News Release WDFW
Release Date: August 3, 2016

The bat-killing fungus recently detected for the first time in western North America is genetically similar to strains found in the eastern United States and did not likely originate in Eurasia, according to a study published today in the journal mSphere.

The findings have implications for resource managers battling the spread of the devastating disease white-nose syndrome (WNS) in North American bats.

Results of the U.S. Geological Survey and USDA Forest Service study provide clues about the origin of this strain of the Pseudogymnoascus destructans fungus, or Pd. This fungus causes WNS and was recently found on a bat near North Bend, Washington, about 1,300 miles from the previous westernmost detection in Nebraska. Because Pd is also present in Eurasia and North Bend is located near an international port, the scientists studied DNA from the Washington fungus to determine if it had roots abroad.

Although it remains unclear how Pd reached Washington, this finding guides us to look to North America as the source, said Jonathan Sleeman, director of the USGS National Wildlife Health Center (NWHC), where the Washington bat was confirmed Pd positive. “Now that Pd has been identified in the western U.S., it’s critical to continue working with resource managers to help conserve imperiled bat species, which are worth billions of dollars per year to North American agriculture and forestry,” Sleeman said.

In March 2016, a little brown bat found sick near North Bend tested positive for WNS. Following this discovery, the USGS NWHC provided DNA from the fungus on the bat’s skin to a laboratory at the Forest Service’s Northern Research Station (NRS) for genetic analysis.

“The severity and potential ecosystem-level effects of WNS in North America make it one of the most serious wildlife diseases ever recorded,” said Daniel Lindner, a research plant pathologist with the Forest Service’s NRS and a co-author on the study. “We have made a lot of progress in understanding WNS and in monitoring its spread, but more work is needed to determine how disease impacts will vary among bat populations in eastern and western North America.”

Scientists at the Forest Service’s NRS sequenced DNA from multiple strains of Pd, including the fungus cultured from the Washington bat, to determine that it most closely matched fungal strains from eastern North America.

White-nose syndrome was first documented in New York state in 2006 and has rapidly spread westward in North America to neighboring states and into Canada. The disease has killed millions of beneficial, insect-eating bats and threatens several formerly abundant bat species with extinction.

Based on the current understanding of Pd distribution in North America, scientists cannot determine if the fungus reached Washington from the east by bat movements or through human activity. However, ongoing surveillance continues.

Continued on Page 7.

BNW IS A NON-PROFIT, ALL VOLUNTEER CONSERVATION ORGANIZATION
WINTER 2016/17

Bats Northwest
www.batsnorthwest.org

Join our monthly BNW Meetings!
Second Tuesday, 6:30-8:30
Sand Point-Magnuson Park
Building 30 Conference Room
Bats Northwest Participates in Washington's Response to White Nose Syndrome

by John E. Bassett, Ph.D.

Discovery of a white nose syndrome (WNS)-infected bat of a subspecies native to Washington state at Ollalie State Park on I-90 east of North Bend, WA, in early March of 2016 initiated quick responses by both state and federal wildlife biologists. With this discovery, WNS, the fungal disease of hibernating bats that has killed millions of animals in the eastern half of the United States, had just jumped 2,000 miles from its last known position in eastern Minnesota to Washington state. Currently, no explanation for this unexpected event has been found.

With the announcement in late March of the discovery of WNS in western Washington, the Washington Department of Fish and Wildlife (WDFW) initiated several survey projects to determine how widespread WNS was in the state and how much damage, if any, the fungus had caused. One of these projects involved Bats Northwest (BNW). In early April, less than two weeks after the announcement at the end of March, BNW conducted an initial acoustic monitoring survey of the bats at the Stillwater Wildlife Management Unit (Stillwater) in the lower Snoqualmie Valley north of Carnation, WA. Stillwater is located 21 miles from Ollalie State Park and is approximately 1,200 feet lower in elevation than Ollalie. The Stillwater site is important because BNW had conducted summer acoustic monitoring surveys of the area in 2012, 2013, and 2014 providing baseline information about the bat fauna active in the area well prior to the appearance of WNS in Washington. The Stillwater site was monitored acoustically for bats by BNW in 2016 until the end of September.

