

Windows to *Wildlife*



Big brown bat colony © (CC-BY-SA) Dave Thomas on Flickr CC.

Strength in Partnership: Building a Unified Front for Bat Conservation in Idaho

Written by Rita Dixon*

State Wildlife Action Plan Coordinator, Idaho Department of Fish and Game

Bats face unprecedented threats. According to a recent review by O’Shea et al. (2016) in the journal *Mammal Review*, since 2000, collisions with wind turbines and white-nose syndrome have become the leading causes of reported multiple mortality events (MMEs) in bats. Prior to that, intentional killing by humans caused the greatest proportion of MMEs in bats, and although reduced, continues today. Mortality in bats due to natural abiotic factors such as unseasonably cold weather, snow storms, flooding of roosts during heavy rainfall, overheating during unusual hot spells, and burning or suffocation during landscape-level fires is projected to increase in the future with climate change. Combined with persistent threats of roosting and foraging habitat loss, increasing mortality through MMEs is unlikely to be compensated for, given the life history attributes of bats.

Why do bats matter?

Bats are unique animals and are the only mammals capable of true powered flight. Another feature that separates bats from most other mammals is echolocation. For their body size and metabolism, bats are remarkably long-lived—some of which live for at least 40 years in the wild. Bats typically give birth to only one pup per year (although some can have twins) and are also unusual among mammals in that their young are not weaned until they approach adult size. Bats are vital for a healthy environment, eating tons of insects nightly, benefitting crops, forests, and humans. In Idaho, bats contribute an estimated

In this newsletter...

Bat Conservation	1-3
Milkweek and Monarchs	4-5
Million Pollinator Garden Challenge	6
iNaturalist for wildlife	7-8
Summer Wildlife Events	9

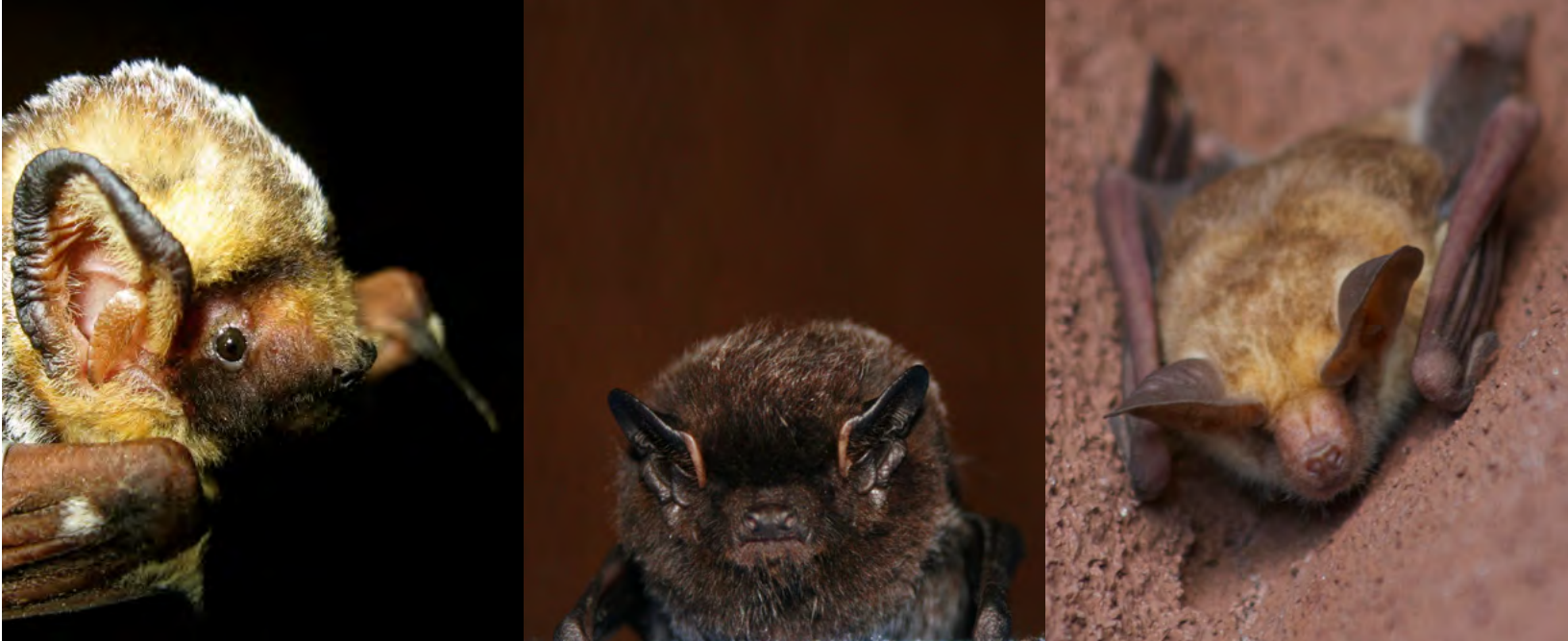
value of over \$313 million in pest control every year to the agricultural industry alone. Studying bats has led to advancements in sonar, vaccine development, blood coagulation, and ageing research.

