

A large, vibrant green leaf with prominent veins dominates the background. In the center-left, a cluster of five small, white, fluffy bat pups is huddled together. They have small, dark eyes and tiny, pointed ears. The background shows a blurred forest scene with sunlight filtering through the trees.

Western Canadian Bat Network  
NEWSLETTER

Issue No. 23  
Autumn 2013

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# Western Canada Bat Network Newsletter

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Autumn 2013

Issue No. 23

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*Front cover photograph by C. Lausen:  
Honduran tent-making bat, seen by many delegates of this year's IBRC/NASBR in Costa Rica*

# UPDATES BY REGION

## Alberta

University of Calgary  
Bat Lab Update



This past summer, little brown bats moved into the two big bat houses that have been put up in the NWT

Things were pretty quiet over the past summer in terms of field research, while lab work went full-steam ahead! With Jesika Reimer successfully defending her MSc thesis in Spring, full-scale research at her study area in the Northwest Territories took a break. Jes and Laura Kaupas spent about 10 days in the summer at the site to maintain long-term records and assess the feasibility of studying the roosting and foraging ecology of *Myotis septentrionalis*. Laura started her MSc in September and plans to work on a project based in NWT, either following on from some of Jes's findings, or on *M. septentrionalis*, the second most common species in the area. Laura completed her BSc Honours project in spring comparing the morphology and diets of *M. lucifugus* and *M. septentrionalis* at that northern site. During the summer, Erin Baerwald's PhD work on the genetics of migratory bats made huge progress, with the help of Laura and Kaylee Scott working magic in the genetics lab. Erin is sorting through the data to elucidate the migratory origins and pathways of hoary, silver-haired, and red bats, and determine how cohesively families or populations are during migration (i.e. in space and time). Over the past month, we have also started to explore the winter behaviour of *Myotis ciliolabrum* in the prairies, in collaboration with former students Brandon Klug who is now doing a PhD with the Brigham lab at Regina, and Cori Lausen who has studied the winter ecology of bats for some time.

Erin, Laura and Robert all attended the International Bat Meetings in Costa Rica in August and presented papers on their research.



Trees that Jesika Reimer and Laura Kaupas tracked two lactating *M. septentrionalis* to.

### Alberta ESRD

Lisa Wilkinson, Species at Risk Biologist, Alberta Fish and Wildlife

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We are looking into starting a bat monitoring program next year, using acoustic monitoring as per the North American protocol that is being developed. We would also like to engage Citizen Scientists in monitoring large maternity colonies, so we would like to hear from people who know about well-established colonies. We have also deployed roost loggers in a few caves in Jasper that have the potential to be hibernaculum.

**ABAT:** We are looking for a new chair or co-chair(s) and hope to have a meeting in December. Contact Lisa Wilkinson if you are interested.

# British Columbia

## Update on the maternity bat colony on Gandl K'in Gwaayaay, Haida Gwaii

Doug Burles, Kamloops BC  
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Many of you may have heard me speak about the maternity colony of Keen's and Little Brown Myotis located on Gandl K'in Gwaayaay (Hotsprings Island). This colony is unusual in that the bats take advantage of crevices in the cliffs and between boulders that are heated by the hot springs to roost and raise their young. It is also one of the few maternity roosts known for Keen's Myotis. You undoubtedly also heard that when an earthquake struck the region on October 29, 2012, the hot springs suddenly dried up! One of the questions posed by management of Gwaii Haanas National Park Reserve and Haida Heritage Site following the earthquake was "What will become of the bat colony?"

With this question in mind, Dr. Carita Bergman, Charlotte Houston of Gwaii Haanas and I visited the island in June of this year to see just what impact the loss of the hot springs was having on the colony. Our plan was to count the number of bats emerging in the evening and measure temperatures in some of the known roosts. We used three automated recording units combined with three observers spread around the roosts to conduct both visual and recorded emergence counts. We also used Ibutton thermochrons to monitor temperatures within and at the entrance to a known roost crevice that used to be heated by the hot springs. Our initial investigation revealed that, although some hot water was flowing again, none of the known roosts were being heated. In fact, all of the hot water seeps that we found were in the intertidal zone, and thus not available to the bats. Six emergence counts conducted between 12 and 19 June revealed that 15 - 23 bats were still using the roosts, which is very close to the 17 - 25 bats counted in 2012, but well below the 110+ bats using the roosts in the late 1990's. Analysis of the echolocation call recordings revealed that at least 6 of the emerging bats were Keen's Myotis, which is also well below the 35 - 40 that were using the roosts in the 1990's.

The thermochrons placed in the known roost were set to record hourly and left to run for five days. They revealed that temperatures within the crevice were slightly higher than those at the entrance (21.5 oC; range 19.5 - 23.5 oC vs. 19.6 oC; range 14.0 - 26.4 oC) and more stable, indicating that there was some thermal advantage to roosting within the crevice. These temperatures were considerably lower however, than temperatures recorded of 32 - 34 oC recorded in this same crevice in the 1990's.

