

# Bats Northwest

# NEWS



BNW IS A NON-PROFIT, ALL VOLUNTEER CONSERVATION ORGANIZATION

WINTER 2011

## North American Society for Bat Research 2010 Meeting

by Meg Lunnun

The North American Society for Bat Research, NASBR, convened its annual meeting in Denver, CO, during the week of 27 to 30 October, 2010. The meeting started with a welcoming reception sponsored by Wildlife Acoustics. This reception is where attendees meet and greet other bat people who they usually only see once a year, at this particular meeting.

Student honors presentations started at 8:20am on Thursday. Those presentations were 10-minute speed papers and included subjects such as, "Dietary overlap: links between *Eleutherodactylus coqui* and *Lasiurus cinereus semotus* on the Island of Hawaii," and, unfortunately, white-nose syndrome papers: "Hibernacula microclimate and white-nose syndrome susceptibility" and "Behavior of bats with white-nose syndrome." The 15-minute papers started after lunch: "Can hibernating *Myotis lucifugus* mount cutaneous immune responses to *Geomyces destructans*?" The plenary session was specifically on White-nose syndrome. After dinner, there was a Videography Workshop that showed the latest developments and applications for video recording, editing and production with HD, IR, high-speed video, thermal imaging and CGI for nature documentary.

Friday started with more speed papers, Evolution, Echolocation, Behavior, and Disease -- "How smart are flying foxes? Megachiropteran bats use human referential stimuli to locate hidden food"; Feeding and Reproductive Ecology -- "Hawaiian gourmand: moths, and beetles, and stink bugs, oh my! What a Hawaiian hoary bat will eat"; Conservation Biology: Movements, Activity Patterns, and Modeling - "Hips don't lie: the phylogeny and morphology of the bat pelvic girdle." There were many posters on varied subjects -- Jamaican fruit bats; impacts of wind energy on North Dakota bats; bat house design for the evening bat, *Nycticeius humeralis*; Summer thermal regulation of desert Kuhl's bat, *Pipistrellus kuhlii*; Bats and rabies: transference of immunity from mother to infant and even a topic for those social networkers, @BatRoost: a prototype device to monitor bat activity through Twitter.

As usual, after the last presentations, there is a business meeting that includes voting for the venue for the next year's meeting. The 2011 meeting is in Montreal, Ontario, Canada, Oct. 26-29; the 2012 meeting is in Puerto Rico and in 2013, the annual North American meeting will be in conjunction with the International Bat Research Conference in Costa Rica.

To access more details about the presentations go to: [www.nasbr.org](http://www.nasbr.org) Click on Previous Meetings: 2010: NASBR, Denver, Colorado to obtain information about the 2010 meeting. Future meetings and venues are posted as soon as the information is available.



Bats Northwest web  
site is waiting for you  
at:  
[www.batsnorthwest.org](http://www.batsnorthwest.org)

Join our monthly  
BNW Meetings!

Second Tuesday,  
6:30-8:30

Sand Point-  
Magnuson Park  
Building 30  
Conference Room





Bats Northwest  
Envisions a Future

Where the Essential Role  
of Bats is Understood

Where the Public Recognizes the  
Vital Place of Bats In Our  
Environment and Economy

Where All are Inspired by the  
Remarkable Attributes and  
Invaluable Contribution of Bats to  
Our Natural Heritage

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# Killer Fungi: The New Disease Paradigm

by Michelle Noe

The frogs started showing signs first and now our mammal cousins, the bats, are also being affected. Fungi is presenting a new challenge to the animals of the world.

It used to be that fungi were just pesky. A case of athlete's foot isn't gonna kill you. But now the amphibians and bats are facing the new disease paradigm, where a skin fungus can spell death and in the cases of White Nose Syndrome and the chytrid fungus, DOES.

