

# Threatened and Endangered Species Updates: Wisconsin

Drew Feldkirchner, Wisconsin DNR





# State & Federal Protection



Big brown



Little brown



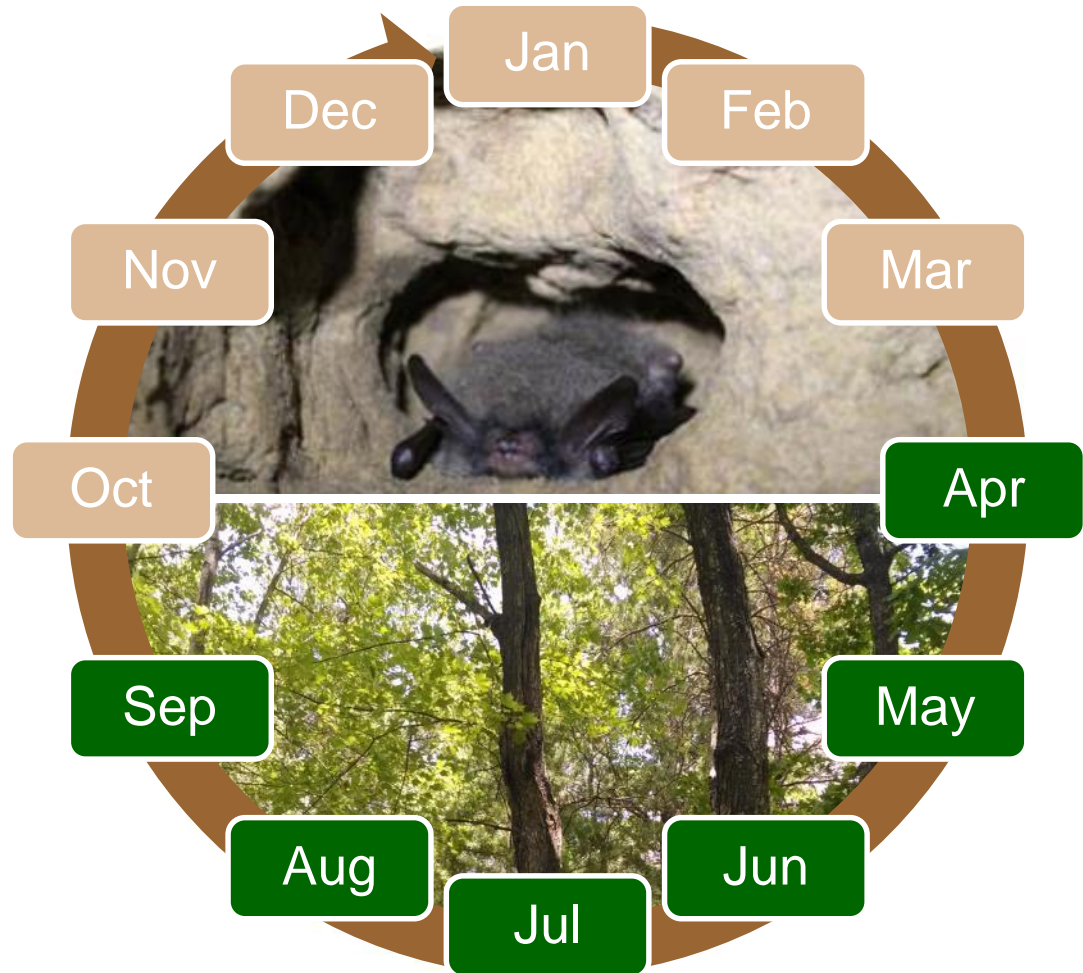
Northern long-eared



Eastern pipistrelle

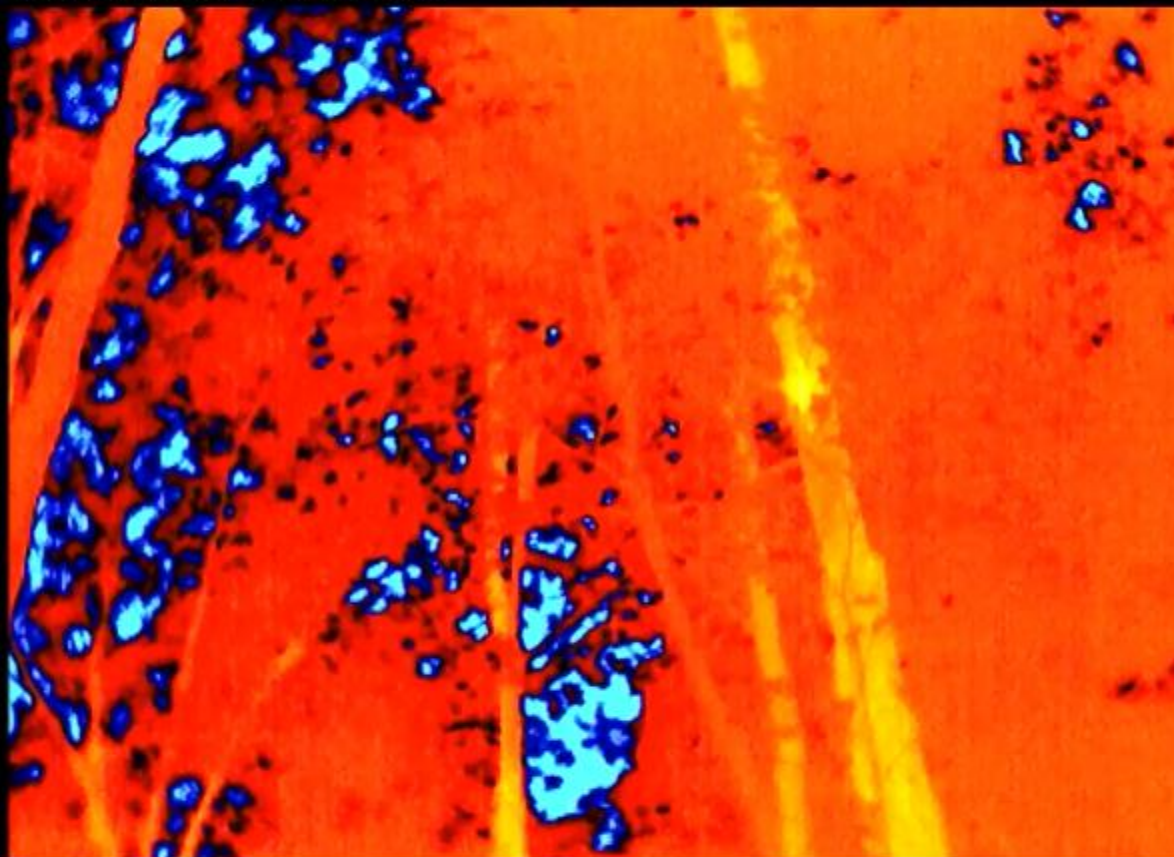


# Annual Cycle



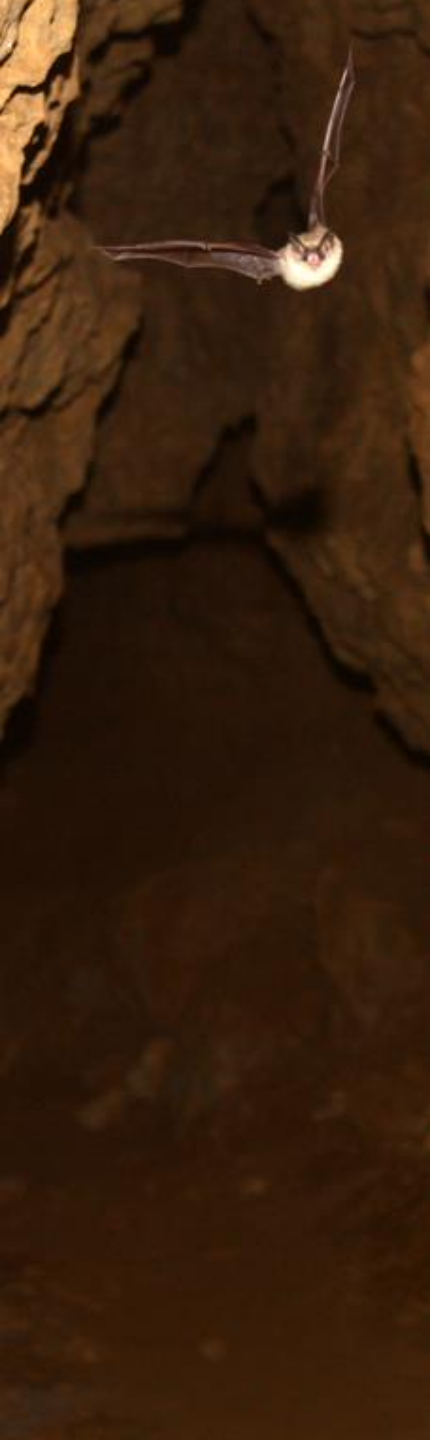


Thermal Camera 3 2014-06-12 21:15:44











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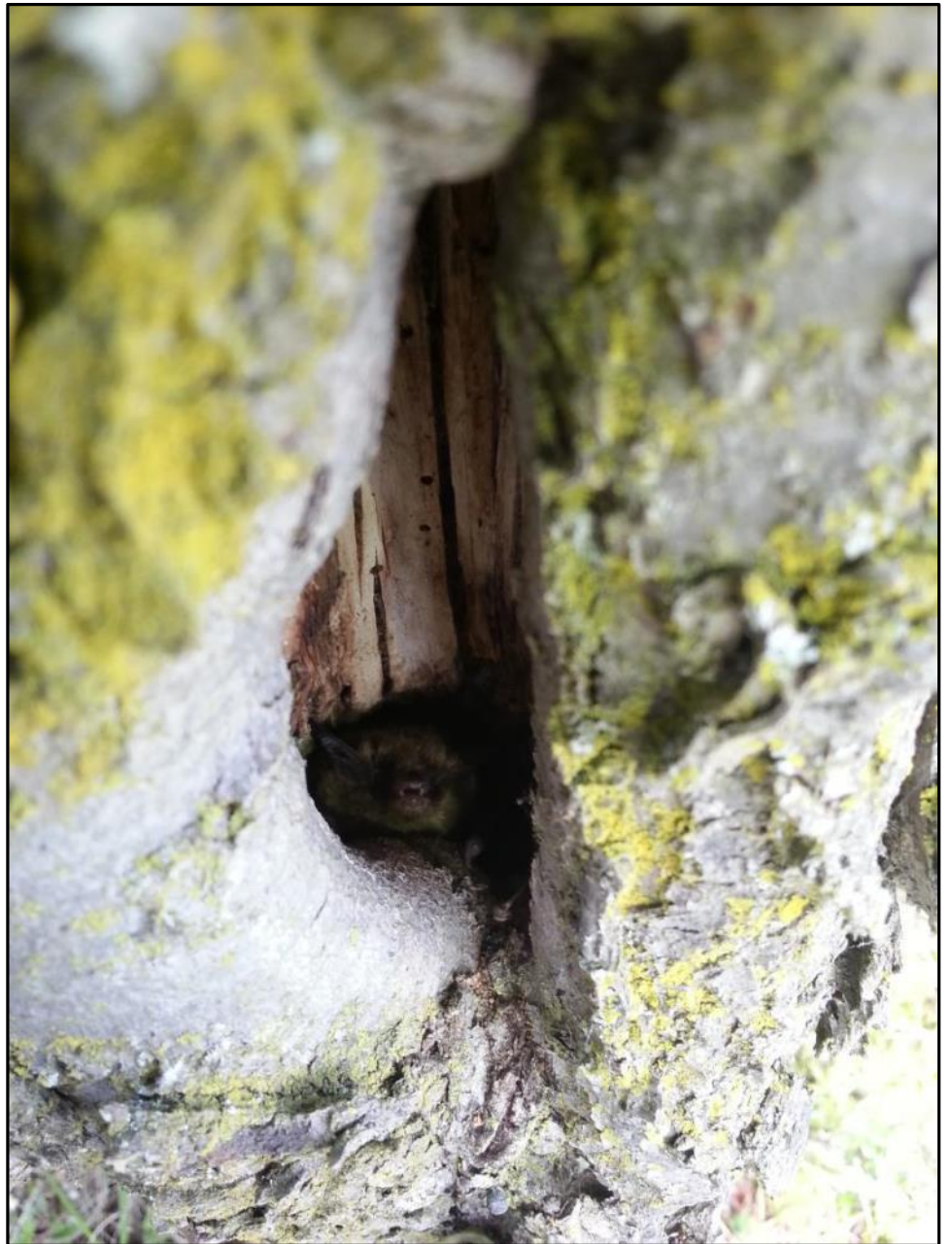