In 2016, BNW also conducted an acoustic monitoring project begun in 2015 at the bats at Mercer Slough Nature Park in Bellevue, WA. BNW had monitored Mercer Slough during the summer of 2015 which provided baseline data on the fauna in the park from before the arrival of WNS. Mercer Slough was some 27 miles from Ollalie State Park and approximately 1,200 feet lower in elevation. Surveys at Mercer Slough were conducted in June, July and August of both 2015 and 2016. The goal of bat acoustic surveying is to determine which species are present in an area from the echolocation pulses they produce in the process of navigating the habitat in the dark. Acoustic surveying can also provide a "first approximation" of how common a species is in an area. In western Washington, the nine species of bats commonly found can be distinguished from each other by analyzing the ultrasound pulses they send out. A survey involves recording echolocation pulses for a 3.5-hour period following sunset as you either walk around the habitat of interest with an operator-triggered ultrasound recording device or monitor the air space over a location of interest with a self-triggering ultrasound recording device which will record automatically when it senses ultrasound. The recorded bat calls are then analyzed with call analysis software, and the results are summarized later as the researcher’s schedule allows.

The Little Brown Bat (Myotis lucifugus), one of the bats which has proven most sensitive to WNS in the eastern U.S., is also found in western Washington state. Since this species is viewed as a “canary in the coal mine” when working with WNS, we employed the Little Brown Bat as an indicator of the effects of the fungus locally. We also acquired data on the occurrence of the other eight insectivorous bat species in the area as well. At Stillwater, Little Brown Bats were heard both before (2014) and after (2016) WNS arrival. In addition, they produced approximately the same percentage of total bat calls heard each year indicating a comparable abundance over time. At Stillwater, seven of the remaining eight bat species were heard in both 2014 and 2016. The exceptions to this pattern was Townsend's Big Eared Bat (Corynorhinus townsendii) which was heard in 2016 but not in 2014. This species is considered sensitive to disturbance, so its...
Bats Northwest Participates in Washington’s Response to White Nose Syndrome

by Meg Lunnum

The 46th Annual Symposium of the North American Society for Bat Research was held on October 12-15, 2016 in San Antonio, TX. Bats Northwest board members Barb Ogaard and Meg Lunnum attended. Before the meeting started, there were two pre-conference events: a visit to Bracken Cave and a tour of Selah, Bamberger Ranch.

Bracken Cave is home to the largest collection of mammals in the world. Twenty-million bats, mostly Mexican Free Tail bats (Tadarida brasiliensis), live in Bracken Cave and feed twice daily on crop pests on the surrounding agriculture areas. The cave is also a maternity colony. You can learn more about Bracken Cave at the following web site: http://www.batcon.org/our-work/regions/usa-canada/protect-mega-populations/bracken-cave

Selah, Bamberger Ranch Preserve is a 3,500-acre ranch in Blanco County that has been restored to its original habitat. http://bambergerranch.org/our-story

There are two federally endangered songbirds that make their home at Bamberger, the Golden-cheeked warbler and the Black cedar thickets Capped Vireo. http://bambergerranch.org/biodiversity

The main reason for our trip to the ranch was to see the man-made bat cave. The cave is currently home to over 360,000 bats, again, mostly Tadarida. More information can be found here: http://www.merlintuttle.com/tag/selah-bamberger-ranch-preserves/

The conference started with the keynote speech from Dr. Merlin Tuttle. Dr. Tuttle is the President of Bat Conservation International and led Bat Conservation International until 2009, then founded Merlin Tuttle’s Bat Conservation in 2014. http://www.merlintuttle.com Merlin started Bat Conservation International in Austin, TX and helped to make Austin a bat friendly town. Millions of visitors come from all over the world to see the famous Congress Avenue Bridge with its 1.5 million bats. Dr. Tuttle’s main point was that maintaining bat species and diversity is very important because so many things that pertain to humans depend on bats: pollination, reforestation, insect control, and medical discoveries and so many more.

During the week, there are many presentations to choose from that cover any of the following topics: Behavioral and Physiological Ecology, Habitat and Distribution, Echolocation, and Conservation Biology. Students Honors Sessions included: Hung Out to Dry? Arid Adaptation in Hibernating Big Brown Bats or A Supralaryngeal Neuromuscular Apparatus for Sonar Beam Forming in the Free-Tailed Bat. Between Barb and me, we try to attend those presentations that apply to us as bat rehabilitators and bat advocates in the Pacific Northwest.