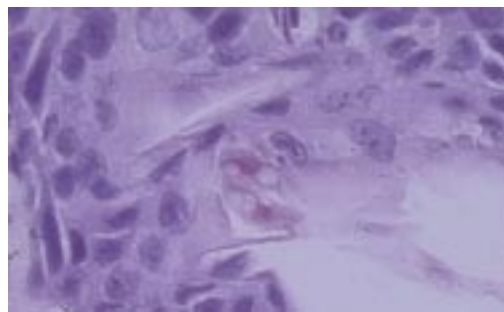
Before chytrid-fungi research, there was little indication that fungal infections were anything to worry about in the wildlife world. A fungus or other disease vector that killed, would reduce populations to a point that it itself would die off. This is not the case with these new threats. Chytrid persists in the water and *Geomyces destructans* persists in the soil.

The frog affecting fungus took scientists many years to figure out. First indications of a problem appeared in discussion back in 1989 and the fungal infection was not fully described until 1998, named chytridiomycosis a year later. This puts the speed that *Geomyces destructans* was figured out in a new light. Bat scientists got it pegged in only two years. The speed in which we are figuring out this new paradigm of skin infections that cause death, is positive, but still scary.

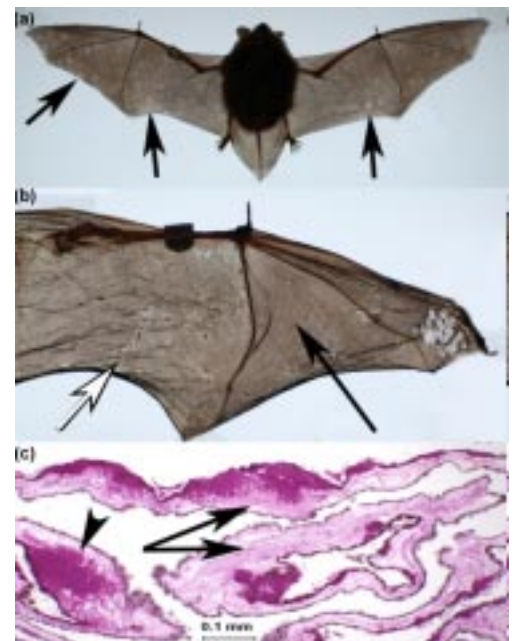
To amphibians and bats the skin is not just an outer protective layer. In amphibians, skin exchanges gas, water and electrolytes. Meaning a disruption of the skin in a frog can lead to cardiac arrest. Bats don't have quite the same level of exchange, but their wings do more than just let them fly. Blood vessels, muscle fibers, glands and more are destroyed when *Geomyces destructans* causes infected wings to crumple and crumble. Bats are forced out of hibernation when they are dehydrated and their blood flow is obstructed. They are no longer able to exchange gases, store body heat, or once awakened, fly right. For mammals, this is an apparently new way to die from disease.

There is lots of speculation on where these killers came from. It might be completely accidental that these fungi became virulent. Without needing their hosts to survive, they present a larger threat than many pathogens. We can only hope that some bats are resistant and survive and can pass that resistance on. So far the chytrid infections have caused the decline or extinction of up to roughly 200 species of frogs according to a study published in *EcoHealth*.

With hard work and a bit of luck, hopefully we can save the bats of North America from the same fate.



Skin cross section of frog infected with chytrid fungus.  
From saveafrog.org



*Geomyces destructans* infected bat wing  
From usgs.gov.

# BATS NORTHWEST DOES TWILIGHT!

by John Bassett

In August of 2010, Bats Northwest participated in an outdoor natural history program about creatures of the night with important roles in the current popular movie series "Twilight". The program, sponsored by the Seattle Department of Parks and Recreation's Carkeek Park Environmental Learning Center, was held in Carkeek Park in northwest Seattle on a hot Saturday evening. In keeping with the vampire and werewolf themes of the Twilight movies, owls, wolves and bats were the featured creatures. Bats Northwest presented a typical informational program to the audience about the biology of bats and the conservation challenges facing the group. Other groups and individuals with knowledge of both owls and wolves also conducted short presentations about the biology of these animals. The attendance at the event was good given the extreme heat experienced in Western Washington on the day of the program. Since the venue was on the beaches and playfields of Carkeek Park immediately adjacent to Puget Sound, the people who attended enjoyed much milder temperatures than those is most of Seattle that evening. Bats Northwest would like to thank the adventurous people who spent a pleasant evening with us learning about bats for attending. Bats Northwest would also like to thank Brian Gay, Carkeek Park Naturalist, for the opportunity to participate in the event.



