

# Bats Northwest

# NEWS



BNW IS A NON-PROFIT, ALL VOLUNTEER CONSERVATION ORGANIZATION WINTER 2009/2010

## The Washington Bat Working Group: Current Concerns of Bat Biologists and Wildlife Managers in Washington State

by John E. Bassett

A group of government agencies, non-governmental organizations, and individuals known as the Washington Bat Working Group (WaBWG) oversees bat research, management, and conservation in Washington. The group serves as a clearinghouse for information about current research on bats, ongoing and future regulatory and management actions, and problems that have the potential to affect the future viability of individual species or bats in general. WaBWG is also part of the Western Bat Working Group (WBWG) which includes similar groups from 13 western U.S. states, the provinces of British Columbia and Alberta, Canada, and Northern Mexico. Finally, WBWG is a member of the Coalition of North American Bat Working Groups. The continent-wide group serves a similar integrative function for bat research, management, and conservation for all of North America.

On January 8, 2010, WaBWG held its semi-annual meeting in Cle Elum, Washington. Attendees included representatives from the Washington Department of Fish and Wildlife (WDFW), the Bureau of Land Management, the National Park Service, Bats Northwest, The Nature Conservancy, Cascadia Research, the Chelan-Douglas Land Trust, the Hanford Nuclear Reservation clean-up contractor, and interested private citizens.

Topics presented and discussed included an update on the current work of the WBWG and a review of information presented in November, 2009, at the North American Symposium on Bat Research in Portland, Oregon. In particular, information from the symposium related to wind energy development and White Nose Syndrome was covered. Also, the WDFW presented a draft 5-year action plan for consideration in conjunction with its soon to be completed (summer 2010?) Bat Conservation Plan. Recently approved Washington wind energy development guidelines were reviewed and compared to the guidelines currently used by Oregon. The ability of these guidelines to reduce bat fatalities during

wind farm operation was then discussed. Unlike Oregon which requires pre-construction wildlife surveys, Washington only recommends such surveys during the permitting process to assess the potential for future problems. Surveys are conducted only if the governmental agency reviewing a wind energy project requests the information. In Washington the agency evaluating the project can be either a county or a state agency at the choice of the developer. Finally, new experimental findings were discussed which show that bat fatalities can be reduced significantly (50-60 %) at wind energy facilities by raising the turbine "cut-in" wind speed (the wind speed at which feathered turbine blades are allowed to rotate and thus generate power) to that speed where electricity is generated in sufficient quantity to flow into the electric grid. The elevated cut-in speed is high enough to keep bats away from the moving blades thus preventing fatalities that usually occur at lower blade velocities. The small amount of electricity that would be generated at wind speeds less than the cut-in velocity represents 1-3% of the yearly output of a given turbine. Thus a relatively simple change in operating procedures at wind energy facilities may make a significant reduction in bat kill with minimal economic loss to the power generation company.

Numerous ongoing research and education activities related to bats in Washington were reviewed. The field research projects range from Moses Coulee in Eastern Washington to Fort Lewis on the wet side of the state. Several abandoned, non-contaminated buildings and other concrete structures on the Hanford Nuclear Reservation have become prime bat roosting habitat. Part of the clean-up process at Hanford now includes stabilizing such structures so that the bats can continue to use them without endangering humans who must work in the vicinity. The Cascade Grotto caving group in Washington has also been asking its members to report the presence or absence of bats in the caves that they explore in Washington and

*Continued on page 2*



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surrounding states. Finally, Bats Northwest continues with its educational programs including the annual Ambassador training program and its display at the Northwest Flower and Garden Show in Seattle.

Pat Ormsbee of the U.S. Forest Service in Eugene, Oregon, presented an update on the current status of White Nose Syndrome in bats in the eastern United States via teleconference. In the last year, the fungus associated with the disease has been isolated, named, and studied in caves in the east both with and without a history of bat fatalities. The most interesting finding to come from this work is that fungal spores were found in the soil of caves which had experienced a White-Nose die-off event, while spores were not found in caves which had not seen such mass mortality events or were not historically known to support hibernating bats. These results suggest that the fungus does not occur naturally in caves in the U.S. These results also imply that the fungus associated with White Nose Syndrome is an introduced pathogen against which native bats have minimal defenses. The next year should provide more pieces to the puzzle presented by this highly unusual fungus and its devastating effects on hibernating bats.

To conclude the program, Pat Ormsbee gave a brief overview of the Northwest Bat Grid project conducted by the U.S. Forest Service in Washington and Oregon. The goal of this project is to determine a current, detailed geographic occurrence map for all bat species in these states for use in management decisions and conservation programs. Such information gives biologists and managers baseline knowledge which will help them determine if problems such as White Nose Syndrome have arrived in the Northwest. This information will also help guide where prevention and remediation actions should be centered.