The March 2016 confirmation of white-nose syndrome (WNS), a disease of hibernating bats caused by a recently discovered fungus called *Pseudogymnoascus destructans* (Pd), in Washington state has heightened concern over the potential implications to Idaho's bat populations. Since first detected in New York state in February 2006, WNS has killed more than 6 million bats. Because this disease has the potential to lead to the extinction (or local extirpation) of some bat species, as well as the loss of their valuable contributions to nature, the primary goal of the Idaho Department of Fish and Game (Department) is to prevent the introduction of the fungus that causes WNS while preparing for its potential arrival.

Within the framework of a national response plan led by the US Fish and Wildlife Service, the Department is working with state and federal agencies, other western states, tribes, academic institutions, grottos, and nongovernmental organizations to gather baseline information on bats, conduct WNS surveillance in Idaho, and to develop a coordinated interagency response plan for the state. As of July 2016, Idaho's WNS Response Team is comprised of staff from the Idaho Department of Fish and Game, Idaho Department of Lands, Idaho Department of Health and Welfare, Idaho Transportation Department, US Fish and Wildlife Service, Bureau of Land Management (BLM), US Forest Service Northern and Intermountain Regions, US Army Corps of Engineers, Idaho National Laboratory, National Park Service, Natural Resources Conservation Service, Shoshone-Bannock Tribes, Idaho Power, Boise State University, Idaho Army National Guard, and Silver Sage Grotto.

Although WNS has been a unifying force to formalize a partnership, the Idaho Department of Fish and Game, in conjunction with some of these same partners, is in its second year of contributing to the North American Bat Monitoring Program (NABat), which grew out of the national WNS effort and will provide important information on the distribution and abundance of bats. Other efforts underway in Idaho to address threats to bats include a partnership with the BLM to monitor the effectiveness of bat gates, an eastern Idaho collaborative acoustic survey, and a partnership between BLM and the Department's Salmon Region to conduct acoustic surveys for bats.





Previous page: Big brown bat © Alex Galt, USFWS. **Left:** Hoary bat © (CC-BY-SA) Nessie Grace on Flickr CC. **Middle:** Silver-haired bat © Rita Dixon, IDFG. **Right:** Pallid bat © (CC-BY-SA) Devra on Flickr CC

You can help bats. If you find a bat that is sick, injured, or in a place that isn't safe, contact the Idaho Department of Fish and Game. To report unusual bat mortality/behavior (five or more dead/sick bats at 1 location), contact the Idaho Department of Fish and Game Wildlife Health Forensic Laboratory at 208-939-9171 or by email at Wildlifelab@idfg.idaho.gov. Report bat colonies in buildings at <https://idfg.idaho.gov/species/observations/bat>. If bats are in your home and you don't want them there, contact the Idaho Department of Fish and Game for guidance on excluding bats without harming them.

For more information, see:

- WHITE-NOSE SYNDROME.org www.whitenosesyndrome.org
- Bat Conservation International www.batcon.org
- Organization for Bat Conservation www.batcon.org
- Project EduBat batlive.pwnet.org/edubat
- USGS National Wildlife Health Center www.nwhc.usgs.gov
- Bats and Wind Energy Cooperative www.batsandwind.org
- Bat World Sanctuary batworld.org
- Western Bat Working Group wbwg.org

References

O'Shea TJ, Cryan PM, Hayman DTS, Plowright RK, Streicker DG. 2016. Multiple mortality events in bats: a global review. *Mammal Review*. n/a-n/a.

