questions, our enthusiasm was noted, and we were invited to take responsibility for a NA Bat Monitoring Program grid cell in the Comox Valley for the 2018-2022 seasons. We were able to find willing private landowners in each quadrant, and the required equipment was loaned to us by the BC Ministry of Environment and Climate Change Strategy.

Shortly thereafter, the BC Community Bat Program and the Habitat Acquisition Trust (Victoria) contacted us to inquire about our willingness to take on the responsibilities of delivering the Community Bat Program for the northern portions of Vancouver Island. Our team of Cumberland Bat Collective volunteers had grown by then to approximately 20 people. We discussed the opportunity and decided that if we could obtain some funding support, we would accept the responsibility. We then applied for and received some funding support from the Fish and Wildlife Compensation Program (BC Hydro) and agreed to take on the role.

Our group is connected on an invite-only Facebook group where we share internal communications, ideas, lessons learned, and other bat resources. In April we launched a public Facebook group we called the Cumberland Bat Project whereby we can communicate with the interested members of the general public about our programs as they role out.

Our group is primarily focused in 2 programmatic areas: research (inventory and monitoring) and public outreach. Some of our members are biologists, while others are educators, event production specialists, carpenters etc. In the 2019 season we plan to:

- Continue with the NA Bat program;
- Install our own, permanent acoustic “bat observatory” to collect year-round data;
- Continue to inventory likely bat habitats, and look for roost sites;
- Begin monitoring any roosts sites we discover;
- Respond to public inquiries;
- Present bat curriculum to school groups and summer camps;
- Conduct public bat walks;
- Work towards obtaining Bat Friendly Community status for Cumberland and possibly Courtenay and Comox after that, and;
- Continue to look for sources of funding for the above.

We are a relatively new and enthusiastic group in the BC bat community, and look forward to growing our capacity, knowledge about bats, and public support.

Tri-Cities Bat Stewardship activities in 2018

(Port Moody, Coquitlam and Port Coquitlam, BC)

John Saremba, Burke Mountain Naturalists Bat Team Coordinator

Last year was a very busy year for the Burke Mountain Naturalists (BMN) Bat Team in conducting a variety of monitoring, stewardship, education, and outreach activities. Key services, projects and activities in 2018 included:

Monitoring Sessions – including emergence counts at roosts, foraging observations, and species identifications with bat detectors. Over 310 person-hours of volunteer time were donated for the monitoring program. The majority of bat monitoring was done at Metro Vancouver Regional Parks in the Tri-Cities area, as well as three municipal parks.



BMN volunteers preparing for bat monitoring session at Minnehada Park.
Photo: John Saremba

Our monitoring found that the number of bats in Colony Farm Regional Park, Minnehada Regional Park and Widgeon Marsh Park Reserve was similar to those from 2017 monitoring results. All three park locations continue to support a large and ecologically significant number of bat colonies at one or more roosts in each park.

BMN Stewardship, Education and Outreach Activities - Members of the BMN Bat Team and other volunteers also conducted bat stewardship, education and outreach activities totaling an additional 388 person-hours of volunteer time. They also participated in community events and gave bat presentations.



BMN volunteers and Brad Parrish (City of Coquitlam staff) ready to install bat houses in Coquitlam River Park. Photo: John Saremba

Bat House Construction and Installations - the construction and installation of bat houses and accessories continued to be a major component of our BMN bat program (photo 2). The BMN donated a custom-made take-apart bat house for display in the Seaview Community School's Nature Room.

We have also designed a large four-chamber bat house with the exterior made of cedar wood rather than plywood, eliminating the need to paint or stain the exterior. This has been enabled with the use of a device called a Kreg jig, which allows us to combine two pieces of 8 to 10 inch wide cedar boards into a single relatively

water-tight board.

Plans for 2019 - 2019 is shaping up to be just as busy with more focus on citizen-based bat research projects for the BMN Bat Team. And because of the generosity of our BMN members and the Pacific Parklands Foundation (PPF), we recently obtained additional funding for our bat stewardship program,



Installation of a four-chamber bat house on a wildlife tree in Pitt Meadows with the exterior made of western red cedar wood. Photo: John Saremba

an Anabat Walkabout bat detector and accessories, Hobo data loggers and a bat roost logger for monitoring temperatures, relative humidity, and bat activity in and around our bat mini-condo.