To fully understand the relative numbers of bats using the Gandl K'in Gwaayaay roosts some background is necessary. This colony has been monitored on an annual basis since 1998 by counting and recording bats as they emerge. These counts have always been carried out during June, a time that, based on previous research, only adult females are using the roosts. Between 1998 and 2007, numbers in this colony varied between 83 and 133 adult females, of which approximately 1/3 were Keen's Myotis. In 2008 however, the population declined to about 70 bats. The population further declined in 2009 to 46, and the most likely reason for this decline became apparent. While conducting an emergence count on 12 June, I observed a Saw-whet Owl fly in at dusk and perch near the entrance to one of the roosts. It remained in the area for about 15 minutes, and from its behaviour it appeared to be looking for emerging bats. The owl was seen

### Update on the maternity bat colony on Gandl K'in Gwaayaay, Haida Gwaii continued...

on a number of subsequent occasions, and was again seen in the vicinity of the roosts in 2010; bat numbers in 2010 further declined to 36. No owl was seen on the island in 2011 and bat numbers using the roosts increased to 70, but in 2012 numbers dropped again to 25, even though no owl was seen. Because the Saw-whet owl on Haida Gwaii is listed as a threatened species, no effort could be made to remove the owl.

Based on our investigations from last summer, I conclude that the loss of the hot springs may not, in itself, result in the demise of this maternity colony. We found that there is still some thermal advantage for bats using the roosts, although it is much less than when the hot springs were flowing. More important is the continued presence of the Saw-whet Owl. If it continues to frequent the roosts the colony will soon be abandoned.

### Mine Hibernaculum near Nelson gets Two Bat-Friendly Gates

Cori Lausen, Wildlife Conservation Society Canada

clausen@wcs.org



A. Glass, FWCP

The gates at Queen Victoria Mine just at the end of the construction/installation phase. Gating team top-bottom, left-right: Brandon Blackmore (welder), Lewis Franklin (welder, fabricator), Phil Whitfield (President Canadian Cave Conservancy), Keri Whitfield (security and logistics), Steve Blackmore (Site Supervisor, design fabricator, BC Search and Rescue), Cassidy Simpson (Director Canadian Cave Conservancy).

Queen Victoria mine, used by at least eight species of bats in the summer, and three species of bats during winter, was identified in 2009 as an important bat hibernaculum in West Kootenay. Through a grant from Sustainable Forestry Initiative and Fish and Wildlife Compensation Program Columbia Basin, this hibernaculum was gated in June 2013. Nature Conservancy Canada administered the project, and many people worked together to see this project through. The following were instrumental in completing this project: Dave Wickstrom, Michael Curnes and Nancy Newhouse (NCC); Juliet Craig (Kootenay Community Bat Program); Irene Manley and Angus Glass (FWCP); Mitch Firman (Golder



**Lower Adit gate being constructed on Queen Victoria mine.**

Associates); Rhiannon Poupard (Interfor); Cori Lausen (Wildlife Conservation Society Canada); and the whole gating crew (see photo description). Much support was needed for this gating project, and this came in many different forms and from many other supporters: Garth Wiggill (Min FLNRO), John Morrison and George Edney (BC Timber Sales), Dave Wallach (49er Creek Gold Corporation), John Pollock (Nelson), Anne Moody (Min of Energy and Mines).

The gate design and construction was led by Steve Blackmore (Never a Dull Moment), a wildlife enclosure fabricator in Kamloops. Steve worked with Cori Lausen to modify a Bat Conservation International design that would prevent human access but allow all species of bats to continue to use the mine. The silver-haired bat in particular hibernates in this mine, one of the few mines that we know of in the province where this species overwinters in relatively large numbers. As this bat is not typically found hibernating in mines/caves that are gated, how to design a gate that would ensure this species would continue to access it, was unknown; as a precaution, two half-culverts were placed high in the top gate to allow a deeper access point than what the rest of the bars allowed. At the end of August it was determined that this species, along with several others, were still using the mine, and C. Lausen will be returning to the hibernaculum this winter to further assess the success of the gate. Human entry is restricted to summer only, when users can obtain a key from Min FLNRO, FWCP or Kootenay Community Bat Program. Access during winter is restricted to prevent disturbance to hibernating bats. Restriction of access allows education of users about preventing accidental transport of *Pseudogymnoascus destructans* spores (the fungus that causes White Nose Syndrome). Prior to gating, this mine was often a party site, new graffiti suggested regular use, and a treasure chest and log book suggested it was a geocache site, with some log entries made during winter.

The gate construction crew installed these gates in a matter of a few days, and for a fraction of the cost that many other mines have been gated in B.C. This same crew will most likely be upgrading the gate on Cody Cave in Cody Caves Provincial Park this summer, to make it bat-friendly. Anne Moody of Min. of Energy and Mines attended a workshop last year on bat-friendly mine closures of mines, and it is hopeful that this ministry will start to require consideration of bats in all of their closures. Bat-friendly closures of mines in the Victoria area are underway.