Attendees learn about bats from John Bassett of Bats Northwest.



A member of the audience becomes a wolf with help of a wolf pelt.



Characters from the Twilight movie series set the mood for the evening.



The biology of owls is presented on the beach next to Puget Sound.

Our Mission

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Bats to Our  
Natural Heritage*

Many bat sites on the Web provide worthy information and great photos from around the world.

BATS NORTHWEST is focused on our regional bats, but there is so much to learn about bat conservation worldwide. You may enjoy visiting some of these sites.

[www.batcon.org](http://www.batcon.org)  
[wdfw.wa.gov/wlm/living/bats.htm](http://wdfw.wa.gov/wlm/living/bats.htm)  
[www.batsound.com](http://www.batsound.com)  
[www.tolgabathospital.org/](http://www.tolgabathospital.org/)  
[www.batbox.org](http://www.batbox.org)  
[www.batworld.org](http://www.batworld.org)  
[www.californiabats.com](http://www.californiabats.com)  
[www.batcrew.com](http://www.batcrew.com)  
[www.warksbats.co.uk](http://www.warksbats.co.uk)



**Bats are Calling You!**

Help bats by becoming a  
**Bat Ambassador**

*A fun and exciting opportunity to learn about Northwest bats.*

Our Ambassadors are trained to conduct walks and talks all over the state. We always have people clamoring for our presentations.

**BAT AMBASSADOR TRAINING**

**Saturday, January 22, 2011**  
**10:00 a.m. - 3:00 p.m.**

Snacks & Lunch Provided. Donation of \$10 Members, \$20 Non-Members Requested.

**Magnuson Park, Sand Point Way at NE 74th St., Building 30**

- General Bat Info • Northwest Bats • Bat Presentation Techniques •
- A CD Full of Educational Materials •

*Follow up with a fun hands-on training as a volunteer at the Bats Northwest booth at the Northwest Flower & Garden Show in Seattle, February 23-27, 2011.*

**Please pre-register.** Leave a message at (206) 256-0406  
 Or register at [info@batsnorthwest.org](mailto:info@batsnorthwest.org) - Give us your name, phone number and e-mail address.