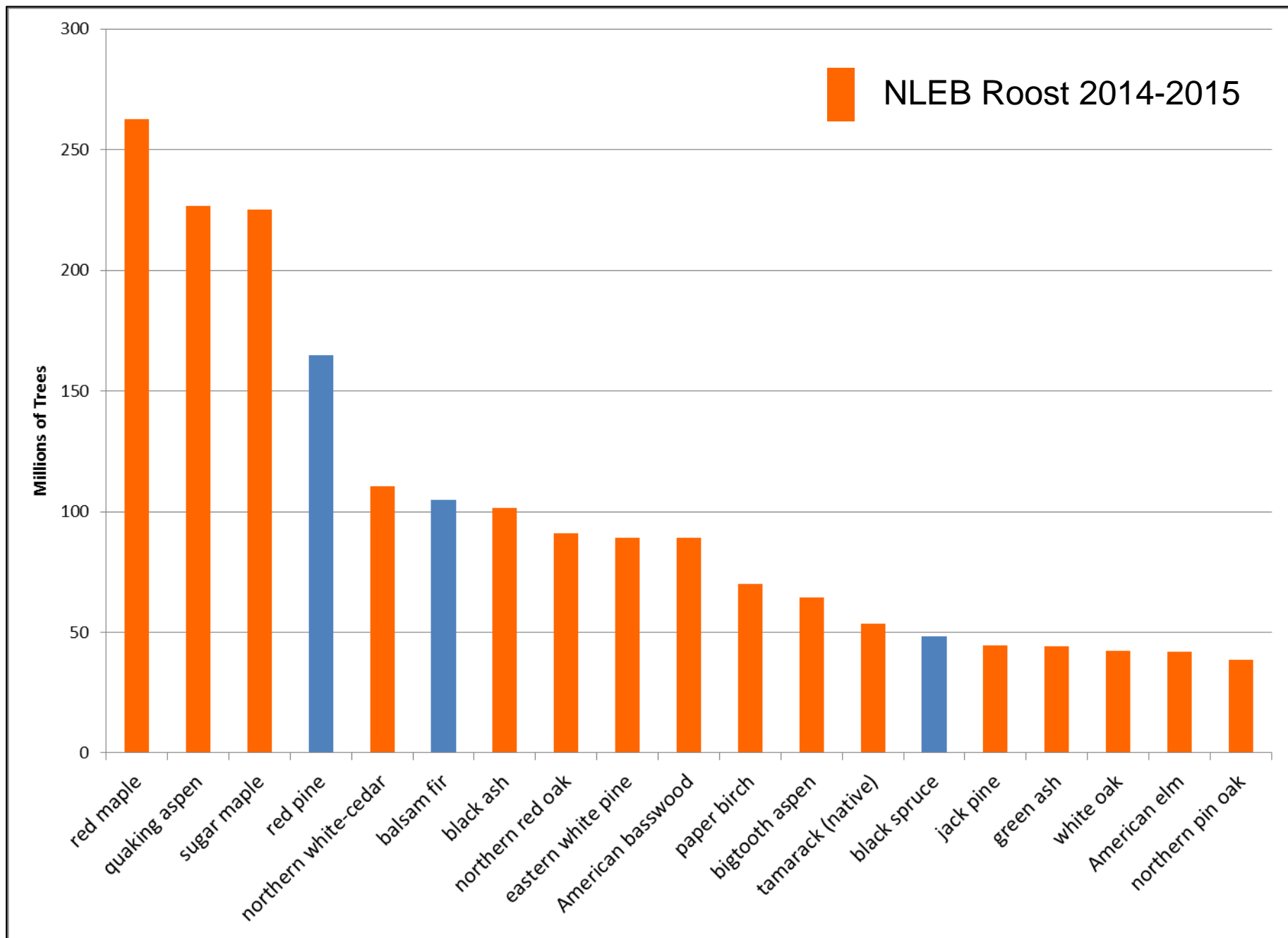




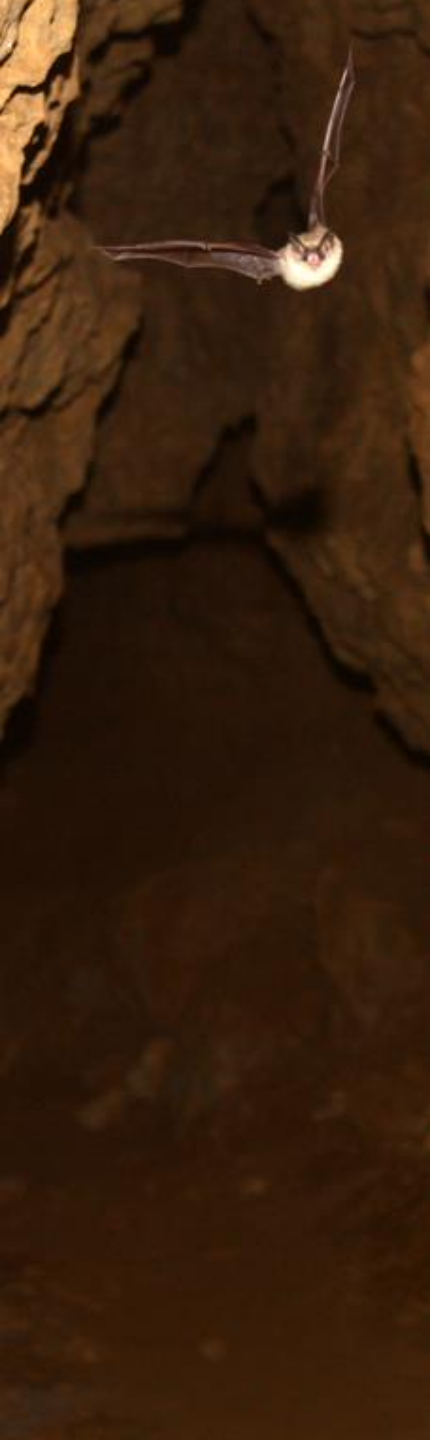






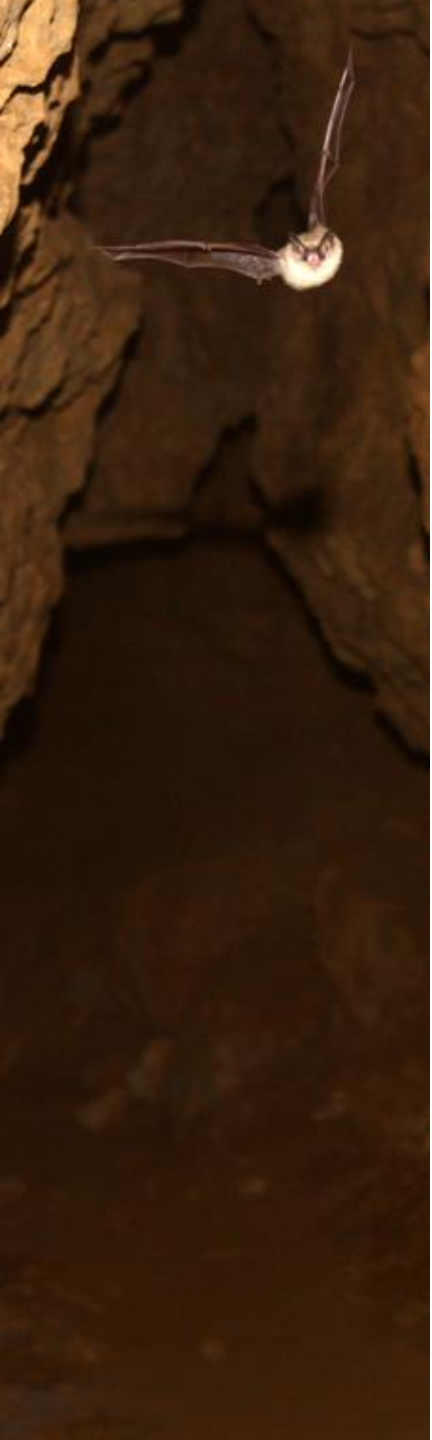




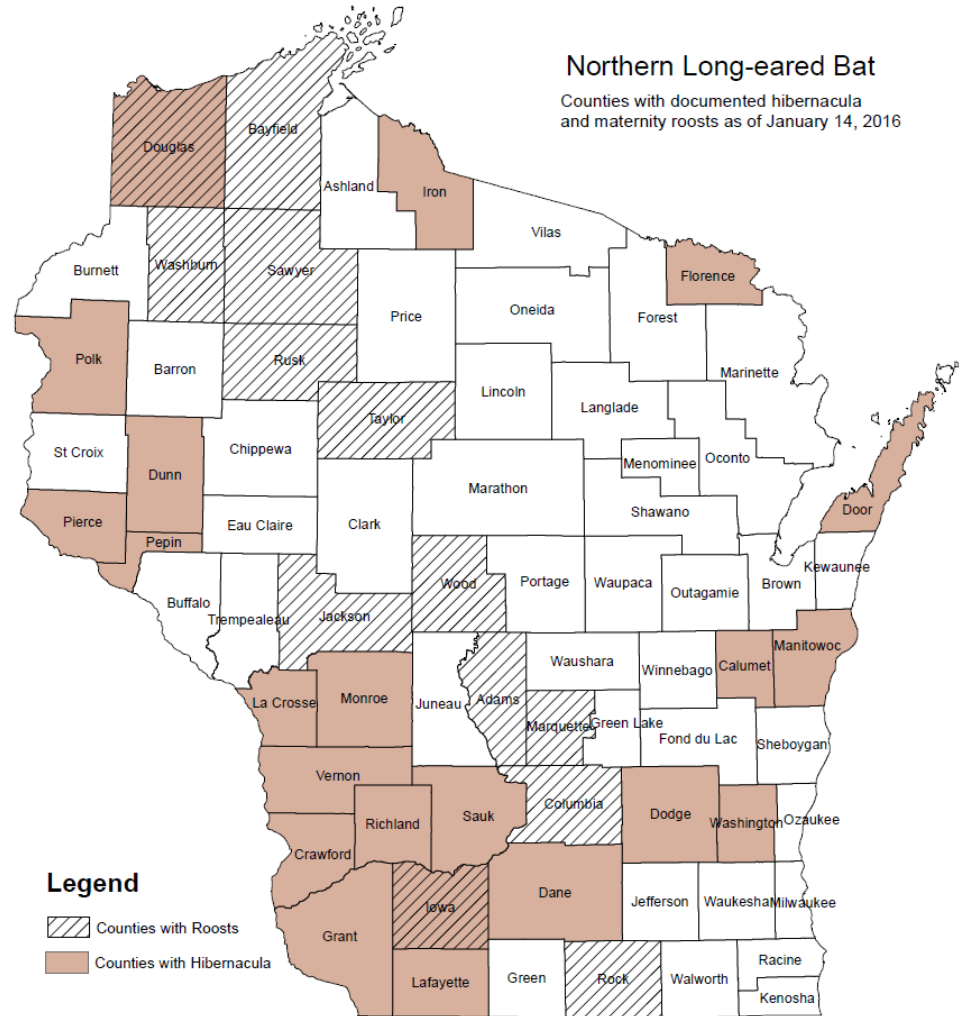


# Final 4(d) Rule

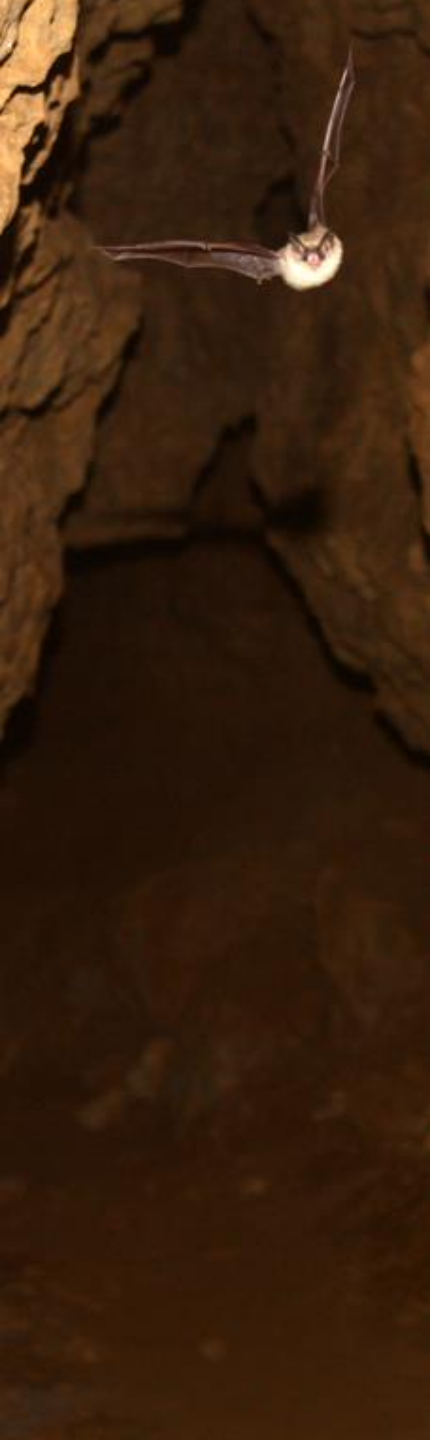
- **Purposeful** take prohibited (w/ exceptions)
- All take within hibernacula prohibited
- Tree removal restrictions (all take prohibited)
  - 0.25 miles from hibernaculum (any time)
  - 150 ft. from known maternity roost trees (June 1 – July 31)