Free Tail bats (Tadarida brasiliensis), live in Bracken Cave and feed twice daily on crop pests on the surrounding agriculture areas. The cave is also a maternity colony. You can learn more about Bracken Cave at the following web site: http://www.batcon.org/our-work/regions/usa-canada/protect-mega-populations/bracken-cave

Selah, Bamberger Ranch Preserve is a 3,500-acre ranch in Blanco County that has been restored to its original habitat. http://bambergerranch.org/our-story

There are two federally endangered songbirds that make their home at Bamberger, the Golden-cheeked warbler and the Black cedar thickets Capped Vireo. http://bambergerranch.org/biodiversity

The main reason for our trip to the ranch was to see the man-made bat cave. The cave is currently home to over 360,000 bats, again, mostly Tadarida. More information can be found here: http://www.merlintuttle.com/tag/selah-bamberger-ranch-preserves/

The conference started with the keynote speech from Dr. Merlin Tuttle. Dr. Tuttle is the President of Bat Conservation International and led Bat Conservation International until 2009, then founded Merlin Tuttle’s Bat Conservation in 2014. http://www.merlintuttle.com Merlin started Bat Conservation International in Austin, TX and helped to make Austin a bat friendly town. Millions of visitors come from all over the world to see the famous Congress Avenue Bridge with its 1.5 million bats. Dr. Tuttle’s main point was that maintaining bat species and diversity is very important because so many things that pertain to humans depend on bats: pollination, reforestation, insect control, and medical discoveries and so many more.

During the week, there are many presentations to choose from that cover any of the following topics: Behavioral and Physiological Ecology, Habitat and Distribution, Echolocation, and Conservation Biology. Students Honors Sessions included: Hung Out to Dry? Arid Adaptation in Hibernating Big Brown Bats or A Supralaryngeal Neuromuscular Apparatus for Sonar Beam Forming in the Free-Tailed Bat. Between Barb and me, we try to attend those presentations that apply to us as bat rehabilitators and bat advocates in the Pacific Northwest.

One of the highlights of the meeting was the Teacher’s Workshop. Teachers from the surrounding area are invited to learn about bats in order to take the information back to the classroom. Dr. Tuttle was also part of the teacher’s workshop: The Magical World of Bats and Their Special Importance in Texas. Some of the other topics included: Bringing Bat Conservation

Continued from Page 2.

The conference started with the keynote speech from Dr. Merlin Tuttle. Dr. Tuttle is the President of Bat Conservation International and led Bat Conservation International until 2009, then founded Merlin Tuttle’s Bat Conservation in 2014. http://www.merlintuttle.com Merlin started Bat Conservation International in Austin, TX and helped to make Austin a bat friendly town. Millions of visitors come from all over the world to see the famous Congress Avenue Bridge with its 1.5 million bats. Dr. Tuttle’s main point was that maintaining bat species and diversity is very important because so many things that pertain to humans depend on bats: pollination, reforestation, insect control, and medical discoveries and so many more.

During the week, there are many presentations to choose from that cover any of the following topics: Behavioral and Physiological Ecology, Habitat and Distribution, Echolocation, and Conservation Biology. Students Honors Sessions included: Hung Out to Dry? Arid Adaptation in Hibernating Big Brown Bats or A Supralaryngeal Neuromuscular Apparatus for Sonar Beam Forming in the Free-Tailed Bat. Between Barb and me, we try to attend those presentations that apply to us as bat rehabilitators and bat advocates in the Pacific Northwest.

One of the highlights of the meeting was the Teacher’s Workshop. Teachers from the surrounding area are invited to learn about bats in order to take the information back to the classroom. Dr. Tuttle was also part of the teacher’s workshop: The Magical World of Bats and Their Special Importance in Texas. Some of the other topics included: Bringing Bat Conservation

Continued on Page 7.

Latest White Nose Syndrome Spread Map

Townsend’s Big-Eared Bat (Corynorhinus townsendii), the lone species that was not heard at Mercer Slough, is less likely to be observed in urban areas such as Bellevue given its sensitivity to disturbance.