Milkweed Supports Monarchs

by Terry Thomas*, Retired Wildlife Biologist

An annual war is forming up on the canals and ditchbanks, fields, farms, and backyards all across the country. On the one side is a pretty pink wildflower called common milkweed. Landowners are on the other side, armed with an array of chemicals loaded into tanks pulled by tractors, carried by ATVs or even by backpacks, and marking their battlelines with blue dye. Anything short of milkweed annihilation seems to be unacceptable.

It is easy to see why landowners might resent this native plant. It is a perennial that not only reproduces through copious seed production but by rhizomes as well. Rhizomes are lateral roots that shoot from the mother plant at an astonishing rate and form numerous new sprouts. They can quickly create a milkweed colony where other plants cannot grow.

To see where milkweed gets its name, cause a little injury to a milkweed stalk. A sticky white sap will immediately begin to ooze out and run down the stem, much like a milky tear. This milky sap is full of toxins known as cardiac glycosides, making this plant poisonous to most animals, humans included.

Milkweed has several redeeming qualities though. First, the pink five-petaled flowers form up in a pretty globe on top of handsome green foliage.

Second, milkweed is attractive to many beneficial insects, providing pollen, nectar and escape cover.

Third, milkweed is the host, the only host, to monarch butterfly caterpillars which can absorb the toxins making themselves poisonous in the process. The relationship between milkweed and monarchs is similar to that between sagebrush and sage-grouse.

To save a milkweed is, quite possibly, to save a monarch and thus a species. © (CC-BY-NA) Becky O'Neill/ USFWS Midwest on Flickr CC.





The plant thrives without the animal, but the animal's biology is hardwired to the plant.

It's that third one that should give pause to the war on milkweed. Monarch numbers are dropping fast, and researchers tie it directly to the decline of common milkweed. To save a milkweed is, quite possibly, to save a monarch and thus a species.

Despite its beautiful flowers and foliage, despite the fact that the late summer seedpods are works of art, even despite the fact that monarchs must have them, for me, our native milkweed is not a plant to welcome in a small backyard.

Once, in an attempt to do my part for monarch conservation, I allowed, even encouraged, a single milkweed plant in my garden. By the second year, I had milkweed runners 12 feet from the mother plant. Feeling two-faced, yet fearing a hostile takeover, I too went to war and battle this same plant today. Its aggressive nature may be best suited for fields and woodlands. There are other species of milkweed, such as butterfly milkweed, that will still satisfy a monarch caterpillar yet won't overwhelm the garden.

If milkweed existed for only one reason, as life support for monarch butterflies, for me that would be enough reason to preserve and even perpetuate it. It would be hard to imagine a world where monarchs no longer fly simply because humans were intolerant of the plant that sustains them.

Top: Monarch chrysalis transformation © (CC-BY-NA) Becky O'Neill/ USFWS Midwest on Flickr CC. **Bottom:** Common milkweed-monarch butterflies not only love it, it is absolutely essential for their life cycle. © (CC-BY-NA) Joanna Gilkeson/USFWS.





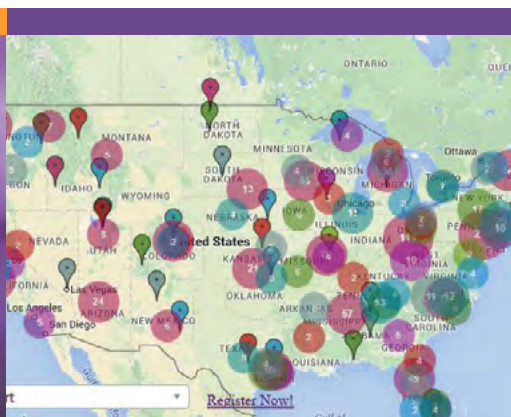
Million Pollinator Garden Challenge

Everyone can answer this call to action to preserve and create gardens and landscapes that help revive the health of bees, butterflies, birds, bats and other pollinators across the country. We will move millions of individuals, kids and families outdoors and make a connection between pollinators and the healthy food people eat.