*NewsRelease*

**FOR IMMEDIATE RELEASE**

### **Bat fatalities at wind energy turbines offer new insight into bat migration**

New data suggest that bats, like birds, may follow specifically defined routes when migrating rather than simply migrating in a dispersed way across a broad area. Wind energy turbines located in these routes may cause fatalities of migrating bats. As new sources of energy such as wind farms are being built in greater numbers, their impact on other aspects of the environment must be considered. While we reduce carbon emissions and develop renewable energy resources, we must be careful not to endanger migrating species such as bats.

The migratory behavior of bats, a topic that has received little attention in the past, is the subject of new study in the December 2009 issue of *The Journal of Mammalogy*. Wind turbines have been the cause of many bat fatalities, but these installations also offer a new opportunity to examine bat migration habits. This is because the majority of bat fatalities caused by wind turbines around the world have involved migratory bats during fall migration.

Over a period of seven years, scientists used acoustic monitoring and carcass searches at nine wind energy facilities across southern Alberta, Canada, to determine if bat activity and fatality were concentrated in certain areas or evenly distributed across the landscape. Their findings indicate that as bats migrated, they concentrated along selected routes at night and sought daytime roosting sites. Migratory tree-roosting bats, including hoary bats, eastern red bats, and silver-haired bats, are the North American species most affected by wind farms.

As locations and types of turbines are planned for new wind energy facilities, the information gained from studying the migratory habits of bats can be put to use, making the facilities even more environmentally friendly. For instance, the researchers found that greater tower height increased the probability of bat fatality, but that differences among sites in migratory bat activity also were related to the number of bat fatalities. By identifying migratory routes and the specific landscape features that bats follow, bat fatalities could be minimized by building wind facilities in areas with low migratory activity.

The full text of this article, "Geographic Variation in Activity and Fatality of Migratory Bats at Wind Energy Facilities," *Journal of Mammalogy*, Vol. 90, No. 6, December 2009, is available at <http://www2.allenpress.com/pdf/mamm-90-06-1341-1349.pdf>.

# The Hoary Bat - (*Lasiurus cinereus*)

by Margaret Gaspari

This teddy bear of North American bats is tough and so adventuresome that his explorations have established him as Hawaii's only native mammal - the subspecies *Lasiurus cinereus semiotus*. His adaptability to diverse habitats allows his range to cover an almost coast-to-coast swath from northern Canada to Argentina and Chile. *Lasiurus cinereus* is a loner who roosts in trees and foliage, camouflaged by thick, luxuriant fur that covers the entire body and dorsal surface of his tail membrane. His coat of browns and grays is tipped in silvery-white and there are patches of cream on the shoulders and wrists as well as yellow on the throat, ears and underside of his dark brown wings. The short, round ears have a blunt tragus and the calcar sports a narrow keel. His skull is broad, blunt and high. He's big, with an average weight of 28.4 grams (1 oz.), total length of 137 mm (5.4 inches) and a wingspan of 392 mm (15.4 inches).



Photo © Brock Fenton. Used with Permission.

*Lasiurus cinereus* appears to be migratory, heading for warmer Pacific and Atlantic coastal regions and the Gulf in the autumn. It is suspected that mating most likely takes place in mid-air during the fall migration. This is the only time when males and females come together. The female will be pregnant when she makes her spring migration northwards, having stored the sperm over winter. Hoaries that hibernate do so out in the open, hanging from foliage or holding tight to a tree trunk - wrapped in their thick, protective fur cape. Their periods of hibernation are probably intermittent, depending on weather, and altogether shorter than most other hibernating bats.

Here in the NW, Hoary Bat mothers give birth about mid-June to two young (providing milk from four mammarys). Three and four pups are not unusual for this bat. The bond between a mother and her young is close and extends past the time they learn to fly well, at about five weeks of age, into their fall migration south. The babies' distinctive chirps allow her to locate them in dense foliage and it has been reported that she will follow distress calls and retrieve a fallen infant. Perhaps the larger brood size may be related to the hazards of a solitary life and rigorous migrations - casualties can be high and the life span of *Lasiurus cinereus* may be as short as six or seven years.

Hoary Bats fly swiftly and hunt in the open, their favored prey being large moths, although there are reports that a large variety of insects and even on rare occasions small bats are consumed. This is a highly territorial hunter who will emit low-frequency chirps warning other bats to stay away from its hunting turf. These warning chirps, below 10 kHz, are audible to humans, who may be lucky enough to hear and observe a Hoary hunting under a street lamp or in a park. Search with your bat detector in the 15-30 kHz range (hunting frequencies) after dark in fields and woodland clearings for this amazing lone ranger.

Source: Tuttle, Merlin. Winter 1995. BATS. Bat Conservation International.