# Known Locations

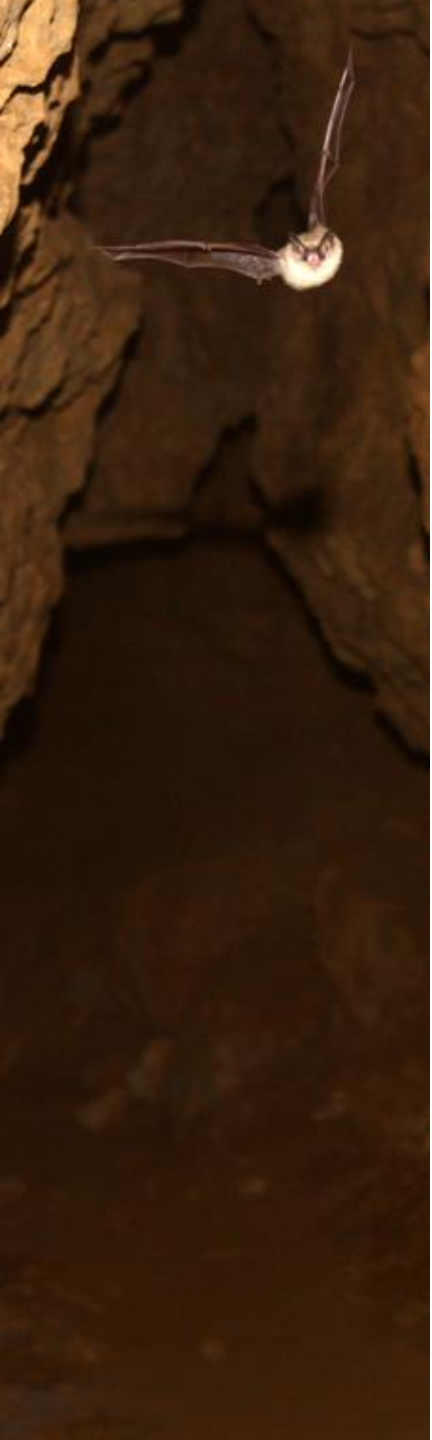




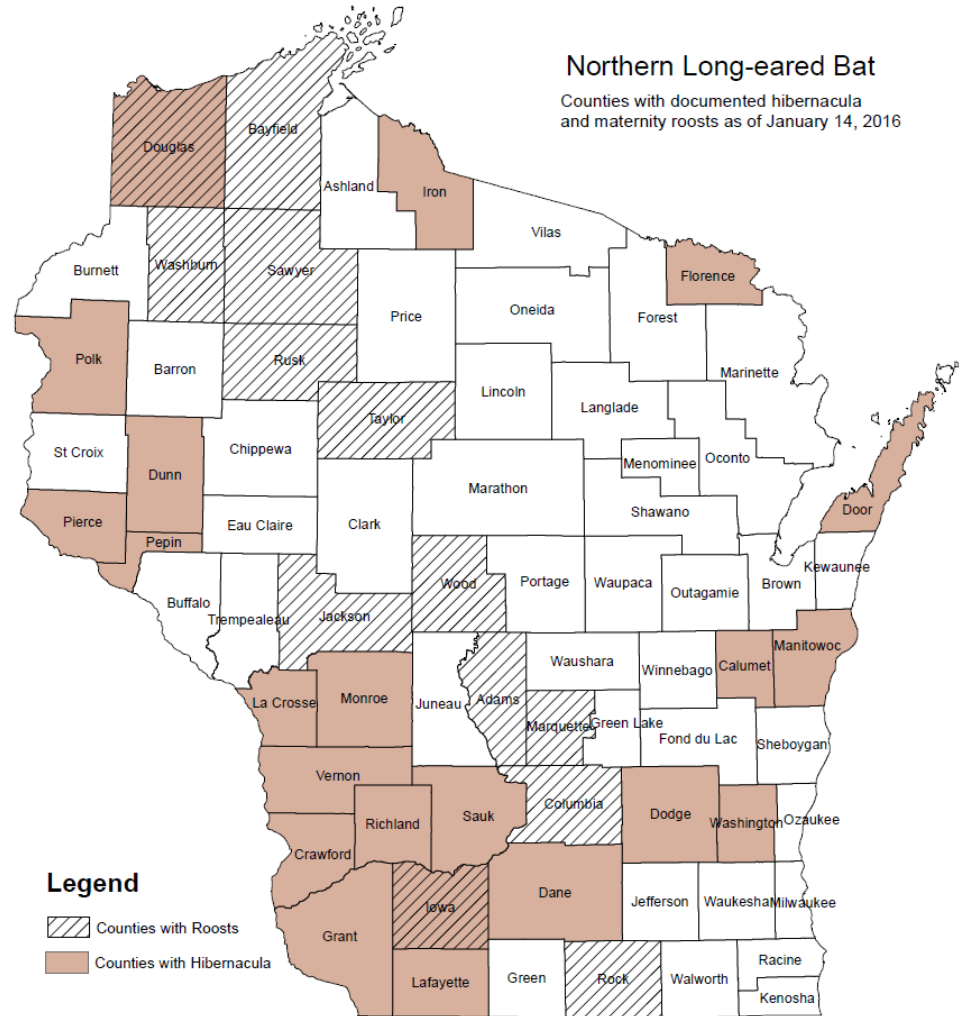


# Known Hibernacula





# Known Locations







## **Other rare species in Wisconsin forests**

# U.S. Threatened & Endangered



J & K Hollingsworth



E & P Bauer



J. M. Lockhart



J. Mayer



# Federally Listed in WI



J. Bartholmai



K. Kohout



D. Feldkirchner



D. Malueg



# Federal Legal Protection

- Animals protected everywhere
- Plants on federal lands or use of federal \$



# WI Threatened & Endangered



J. Lyons



L. Hays



T. Meyer



A. Badje



# State Legal Protection

- Animals on any **Public or Private Lands**
- Plants on **Public Lands Only**, except:
  - Agriculture
  - Forestry
  - Utility activity
  - Bulk mine sampling (NEW)



# Special Concern Species

- Suspected problem
- Avoid future endangerment



K. Laubenstein



L. Erikson



R. Paloski

# Rare Turtles – Forestry Activities

ornate box turtle



R. Paloski

wood turtle



A. Badje

Blanding's turtle



B. Collins





## Ornate Box Turtle (Threatened)



R. Paloski

- Open to semi-open canopy
- Sandy habitats
- Large grasslands





# Blanding's Turtle (Special Concern)



B. Collins

- Variety of aquatic habitats and wetlands
- Often shallow waters, wetlands
- Semi-terrestrial





# Blanding's Turtle





# Blanding's Turtle



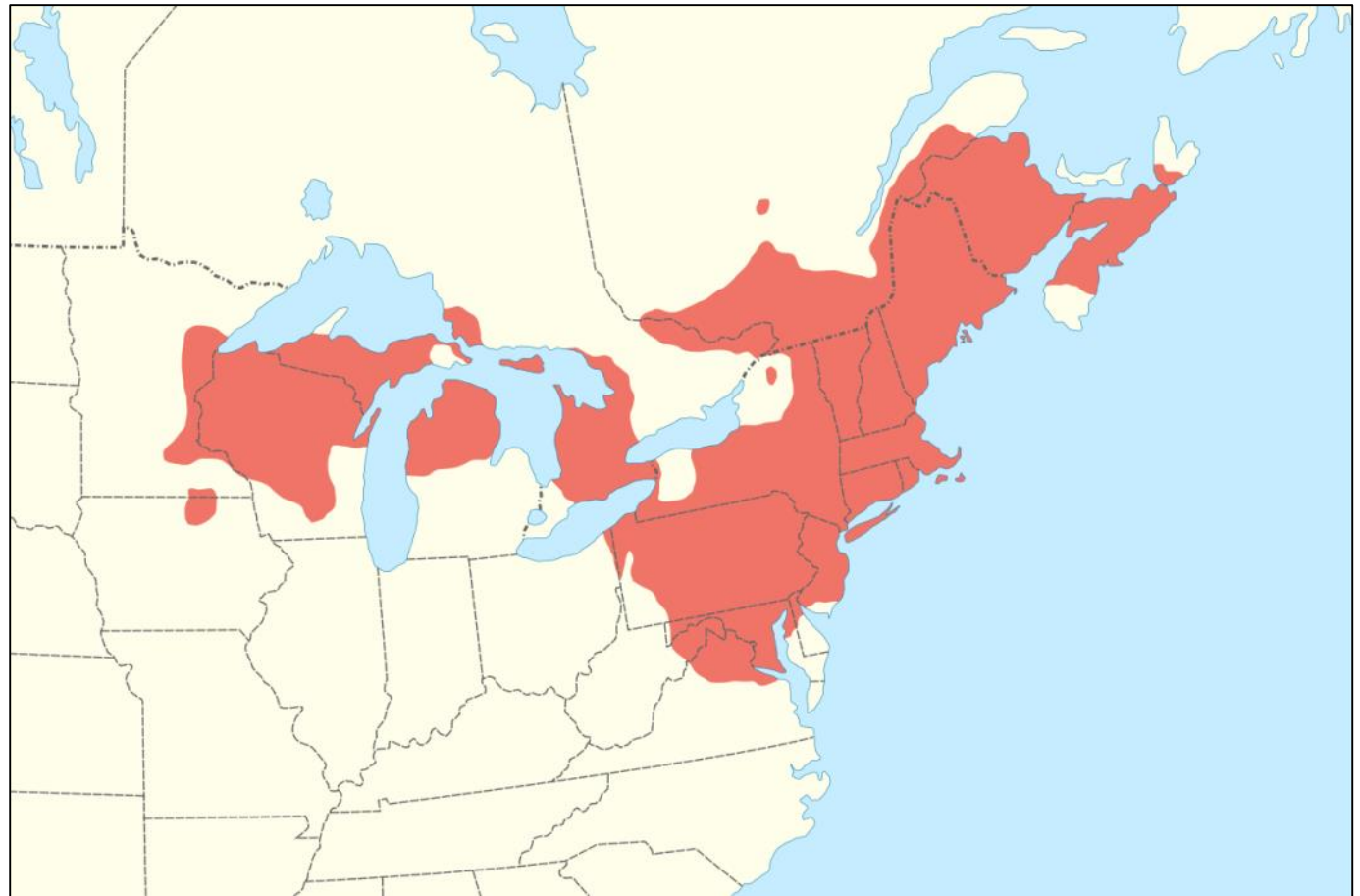
Avoid **open** sandy or well-drained areas within 900 ft. of the stream or wetland

May 20 - October 15





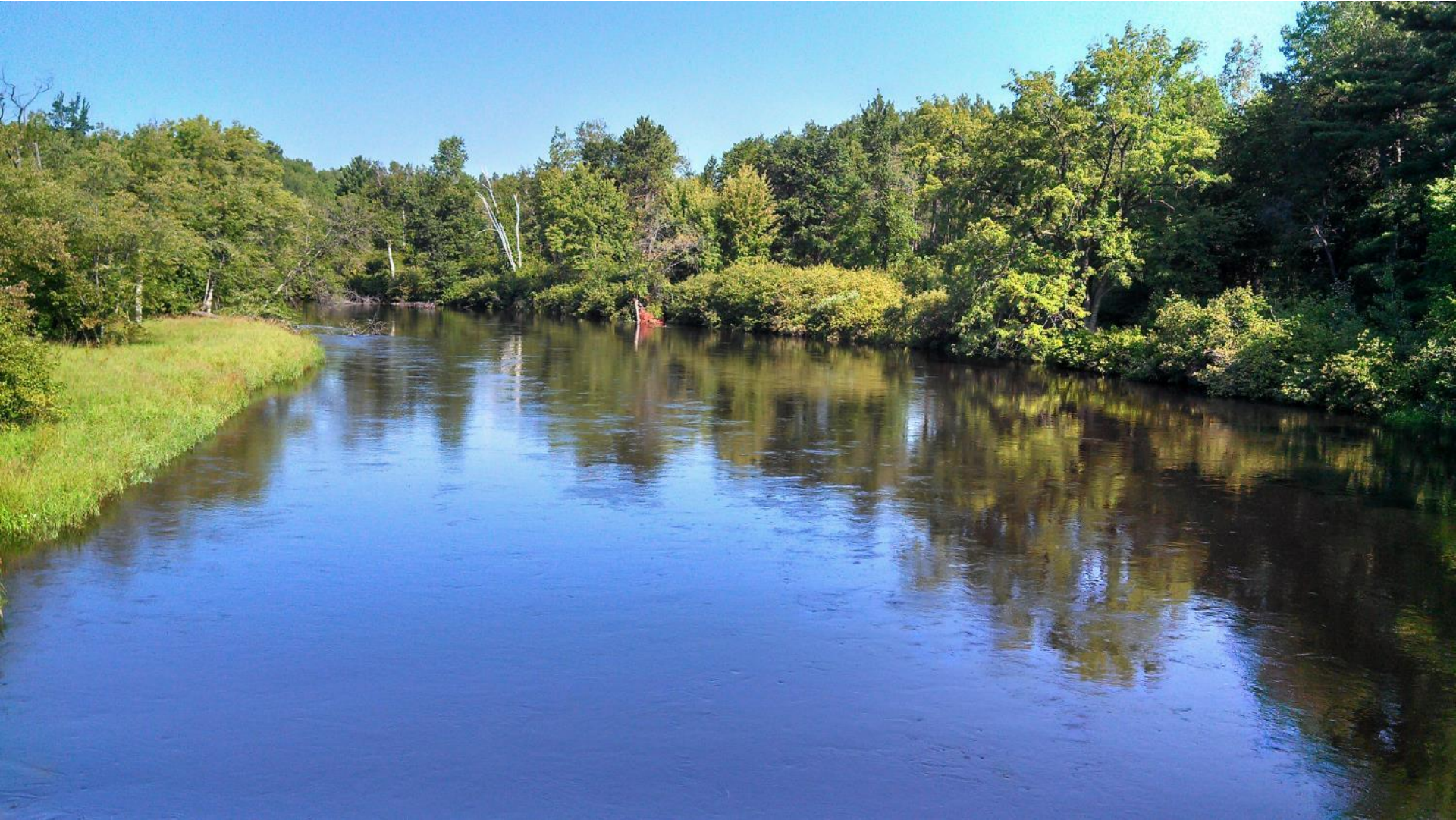
# Wood Turtle













# Aquatic Habitat



Ryan Magana, WDNR



Ryan Magana, WDNR



Eric Epstein, WDNR



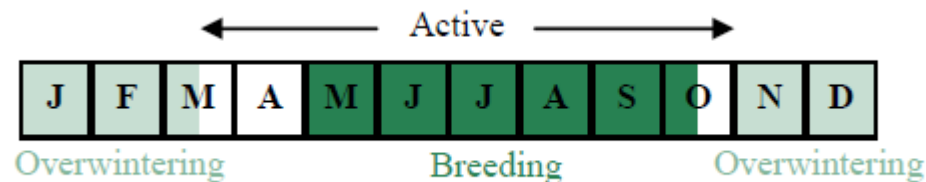
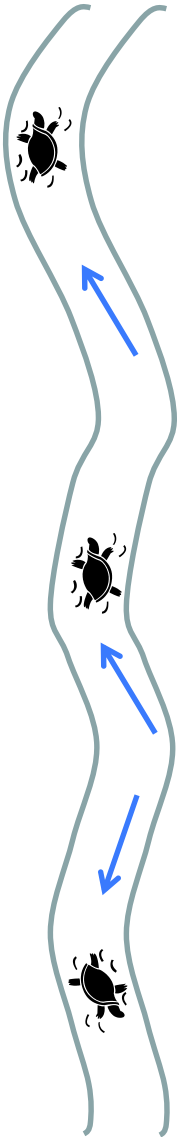
D. Feldkirchner, WDNR