In conclusion, WNS does not yet appear to have caused large numbers of deaths in hibernating bat species in western Washington. Little Brown Bat populations appear to have been stable over the last 3 summers at the two monitoring locations examined. Since WNS kills bats during winter hibernation, we will get another update on the status of sensitive species such as the Little Brown Bat during the spring of 2017 when the hibernating species in Washington emerge from their winter dormancy. Once again, BNSW will be involved with local efforts to determine the effects of WNS in western Washington and the status of sensitive species by conducting acoustic monitoring studies.

Free Tail bats (Tadarida brasiliensis), live in Bracken Cave and feed twice daily on crop pests on the surrounding agriculture areas. The cave is also a maternity colony. You can learn more about Bracken Cave at the following web site: http://www.batcon.org/our-work/regions/usa-canada/protect-mega-populations/bracken-cave

Selah, Bamberger Ranch Preserve is a 3,500-acre ranch in Blanco County that has been restored to its original habitat. http://bambergerranch.org/our-story

There are two federally endangered songbirds that make their home at Bamberger, the Golden-cheeked warbler and the Black cedar thickets Capped Vireo. http://bambergerranch.org/biodiversity

The main reason for our trip to the ranch was to see the man-made bat cave. The cave is currently home to over 360,000 bats, again, mostly Tadarida. More information can be found here: http://www.merlintuttle.com/tag/selah-bamberger-ranch-preserves/

The conference started with the keynote speech from Dr. Merlin Tuttle. Dr. Tuttle is the President of Bat Conservation International and led Bat Conservation International until 2009, then founded Merlin Tuttle’s Bat Conservation in 2014. http://www.merlintuttle.com Merlin started Bat Conservation International in Austin, TX and helped to make Austin a bat friendly town. Millions of visitors come from all over the world to see the famous Congress Avenue Bridge with its 1.5 million bats. Dr. Tuttle’s main point was that maintaining bat species and diversity is very important because so many things that pertain to humans depend on bats: pollination, reforestation, insect control, and medical discoveries and so many more.

During the week, there are many presentations to choose from that cover any of the following topics: Behavioral and Physiological Ecology, Habitat and Distribution, Echolocation, and Conservation Biology. Students Honors Sessions included: Hung Out to Dry? Arid Adaptation in Hibernating Big Brown Bats or A Supralaryngeal Neuromuscular Apparatus for Sonar Beam Forming in the Free-Tailed Bat. Between Barb and me, we try to attend those presentations that apply to us as bat rehabilitators and bat advocates in the Pacific Northwest.

One of the highlights of the meeting was the Teacher’s Workshop. Teachers from the surrounding area are invited to learn about bats in order to take the information back to the classroom. Dr. Tuttle was also part of the teacher’s workshop: The Magical World of Bats and Their Special Importance in Texas. Some of the other topics included: Bringing Bat Conservation

Continued from Page 2.

The conference started with the keynote speech from Dr. Merlin Tuttle. Dr. Tuttle is the President of Bat Conservation International and led Bat Conservation International until 2009, then founded Merlin Tuttle’s Bat Conservation in 2014. http://www.merlintuttle.com Merlin started Bat Conservation International in Austin, TX and helped to make Austin a bat friendly town. Millions of visitors come from all over the world to see the famous Congress Avenue Bridge with its 1.5 million bats. Dr. Tuttle’s main point was that maintaining bat species and diversity is very important because so many things that pertain to humans depend on bats: pollination, reforestation, insect control, and medical discoveries and so many more.

During the week, there are many presentations to choose from that cover any of the following topics: Behavioral and Physiological Ecology, Habitat and Distribution, Echolocation, and Conservation Biology. Students Honors Sessions included: Hung Out to Dry? Arid Adaptation in Hibernating Big Brown Bats or A Supralaryngeal Neuromuscular Apparatus for Sonar Beam Forming in the Free-Tailed Bat. Between Barb and me, we try to attend those presentations that apply to us as bat rehabilitators and bat advocates in the Pacific Northwest.

One of the highlights of the meeting was the Teacher’s Workshop. Teachers from the surrounding area are invited to learn about bats in order to take the information back to the classroom. Dr. Tuttle was also part of the teacher’s workshop: The Magical World of Bats and Their Special Importance in Texas. Some of the other topics included: Bringing Bat Conservation

Continued on Page 7.