We have already purchased and installed four Hobo data loggers at the Colony Farm bat mini-condo. These data loggers will complement similar devices at other bat roosts in our area (i.e., data loggers supplied by Leah Rensel, Ed Hill and Metro Vancouver Regional Parks), as well as at other locations in BC. Special thanks goes out to BMN member Gord Mayenburg for his excellent work in assisting with this installation and many other artificial bat roost projects.

This equipment are key components of an important research project to study conditions inside artificial bat roosts, which is critical in light of bat mortalities in the past couple of years at bat houses in our area, the Okanagan and in the United States. Studying the environmental conditions in these artificial bat roosts will help bat biologists, volunteers, and agencies enhance the design, installation and maintenance of such roosts.

We greatly appreciate the continued interest in and support of our bat stewardship program by BMN members, Pacific Parklands Foundation, Colony Farm and Minnehada Park Associations, and Metro Vancouver Regional Parks, SCBats, and the BC Community Bat Program. BMN partners with Metro Vancouver Regional Parks (MVRP) and Pacific Parklands Foundation, City of Port Coquitlam, City of Coquitlam, City of Port Moody, Colony Farm and Minnehada Park Associations, Terry Fox Secondary School (Port Coquitlam) and Seaview Community School (Port Moody), UBC Biology, BCIT Forestry, Wildlife and Recreation, University of the Fraser Valley Biology Department

Our Bat Team work was done with guidance from the BC Community Bat (BCCB) Program. The support of Mandy Kellner (Provincial Coordinator), and Aimee Mitchell and Danielle Dagenais (BCCP Program Regional Coordinators)



Bat mini-condo built in October 2017 by Contractor John Grzesiak and BMN volunteers at Colony Farm Regional Park, Coquitlam, BC. Photo: John Saremba

was greatly appreciated. As well, considerable support was provide by Dr. Cori Lausen and Orville Dyer.

Saskatchewan

Brigham lab update

Mark Brigham, University of Regina

Its field season and time to collect some data. Dana Green (PhD), Eric Green (PhD) and Adam Sprott (M.Sc.) will all be in Cypress Hills this summer. We will report on their findings and projects in the fall. Erin Swerdfeger (M.Sc.) is in the home stretch of writing up her thesis on how bats migrate through Saskatchewan in the context of wind power developments. Audrey Lauzon (M.Sc.) defended here thesis (bats and long term forestry implications) in April. Erin Baerwald has a busy summer of writing manuscripts, helping me supervise students and even a job interview or two. I am trying to get a volume on bat echolocation out the door, the revised Bats of BC volume finished off and a chapter for the 50th anniversary of NASBR written. Busy times for all.

National Park Bat Surveys Update – Saskatchewan

Cory Olson, Sky Ecological

In the Winter 2018 edition of the WCBN Newsletter, we summarized findings of year one of the Grasslands National Park Bat Inventory. Genetic testing has since been completed, largely confirming original observations. DNA barcoding of guano samples collected in Grasslands National Park in 2018 confirm the presence of Little Brown Myotis, and to a lesser extent Big Brown Bats, roosting in park buildings. In addition, a Long-eared Myotis was visually observed roosting in an abandoned house in 2018, but was not among the samples genetically tested. Of the four species captured in Grasslands, three were confirmed in the park using DNA barcoding (including from wing swabs and/or guano samples), including Little Brown Myotis, Long-eared Myotis, and Big Brown Bats. The bat field identified in 2018 as a Western Small-footed Myotis was DNA barcoded as California Myotis, but these two species are suspected to share the same haplotype for the sequence being tested, making the genetic test unreliable for separating these two species. Including three additional species only identified acoustically (Hoary Bat, Eastern Red Bat, Silver-haired Bat), project results support the presence of seven species in the park during at least some portions of the year. This project was carried out in collaboration with the Parks Canada Agency.

In July 2019, I will be leading a bat survey in Prince Albert National Park on behalf of the Parks Canada Agency, which will include a combination of building inspections, mist-netting and acoustic detection. Year two of the Grasslands National Park Bat Survey is pending.