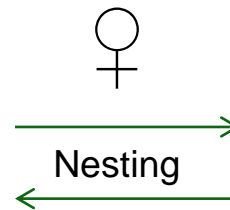
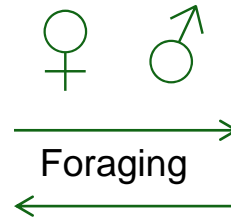
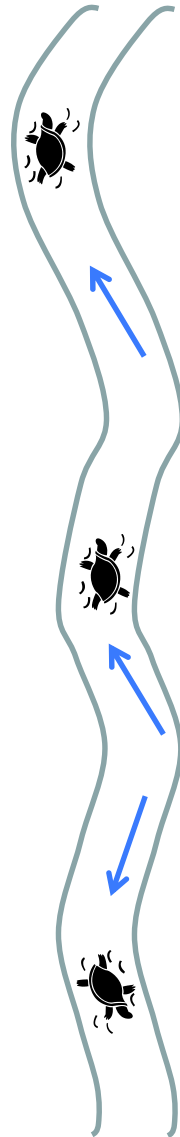
# Seasonal Life History



- Over-winter in streams
- Can travel long distances in streams
- Terrestrial period spring through fall
- Travel farthest from stream summer



# Wood Turtle Active Period: March 15 – October 15









# Nesting Habitat

- Well-drained open sandy soils within 200 feet of suitable aquatic habitat



Ryan Magana, WDNR



Carly Lapin, WDNR

Recently completed wood turtle nest



# Nesting Habitat



Erik Wild



Andrew Badje, WDNR



Carly Lapin, WDNR

# Wood Turtle Threats

- Habitat loss
- Illegal collection
- Agriculture / mowing
- Low reproduction rates
- Very high nest predation rates reported





# Wood Turtle Threats...



First year wood turtle



Raccoon patrolling a nest site



Photo Credit: Michele Woodford, WDNr

Predated nest

# Species Guidance

## Wood Turtle (*Glyptemys insculpta*) Species Guidance

Previously known as *Clemmys insculpta*  
Family: Emydidae – the pond turtles

State Status: [Threatened](#) (1975)

State Rank: [S2](#)

Federal Status: [None](#)

Global Rank: [G4](#)

Wildlife Action Plan  
Mean Risk Score: [4.1](#)

Wildlife Action Plan Area  
Importance Score: [3](#)



Photo by A.B. Sheldon

### Species Information

**General Description:** The wood turtle is a medium-sized turtle, with a 12-24 cm-long (4.7-9.4 in) carapace (upper shell) (Vogt 1981). The plastron (lower shell) is typically yellow with large black blotches on the lateral edge of each ventral scute (segment). The top of the head and distal (rear) portions of the legs are dark brown, gray, or black. The skin between the scales, in the leg sockets, and on the throat is usually yellow, or occasionally orange. The individual scutes of the carapace possess growth annuli (rings that form concentric circles) that are far more pronounced than on any other Wisconsin turtle. Individuals may vary in these characteristics, and some may differ slightly from this general description.

**Similar Species:** The Blanding's turtle (*Emydoidea blandingii*) is the only species in Wisconsin that may be mistaken for the wood turtle. Both species have yellow plastrons with black marks on individual scutes and some degree of yellow coloration around the neck. The Blanding's turtle is distinguished by a much brighter yellow that covers the entire lower jaw, whereas the wood turtle lacks the bright yellow chin. Young Blanding's turtles will often have visible growth annuli, but they are much less pronounced than those of the wood turtles. Juvenile and adult Blanding's turtles have a hinged plastron and adults have a smooth, highly domed carapace.

**Associated Species:** In Wisconsin, the wood turtle may occur in the same water bodies as all other riverine turtle species where their geographic distributions overlap. Snapping turtles (*Chelydra serpentina*) are the most commonly associated turtle species in Wisconsin because of their extensive state distribution.

**State Distribution and Abundance:** Wood turtles are found from the northern parts of Wisconsin down to Brown, Outagamie, and Winnebago counties, and south to the extreme southwest counties, but are absent from Polk, Pepin, Richland, Waubesa, Marquette, and Green Lake counties. Distribution information for this species may not reflect its full extent in Wisconsin because many areas of the state have not been thoroughly surveyed.

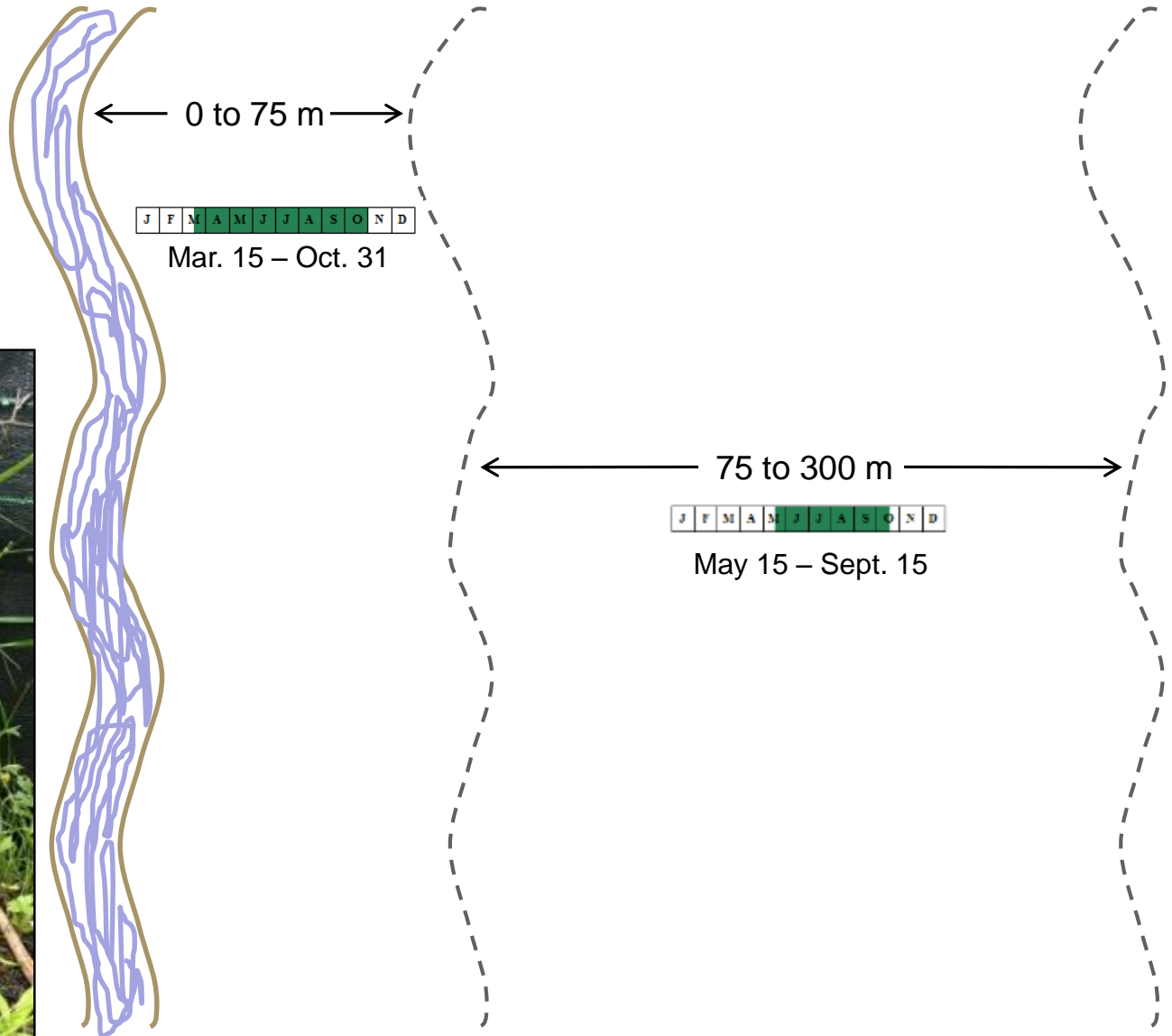
**Global Distribution and Abundance:** The wood turtle occurs in the Midwest in Wisconsin and Michigan, as well as small portions of Minnesota and Iowa. To the east, they are found from the northern tip of Virginia through Maine. They also occur in the Canadian provinces of Ontario, Quebec, New Brunswick and Nova Scotia (Harding 1997).

**Diet:** Wood turtles are opportunistic feeders with omnivorous tendencies (Harding and Bloomer 1979, Farrell and Graham 1991, Walde et al. 2003). They have been observed eating a wide variety of plant material ranging from various berries and leaves to mushrooms. Wood turtles also eat numerous invertebrates, such as earthworms, insects and mollusks, and vertebrates such as young mice, amphibians and carrion (Harding and Bloomer 1979, Walde et al. 2003).

**Reproductive Cycle:** Mating occurs at various points throughout the active season and has been observed from May until November, but the majority of mating occurs in the fall (Walde et al. 2003). Mating most often takes place from midday to late afternoon and in water at depths of 0.1-1.2 m (0.3-3.9 ft); terrestrial mating has been observed (Ernst 1986, Walde et al. 2003). Females nest from May 20-July 5, with peak nesting activity in mid- to late-June, and select nesting sites that generally consist of sandy river/stream banks or sandbars (Walde et al. 2007, Vogt 1981). Wood turtles also nest in disturbed habitats such as roadsides, agricultural fields, and gravel pits (Thayer et al. 2006). Female wood turtles will "stuge" (remain within the vicinity) near nesting areas for several days before they deposit their eggs; stuging areas typically possess unaltered natural vegetation such as alder thickets (Walde et al. 2007). Nest-site fidelity has been observed in this species (Walde et al. 2007). In Wisconsin, females lay one clutch per year and some individuals only nest every other year (Ross et al. 1991). Clutch sizes may vary depending on geographic location; a mean of 11 eggs per clutch has