# Saskatchewan

University of Regina,  
Bat Lab Update



**A cute little *Artibeus* hanging under a banana leaf in Costa Rica**

Jody Rintoul defended her M.Sc. thesis “The influence of reproduction and roost type on thermoregulation and foraging in big brown bats (*Eptesicus fuscus*). She is currently doing a maternity leave fill in for teaching at the Augustana Campus of the U of Alberta. She is close to submitting a MS based on her thesis work. She attended the Int. bat meetings in Costa Rica and gave a talk.

Brandon Klug attended the bat meetings in Costa Rica.

Ioanna Salvarina is a PhD student at the University of Constance in Germany. She is visiting until mid-October. She is working on aquatic subsidies through bats to terrestrial environments, principally using stable isotope analysis. She attended the meeting in Costa Rica.

I, Mark Brigham, was also in Costa Rica and gave a talk. As well as the bat students above I am also supervising Joe Poissant who is writing up his PhD on bats, two M.Sc. working on grassland songbirds, a MSc working on Common Poorwills and a just started M.Sc. doing some habitat modeling on Sage Grouse. I am also co-supervising a PhD at the University of Pretoria working on thermoregulation by African Nightjars



# USA

## What? A Spotted Bat in Western Washington!

Greg Falxa, Cascadia Research

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On the afternoon of September 18, 2013 there was a flurry of phone, text, and email messages between Meg the bat rehabber, Phil the high school science teacher, and me. The topic was the bat that Phil had in a box, a bat that the school principal had captured earlier that day in a classroom, hanging on a bulletin board. After he scooped it into a container, the principal took it outside to release it, but it didn't fly off as he had hoped. He then took it to Phil, one of the science teachers, who immediately knew that this was not one of the typical bat species for this area. Phil quickly figured out it was a spotted bat, and on the wrong side of the Cascade mountains. In fact, the only record of a Spotted bat in western Washington or Oregon states is an individual found in the Seattle area in November of 2008. There are rocky areas of eastern Washington, Oregon and British Columbia -- east of the Cascade mountain range -- where these bats are routinely heard on summer evenings. However, not much is known about their life histories in the Pacific Northwest, and there have been no specimens in the natural history museums of this region. The closest records are acoustic observations approximately 120 miles (190 km) east of Tacoma, near the Columbia River gorge.



Slater Museum collection number:  
TSM306333

Back to the story. Phil had received a bat he realized was special. He contacted Meg Lunnum of Happy Valley Bats, Washington's only state permitted bat rehabilitation facility. Meg turns away no bats in need, but she was over 100 miles (160 km) away, and I was only 25 miles (40 km) from the bat, so Meg brought me into the loop. I would care for it while arranging transport to Happy Valley Bats, and made arrangements to meet Phil that evening for the hand-off. In a dark parking lot halfway between our homes I took possession of a beautiful male adult *Euderma maculatum*. It looked boney and scruffy, but still had enough energy to try some self-defense moves. I took it home, got it to take some water from a cotton ball, and made plans to take it to our local 'rescue friendly' veterinarian the next morning. But the next morning I found the bat slumped at the bottom of its perch, and thought it was dead. When I reached down I was greeted with a hiss, so we headed off to the veterinarian. Hopeful, I stopped by a pet supply shop to pick up some meal worms, but when I arrived at Tumwater Animal Hospital we found an expired bat, still a little warm. After a few photos I took it back to the lab and weighed it: 10.9 grams. Bats of British Columbia lists the mass for 6 Spotted bat specimens, ranging between 16.2 - 21.4 grams. It appeared that this adult Spotted bat was rather emaciated.

After the bat became a lifeless specimen, I contacted Dr. Gary Shugart, the curator for the Slater Museum of Natural History located at the University of Puget Sound. The museum is only 10 miles (16 km) from the school where the bat was found. The museum was not only happy to receive the bat for their collection, but has already featured it in a special display during their public education Bat Night on October 30 (see Bat Night

for details). In its first month at the museum hundred people have viewed it on display and many others have read about it and viewed the photographs of it on the Slater Museum's Facebook pages.

The museum web page had this to say about this specimen:

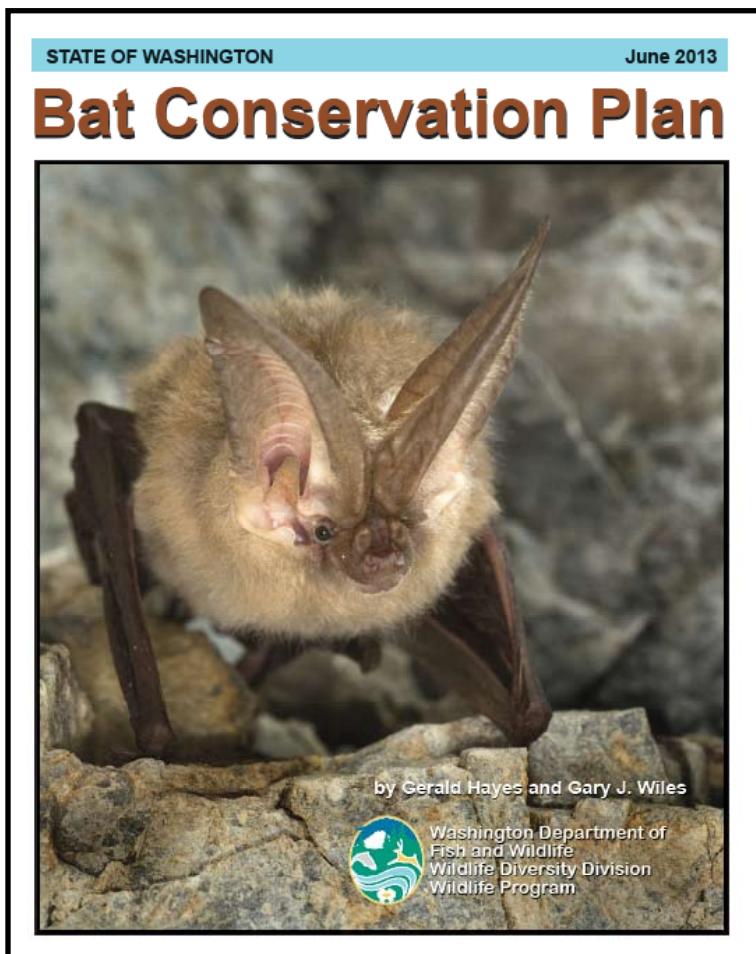
*The specimen was found recently in a local high school classroom near Tacoma and was eventually passed on to Greg Falxa of Cascadia Research. The bat died despite attempts at rescue and was deposited at the Slater. It was prepared as a standard skin/skull voucher specimen with associated issue for genetic analysis and post cranial skeleton and dried muscle for stable isotope analysis. If feasible, stable isotopes might provide clues to the bat's mysterious appearance in western Washington. Typically this species is confined to drier areas of eastern Washington, however they are difficult to find and study. They are migratory so the specimen we received might have been wandering, lost or disoriented migrant. The species status in Washington has yet to be determined.*

*Our specimen is the 69th spotted bat specimen housed in the 46 institutions in online VertNet consortium. Including the Slater, 13 of 46 institutions have spotted bats. Most of the specimens are from New Mexico (29), Utah (10) and California (8). The Slater specimen is the northern most specimen.*

*(From <https://www.facebook.com/media/set/?set=a.556527481085470.1073741844.124332280971661>)*

## Washington State Bat Conservation Plan

Gary Wiles, WDFW



The Washington Department of Fish and Wildlife has published its new Washington State Bat Conservation Plan, which was authored by staff biologists Gerry Hayes and Gary Wiles. The 138-page plan was prepared to guide conservation activities for bats in the state. The plan is divided into three main chapters and provides Washington-specific information on the state's bats whenever possible. Chapter 1 contains an overview of bat biology, habitat requirements, legal and conservation status, known and potential threats to bats, and relationships to public health. Chapter 2 provides brief accounts for each of the 15 bat species found in Washington, with summary information on historical and current distribution and abundance, identification, taxonomy, habitat, natural history, threats, and conservation measures given for each species. Chapter 3 outlines strategies and tasks needed to implement conservation and protection of bats in the state. Copies of the plan can be downloaded from WDFW's webpage at: <http://wdfw.wa.gov/publications/01504/>