Alaska

Alaska Center for Conservation Science

Jesika P. Reimer, Wildlife Ecologist, email: jpreimer@alaska.edu

The Alaska Center for Conservation Science is wrapping up its third, and final year of little brown myotis maternity roost monitoring in Alaska. A detailed final report, summarizing all three years of data, will be posted to our website by July 2019. The report will include information on roost-use, colony size, morphometrics and reproductive rates, as determined through emergence counts and capture surveys; a general description of seasonal activity as related to various environmental variables, based on three years of acoustic monitoring data at 22 maternity roosts; and a brief description of roost-switching as observed through a pilot study using radio telemetry of females at four known maternity roosts. The Alaska Department of Fish and Game plans to continue a basic level of acoustic and annual emergence count monitoring at a small number of these known maternity roosts, to monitor for population fluctuations throughout the state.

Website: <https://accs.uaa.alaska.edu/wildlife/small-mammal-ecology/>

Western

Finalizing the Development and Testing of an Anti-Pd Probiotic Cocktail – a collaborative project of WCS Canada, Thompson Rivers University, and McMaster University

Cori Lausen, Wildlife Conservation Society Canada

We are underway with our second of two captive bat trials testing and refining a prophylaxis approach for reducing the severity of white-nose syndrome. Our goal is to use a probiotic cocktail to inhibit or reduce the growth of the fungus *Pseudogymnoascus destructans* (Pd). Male Yuma Myotis bats are being held at the BC Wildlife Park in Kamloops to test both the probiotic and an effective application method. This is a collaborative project of Dr. Ann Cheeptham, Thompson Rivers University, Dr. JP Xu, McMaster University, and Dr. Cori Lausen, Wildlife Conservation Society Canada, and two graduate students: Nick Fontaine (TRU) and Adrian Forsythe (McMaster).

Our final probiotic consists of four bacteria, all naturally found in soil, and sourced from the wings of bats in B.C. – from big brown, Townsend's Big-eared and Long-eared Myotis bats. In synergy, these 4 microbes have been shown to effectively inhibit the growth of Pd. The objectives of the current spring trial are to: 1. Verify these microbes do not cause any health effects for the bats; 2. Design an inexpensive, effective and easy deployment method for applying this probiotic in the field at summer maternity colonies; 3. Verify that a sustained wing microflora change can be achieved.

In our fall trial we used a single bat enclosure at the Wildlife Park. But due to aerosol transmission of the microbes, a second separate enclosure was built in March to ensure substantial separation of the 'control bats' from the 'treatment (application)' bats. Each of these enclosures is divided into two flight chambers, allowing the bats 10 x 4 feet of flying room and a single chamber bat box to roost in. This bat box has a front access door allowing bats to be periodically accessed to swab wings for testing of wing and muzzle microflora.

A passive application method is being tested in this trial, preparing for potential field applications in late summer. This passive applicator is clay, simulating a natural way to transfer soil microbes to bats, as they would likely acquire them in natural rock crevice roosts. We are experimenting with applying the probiotic in various clay applications including a paste that can be smeared at the top of the bat box landing platform, or a spray method for better coverage up into the bat box depending on whether there are bats present at the time. The goal is to have bat box roost substrates coated with the fine clay particles that have probiotic adhered to them so that as bats move around in the bat box, or as they come and go from the box, they pick up a regular, small dose of the probiotic microbes, and over time will incorporate them into their regular wing microflora. Ideally this would happen over the course of the last few weeks of summer, and then bats would leave to their hibernation sites armed with the ability to better fight off the Pd fungus.

Our captive trial is tentatively scheduled to wrap up in late June/early July to prepare for going to field in the Metro-Vancouver area late July/early August. The decision to go to field will depend on this trial's results. Graduate student Leah Rensel of UBC Okanagan (supervisor Dr. Karen Hodges) is in her second summer of gathering baseline ecological information at the study sites that she has selected for this probiotic project. Bats are being PIT-tagged in preparation for the field application of the probiotic so that we can track return rates, survivorship, wing microbiome changes, etc.

We thank our Advisory Committee: Dr. Glenna McGregor, Dr. Purnima Govindarajulu, Dr. Helen Schwantje, Dr. Dave Sedgman, and Orville Dyer; funders: National Fish and Wildlife Foundation (US Fish and Wildlife Service), Habitat Conservation Trust Foundation, Fish and Wildlife Compensation Program Coastal, fightWNS, Kamloops Nature Club, BC Ministry of Environment and Climate Change Strategy, and others; and partners including BC Wildlife Park, BC Parks, Little Shuswap Lake First Nation, and others. We also thank the growing number of students at Thompson Rivers University who are helping with the daily care of the bats!