# Wood Turtle Avoidance



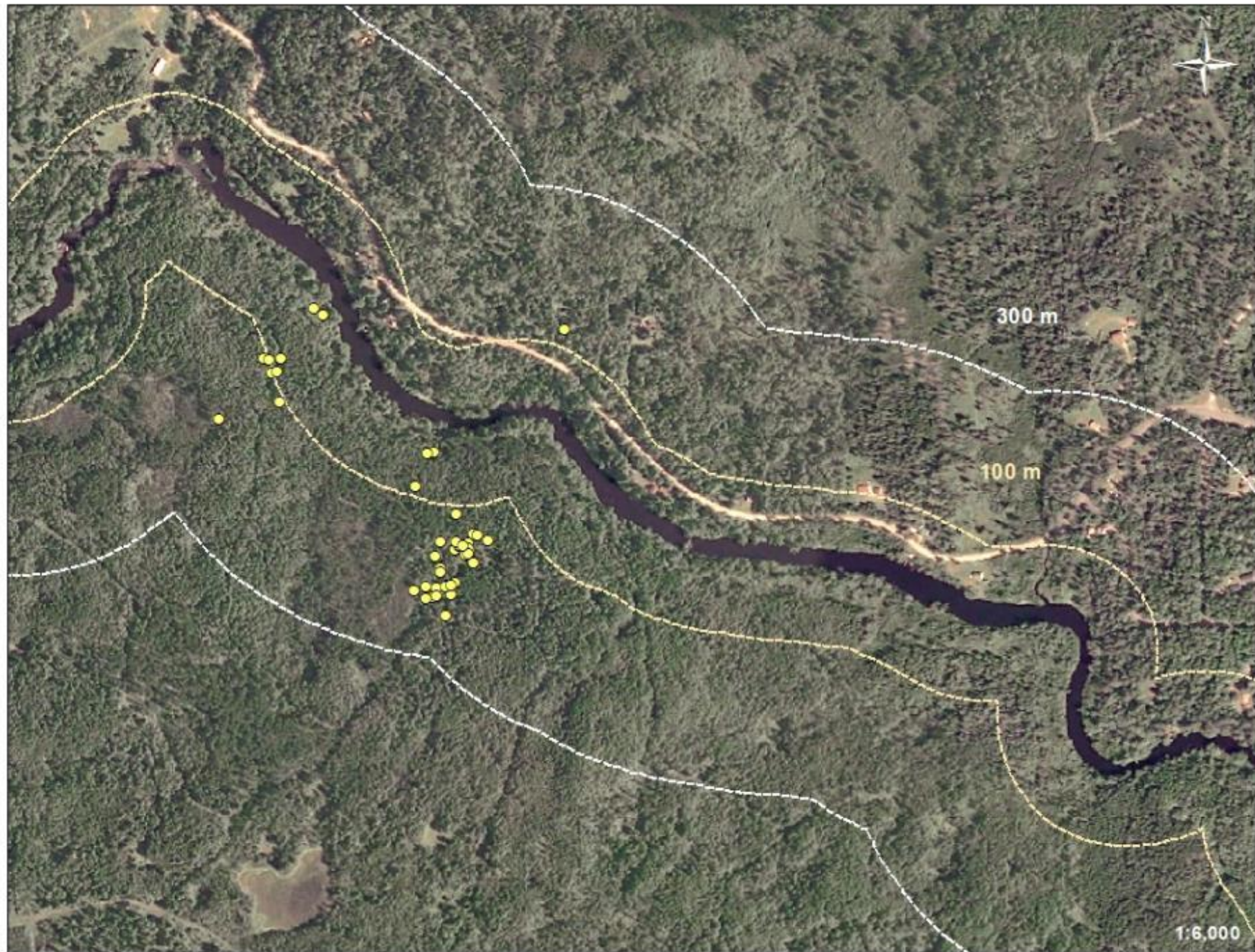
# Radio Tracking



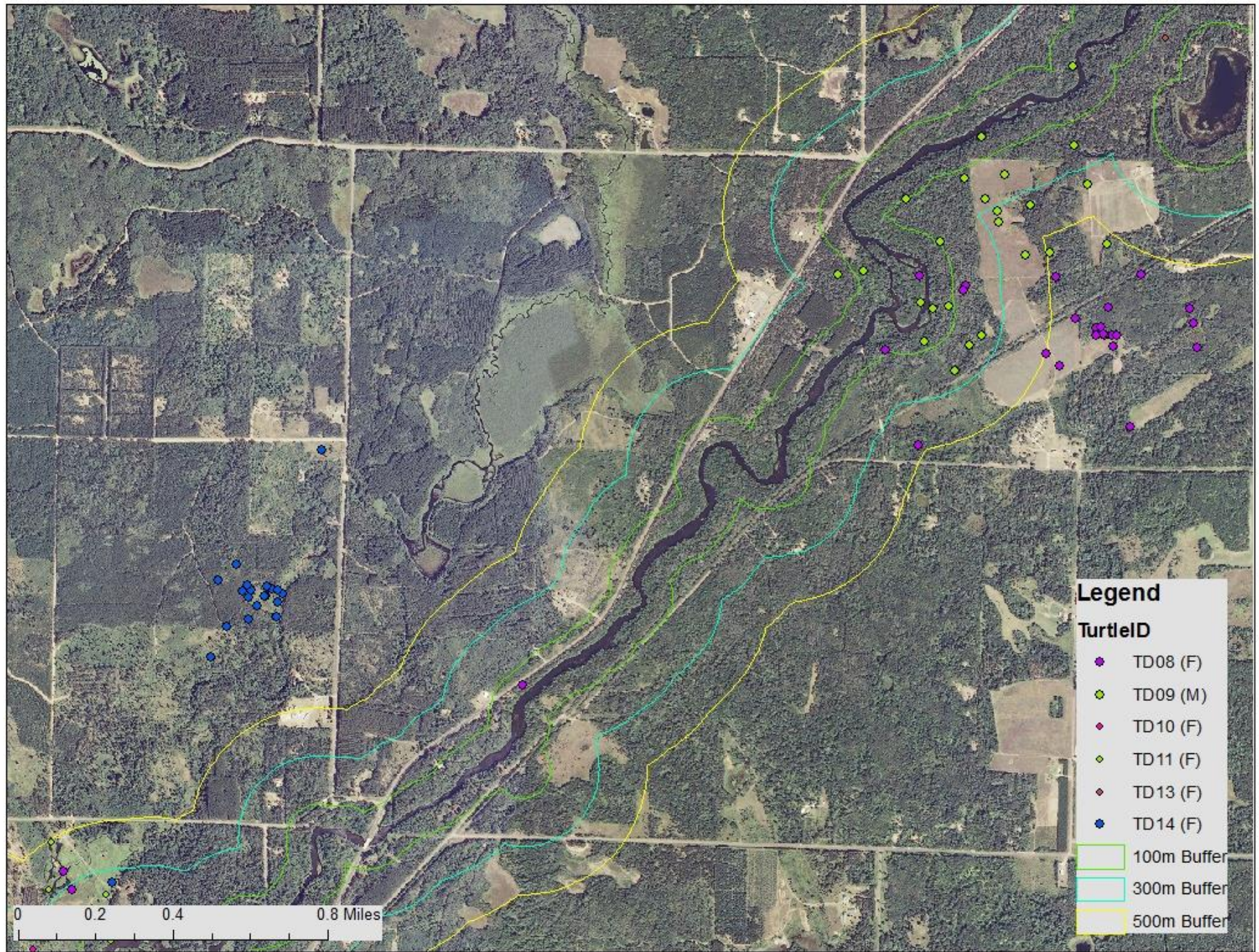






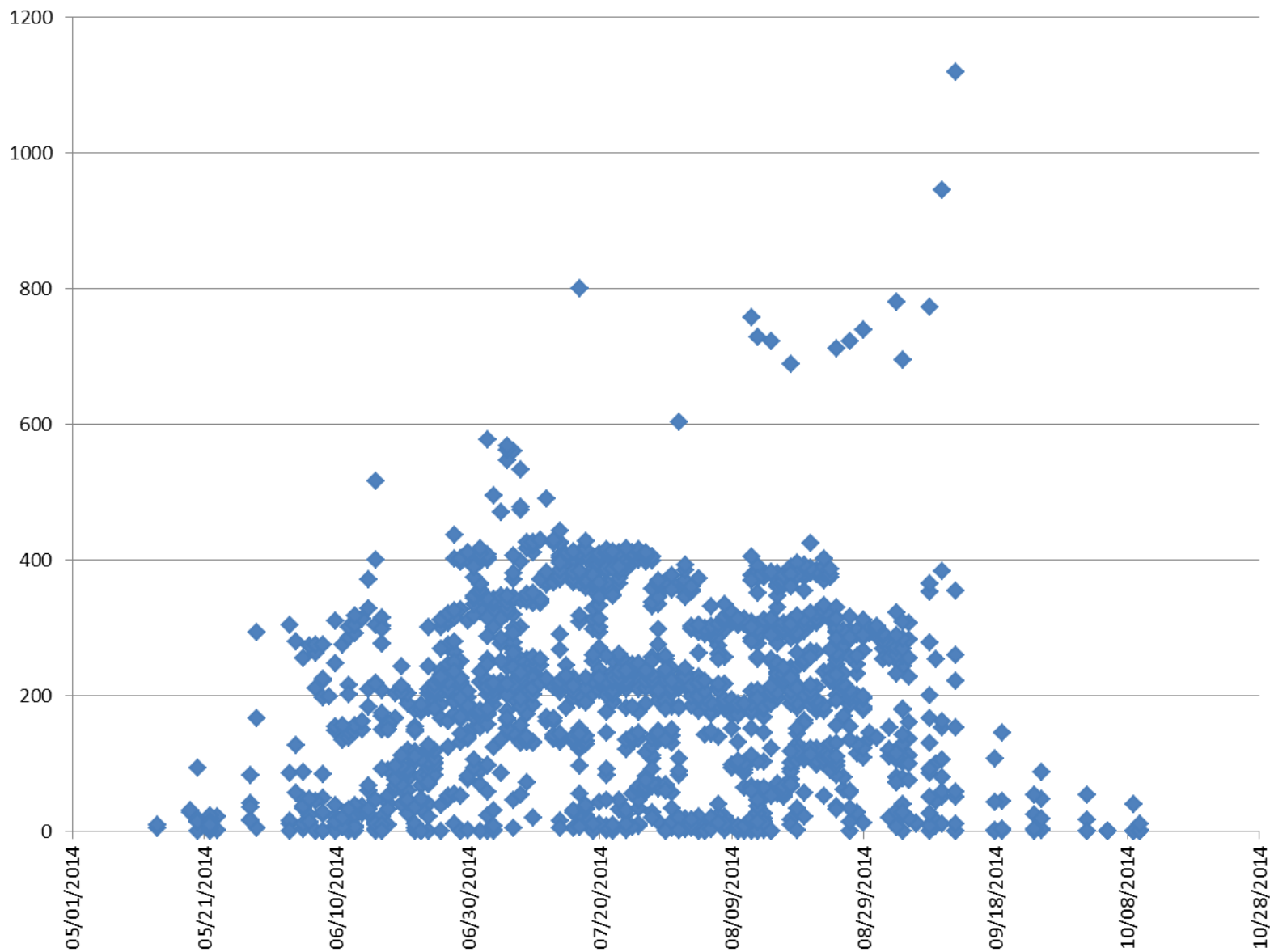






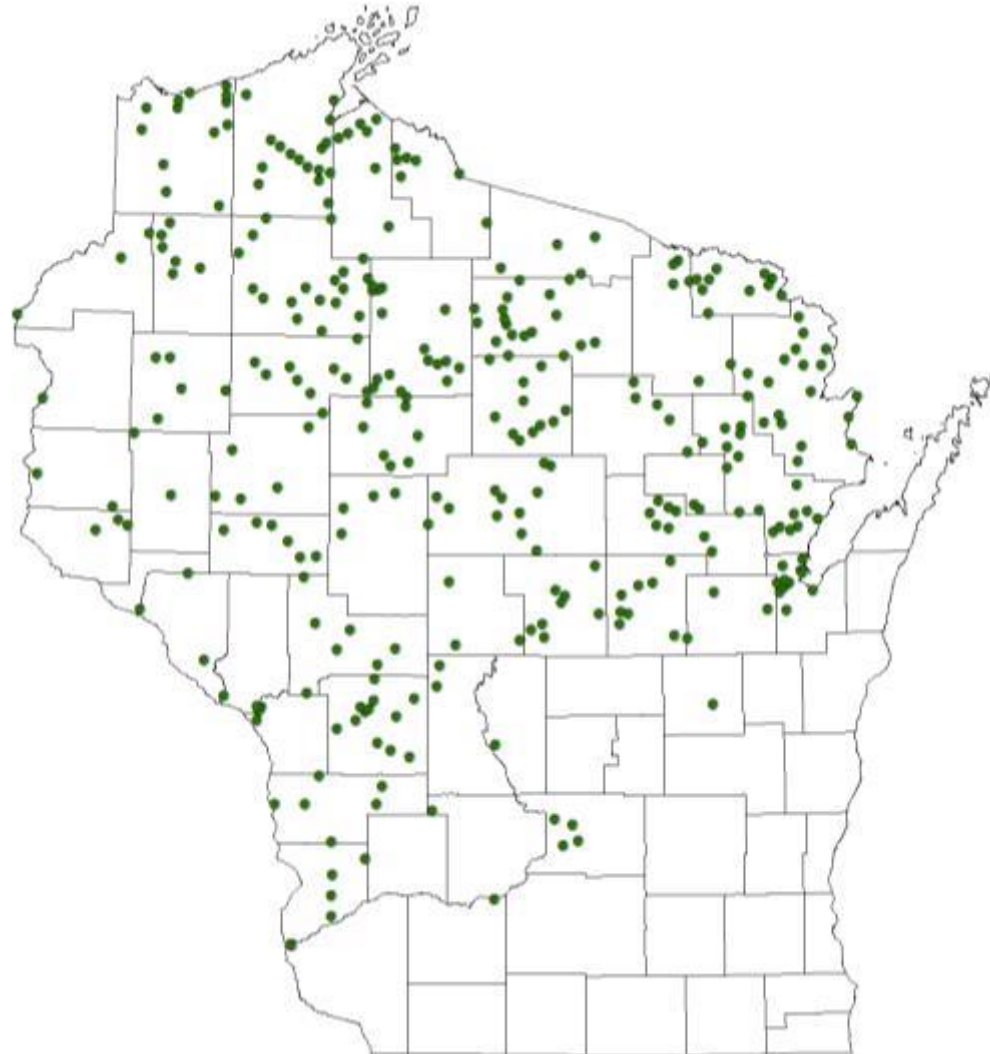


# Distance (m)





**How many?**



# Conservation Strategy



Wisconsin Department of Natural Resources  
Bureau of Natural Heritage Conservation

Wisconsin Wood Turtle  
(*Glyptemys insculpta*)  
April 2016  
Status Assessment and  
Conservation Strategy



Photograph by Chris Hamerla

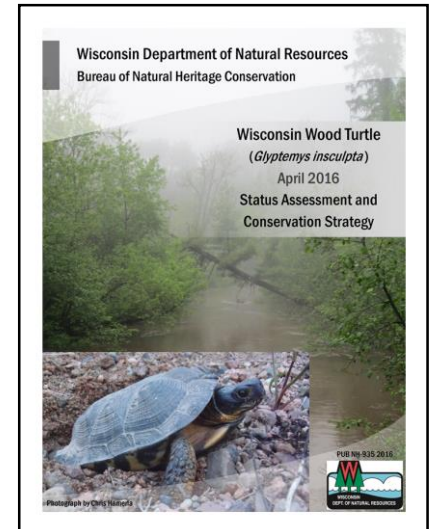
PUB NH-935 2016





# Conservation Strategy

- Most important conservation needs
- Focus on highest priorities
- Assess current status





## Results - Status

- Delist to Special Concern
- Protected Wild Animal
- Criteria for listing

S1	S2	S3	S4	S5
END	THR	SC / Protected	Protected	Standard Harvest





# E/T List – Changes 01/01/2014

## Removed

- Snowy egret
- Barn owl
- Bewick's wren
- Greater redhorse
- Blanding's turtle
- Butler's gentian snake