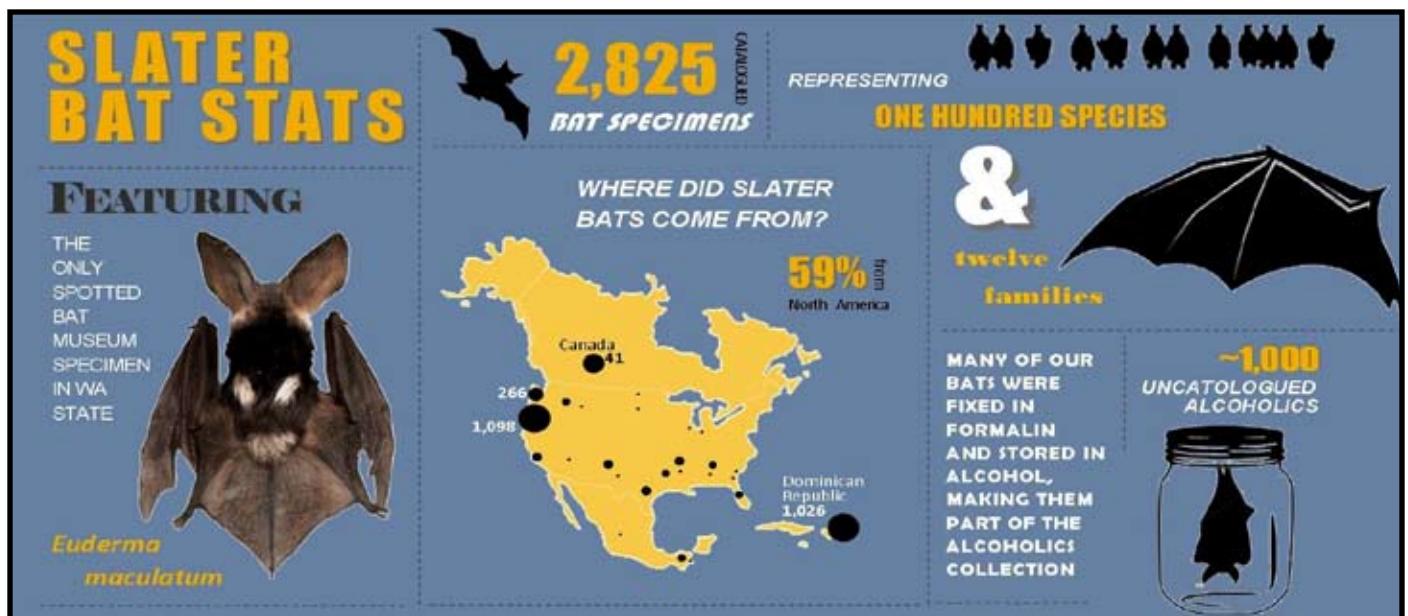
## Bat Night at the Slater Museum

### Slater Museum Staff, Tacoma WA

The Slater Museum of Natural History, located in Tacoma, WA, houses more than 29,500 mammal specimens, 23,000 bird specimens, 7,500 reptiles and amphibians, 5,000 insects, and 13,000 plants. Most of the specimens are from Washington, Oregon, and elsewhere in western North America, but many have been acquired from other parts of the world through collecting and exchange.

On the evening of October 30th the museum staff and a team of 22 volunteer docents opened the doors and drawers for a public open house to showcase the several thousand bats in the collection. The event was attended by around 220 people -- including students, community members, families, and Bats Northwest members from the Seattle and Olympia areas.

If you are located nearby and interested in volunteering to help improve and maintain the Slater bat collection send an email to [Slatermuseum@pugetsound.edu](mailto:Slatermuseum@pugetsound.edu). Possible volunteer jobs include identifying and cataloguing the museum's alcoholic bat specimens.



Bat Night facebook page:

<https://www.facebook.com/events/341203179349443>

Slater Museum web site:

<http://www.pugetsound.edu/academics/academic-resources/slater-museum>



## Montana's Bat and White-Nose Syndrome Surveillance Efforts

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 Lauri Hanauska-Brown and Kristi Dubois - Montana Fish, Wildlife, and Parks, Helena, MT, [lhanauaska.brown@mt.gov](mailto:lhanauaska.brown@mt.gov)  
 Annie Shovlain - Region 1 U.S. Forest Service, Dillon, MT, [ashovlain@usfs.gov](mailto:ashovlain@usfs.gov)  
 Jake Chalfin - Montana/Dakotas Bureau of Land Management State Office, Billings, MT, [jake\\_chalfin@blm.gov](mailto:jake_chalfin@blm.gov)  
 Hans Bodenhamer and Bigfork High School Cave Club - Bigfork, MT, [http://www.nrmg.org](http://bigforkhighschoolcaveclub.org)  
 Northern Rocky Mountain Grotto of the National Speleological Society, <http://www.nrmg.org>

### Overview

Montana's bat populations face a wide array of conservation issues, including loss of roosting sites, collision and drowning hazards at sites where they forage and drink, barotrauma and collisions with wind turbines, and the potential arrival of *Pseudogymnosas destructans*, the cold-adapted soil fungus that causes White-Nose Syndrome and has decimated bat populations in eastern North America. These conservation issues, and the low reproductive output of bats, highlight the need to gather baseline information that can be used to mitigate impacts to populations. Beginning in the fall of 2011, a collaborative effort was initiated to document roost habitat characteristics and year-round spatial and temporal activity patterns of Montana's bats. To date, collaborators have deployed over 30 temperature and relative humidity data loggers near known winter bat roosts; most known bat hibernacula in Montana are now being monitored. Collaborators have also established a nearly statewide array of 48 passive ultrasonic detector/recorder stations that are deployed year-round and powered by solar panels and deep cycle batteries. Through June 2013, these recording stations have resulted in more than 1.3 million sound files containing nearly 5 terabytes of information. Highlights to-date include numerous first records of species in regions with previously limited bat survey effort, numerous first records of bat activity during the fall, winter, and spring months, documentation of temperatures at which bats are active year-round, documentation of winter bat roost temperatures, the potential year-round presence of species throughout the year, and considered migratory.