Our Mission

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of Bats is  
Understood  
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Where all are  
Inspired by  
the Remarkable  
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Contribution of  
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)  
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### “A new beginning for a Northwest tradition”

Northwest Flower & Garden Show returns February 3-7, 2010 with big line-up of display gardens, internationally-known speakers, over 350 exhibitors and activities for the entire family at the Washington State Convention and Trade Center.

The 2010 show will again showcase inspiring work by top garden creators-- integrating thousands of flowers and plants with their rich colors, fragrances and textures into dazzling fullscale gardens. The show has assembled a world-class panel to review and judge the display gardens, including Fergus Garrett, Andrea Cochran and Roger Swain. All three will present seminars during the five-day run of the show.

Any gardener knows that half the fun is putting on the gloves to plant, prune and nurture, and the show's 2010 edition will have a packed schedule of free “how-to” seminars and demonstrations geared for garden spaces large and small. A number of seminars will reflect the growing interest in vegetable gardening.

Top speakers with new books return to the show, sharing their expertise on a variety of topics. They include authors Suzy Bales, Rich Darke, John Greenlee, Valerie Easton, Debra Lee Baldwin, Kathy Brenzel, Saxon Holt, Roger Gossler and Keeyla Meadows.

The show's “Marketplace” will feature over 350 nurseries and other exhibitors spotlighting products and services related to gardening and outdoor living. Other attractions include the “Sproutopia” children's area, the handiwork of high school horticulture students in the “Funky Junk” display, floral display competitions, a container garden exhibition and much more.

#### Show details:

**WHAT:** The Northwest Flower & Garden Show  
**WHEN:** Wednesday, February 3 through Sunday, February 7, 2010  
**WHERE:** Washington State Convention and Trade Center 7th & Pike, Seattle, WA 98101  
**HOURS:** Wednesday – Saturday (February 3-6) 9 a.m. to 8 p.m. & Sunday (February 7) 9 a.m. to 6 p.m.

# Welcome Bat Ambassadors of 2010!



Keep up to date!  
Check out  
Bats Northwest's  
Website.

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

On January 16, 2010, Bats Northwest held its annual Bat Ambassador Training at our office in Magnuson Park Building 30. An informative and fun day was had by all. Presenters taught on subjects such as Washington Bats, Presenting to Adults and Children, Public Health and Bat Legalities.

## Bat Encounters Inside or Outside Your Home

In spring and fall, migrating bats may temporarily roost outside on window screens, fence posts, piles of lumber, and other unlikely places. If a bat is seen roosting outside during daylight hours, leave it alone. It will probably be gone the following morning.

If a bat flies into your home it's probably a juvenile learning to fly, a solitary male following prey, or an adult that has been excluded from its roost. Bats often enter through an open door or window, or by coming down a chimney into an unused fireplace.

If a bat is found inside during the day, confine it to one room. Place a towel under doors to prevent the bat from moving into other parts of the house. Leave the area alone until nightfall.

At nightfall (if you are sure the bat has not been in contact with humans or pets), turn off any lights in the room where the bat is confined, open all doors and windows that lead outside, and stand in the corner. This allows you to watch the bat while staying out of its way. (If you must move around the room, stay as near to the wall as possible.) Be prepared to watch the bat for up to 20 minutes. Normally, the bat will fly around the room to orient itself, and then leave.

If the bat seems to have disappeared but you didn't see it leave, it may be perched somewhere, such as behind a curtain, in hanging clothes, or in a houseplant. The bat will generally choose a high place to roost. Moving these things around with a broomstick may arouse the bat.