North American Bat Monitoring Program Gears Up For 2019

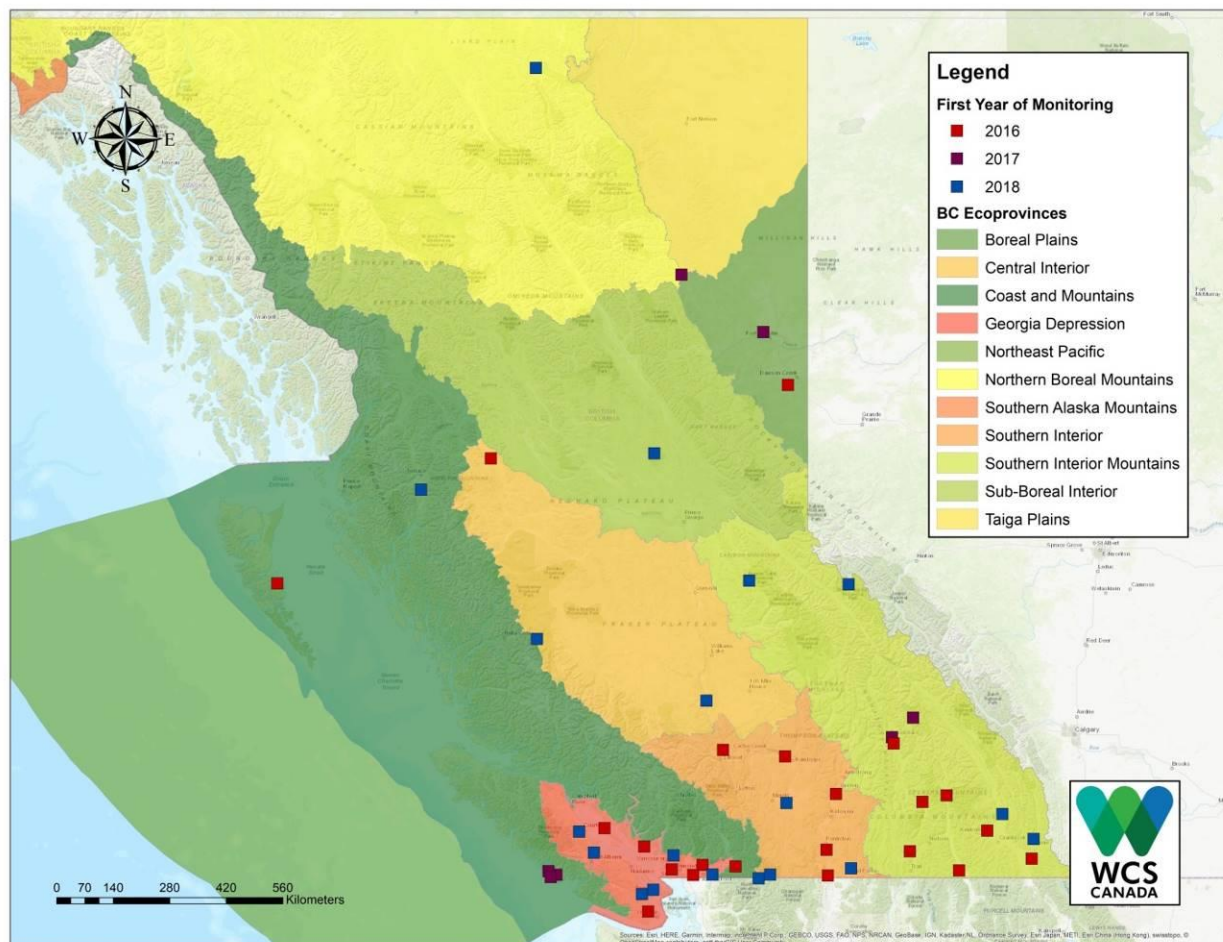
Cori Lausen, Wildlife Conservation Society Canada

Jason Rae (WCS Canada) and Orville Dyer (MOECCS) are coordinating acoustic monitoring kits again this spring. As in previous years, monitoring will occur roughly mid-May to mid-July, with southern grid cells monitoring earlier than northern grid cells. In the included map, you can see the cells that were

monitored in 2018. It is anticipated that there will be a couple more 10kmx10km grid cells monitored in 2019, bringing the total number to approximately 50.