Common Name	Scientific Name	A-Code	BT Registrations	Reqs
Pink Bat	<i>Antrozous pallidus</i>	ANPA	47	44
Townsend's Big-eared Bat	<i>Corynorhinus townsendii</i>	COTO	201	201
Big Brown Bat	<i>Eptesicus fuscus</i>	EPFU	773	773
Scalpated Bat	<i>Eudermis maculatum</i>	EUMA	50	50
Snow-haired Bat	<i>Lasiurus noctivagans</i>	LANO	1,037	1,037
Eastern Red Bat	<i>Lasiurus borealis</i>	LABO	21	21
Hoary Bat	<i>Lasiurus cinereus</i>	LACI	828	828
California Myotis	<i>Myotis californicus</i>	MYCA	159	159
Western Small-footed Myotis	<i>Myotis callositarsus</i>	MYCI	636	636
Long-eared Myotis	<i>Myotisotis</i>	MYLO	820	820
Little Brown Myotis	<i>Myotis leucopus</i>	MYLU	1,165	1,165
Northern Myotis	<i>Myotis septentrionalis</i>	MYSE	7	7
Fringed Myotis	<i>Myotis thysanodes</i>	MYTH	113	113
Long-legged Myotis	<i>Myotis volans</i>	MYVO	316	316
Yuma Myotis	<i>Myotis yumanensis</i>	MYYU	23	23

### Information Needs/Objectives

- Centralization of winter and summer roost site data.
- Overwintering locations and temperature and relative humidity of roosting areas.
- Baseline activity levels within and outside of hibernacula.
- Timing, routes, and other correlates of migration.
- Focal studies at wind energy facilities.
- Year-round spatial use of landscapes.
- Year-round status information (occupancy rates, sizes of roost aggregations, activity levels).



### Roost Site Monitoring

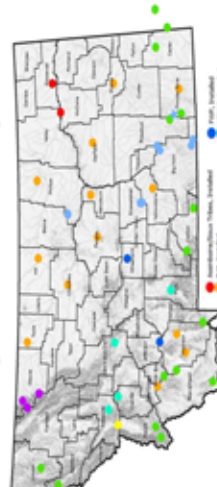
In addition to surveys of summer roost sites by agency biologists, we have worked with Northern Rocky Mountain Grotto and Bigfork High School Cave Club to centralize information on Montana's Caves in general and to gather critical baseline information on the summer and winter use of Montana's caves by bats. Cavers and cave groups have installed cave registers, reported bats and bat sign, installed 30+ temperature and humidity data loggers at bat winter roosts, reported temperatures near roosting bats, and provided cave maps with bat locations, other cave biota, and cave features that can be readily used by resource managers. We consider our collaboration with cavers and caving groups to be a model for assessing caves and bat populations given the fiscal and training limitations of agencies and agency personnel.



Bigfork Cave Club student Mandy Oberdorfer and Bigfork High School Cave Club member (BCC) Phyllis and example of cave map from the resulting survey report including bat roost recommendation for placement of a bat roost logger for acoustic monitoring.

### Acoustic Monitoring Effort

Funders of Long-term Bat Acoustic Monitoring Stations



We have deployed a statewide network of SM2Bat and SM2Bat+ detector/recorders powered by 30 watt solar panels and 12-volt deep cycle batteries. Locations were chosen in order to fill gaps in the statewide network and provide information for local management decisions. Where possible, detectors were placed near year-round open water and likely roost habitat with good solar exposure and limited risk of damage from vandalism, cows, or other hazards. Bat passes that are recorded are being analyzed with the Sonobat 3.0 automated analysis with results relational databases in order to manage the large volume of bat passes and in order to create summary graphs for site specific powerpoints.

### Acoustic Monitoring Goals

- Summaries of year-round nightly bat activity levels as measured by the number of bat passes detected, regardless of species
- Summaries of year-round nightly activity levels of individual bat species based on automated Sonobat 3.0 call id analyses in order to identify annual timing of emergence to and emergence from hibernacula by resident bat species and timing of spring and fall migrations by migratory species
- Summaries of timing of nightly activity patterns of individual bat species based on automated Sonobat 3.0 call id analyses
- Correlations of overall bat activity and activity of individual species with temperature and, where possible, wind speed and barometric pressure.
- Because Sonobat 3.0 automated call identification analyses are not always reliable, both monthly species presence and minimum temperatures of activity will be verified through hand analyses
- Summarize all information gathered on individual ultrasonic acoustic monitoring devices in site specific powerpoint presentations that can be readily shared.
- Collectively summarize information gathered on all ultrasonic acoustic monitoring devices that are deployed across the state in order to identify landscape characteristics that are associated with different levels of bat activity throughout the year and in order to identify timing, and potentially pathways, of migratory events.

### Cooperators



# WHITE NOSE SYNDROME

## 6th Annual White Nose Syndrome Workshop, Boise, Idaho

Cori Lausen, Wildlife Conservation Society Canada

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The 2013 USFWS White Nose Syndrome Workshop was in Boise, Idaho 3 – 6 Sept. Approximately 150 workshop participants gathered to discuss the latest research and management issues surrounding WNS.