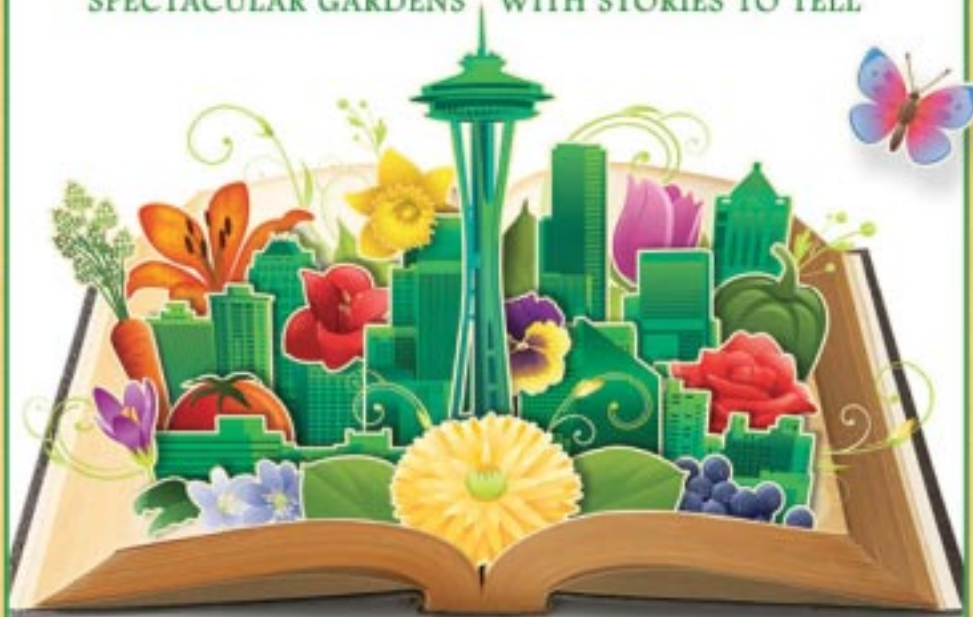
We're exhibiting at the



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Check out  
Bats Northwest's  
Website.

Watch our  
Events Page  
for news on  
upcoming  
presentations and  
field trips.

We are looking for knowledgeable people to staff the Bats Northwest booth.  
If you would like to volunteer, e-mail [info@batsnorthwest.org](mailto:info@batsnorthwest.org).

# Status Review Indicates: Little Brown Bat in Trouble

by Michelle Noe

If you've gone bat watching in most any part of the country, you've likely seen one of the most common bat species in the U.S., *Myotis lucifugus*. The little brown myotis is a well known and well loved bat. Large colonies, wide distribution, and relatively stable populations make it the bat that everyone knows. White Nose Syndrome is changing the picture for this common bat and may make them a thing of the past soon in the Northeast portion of the United States. A paper recently published in *Science* projects that regional species extinction will likely occur, with 99% certainty, in or before 2026 (Frick et al. 2010b). The rapidity of the elimination of such a common species in such a short time is unprecedented.

With White Nose Syndrome plowing its way across the United States and Canada, many bat species are in danger. The rapid progress and almost complete destruction of bats that come in contact with the fungus leads the authors of "Status Review of the Little Brown Myotis (*Myotis lucifugus*) and Determination That Immediate Listing Under the Endangered Species Act is Scientifically and Legally Warranted" to conclude that the 2026 figure is a virtual certainty.

Complete Report can be found at:

<http://www.bu.edu/cecb/files/2010/12/Final-Status-Review.pdf>



## STATUS REVIEW OF THE LITTLE BROWN MYOTIS (*MYOTIS LUCIFUGUS*) AND DETERMINATION THAT IMMEDIATE LISTING UNDER THE ENDANGERED SPECIES ACT IS SCIENTIFICALLY AND LEGALLY WARRANTED



Healthy Little Brown myotis in flight  
Credit: M. David Foster



Little brown myotis roosting in Andover Cave, VT in 2009  
Credit: Jonathan D. Reichard, Boston University (JDR)

### Status Review Conducted by:

Thomas H. Kunz, Ph.D.  
Jonathan D. Reichard, Ph.D.  
Boston University's Center for Ecology and Conservation Biology

### In collaboration with:

Friends of Blackwater Canyon  
Wildlife Advocacy Project  
Bat Conservation International  
Center for Biological Diversity  
Mayer-Gustafson & Crystal

Unfortunately White-nose Syndrome has become the major topic in the bat world for the last few years. The Washington State Department of Fish and Wildlife is also concerned about the possibility of the fungus reaching our state. The department has sent out an e-mail to Washington state wildlife rehabilitators and veterinarians to inform and update them on the syndrome. WDFW is also requesting vigilant surveillance in regards to sick and dead bats among the state's wildlife rehabilitators and veterinarians in order to monitor the possible introduction of White-nose Syndrome to our state.

Ella Rowan is the Washington State Department of Fish and Wildlife contact person; Dr. Kristin Mansfield, WDFW wildlife veterinarian and Trish Thompson, WDFW wildlife rehabilitation coordinator, are also available for contact to report any suspicious bat mortalities or to ask any questions about White-nose syndrome. Within the Bats Northwest group, Barbara Ogaard and Meg Lunnum are bat rehabilitators and may be contacted through the Bats Northwest web site.