Latest White Nose Syndrome Spread Map

Townsend’s Big-Eared Bat (Corynorhinus townsendii), the lone species that was not heard at Mercer Slough, is less likely to be observed in urban areas such as Bellevue given its sensitivity to disturbance.

In conclusion, WNS does not yet appear to have caused large numbers of deaths in hibernating bat species in western Washington. Little Brown Bat populations appear to have been stable over the last 3 summers at the two monitoring locations examined. Since WNS kills bats during winter hibernation, we will get another update on the status of sensitive species such as the Little Brown Bat during the spring of 2017 when the hibernating species in Washington emerge from their winter dormancy. Once again, BNSW will be involved with local efforts to determine the effects of WNS in western Washington and the status of sensitive species by conducting acoustic monitoring studies.
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 the sites listed on our Resource Page at:

http://www.batsnorthwest.org/resources.html

by Devon Abejo

What started as a book search for a second grader turned into a series of programs and outreach to children and teens ages 3-18. When I was asked to help someone find a book about bats I had no idea what this would turn into. Once he had a book about bats the other kids in his class wanted to learn about bats. Suddenly there was a swarm of kids interested in bats. As luck would have it I met a volunteer from Bats Northwest at a charity fund raiser and got information about the Edu-bat kit. With the kit 4 librarians were able to offer 7 programs to children ranging in age from 3-18, both in the library and out in the community.

A large part of what we do in the library involves outreach to people in our community and with such an emphasis placed on STEM learning it was wonderful to be able to bring a program to the patrons that deals with an animal that lives in their back yard.

The highlight of the programs was having Michelle Noe come visit the library and speak about her experience working with bats. This helped clear up some common misconceptions about the bats that are in our area. This was a wonderful experience in the library and I look forward to bringing the programs back next year to teach another group of kids about the wonderful world of bats.

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

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

Help Bats Northwest Help Our Bats

Members of Bats Northwest are assisting the Washington Department of Fish and Wildlife with acoustic survey work in King County on WDFW lands. We are also assisting the City of Bellevue Parks Department in learning about their bats. If you would like to learn how you can assist as a citizen scientist, please email info@batsnorthwest.org with the subject “Acoustic survey volunteer”. At this time we are seeking adult volunteers who can commit to nighttime surveys and can transport themselves to sites reachable by car. Thank you for your support!
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 the sites listed on our Resource Page at: http://www.batsnorthwest.org/resources.html

**Bats in the library**

by Devon Abejo

What started as a book search for a second grader turned into a series of programs and outreach to children and teens ages 3-18. When I was asked to help someone find a book about bats, I had no idea what this would turn into. Once he had a book about bats, the other kids in his class wanted to learn about bats. Suddenly there was a swarm of kids interested in bats.

As luck would have it I met a volunteer from Bats Northwest at a charity fund raiser and got information about the Edu-bat kit. With the kit the 4 librarians were able to offer 7 programs to children ranging in age from 3-18, both in the library and out in the community.

A large part of what we do in the library involves outreach to people in our community and with such an emphasis placed on STEM learning it was wonderful to be able to bring a program to the patrons that deals with an animal that lives in their back yard.

The highlight of the programs was having Michelle Noe come visit the library and speak about her experience working with bats. This helped clear up some common misconceptions about the bats that are in our area. This was a wonderful experience in the library and I look forward to bringing the programs back next year to teach another group of kids about the wonderful world of bats.

**Washington Bats Need Your Help!**

A devastating bat disease called White-Nose Syndrome is now in Washington

**Report Your Bat Sightings**

- If you find sick/dead bats or a group of live bats, report your observation to the Washington Department of Fish and Wildlife at wdfw.wa.gov/bats or (360) 902-2515.
- Do not attempt to handle a live bat. If you find a sick or injured bat, report it to WDFW and visit wdfw.wa.gov/conservation/health/rehabilitation to find a wildlife rehabilitation center near you.
- Never handle a dead bat with your bare hands. If you must touch a dead bat, wear durable gloves for protection.