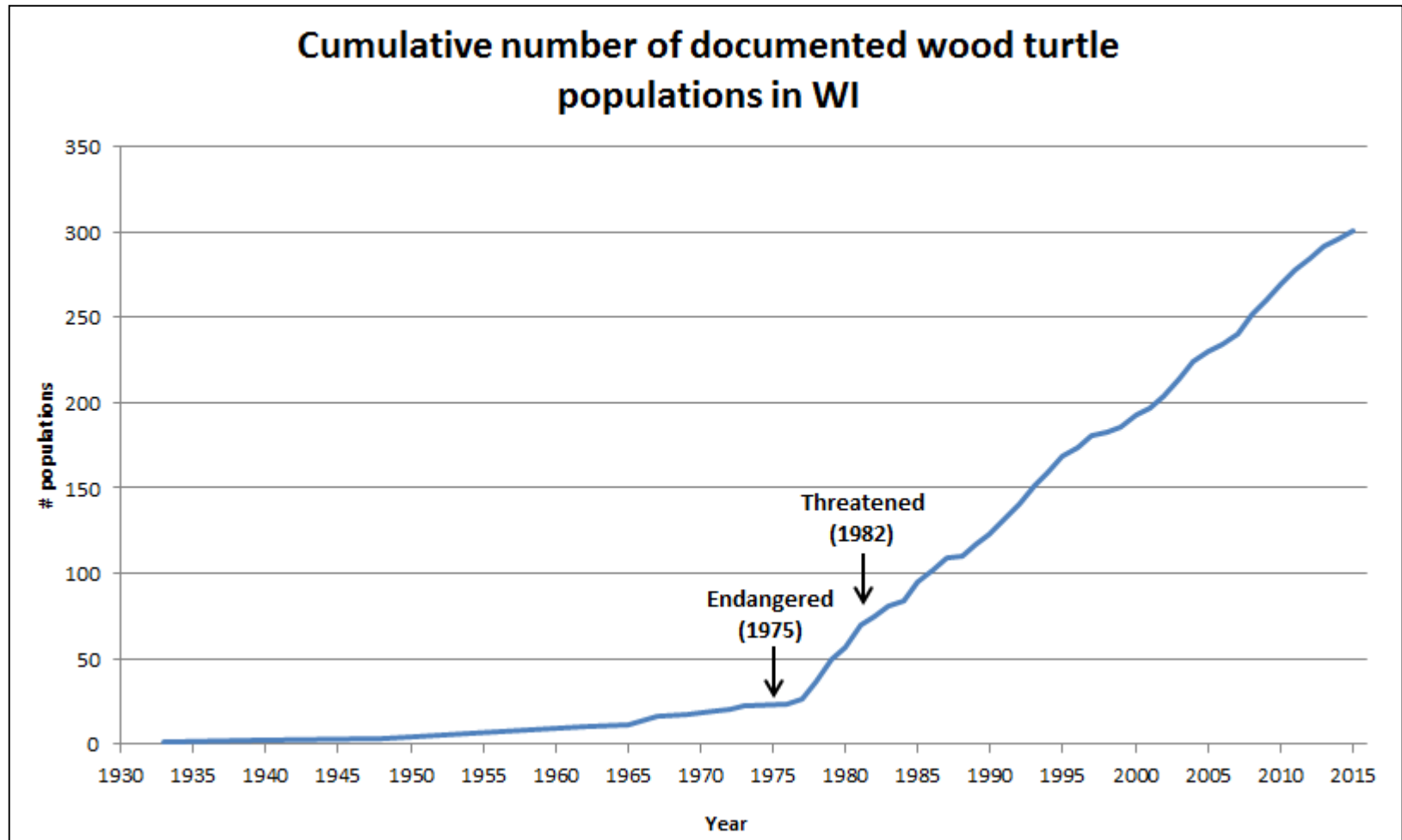


## Added

- Black tern
- Kirtland's warbler



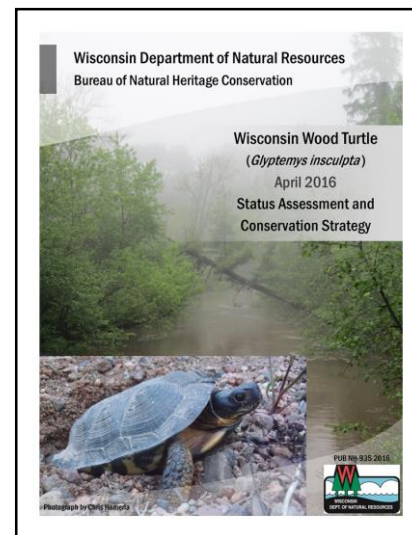
# Conservation Strategy...





# Conservation Measures

- Continue to monitor, collect data
- Work with external partners, landowners
- Reference sites
- PVA



# Nest Site Creation/Restoration



Photo Credit: Carly Lapin, WDNR



Photo Credit: Carly Lapin, WDNR



# Nest Site Creation/Restoration



Michele Woodford, WDNR



# Nest Protection





# Road Mortality Reduction



A photograph of a turtle resting on a log in a pond. The background shows a dense forest with green trees and a fallen log in the water.

# When is Take Allowed?

- Endangered and Threatened Species Permit

(E/T Permit)

- zoological, educational, scientific purposes

- Incidental Take Authorization (ITA) or Incidental Take Permit (ITP)





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**Wisconsin Department of Natural Resources  
Broad Incidental Take Permit/Authorization for Common Activities**

**Forest Management Activities  
and  
Wood Turtle (*Glyptemys insculpta*)**

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The wood turtle, a state threatened species in Wisconsin, utilizes habitat along streams and uplands within wooded and semi-wooded areas in the northern portion of the state. Due to the various seasonal restrictions impacting forest management activities, a group of stakeholders and DNR staff proposed the development of a broad incidental take permit/authorization to cover forestry activities within wood turtle habitat. The goal of the permit/authorization is to meet the requirements of the law protecting wood turtles while also providing more flexibility for forest management. This document will be updated as needed to reflect new wood turtle research findings.

This Broad Incidental Take Permit/Authorization (BITP/A) is available to all landowners and property owners in Wisconsin that meet the requirements within the document. Individuals only need to follow this BITP/A if they are near a wood turtle record (as determined by department staff or through an Endangered Resources Review: <http://dnr.wi.gov/topic/ERReview/Review.html>) AND have suitable wood turtle habitat within their project area. Habitat for wood turtles is defined as closed or semi-closed canopy and openings, within 300 m of a non-intermittent (e.g., permanent) stream or river (for additional details on suitable habitat, please refer to the Wood Turtle Species Guidance document <http://dnr.wi.gov/files/PDF/pubs/er/ER0684.pdf>).

The Broad Incidental Take Permit/Authorization is only one of several approaches being taken to find greater flexibility for forestry practices in Wisconsin. Several study proposals (e.g., risk assessment, nest site/upland habitat research, stream characteristics research, exclusion methods efficacy) are being drafted to gain additional information on wood turtle habits and habitat preferences in Wisconsin. Data collected during these studies will help to further refine and update this BITP/A and the Wood Turtle Species Guidance document.

This BITP/A will not require a pre-project notification as listed in the BITP/A Common Activities General Criteria Document ([http://dnr.wi.gov/topic/ERReview/documents/CA\\_Intro.pdf](http://dnr.wi.gov/topic/ERReview/documents/CA_Intro.pdf)) and a closing report is only required for Minimization Measure #5.



## Incidental Take Permit/Authorization (ITP/A)

The department can allow incidental take of endangered or threatened species under certain circumstances through an Incidental Take Permit (used by non-state agencies and individuals) or an Incidental Take Authorization (used by state agencies).

View current [public notices](#).

### Individual ITP/A

If you've received an ER Review and need to apply for the allowance of incidental take, please complete the Incidental Take Permit/Authorization Application.

Individual

Individual ITP/A

### Broad Incidental Take Permits/Authorizations

A Broad Incidental Take Permit/Authorization (BITP/A) can be created for specific scenarios so that neither an application nor a permit fee are required (although minimization, mitigation and/or reporting may still be required).

List of available permits/authorizations below.

Bats

Bats BITP/A

Grassland

Grassland and savanna management BITP/A

Common

Common activities BITP/A

No/low

No/low activities BITP/A

Last revised: Friday November 14 2014



For more information about incidental take, [read this flyer](#) [PDF].

## Endangered Resources Review

### Use the Public Portal

to complete an ER Preliminary Assessment.

### Request a review

for proposed development activities, planning and land management projects.

### Receive training

for DNR staff and those seeking NHI license agreements.

### Conduct reviews

by becoming a Certified ER Reviewer.

### Access NHI data

for research and planning purposes.

### Contact information

For incidental take questions, please contact:

[Rori Paloski](#)

Incidental take coordinator  
608-785-6040

May  
19

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- Lands and Activities
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- Resident
- Sales Locations







# **New IT Permit: not covered**

- Permanent land conversion
- Disturb nesting areas (May 20 - Sept 18)
- Burn nesting areas (May 20 – July 5)
- Instream work (Oct 1 – Apr 30)
- Intentional killing or collection

# New IT Permit: measures

- Move turtles
- Herbicide list









# Rare Forest Raptors in WI





# Red-Shouldered Hawk (THR)



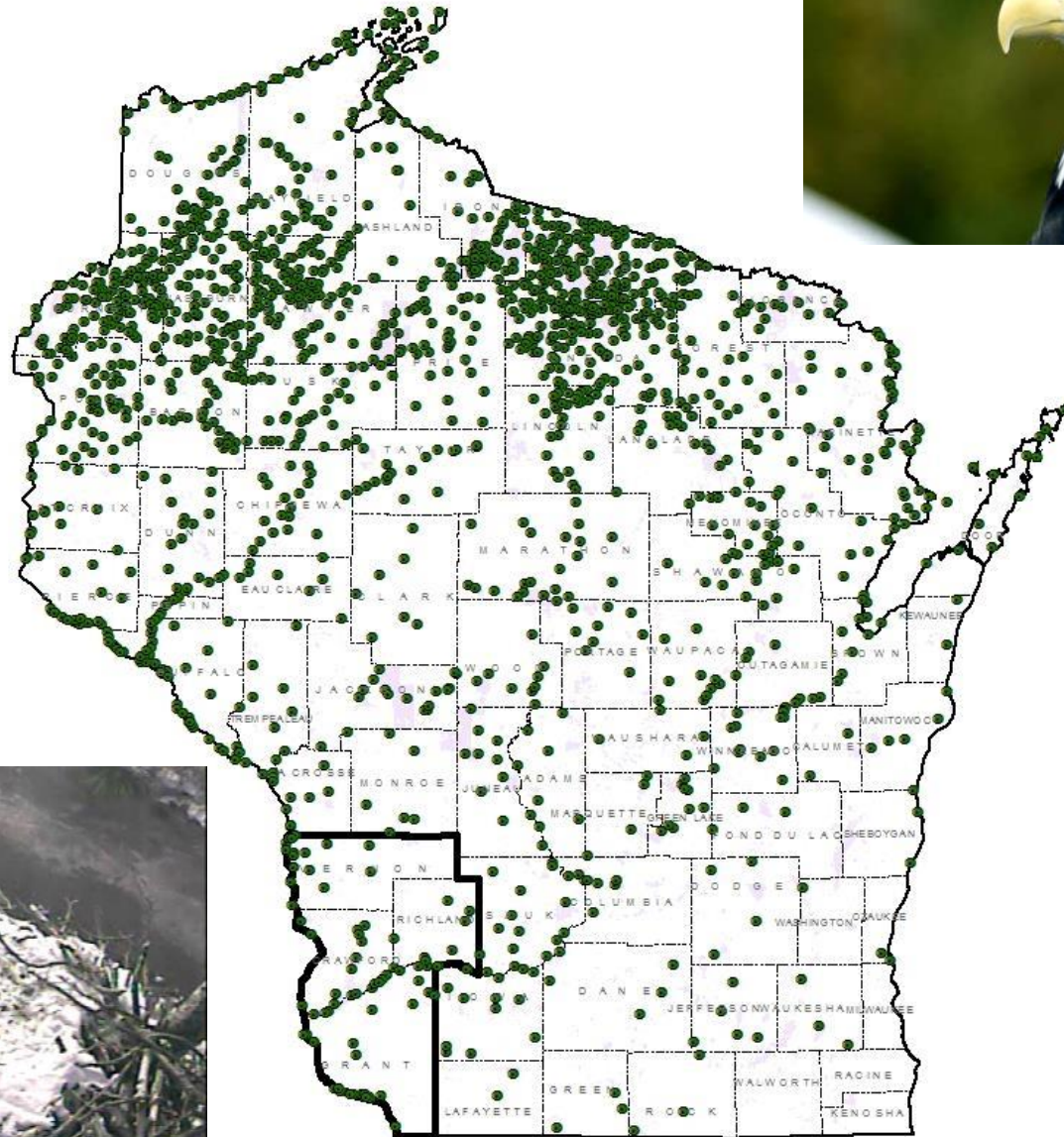


# Northern Goshawk (SC)





# Bald Eagle (SC)



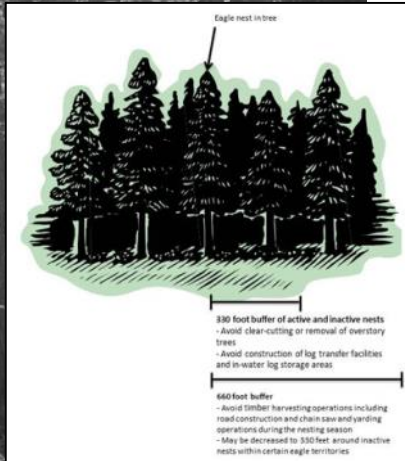
# Osprey





# Rare Forest Raptors in WI

*dnr.wi.gov*



### Osprey (*Pandion haliaetus*) Species Guidance

Family: Accipitridae - The Hawks, Falcons, and Eagles

**Species of Concern:** [Conservation Need \(CNC\)](#)

**State Species:** [Yes](#) [No](#) [Uncertain](#)

**Global Rank:** [CNC](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

**Federal Status:** [Yes](#) [No](#) [Uncertain](#)

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**Wildlife Action Plan:** [Yes](#) [No](#) [Uncertain](#)

**Wildlife Action Plan Area of Importance:** [Yes](#) [No](#) [Uncertain](#)

**Species Information:**

**General Description:** Osprey are large eagles that prey almost exclusively on fish. Adult length and wingspan measurements range from 18-46 in (45-117 cm) and 25-33 in (63-84 cm), respectively (Shoreline Osprey Project 1999). Adults are dark brown above and mostly white underneath, with heavy white patches on the upper side of the wings (Shoreline Osprey Project 1999). The head is mostly white with some brown and a prominent dark band over the eyes (Shore 1993). Adult females are more likely to have a reddish-brown patch on the upper side of the head (Shore et al. 2002). Ospreys are also known to molt seasonally, but it is not clear if this is related to the adult male or the adult female (Shore et al. 2002). Ospreys are also known to molt seasonally, but it is not clear if this is related to the adult male or the adult female (Shore et al. 2002). Ospreys are also known to molt seasonally, but it is not clear if this is related to the adult male or the adult female (Shore et al. 2002).