If you see a bat exhibiting any of the following symptoms, please contact any of the above people immediately:

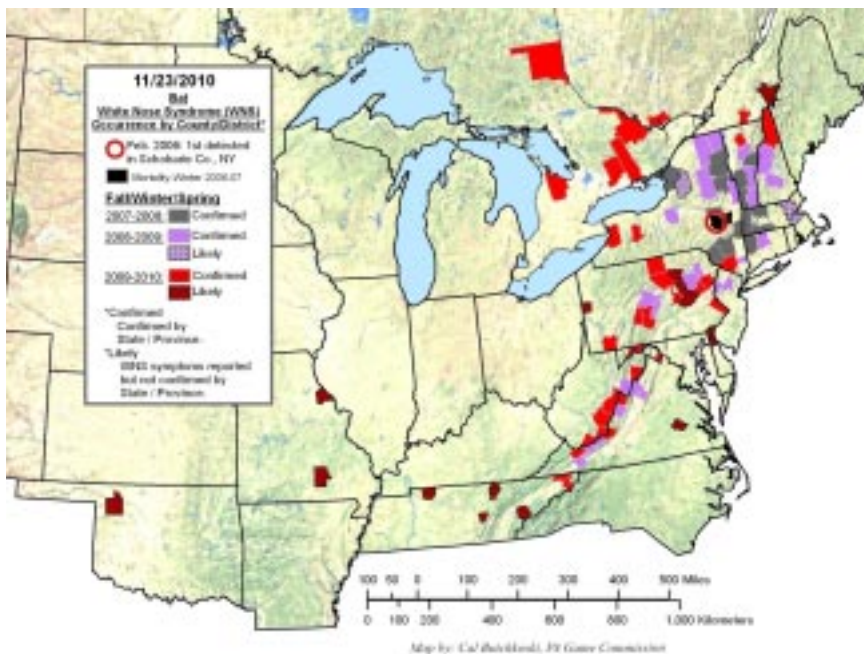
- Active during freezing temperatures (they normally hibernate during winter, or have migrated south in autumn).
- Emaciated during winter months.
- May exhibit a white, powdery-looking fungus on its nose, wings or ears.
- Wings may exhibit tissue damage (holes, thinning) caused by invasive fungus.

The little brown bat (*Myotis lucifugus*) is the one species that is found in all of our states and is the one species that has been decimated by this fungus.

Please take extra caution if you are out during winter and see bat bodies lying outside a cave or if you find some other disturbing situation involving small bats, especially if they show any of the above signs.

**Always handle any bat with thick gloves, no matter what the situation.  
If possible, avoid handling completely.**

For more information on White-nose Syndrome, current research updates and current decontamination protocols, visit the US Fish and Wildlife Service webpage at: <http://www.fws.gov/whitnosesyndrome/>



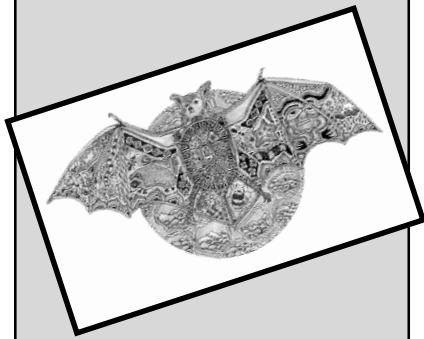
Bats Northwest  
206.256.0406  
[www.batsnorthwest.com](http://www.batsnorthwest.com)



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Lynnwood, WA 98046  
206.256.0406

Bats Northwest web site:  
[www.batsnorthwest.org](http://www.batsnorthwest.org)



## Become a Bats Northwest Member

Join us in the adventure to learn more about our bat neighbors!

Membership Options:   \_\$35           \_\$50           \_\$75           \_\$100           \_Other

Name: \_\_\_\_\_

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*You'll look great in our Bats Northwest short sleeve T-Shirt!  
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