**What is White-Nose Syndrome?**

- White-Nose Syndrome is a fungal disease that has killed millions of bats in eastern North America.
- The disease has been confirmed in 29 states and five Canadian provinces since it was first documented in New York in 2006.
- In March 2016, the first case of the disease was confirmed in Washington.
- White-Nose Syndrome does not pose a threat to humans, pets or other animals.

**How does White-Nose Syndrome affect bats?**

- The fungus can grow on the nose, wings and ears of an infected bat during winter hibernation, giving it a white, fuzzy appearance. After bats wake from hibernation, this fuzzy white appearance goes away.
- Even though the fungus may not be visible, it invades and damages deep skin tissues. Infected bats arouse more often during hibernation which causes them to use crucial fat reserves, leading to possible starvation and death.
- Infected bats may also die from wing damage, inability to regulate body temperature, breathing disruptions, and dehydration.

For more information please visit: wdfw.wa.gov/bats

**How can you help?**

- Whenever possible, avoid entering areas where bats may live to limit potential of spreading disease and disturbance of roosting bats.
- If you come into contact with crevices in rock cliffs, talus areas, caves or mines, please clean your gear. If possible use the decontamination guidelines at www.whitenosesyndrome.org
- Improve bat habitats. Reduce lighting around your home, minimize tree clearing, and protect streams and wetlands. For more information on living with bats, and instructions for how to build a bat house, visit: wdfw.wa.gov/living/bats.html

**Help Bats Northwest Help Our Bats**

Members of Bats Northwest are assisting the Washington Department of Fish and Wildlife with acoustic survey work in King County on WDFW lands. We are also assisting the City of Bellevue Parks Department in learning about their bats. If you would like to learn how you can assist as a citizen scientist, please email info@batsnorthwest.org with the subject “Acoustic survey volunteer”. At this time we are seeking adult volunteers who can commit to nighttime surveys and can transport themselves to sites reachable by car. Thank you for your support!
Would you like to lend a hand? Bats Northwest would love your help.
Would you like to build bat houses? Write newsletter articles? Coordinate other volunteers? Please contact us to see how you can help us help bats!

---

Free Tail bats (Tadarida brasilien), live in Bracken Cave and feast twice daily on crop pests on the surrounding agriculture areas. The cave is also a maternity colony. You can learn more about Bracken Cave at the following website: http://www.batcon.org/our-work/regions/usa-canada/protect-mega-populations/bracken-cave

Selah, Bamberger Ranch Preserve is a 5,500-acre ranch in Blanco County that has been restored to its original habitat. http://bambergerranch.org/our-story

There are two federally endangered songbirds that make their home at Bamberger Ranch: the Golden-cheeked warbler and the Black cedar thickets Capped Vireo. http://bambergerranch.org/biodiversity

The main reason for our trip to the ranch was to see the man-made bat cave. The cave is currently home to over 360,000 bats, again, mostly Tadarida. More information can be found here: http://www.merlintuttle.com/tag/selah-bamberger-ranch-preserve/

The conference started with the keynote speech from Dr. Merlin Tuttle. Dr. Tuttle founded and led Bat Conservation International until 2009, then founded Merlin Tuttle’s Bat Conservation in 2014. http://www.merlintuttle.com. Merlin started Bat Conservation International in Austin, TX and helped to make Austin a bat friendly town. Millions of visitors come from all over the world to see the famous Congress Avenue Bridge with its 1.5 million bats. Dr. Tuttle’s main point was that maintaining bat species and diversity is very important because so many things that pertain to humans depend on bats: pollination, reforestation, insect control, and medical discoveries and so many more.

During the week, there are many presentations to choose from that cover any of the following topics: Behavioral and Physiological Ecology, Habitat and Distribution, Echolocation, and Conservation Biology. Students Honors Sessions included: Hung Out to Dry? Arid Adaptation in Hibernating Big Brown Bats or A Supralaryngeal Neuromuscular Apparatus for Sonar Beam Forming in the Free-Tailed Bat. Between Barb and me, we try to attend those presentations that apply to us as bat rehabilitators and bat advocates in the Pacific Northwest.

One of the highlights of the meeting is the Teacher’s Workshop. Teachers from the surrounding area are invited to learn about bats in order to take the information back to the classroom. Dr. Tuttle was also part of the teacher’s workshop: The Magical World of Bats and Their Special Importance in Texas. Some of the other topics included: Bringing Bat Conservation... Continued on Page 7.