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### Northern Goshawk (*Accipiter gentilis*) Species Guidance

Family: Accipitridae - The Hawks, Falcons, and Eagles

**Species of Concern:** [Conservation Need \(CNC\)](#)

**State Species:** [Yes](#) [No](#) [Uncertain](#)

**Global Rank:** [CNC](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

**Federal Status:** [Yes](#) [No](#) [Uncertain](#)

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**Wildlife Action Plan:** [Yes](#) [No](#) [Uncertain](#)

**Wildlife Action Plan Area of Importance:** [Yes](#) [No](#) [Uncertain](#)

**Species Information:**

**General Description:** Northern Goshawks are the largest members of the accipiter genus in Wisconsin. They possess a long tail and a broad, rounded head. Adult length and wingspan measurements range from 18-46 in (45-117 cm) and 25-33 in (63-84 cm), respectively (Shoreline Osprey Project 1999). Adults are dark brown above and mostly white underneath, with heavy white patches on the upper side of the wings (Shoreline Osprey Project 1999). The head is mostly white with some brown and a prominent dark band over the eyes (Shore 1993). Adult females are more likely to have a reddish-brown patch on the upper side of the head (Shore et al. 2002). Ospreys are also known to molt seasonally, but it is not clear if this is related to the adult male or the adult female (Shore et al. 2002).

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### Red-shouldered Hawk (*Buteo lineatus*) Species Guidance

Family: Accipitridae - The Hawks, Falcons, and Eagles

**State Species:** [Yes](#) [No](#) [Uncertain](#)

**Global Rank:** [CNC](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

**Federal Status:** [Yes](#) [No](#) [Uncertain](#)

**Global Rank:** [CNC](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

**Wildlife Action Plan:** [Yes](#) [No](#) [Uncertain](#)

**Wildlife Action Plan Area of Importance:** [Yes](#) [No](#) [Uncertain](#)

**Species Information:**

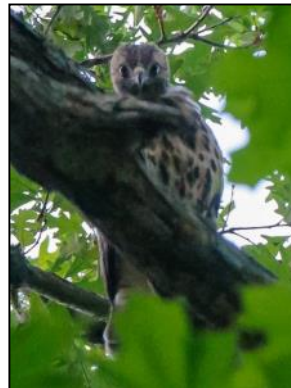
**General Description:** Red-shouldered Hawks are medium-sized birds of prey. Adult length and wingspan measurements range from 18-46 in (45-117 cm) and 25-33 in (63-84 cm), respectively (Shoreline Osprey Project 1999). Adults are dark brown above and mostly white underneath, with heavy white patches on the upper side of the wings (Shoreline Osprey Project 1999). The head is mostly white with some brown and a prominent dark band over the eyes (Shore 1993). Adult females are more likely to have a reddish-brown patch on the upper side of the head (Shore et al. 2002). Ospreys are also known to molt seasonally, but it is not clear if this is related to the adult male or the adult female (Shore et al. 2002).

**Reproduction:** Osprey are large eagles that prey almost exclusively on fish. Adult length and wingspan measurements range from 18-46 in (45-117 cm) and 25-33 in (63-84 cm), respectively (Shoreline Osprey Project 1999). Adults are dark brown above and mostly white underneath, with heavy white patches on the upper side of the wings (Shoreline Osprey Project 1999). The head is mostly white with some brown and a prominent dark band over the eyes (Shore 1993). Adult females are more likely to have a reddish-brown patch on the upper side of the head (Shore et al. 2002). Ospreys are also known to molt seasonally, but it is not clear if this is related to the adult male or the adult female (Shore et al. 2002).



# Rare Forest Raptor Avoidance

- Seasonal restrictions (i.e., avoid logging during the breeding season)
- Usually based around a nest location



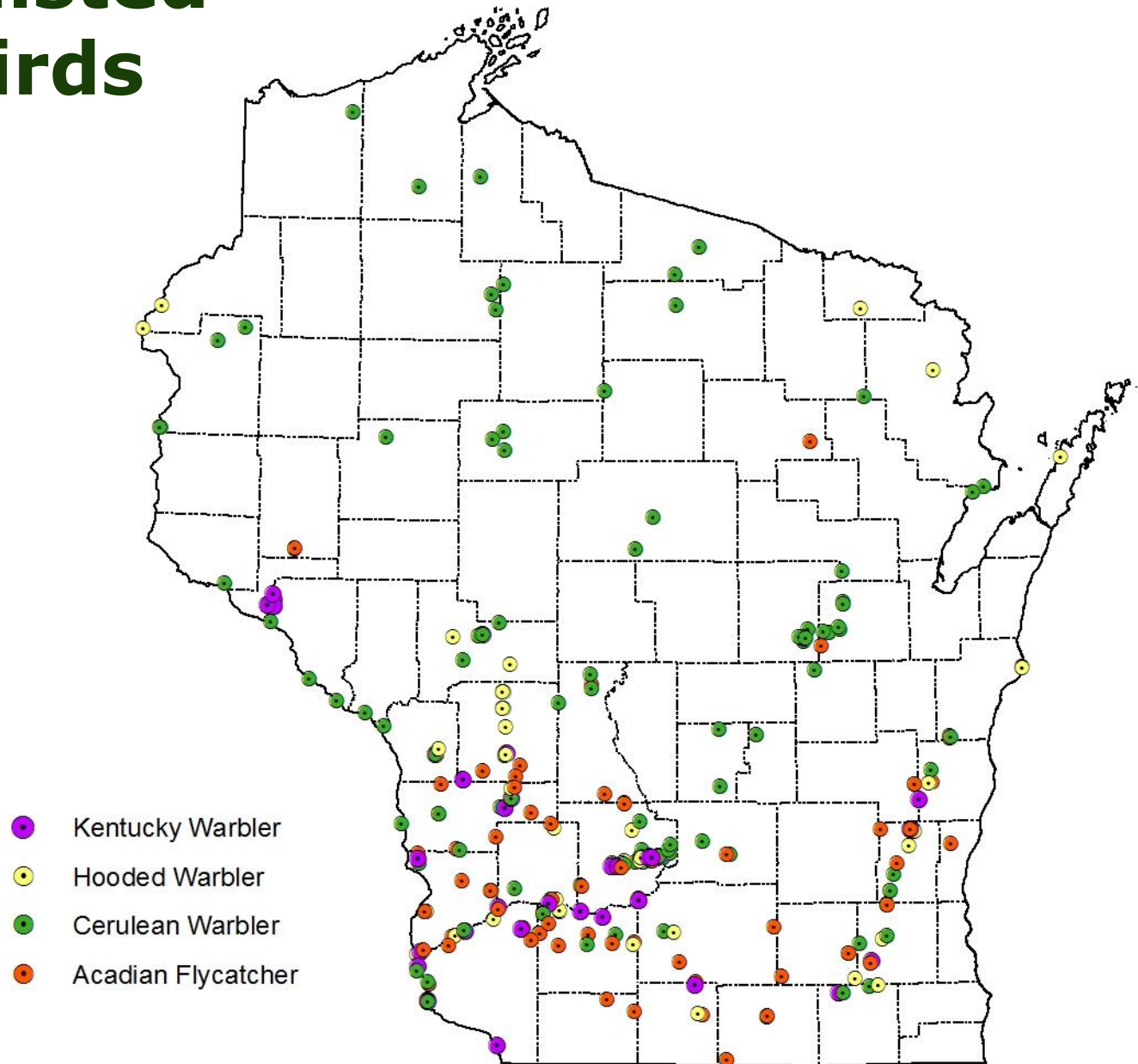


# Rare Forest Songbirds

- Nests very difficult to locate
- Seasonal restrictions



# State-listed Songbirds





## Wisconsin Bird Nesting Dates for Species Tracked by the Natural Heritage Inventory

Common Name	Scientific Name	Status	Arrival Dates	Breeding Dates (Avoidance Period) **	Departure Dates	Notes	Source
Acadian Flycatcher	<i>Empidonax virescens</i>	THR	Early May - June	1 May - 31 Aug	mid-Sept	considered to be single-brooded, but if initial nest fails, may reneests several times until successful; small % of successful pairs attempt second brood, but rare in WI	6
American Bittern	<i>Botaurus lentiginosus</i>	SC/M	March - April	25 Apr - 31 July	Sept. - Nov.	considered to be single-brooded	1, 2, 3
American White Pelican	<i>Pelecanus erythrorhynchos</i>	SC/M	early March - late May	15 Apr - 15 Aug	Oct. - early Dec.	considered to be single-brooded; nest initiation synchronous among pairs of a sub-colony, but later additions to sub-colonies may occur; also later sub-colonies may occur adjacent to early nesting sub-colony	1, 2, 4
Bald Eagle	<i>Haliaeetus leucocephalus</i>	SC/P	Feb. (adults) March (immature)	Southern WI: 15 Feb - 1 July Northern WI: 15 Mar - 1 Aug	Oct. (adults) and (immature) Nov.	considered single-brooded, but if initial nest fails, may reneest; WI appears to support year-round and breeding migratory populations; nest construction and maintenance may be year-round	3, 4
Barn Owl	<i>Tyto alba</i>	END	mid-March - late April	16 Apr - 31 Aug	Oct/Nov (but some stay through winter)	may attempt multiple broods in temperate areas, but unknown in WI; non-migratory except for short distances	6
Bell's Vireo	<i>Vireo bellii</i>	THR	early May/June	25 May - 15 Aug	late Sept	considered to be single-brooded, but if initial nest fails, may reneest	6
Black Tern	<i>Chlidonias niger</i>	SC/M	mid-April - late May	15 May - 31 July	early Aug - early Nov	considered to be single-brooded	1, 2, 3
Black-crowned Night-heron	<i>Nycticorax nycticorax</i>	SC/M	early April - early May	15 April - 31 July	mid-Sept - early Nov	considered to be single-brooded, but if initial nest fails, may reneest	1, 2, 4
Boreal Chickadee	<i>Poecile hudsonica</i>	SC/M	na	late April - mid.July	na	considered to be single-brooded; non-migratory except for short distances	1, 3
Caspian Tern	<i>Sterna caspia</i>	END	mid.April - early June	mid May - mid Aug	mid.July - mid.Oct	considered to be single-brooded, but if initial nest fails, may reneest	6
Cerulean Warbler	<i>Setophaga cerulea*</i>	THR	late Apr - late May	1 May - 24 Aug	late Aug	considered to be single-brooded, but may lay second clutch irregardless of whether or not first clutch is successful	6
Common Goldeneye	<i>Bucephala clangula</i>	SC/M	late Oct. - Dec.	15 March - 31 Aug	early March - mid.May	considered to be single-brooded, rare summer resident east and north, common winter resident	1, 3, 4
Common Tern	<i>Sterna hirundo</i>	END	late April - early May	mid May - late Aug	early Aug. - early Nov.	considered to be single-brooded, but if initial nest fails, may reneest; occasionally lays second clutch when only chick remains from first clutch	6
Connecticut Warbler	<i>Oporornis agilis</i>	SC/M	late April - early June	1 June - 25 Aug	mid.Aug - early Oct.	considered to be single-brooded	1, 4, 5