New in 2019 is a pilot to include some passive bat detectors that will be strategically placed to collect pass rate data allowing an activity index. This activity index summarizes species presence in a 5 minute period to reduce the bias of a single bat generating multiple recordings. This may allow relative abundance to be monitored using passive data instead of driving transects – for cells that do not have a driving transect, this will enable both species diversity and relative abundance to be tracked over time, and for all other cells it will provide another measure of abundance that extends over 7 nights instead of 3 hours.

We thank Habitat Conservation Trust Foundation, Ministry of Environment and Climate Change Strategy, Fish and Wildlife Compensation Program, Columbia Basin Trust, and Environment and Climate Change Canada for funding. And for contributing data from monitored grid cells, we thank BC Parks, Parks Canada, BC MOECCS, BC Community Bat Program (and respective regional community bat programs within), Fernie Nature, Nature Conservancy Canada, South Coast Bat Conservation Society, Sunshine Coast Wildlife Project, and many additional individual volunteers!



New Technique Proves Useful for Documenting Winter Arousal Rates of Bats – Modified Ibuttons

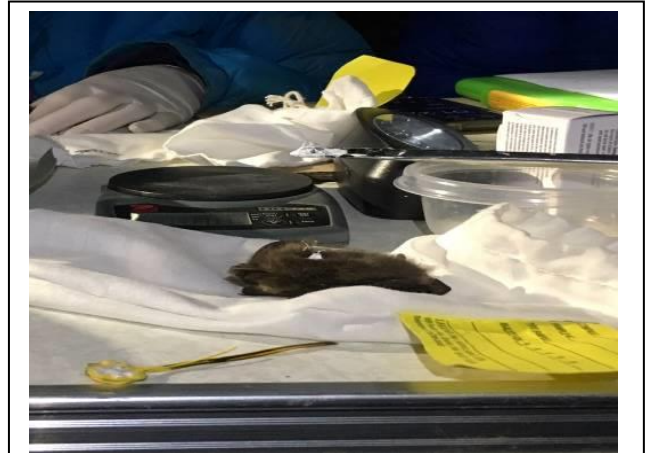
Cori Lausen, Wildlife Conservation Society Canada

This past winter, a team led by Cory Olson in Alberta and by Cori Lausen in B.C., affixed modified ibuttons to bats in Cadomin Cave and Phoenix Mine, respectively. The former is a significant hibernaculum for Little Brown myotis in Alberta and the latter is a newly discovered hibernaculum for hundreds of Townsend's Big-eared bats near the Greenwood area of B.C. Dave Critchley of NAIT in Edmonton remodeled the ibuttons to use a smaller battery and a housing that was only a thin layer of plastidip. These ibuttons were modified by adapting the instructions included in Reeder et al. 2012.

These ibuttons were attached with a small amount of latex glue with the hope that they would fall off on their own by the end of winter when the bat starts to fly around frequently. They were deployed mid-winter in both locations.

Greg Horne, familiar with avalanche technology, arranged for a small RECCO tag that was attached to the ibuttons. These tags are used on butterflies and thus add almost no mass overall to the device. These RECCO tags allowed the modified ibuttons to be located at the end of the winter. Included here is a photo -- long 'tail' of the ibutton is a RECCO tag that adds 0.03g to the modified ibutton for a total weight of less than 1.2g. These tags are on hibernating bats—the goal of the small amount of glue is that the ibutton will fall off when the bat starts to fly prior to emergence from hibernation.

There was mixed success in locating the tags, with interference by the RECCO receiver detected in the mine, but substantially clearer signals in Cadomin cave. A total of 13 (of 20) modified ibuttons were detected in Cadomin Cave using the RECCO receiver, and 8 of these were recovered for data download. One tag was retrieved that was buried deep in a narrow crevice, and would not have been found without the RECCO, highlighting the usefulness of this tool for locating tags. In Phoenix Mine, a total of 8 (of 19) ibuttons were observed in the mine and 5 were downloaded.



Townsend's Big-eared bat sits with a small amount of latex adhesive on its back waits for the glue to partially dry to attach the modified ibutton (yellow, in forefront).

Data from these ibuttons provided a highly detailed arousal pattern of the bats over the last half of the winter. These arousal patterns are being used in finalizing WNS Survivorship Models; models are being developed by Massey State University in New Zealand in collaboration with WCS Wildlife Health Program, WCS Canada, Texas Tech University, and Montana State University. Publications of this new method, together with species-specific WNS survivorship models are in prep.