The most striking progress presented was in Disease Management, specifically in the field of ‘biocontrol mechanisms,’ including commercially available products and micro-organisms naturally occurring on some bat wings. Lab results were presented for use of chitosan, *Trichoderma polysporum*, *Pseudomonas fluorescens*, and *Rhodococcus rhodochrous*, as ways of using other organisms to inhibit the growth of the White Nose Syndrome fungus, *Pseudogymnoascus destructans* (Pd). Field trials of some of these methods will be tested in upcoming winters, in mine hibernacula. The use of a volatile chemical produced by *Rhodococcus rhodochrous* was featured in a recent issue of BATS magazine ([http://static.whitenosesyndrome.org/sites/default/files/new\\_hope\\_in\\_the\\_battle\\_against\\_wns\\_bats\\_mag\\_summer\\_2013\\_1.pdf](http://static.whitenosesyndrome.org/sites/default/files/new_hope_in_the_battle_against_wns_bats_mag_summer_2013_1.pdf)), and could enable ‘air freshener’ type objects to be hung in hibernacula to slow progression of WNS.



Virginia Dept of Cons and Rec Div of Natural Heritage

Little brown myotis in WNS infected cave.

Kate Langwig (University of California, Santa Cruz) presented data on prevalence and timing of Pd spores on bats. She stressed the importance of using genetics rather than trying to culture Pd, as the fungus may not be detectable using the latter technique. For example, 6 weeks after spring emergence, 294 of 304 bats that survived a Pd infected hibernaculum were found negative for Pd using genetics. Fungus could not be cultured from the swabs of the 10 bats that tested positive for Pd, providing evidence that: Pd is killed over the summer, and that tests that culture for the fungus can provide false negative tests. New evidence shows that Pd may be able to not only survive, but possibly grow, in soils (Hazel Barton, Univ of Akron).

Other noteworthy news included a presentation from Jeff Foster (Northern AZ Univ) that despite many samples of Pd from across Europe, the genetic match for the North American strain has still not been found. The relative genetic distance between the North American and European strains suggests that a source outside of Europe (e.g. Asia) cannot be ruled out. Sebastian Puechmaile (Univ College Dublin and Institute of Zoology) applied an ecological niche model based on European Pd, to North America using climatic and altitude variables. He highlighted several areas of Canada that are predicted to be hit hardest by WNS: Labrador, parts of Newfoundland, the Great Lakes area, New Brunswick, BC Coast Mountain range, and the West Kootenay region of BC. Abstracts from this workshop can be accessed: [http://static.whitenosesyndrome.org/sites/default/files/files/2013\\_wns\\_workshop\\_abstracts-final.pdf](http://static.whitenosesyndrome.org/sites/default/files/files/2013_wns_workshop_abstracts-final.pdf)

## New! Canadian WNS Coordinator

Allysia Park joined the Canadian Cooperative Wildlife Health Centre (CCWHC) as the national coordinator of Canada's Bat White-nose Syndrome (WNS) response program. She started 26 August 2013, and is based in the Atlantic Regional Centre of the CCWHC at the Atlantic Veterinary College, University of Prince Edward Island, Charlottetown. Allysia has an Honours BSc (2008) from Memorial University (St John's), examining bat foraging behaviour. Her MSc (2010) from Saint Mary's University (Halifax) with Dr. Hugh Broders was entitled Factors affecting the distribution and roost-site selection of bats on the island of Newfoundland.

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# CONFERENCES

## 16th International Bat Research Conference and 43rd North America Symposium on Bat Research, Costa Rica Cori Lausen, Wildlife Conservation Society Canada

Approximately 650 delegates assembled in San Jose, Costa Rica 11 – 15 Aug 2013 for the combined meeting of the International Bat Research Conference (IBRC) and North American Symposium on Bat Research, making this the largest IRBR to date. Fifty-five countries participated, with a total of 436 papers (oral/poster) delivered, 25 of these by Canadian agencies/universities.

Several pre- and post-conference tours were offered, ranging from egg-laying sea turtles to white water rafting. Each tour enabled delegates to mistnet capture bats and explore the amazing bat diversity that Costa Rica has to offer. In most cases, tour participants were rewarded with the opportunity to see roosting *Ectophylla alba* (Honduran tent-making bat).

As usual, WNS and wind energy development were key threats discussed. Two talks were given by University of Calgary on wind energy. Erin Baerwald provided new estimates of cumulative fatality rates for North American bats over the past decade, highlighting that while millions of bats have been killed by White Nose Syndrome, millions have also been killed by wind turbines. With a conservative estimate of over 2 million bats killed by wind turbines in the past decade, the need to examine impacts of wind energy development on migratory bat populations has never been stronger. Dr. Robert Barclay, Erin's PhD supervisor at the University of Calgary, presented a compelling argument for trying to regulate individual wind energy development facilities according to cumulative mortalities on a regional/population basis, rather than focussing on the mortalities per turbine, which provides no context for magnitude and impact on bat populations. All conference abstracts can be found at: [http://www.ibrc2013.com/pdf/ibrc\\_2013\\_abstracts.pdf](http://www.ibrc2013.com/pdf/ibrc_2013_abstracts.pdf). And a local Costa Rican newspaper covered the conference: [http://www.ticotimes.net/layout/set/print/More-news/News-Briefs/Costa-Rica-hosts-largest-ever-bat-conference\\_Sunday-August-18-2013](http://www.ticotimes.net/layout/set/print/More-news/News-Briefs/Costa-Rica-hosts-largest-ever-bat-conference_Sunday-August-18-2013).