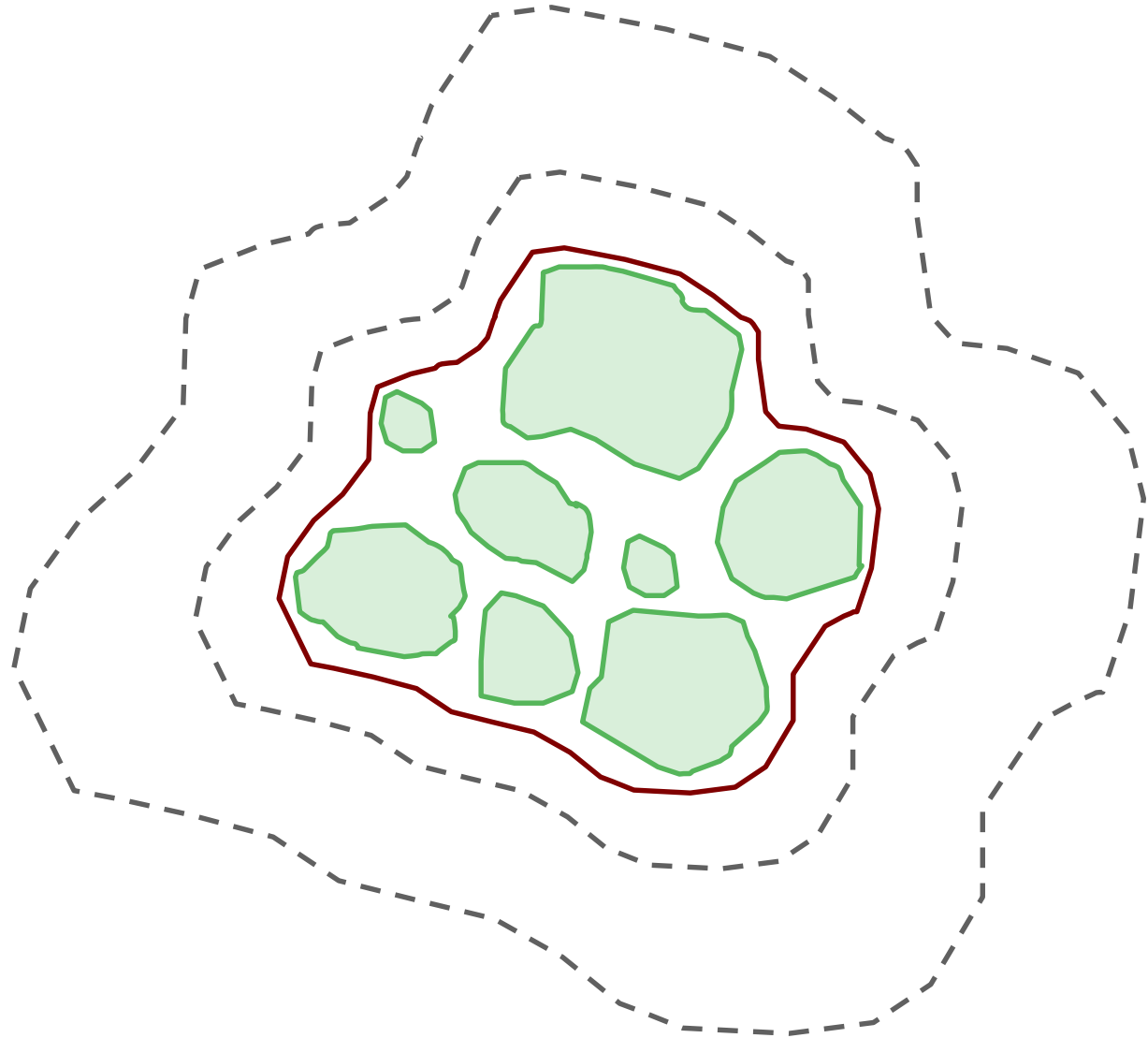


# Bird Rookeries





# Bird Rookeries...



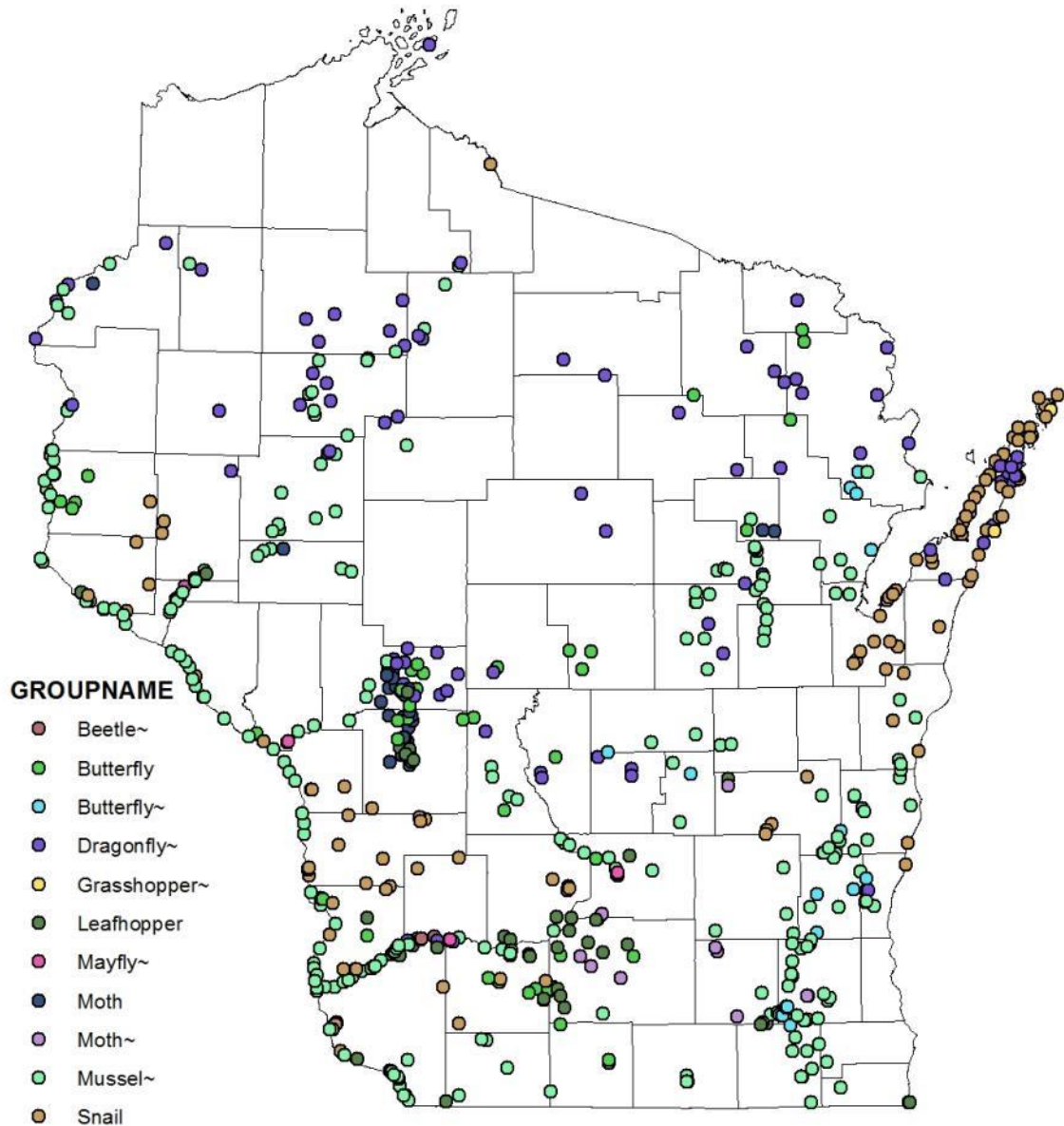
**Avoidance:** March 21 – July 15

# Invertebrates

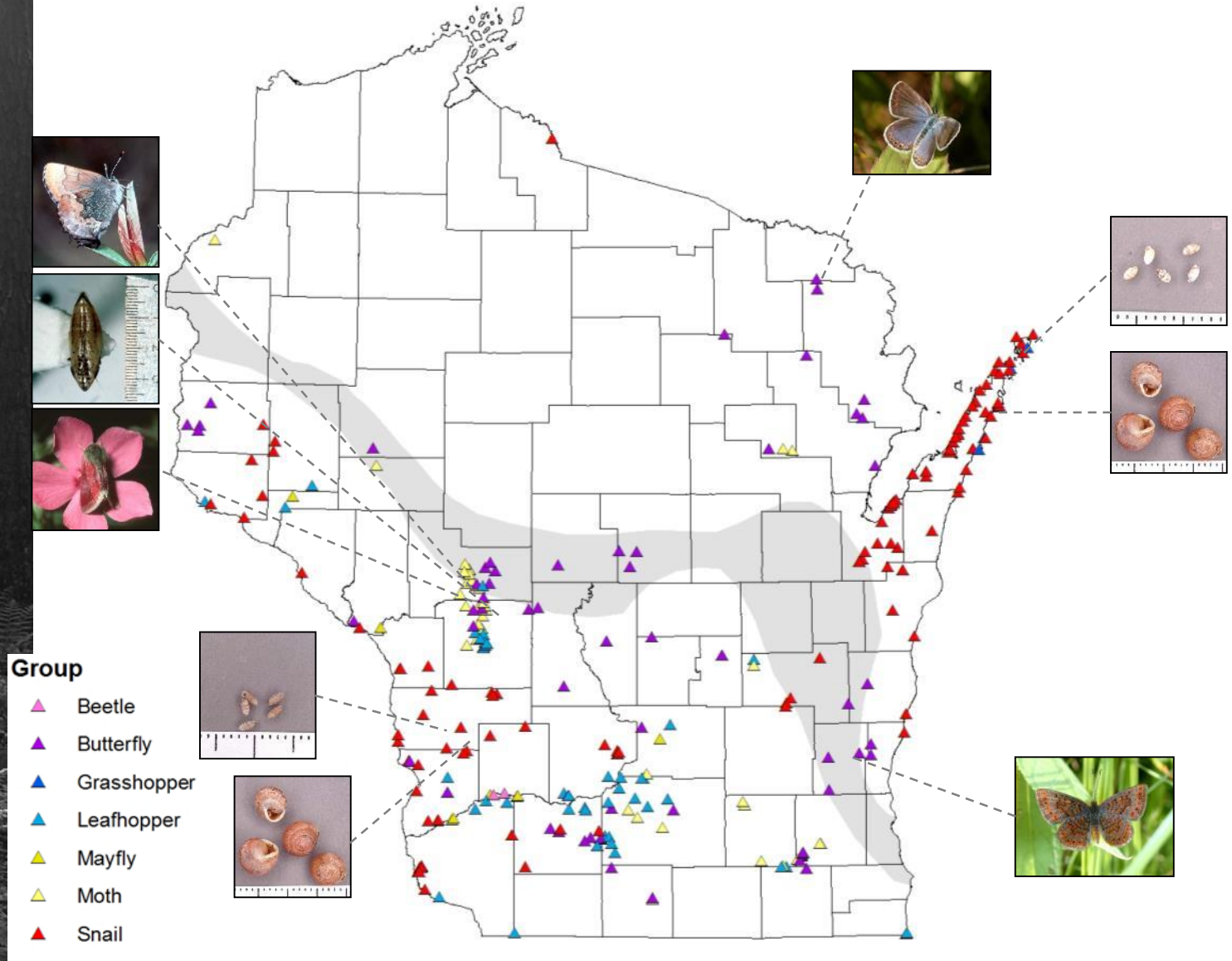




# E/T Invertebrates



# E/T Invertebrates: Mussels and Dragonflies Removed





# Rare Plants

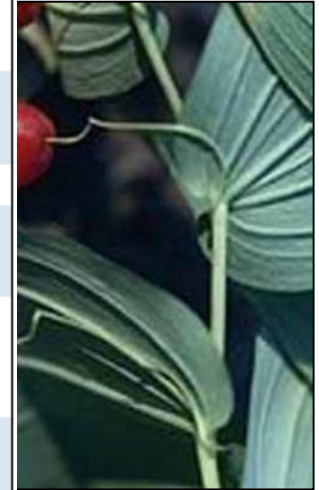


Dwarf Milkweed  
(*Asclepias ovalifolia*)



Rock Clubmoss (*Huperzia lucidula*)

<b>FEDERALLY LISTED</b>	
<b>Aconitum noveboracense</b> (Northern Wild Monkshood)	
Algific Talus Slope	2
Moist Cliff	3
<b>Cirsium pitcheri</b> (Dune Thistle)	
Great Lakes Dune	3
<b>Lespedeza leptostachya</b> (Prairie Bush-clover)	
Dry Prairie	3
Dry-mesic Prairie	3
Mesic Prairie	2
<b>Iris lacustris</b> (Dwarf Lake Iris)	
Boreal Forest	2
Great Lakes Dune	3
Great Lakes Alkaline Rockshore	3
Alvar	3
<b>Oxytropis campestris var. chartacea</b> (Fassett's Locoweed)	
Inland Beach	3
<b>Platanthera leucophaea</b> (Prairie White-fringed Orchid)	
Wet-mesic Prairie	3
Bog Relict	1



treptopus amplexifolius)



n (*Polystichum braunii*)



## Wisconsin's rare animals



Slender glass lizard (*Ophisaurus attenuatus*), photo © Nick Walton.

All of Wisconsin's rare species are found on the [Natural heritage working list](#). Species become rare for a number of reasons, including habitat loss, habitat degradation, highly specialized habitat needs, disturbance sensitivity, genetic problems, exploitation, persecution, predation, competition and parasitism. Some rare species are present here at the edges of their main ranges. Invasive species and climate change are also impacting rare species and expected to become even bigger factors in the future.

### Explore rare species pages

These pages contain information about Wisconsin's rare animals, including where they are found in the state, their level of legal protection and photos. Life history and management considerations are available for many species, and new information is continually being added.

#### Vertebrates



- [Amphibians](#)
- [Birds](#)
- [Fishes](#)
- [Mammals](#)
- [Reptiles](#)

#### Invertebrates



- [Ants, wasps, and bees](#)
- [Aquatic and terrestrial snails](#)
- [Beetles](#)
- [Bristleworms](#)
- [Butterflies and moths](#)
- [Caddisflies](#)
- [Crustaceans](#)
- [Dragonflies and damselflies](#)
- [Flies](#)
- [Grasshoppers and allies](#)
- [Leafhoppers and true bugs](#)
- [Mayflies](#)
- [Mussels and clams](#)
- [Spiders](#)
- [Stoneflies](#)

### Biodiversity

#### Natural communities

Explore Wisconsin's natural communities.

#### Rare plants

Learn about plants on the Natural Heritage Working List.

#### Rare animals

Find rare and non-game animals.

#### Other features

Discover unique resources.

### Update

- [Proposed changes to the endangered and threatened species list](#)

### Related links

- [Endangered species laws](#)
- [Natural Heritage Inventory](#)
- [Report a rare species](#)
- [Wildlife Action Plan](#)
- [Wildlife and forestry research](#)
- [Wisconsin's endangered resources](#)

### Contact information

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