---

Latest White Nose Syndrome Spread Map

In conclusion, WNS does not yet appear to have caused large numbers of deaths in hibernating bat species in western Washington. Little Brown Bat populations appear to be very stable over the last 3 summers at the two monitoring locations examined. Since WNS kills bats during winter hibernation, we will get another update on the status of sensitive species such as the Little Brown Bat during the spring of 2017 when the hibernating species in Washington emerge from their winter dormancy. Once again, BNW will be involved with local efforts to determine the effects of WNS in western Washington and the status of sensitive species by conducting acoustic monitoring studies.

---

Our Mission
Bats Northwest Envisions a Future 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
Bats Northwest Participates in Washington's Response to White Nose Syndrome

by John E. Bassett, Ph.D.

Discovery of a white nose syndrome (WNS)-infected bat of a subspecies native to Washington state at Ollalie State Park on I-90 east of North Bend, WA, in early March of 2016 initiated quick responses by both state and federal wildlife biologists. With this discovery, WNS, the fungal disease of hibernating bats that has killed millions of animals in the eastern half of the United States, had just jumped 2,000 miles from its last known position in eastern Minnesota to Washington state. Currently, no explanation for this unexpected event has been found.

With the announcement in late March of the discovery of WNS in western Washington, the Washington Department of Fish and Wildlife (WDFW) initiated several survey projects to determine how widespread WNS was in the state and how much damage, if any, the fungus had caused. One of these projects involved Bats Northwest (BNW). In early April, less than two weeks after the announcement at the end of March, BNW conducted an initial acoustic monitoring survey of the bats at the Stillwater Wildlife Management Unit (Stillwater) in the lower Snoqualmie Valley north of Carnation, WA. Stillwater is located 21 miles from Ollalie State Park and is approximately 1,200 feet lower in elevation than Ollalie. The Stillwater site is important because BNW had conducted summer acoustic monitoring surveys of the area in 2012, 2013, and 2014 providing baseline information about the bat fauna active in the area well prior to the appearance of WNS in Washington. The Stillwater site was monitored acoustically for bats by BNW in 2016 until the end of September. In 2016, BNW also continued an acoustic monitoring project begun in 2015 of the bats at Mercer Slough Nature Park in Bellevue, WA. BNW had monitored Mercer Slough during the summer of 2015 which provided baseline data on the fauna in the park from before the arrival of WNS. Mercer Slough is some 27 miles from Ollalie State Park and approximately 1,200 feet lower in elevation. Surveys at Mercer Slough were conducted in June, July and August of both 2015 and 2016.

The goal of bat acoustic surveying is to determine which species are present in an area from the echolocation pulses they produce in the process of navigating the habitat in the dark. Acoustic surveying can also provide a "first approximation" of how common a species is in an area. In western Washington, the nine species of bats commonly found can be distinguished from each other by analyzing the ultrasound pulses they send out. A survey involves recording echolocation pulses for a 3.5-hour period following sunset as you either walk around the habitat of interest with an operator-triggered ultrasound recording device or monitor the air space over a location of interest with a self-triggering ultrasound recording device which will record automatically when it senses ultrasound. The recorded bat calls are then analyzed with call analysis software, and the results are summarized later at the researcher’s schedule allows.

The Little Brown Bat (Myotis lucifugus), one of the bats which has proven most sensitive to WNS in the eastern U.S., is also found in Washington state. Since this species is viewed as a "canary in the coal mine" when working with WNS, we employed the Little Brown Bat as an indicator of the effects of the fungus locally. We also acquired data on the occurrence of the other eight insectivorous bat species in the area as well. At Stillwater, Little Brown Bats were heard both before (2014) and after (2016) WNS arrival. In addition, they produced approximately the same percentage of total bat calls heard each year indicating a comparable abundance over time. At Stillwater, seven of the remaining eight bat species were heard in both 2014 and 2016. The exceptions to this pattern was Townsend's Big-Eared Bat (Corynorhinus townsendii) which was heard in 2016 but not in 2014. This species is considered sensitive to disturbance, so its

Continued from Page 1.

efforts coordinated through the multiagency WNS response effort continues to provide insights on the spread of WNS, the impacts of this disease on bat populations and the potential for population recovery.