Hibernating Little Brown Myotis with modified ibutton for temperature sensitive datalogging of hibernal arousal rates. The 'tail' of the ibutton seen folded over in photo is the RECCO tag which provides easy locating using a RECCO avalanche receiver. Photo: Cory Olson.



Greg Horne uses RECCO avalanche receiver in Cadomin Cave to look for modified ibuttons that have either fallen off of bats during the winter, or remain on bats that are still in the cave near the end of the hibernation period. Photo: Cory Olson.

International

International Committee to Develop Bat Box Best Management Practices

Cori Lausen, Wildlife Conservation Society Canada

Co-led by WCS Canada, Canadian Wildlife Health Cooperative and US Conservation and Recovery Working Group, a small committee came into being in spring 2019 to provide guidance for US and

Canada on the use of bat boxes as mitigation tools. First steps are to compile what is known about how well bats do in bat boxes, with focus on Little Brown and Yuma Myotis. Recent published and anecdotal evidence suggests that as heat waves become more frequent, climate change may be causing overheating events in some bat boxes. It is our goal to understand potential causes of this and make recommendations for how to increase the effectiveness of bat boxes. This could include more strategic placements of multiple boxes in a small area to increase the range of available microclimates to a maternity colony. It could also include recommendations for different building substrates, or styles such as mini- or full-size condos which are thought to be less susceptible to having bats overheat. The western Canada field component that will help inform this BMP is being conducted by Susan Dulc (TRU, supervisor: Dr. Karl Larsen – see Sue’s separate newsletter submission) in BC, and Cory Olson (Sky Ecological/WCS Canada) in Alberta. In BC this field research is being funded by US Fish and Wildlife Service (Bats for the Future Fund), and in Alberta it is being funded in part by the Edmonton Community Foundation and by the Alberta Conservation Association.

The goal is to complete the BMP in 2 years. We seek committee members who would like to provide input into the BMP. And we are hopeful to find existing or newly acquired datasets that can inform this BMP. For example, we would like to determine thresholds such as distances between roosts for roost switching pre-weaning, upper temperature thresholds for occupancy/heat-stress mortality events, temperature and roost switching relationships, reproductive successes of bats that use buildings vs boxes, effects of shades installed on bat boxes mid-summer, and more.

Western Bat Working Group Biennial Conference – Tulsa Oklahoma April 2019

Cori Lausen, Wildlife Conservation Society Canada

The WBWG meeting is held every two years, and this year’s event at the Hyatt in Tulsa was attended by approximately 120 attendees. Over the course of the 2.5 day meeting there were research, conservation and management presentations, and three special workshops: Setting Priorities for White Nose Syndrome Research, North American Bat Monitoring Program, and Bat Exclusion Workshop. The former workshop was led by the USFWS and served as a way to discuss WNS updates and future research in lieu of there being no 2019 USFWS WNS Workshop.

Two bat capture nights took place at the end of the conference as part of a local bat bioblitz. Bob Berry Award Winners were announced which included Kyle Nelson of University of Victoria, and Susan Dulc of Thompson Rivers University.

The location of the next meeting in April 2021 has not been decided, but Nebraska, San Diego and Victoria BC have all been brought forward as options; the WBWG board will make a decision in the next few months. The conference has never been held in Canada, and while Victoria seems like a great option, the Board needs to assess whether state and federal US government employees would encounter too many difficulties getting permission to travel out of country.