## Upcoming Conferences

- 2014: October 22-25. NASBR 44, Albany NY, USA
- 2015: October 28- November 1. NASBR 45, Monterey, CA, USA
- 2016: NASBR 46, San Antonio, TX, USA. Dates tbd
- 2017: NASBR 47, bids to be solicited from the East region

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# FIELD NOTES

## North American Bat Monitoring Program (NABat) – Participation in 2014 Pilot Studies being Sought

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The last of four workshops for the planning of the North American bat monitoring program took place in Fort Collins, Colorado 4 – 7 Nov 2013. Fifteen biologists/statisticians from diverse agencies, including 2 biologists from Canada (Charles Francis, Canadian Wildlife Service; Cori Lausen, Wildlife Conservation Society Canada) gathered for the final think tank session to establish framework and design. Over the course of the four days, the group worked on writing a technical document, including protocols for gathering acoustics (stationary passive stations and driving transects) and colony count data, which will be released in spring 2014.

The goal of this program is continent-wide monitoring of bats at local to range-wide scales. Data will be collected in a continental ‘Bat Population Database’ (BPD) and analyzed for trends in relative population abundance and species distributions. This program will provide to biologists and managers “State of North American Bats” reports, trend analyses to facilitate assessment of impacts of threats such as climate change, White Nose Syndrome, and wind energy development.

The program is designed with the best knowledge to date, although there is much that will be learned in pilot studies to refine the design, and thus it is expected this program will evolve over time. The base unit of the program is 10 km x 10 km grid cells overlaid across Canada, US and Mexico. A weighted random draw will provide a list of grid cells for monitoring. It will be up to agencies such as provincial governments, Parks Canada, NGO’s, biologists, Community Bat programs, etc. to ‘adopt a grid cell’ for long term monitoring. The NABat committee is looking for interested parties to pilot this program in their area(s) during the summer of 2014. Currently, the design is such that 2 – 4 bat detectors would be deployed passively for 4 – 7 nights within one 10 km x 10 km grid cell, and a road within this grid would be driven on 2 nights during this same deployment period. The road could be as long as 30 km and extend into neighboring grid cell(s), and would be driven at 25-30 km/hr with a bat detector/microphone on the roof of the vehicle. Colonies of bats that can be counted should also be included in the BPD data and may be valuable in the overall statistical analyses over time. “Legacy data” for counts of bats done in past years can be incorporated into the BPD, and locating of new summer and winter colonies for future monitoring is encouraged. If you are interested in participating in a pilot study in 2014, or would like more details, contact Cori Lausen [clausen@wsc.org](mailto:clausen@wsc.org).

**Photo: Organizing Committee for North American Bat Monitoring Program. Back row: Jonathan Reichard (USFWS), Tushar Kansal (mediator), Tom Ingersoll (Dept of Defence), John Sauer (USGS), Tom Stanley (USGS), Wayne Thogmartin (USGS), Doug Johnson (USGS), Jeremy Coleman (US WNS Coordinator), Pat Field (lead mediator). Front Row: Mylea Bayless (BCI), Kathi Irvine (USGS), Cori Lausen (WCS Canada), Tom Rodhouse (NPS), Susan Loeb (USFS, Chair of NABat), Laura Ellison (USGS), Charles Francis (CWS).**



## Western Acoustic Monitoring Initiative (WAMI): BatAMP (Acoustic Monitoring Portal) is “Open for Business”!

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The Western Acoustic Monitoring Initiative (WAMI) network members are now being asked to enter their acoustics metadata into BatAMP, a portal established on Data Basin for the deposition of long term acoustics data. Once you have created an account and entered your data, you will be able to search for temporal and spatial patterns in your own data and/or the larger dataset from across North America. The goal is to have enough data entered into this database that large scale movement patterns of bats, for migration or hibernation, will be realized on a per species basis, informing wind development industries and biologists seeking to understand hibernation patterns and habitats. For more information on how to join the WAMI network, contact Karen Blejwas [Karen.blejwas@alaska.gov](mailto:Karen.blejwas@alaska.gov) ; and for information on entering data into the Data Basin BatAMP, contact Ted Weller [tweller@fs.fed.us](mailto:tweller@fs.fed.us) , or visit the BatAMP website.

The basic steps for getting started are:

- 1) Join DataBasin... [www.databasin.org](http://www.databasin.org) and “Become a Member”.



- 2) Become a member of the BatAMP community (or search for BatAMP within DataBasin).  
<http://databasin.org/groups/59d81a3951fd4915909efacbe2317efb>





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# 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://www.srd.alberta.ca/FishWildlife/WildlifeManagement/AlbertaBatActionTeam/ABATProgramsPublications.aspx>

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## WCBN Newsletter Submissions

Please submit all newsletter submissions to Jen Talerico:

[western.canada.bat.network@gmail.com](mailto:western.canada.bat.network@gmail.com)

Submissions can be made at any time.

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