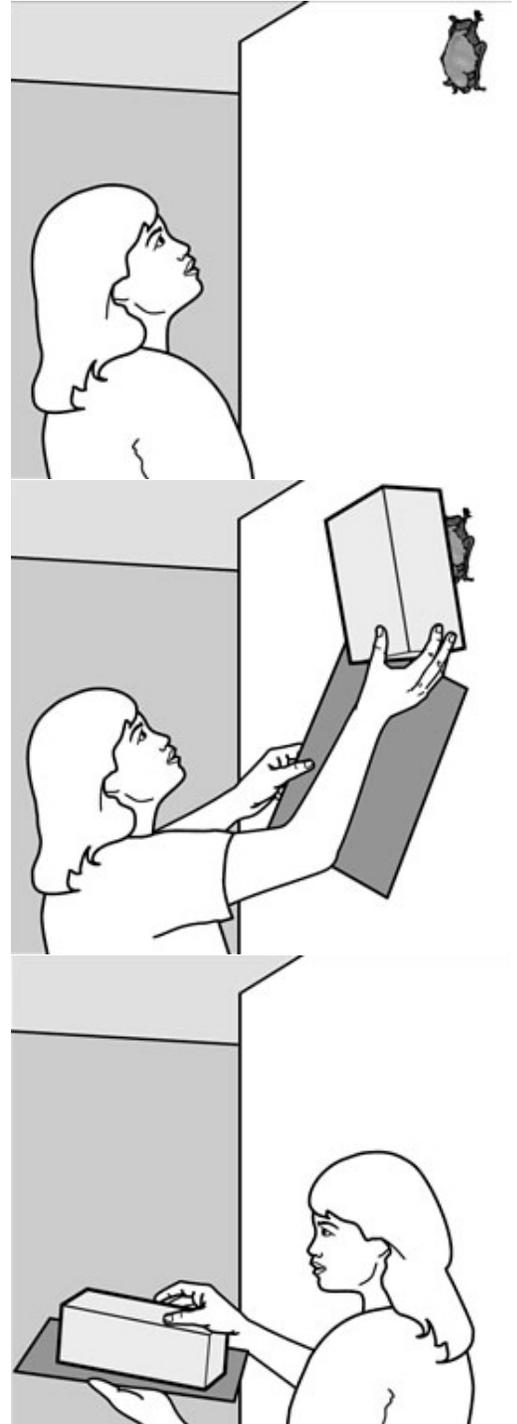
If the bat doesn't leave, it can be caught and released outdoors away from people and pets. Approach the bat slowly and place a container (small box, large glass, Tupperware container, coffee can) over it. Next, gently slide a piece of cereal box paper or cardboard underneath the bat (be gentle—bats are fragile animals). Using the paper as a cover, take the bat outside. The ideal release procedure is to place the container against a tree, slowly slide the paper away, and then remove the container. Releasing the bat against a tree allows the bat to rest safe from potential predators—like the neighbor's cat.

You may also catch the bat using a pair of leather gloves and a pillowcase. (Never handle a bat with your bare hands.) Put your gloved hand inside the pillowcase and gently place it

over the bat. Then fold the pillowcase over the bat so it is inside. Take the bat outdoors and safely release it on a rough tree trunk or lightly shake the pillowcase until the bat flies off. In the absence of a container or pillowcase and gloves, a thick towel can be used. Roll the bat up gently and release it outside.

Note: State wildlife offices do not provide bat removal services, but they can provide names of individuals or companies that do. To find such help yourself, look up "Animal Control," "Wildlife Control," or "Pest Control" in your phone directory.

*Written by: Russell Link, Urban Wildlife Biologist  
Washington Department of Fish and Wildlife*



Bats can be caught and released outdoors away from people and pets.

(Bat Conservation International.)



## White Nose Syndrome Update

by Michelle Noe

*Geomyces destructans*, the fungus thought responsible for White Nose Syndrome, has been found on an apparently healthy bat in France. Details were published in the Emerging Infectious Diseases Journal this month.

The authors proposed three possible scenarios from their findings which may suggest hope for bats in the United States. Scenario one suggests that *G. destructans* only just arrived in Europe and that this might be the first sign of an imminent threat to the bats of France and the rest of Europe. The large migration area of *Myotis myotis* could lead to widespread infection come Spring. The second scenario proposed is that the fungus may have been present in Europe for a long time and since they haven't been seeing the bat die-offs that the Northeastern United States has, the bats of Europe could have developed immunity to the fungus. The third scenario is that *G. destructans* is not what is killing North American bats and that the pathogen causing

mortality is not present in Europe at this time.

These scenarios have very different implications for the bats of the U.S. Scenario one is thought to not be the most likely since the bat found was not underweight and appeared to be suffering no ill-effects. Scenarios two and three are more likely because the bat was found in an area that has been being monitored since 2004 and there have not been die-offs. Study of the differences between the bats of Europe and the affected bats of the U.S. could lead us to an understanding and possible control for this devastating disease. If the bats of Europe are immune, scientists may be able to harness this immunity to protect uninfected colonies and possibly infected bats should it be reproducible. If *G. destructans* turns out to not be the primary pathogen, finding the actual cause of mortality could speed efforts to save U.S. cave bats and the ecosystems that they support.



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To read the whole report, go to: <http://www.cdc.gov/eid/content/16/2/pdfs/09-1391.pdf>



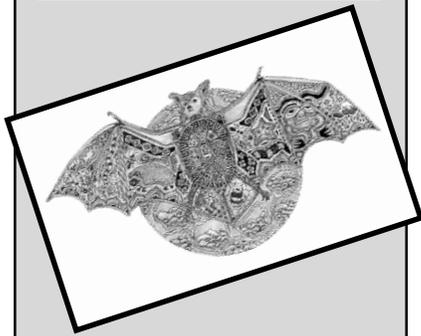
Photo by Al Hicks; New York Dept. of Environmental Conservation



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