The national WNS response effort is coordinated by the U.S. Fish and Wildlife Service and involves federal, state and non-governmental organizations, including representatives from the bat conservation and caving communities.

“These results confirm that Pd is capable of movement far across North America. They do not, however, change the importance of taking precautions to reduce the risk of spread by humans,” said Jeremy Coleman, National WNS Coordinator for the U.S. Fish and Wildlife Service. “There’s much we don’t know about how Pd will affect populations of western bats, so it is critical to limit spread as much as possible until we can improve survival of susceptible bats.”

WNS is not known to pose a threat to humans, pets, livestock or other wildlife.

For more information about WNS, please visit the USGS National Wildlife Health Center and Forest Service’s Northern Research Station websites.

Continued from Page 6.
to the Classroom (Dianne Odegard, Education & Public Outreach Manager, Bat Conservation International), The Agricultural Importance of Bats (Dr. John K. Westbrook, Research Meteorologist, USDA-Agricultural Research Service), and Batman, Bananas and Bugs (Rob Mies, Executive Director, Organization for Bat Conservation, Cranbrook Institute of Science). 

During the conference, one gets to see old friends, meet new batty friends, learn more about bats, and in general reconnect with the bat world as it pertains to bat research. In 2017, October 18-21, NASBR #47, will be in Knoxville, TN and Puerto Vallarta, MX will be the host city on October 24-27, 2018, for NASBR #48.

On the way to San Antonio, Meg and Barb also visited Bat World – Texas (https://batworld.org/). In 2000 they attended bat boot camp with Amanda Lollar to learn more about rehabilitating bats. There is a newly built facility with room for insect bats and fruit bats and a new bat cave. It was fun getting to interact with Mexican Free-tails and the little fruit bats.

Continued from Page 5.

Continued from Page 5.

Continued from Page 5.

Continued from Page 5.
News

Deadly Bat Fungus in Washington State Likely Originated in Eastern U.S.

NEWS RELEASE WDFW
Release Date: August 3, 2016

The bat-killing fungus recently detected for the first time in western North America is genetically similar to strains found in the eastern United States and did not likely originate in Eurasia, according to a study published today in the journal mSphere.

The findings have implications for resource managers battling the spread of the devastating disease white-nose syndrome (WNS) in North American bats.

Results of the U.S. Geological Survey and USDA Forest Service study provide clues about the origin of this fungus, or Pd. This fungus causes WNS and was recently found on a bat near North Bend, Washington, about 1,300 miles from the previous westernmost detection in Nebraska. Because Pd is also present in Eurasia and North Bend is located near an international port, the scientists studied DNA from the Washington fungus to determine if it had roots abroad.

“Although it remains unclear how Pd reached Washington, this finding guides us to look to North America as the source,” said Jonathan Sheehan, director of the USGS National Wildlife Health Center (NWHC), where the Washington bat was confirmed Pd positive. “Now that Pd has been identified in the western U.S., it’s critical to continue working with resource managers to help conserve imperiled bat species, which are worth billions of dollars per year to North American agriculture and forestry.”

In March 2016, a little brown bat found sick near North Bend tested positive for WNS. Following this discovery, the USGS NWHC provided DNA from the fungus on the bat’s skin to a laboratory at the Forest Service’s Northern Research Station (NRS) for genetic analysis.

“The severity and potential ecosystem-level effects of WNS in North America make it one of the most serious wildlife diseases ever recorded,” said Daniel Lindner, a research plant pathologist with the Forest Service’s NRS and a co-author on the study. “We have made a lot of progress in understanding WNS and in monitoring its spread, but more work is needed to determine how disease impacts will vary among bat populations in eastern and western North America.”

Scientists at the Forest Service’s NRS sequenced DNA from multiple strains of Pd, including the fungus cultured from the Washington bat, to determine that it most closely matched fungal strains from eastern North America.

White-nose syndrome was first documented in New York state in 2006 and has rapidly spread westward in North America to neighboring states and into Canada. The disease has killed millions of beneficial, insect-eating bats and threatens several formerly abundant bat species with extinction.

Based on the current understanding of Pd distribution in North America, scientists cannot determine if the fungus reached Washington from the east by bat movements or through human activities. However, ongoing surveillance

Continued on Page 7.