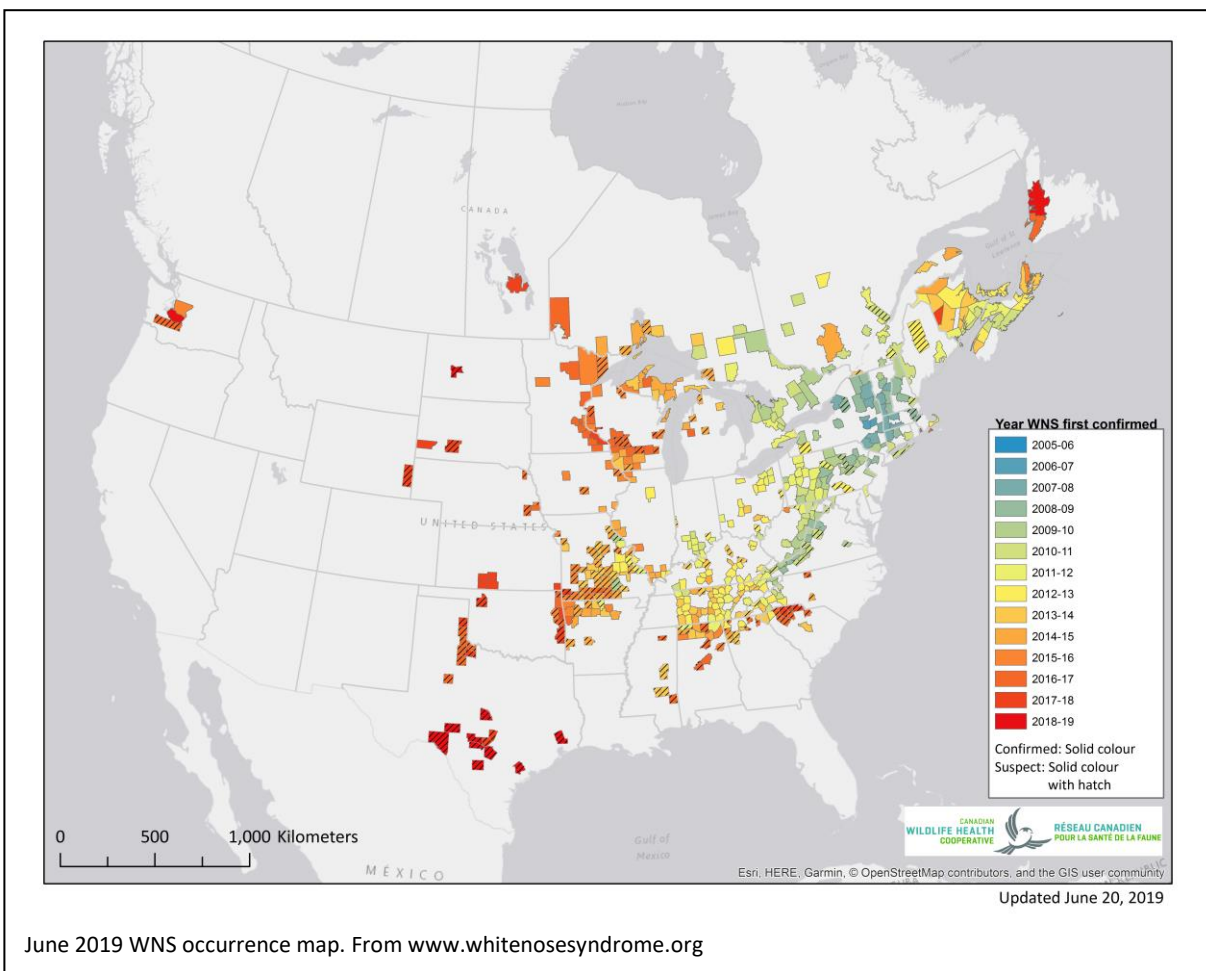
White nose syndrome

Current decontamination protocols

The most recent Canadian decontamination protocol for WNS continues to be available on the Canadian Cooperative Wildlife Health website (http://www.cwhc-rcsf.ca/wns_resources.php) or http://www.cwhc-rcsf.ca/docs/WNS_Decontamination_Protocol-Mar2017.pdf.

Funding for WNS research

The Canadian Cooperative Wildlife Health website also has information on funding for WNS-related research (<http://www.cwhc-rcsf.ca/docs/WNS%20Funding%20opportunities.pdf>)



Recent literature/resources

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- O'Brien, J. 2019. Impacts of Urban Forest Structure on Bat Populations in Kitchener, Ontario.
- Thomas, J.P. and T.S. Jung. 2019. Life in a northern town: rural villages in the boreal forest are islands of habitat for an endangered bat. *Ecosphere* 10(1): p.e02563.

Conferences and training

Save the Dates for the Next BC Bat Action Team Meeting! This could be a Joint meeting with Alberta Bat Action Team!

BC BAT meeting: September 13-14, 2019, Columbia Outdoor School (1.5 hour drive north of Cranbrook)
<http://columbiaoutdoorschool.com/>

Leigh Anne Isaac of Vast Resources is looking into hosting our BC Bat Action Team meeting in Sept. 2019. This meeting will tentatively start on a Friday evening with a social, and include full day meeting Saturday and part-day meeting on Sunday. Location will be in the Cranbrook area to allow people to fly in from Alberta or other parts of B.C. Jordi Segers, Canadian WNS Coordinator, is tentatively planning to attend.