Three Simple Steps



1. Plant Something for Pollinators



2. Register Your Garden at MillionPollinatorGardens.org



3. Spread The Word and Get Others to Join In!

Pollinator Gardens Should:

- Use plants that provide nectar and pollen sources
- Provide a water source
- Be situated in sunny areas with wind breaks
- Create large “pollinator targets” of native or non-invasive plants
- Establish continuous bloom throughout the growing season
- Eliminate or minimize the impact of pesticides

Register your Garden to BEE Counted

Add a photo of your garden or landscape to the S.H.A.R.E map. Anyone and any size garden can join in our campaign to reach one million sites for pollinators!

Keep the Challenge Growing!

Invite others to your garden and talk to everyone about the importance of pollinators and how you can help!

Need help finding the right plants in your area? Ask your local nursery, native plant society, public garden, nature center or state university extension master gardener program.

For more gardening tips for pollinator friendly planting: MillionPollinatorGardens.org

MillionPollinatorGardens.org

Using your Smartphone to Conserve Wildlife

by Dan Giltz and Chuck Peterson*,
Herpetology Laboratory, Department of Biological Sciences, Idaho State University, Idaho Museum of Natural History

The Idaho Department of Fish and Game greatly needs information about changes in the occurrence and distribution of many non-game species to protect and restore them. You can help by sharing your wildlife observations. In the past, observations contributed by members of the public have been an important source of information, however, collecting and sharing this information has been problematic in a number of ways. First, accurately identifying the observed species; second, obtaining the geographic coordinates associated with the observation; and third, easily sharing the information. With the advent of smartphones and social media, observations from the public could become even more valuable as a source of new data for species conservation. A recently developed mobile application called iNaturalist shows promise as a way to make and share observations and for these observations to be added to the permanent databases of organizations like the Idaho Department of Fish and Game. Data from iNaturalist observations include a picture of the observed organism, the time and date it was seen, and its geographic coordinates, providing a photographic record of an organism in a specific place at a particular time. The records created can also be exported for use in evaluating a species' conservation status as well as planning for protection or restoration efforts.

According to their website (www.iNaturalist.org), iNaturalist was created as the Masters Degree project of a group of students at University of California Berkeley's School of Information in 2008 and acquired by The California Academy of Science in 2014. The idea was to provide a social network for naturalists to share information about what they've seen. If used by enough people, the iNaturalist platform would provide scientists and managers with species distribution information that could be used to monitor changes in biodiversity. It was also intended to be used by anyone to learn more about natural history. In addition to contributing



Dan Giltz entering an iNaturalist observation with his smartphone © Chuck Peterson



Rocky Mountain tailed frog © Chuck Peterson

observations, people using the site can follow other users and track their observations, confirm or discuss observations made in the community, get help identifying unknown species, create or participate in projects, and download or create field guides. It's like Facebook, but each "Status Update" is a meaningful contribution containing scientifically useful information. Any observation, once uploaded, is subject to review by other users and project curators within the site before being given the status of Research Grade. Even if the person making the observation doesn't know the identity of what they've seen, a function called "Help ID" can be used to improve the quality of the observation data.

One of the strengths of iNaturalist is that it allows users to contribute observations of any living organism, including plants, animals and fungi. Dr. Rick Williams, Life Sciences Curator at the Idaho Museum of Natural History, uses iNaturalist to provide records for the museum's collection as well as for a tool to teach botany students. There are several other projects focusing on different animals and areas of our state. Recently, the Herpetology Laboratory at Idaho State University has started an iNaturalist project to gather observations of amphibians and reptiles within the state. Biologists, teachers, students, and citizens are collaborating by using this project and have already increased the amount of data available. Since being created in June of 2016, the Idaho Amphibian and Reptile iNaturalist Project has gained 50 members who have observed 33 of the 38 possible amphibian and reptile species and these members have logged 228 observations from around the state.

You can join the project and contribute observations too. Simply visit www.iNaturalist.org and/or download the free mobile app to create an account. Once you have done this, search for the Idaho Amphibian and Reptile iNaturalist Project and join the project. To help with identifying species, the ISU Herp Lab has created guides entitled Idaho Amphibians and Idaho Reptiles. The guides can be found using the search tool on iNaturalist and are available to download and use even when not connected to the internet. This is an opportunity to learn more about Idaho's amphibian and reptile species while helping to improve records of changes in their occurrence and distribution. Such information will be critical to the conservation of Idaho's wildlife in the future.

Taking a photograph using the iNaturalist app © iNaturalist



Gopher snake © Chuck Peterson



Long-nosed leopard lizard © Chuck Peterson



Summer Wildlife Events

Events in and Around the Treasure Valley

Boise WaterShed

11818 West Joplin Rd., Boise; (208) 489-1284
www.cityofboise.org/Bee/WaterShed/Home/index.aspx

August 20- WaterShed Weekend: Whose Home Is It?

From 10:00 a.m. – 1:00 p.m., take part in fun crafts and activities that highlight life along the river. At 10:30, join us in the theater for a presentation of local wildlife by Idaho Fish and Game Wildlife Educator, Adare Evans. Work with local artist Renda Palmer to create a habitat with luscious inks, using fox and hawk stencils to create a one of a kind monoprint. At 11:30, join us for a wastewater treatment plant tour (not recommended for children under the age of four). Closed-toe shoes are required for the tour. No strollers. Free. No registration is required.

Events In and Around the Wood River Valley

August 13: Nature Walk- Butterflies, Aquatic Insects, and Pollinators

10 a.m.-12:00 p.m. Meet at Silver Creek Visitor Center. Kilpatrick Bridge Rd, Picabo, ID. For more information contact Dayna Gross at (208) 578-4083.

Events In and Around the Panhandle

August 20: Bird Walk at Kootenai National Wildlife Refuge

Meet by the Refuge office at 9:00 a.m. (287 Westside Rd., Bonners Ferry) rain or shine and dress for the weather. Bring binoculars or scope, field guide if you have one, snacks and good hiking shoes. Public restroom & water on site. Bird walks last 1-2 hours. Come on out and see some of the unique birds that frequent the refuge.

Events In and Around Eastern Idaho

Camas National Wildlife Refuge

2150E 2350N, Hamer; (208) 662-5423
www.fws.gov/refuge/camas/

August 12- Take a Shower at Camas

Watch the meteor showers of Perseids.

September 24- Discover Camas! Birds, Bugles, and Brunch

From 8 a.m. - 12 p.m., experience hayrides, bird walks for rookies to veterans, youth educational activities, live music, and free brunch! For specific directions click: <http://www.fws.gov/refuges/profiles/index.cfm?id=14611> and enter your starting point. To save your spot, call Patty (208-313-7581).

Craters of the Moon National Monument & Preserve

18 miles SW of Arco on Hwy 20/26/93. 24 miles NE of Carey on Hwy 20/26/93; (208) 527-1300
<https://www.nps.gov/crmo/index.htm>

August 25- Fee Free Day

Free admission to Craters! Come out and enjoy your park.

August 27- National Park Service Centennial Celebration

From 6:15 p.m. - 7:15 p.m. at the visitor center, celebrate 100 years of national parks with a variety of special events including a living history performance of "Two Gun" Bob Limbert! Meet the legendary explorer and adventurer Robert W. Limbert. Limbert, the first person to extensively explore and document what is now Craters of the Moon, will be portrayed by historian, Clark Heglar. Clark will recreate the exploits of the colorful showman and promoter who traveled extensively photographing Idaho's scenic wonders and sharing his discoveries with the world in the 1920's. Join us as we celebrate the 100th Anniversary of the National Park Service at this free presentation provided through the generous support of the Idaho Humanities Council and the Craters of the Moon Natural History Association.

Thank You for Your Support!

Thank you to those who made direct donations, purchased or renewed a wildlife license plate, or let us know of a tax check-off donation between April 1- June 30, 2016.

Your contribution provides important funding for wildlife and habitat conservation in Idaho.



Common Nighthawk © Mike Morrison



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Wildlife Diversity Program
P O Box 25
Boise, ID 83707-0025

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Deniz Aygen — Editor

deniz.aygen@idfg.idaho.gov
208•287•2750

To submit an article, obtain a subscription, or notify us of address change, contact the Editor at the above address.

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