NASBR 2019 Symposium: Oct. 23-26, 2019 Kalamazoo, MI. <https://www.nasbr.org/annual-meetings>

WCSC Training Course: Acoustics Deployment and Analysis (Saskatoon)

The Acoustics Course in Saskatoon is 8-12 July. It includes instruction on all of the fundamental concepts about bioacoustics to ensure you place your detectors in locations and orientations that maximize your chance of being able to differentiate recordings to species level. You will also be given an overview of the detectors on the market, pros and cons of each, when to use directional vs omnidirectional mics, when to use zero-cross versus full spectrum, where to situate detectors for various outcomes (e.g. abundance trends vs habitat use vs species diversity assessment, etc.), and more.

The analysis part of the course will incorporate a new set of workflow options including using Anabat Insight as a powerful vetting software. Hands-on practice with autoID programs Sonobat and KaleidoscopePro, and a critique of auto-identification. Learn about all bat species in North America with hands on practice with identification of common species. Instructor is Dr. Cori Lausen.



Let the face-off begin! Karen Blejwas and Leah Rensel prepare to actively record bats, each with a Titley Walkabout and a Wildlife Acoustics' EMTouch (Spokane Acoustic Course 2017).



Acoustic course in Vancouver 2018. Participants deploy a microphone in Stanley Park in such a way as to increase the time delay of reflected ultrasound.

WCSC Training Course: Bat capture (Lillooet)

The Bat Capture Course will be offered in Lillooet again in 2020. This will be the second time this course has been offered, the first being in 2017. During the 2017 course we captured more than 300 bats during the 6 nights of capture, and handled 10 of the 12 species known from the area: spotted bats, Fringed Myotis, Western Small-footed Myotis, Long-eared Myotis, Long-legged Myotis, Little Brown Myotis, Yuma Myotis, Big Brown bats, Silver-haired bat, and California Myotis. The two species that have been captured in this area in past years are Townsend's Big-eared Bat and Hoary Bat. The course is strategically being held over the new moon, the time period most conducive to capture of spotted bats which are plentiful in the area.



Setting a net across a deep dugout of water in the grasslands of Lillooet; 2017 Lillooet Capture Course. Photo: C. Lausen.

The unique setting of Lillooet allows instruction in net deployment in a large variety of habitat types including ranging from riparian forest to dry open grasslands. Net sets include deep water deployments using bellyboat, quad and triple high nets, rocky talus slopes, etc. We discuss species-specific capture techniques and how you would strategically set nets to capture certain species. Focus is on western species, including northern myotis.



One of seven spotted bats captured in 2017 Lillooet Capture Course. Photo: C. Lausen.

Day-time classroom instruction is several hours a day, and netting usually occurs all night, so the hours are very long! But it is very rewarding and all participants will be able to handle bats every night. Instructor to participant ratio is high ensuring a highly supportive learning environment.

Participants must show proof of rabies vaccination/titre in order to handle bats. Allow at least 3 weeks for this vaccination series, and these may cost you far less if you can join in on an existing vaccination program at a travel clinic. Camping opportunities exist in Lillooet, but hot days may be more conducive to hotels. Please inquire as a block of hotel rooms have been put aside for participants. Student and group discounts are available, please inquire. Registration is capped at 12 students.

For more information and to register visit: www.batsrus.ca/training-courses/



Spotted Bat. Photo: Michael Proctor.

WBCN newsletter submissions

Please submit all newsletter submissions to Mandy Kellner: Western.canada.bat.network@gmail.com
Submissions can be made at any time.

WANTED: Newsletter Editor

Have you always dreamed of making a newsletter? Being the first to know about exciting submissions about bat research in western Canada and Alaska? The WCBN Newsletter needs a new editor, and it could be YOU! If you are interested in this volunteer opportunity to contribute to the communication goals of the BC Bat Action Plan, email Mandy at Western.canada.bat.network@gmail.com

Archived newsletters

This newsletter first started in Fall 2002. It is produced two times per year and is housed by the Alberta Sustainable Resource Development on the Alberta Bat Action Team website. All past issues can be accessed at the following link <http://aep.alberta.ca/fish-wildlife/wildlife-management/bat-management/abat-programs-publications.aspx>

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