

## Eastern Red Bat (*Lasiurus borealis*)



The eastern red bat is a medium-size (3½ - 4½ in. long, 0.3 - 0.5 oz) red bat /w 11-13 in. wingspans and whitish shoulder patches. They roost in trees during the summer and in winter either migrate south or hibernate in leaf litter, or trees. Our most common tree bat, they reproduce in high numbers for bats. Most bats birth single pups, but red bat litters average three pups and can be as many as five pups.

## Hoary Bat (*Lasiurus cinereus*)



The hoary bat is a large (~ 5½ - 5¼ in long, 0.3 - 0.75 oz) gray bat /w 12-16 in. wingspans and white tipped hairs giving it the hoary look it gets its name from. They roost in trees, usually conifers, in summer and in winter, migrate south. Among our bats, they probably travel the longest distances annually. As /w red bats and silver-haired bats, wind mills strikes are a high source of mortality for them.

## Silver-Haired Bat (*Lasionycteris noctivagans*)



The silver-haired bat is a medium-size (3½ - 4½ in. long, 0.3 - 0.4 oz) black and gray bat /w 11-12 in. wingspans and silver/white hairtips giving it the silver look it gets its name from. They roost in trees under loose bark in the summer. In winter, they hibernate in caves, tree hollows, and buildings. Among surveys done at West Point, these are the least frequently detected of the three tree bat species.

## THE BENEFITS OF BATS

Although bats are greatly feared and hated by many people, as a group, bats provide many benefits to people and the environment alike, including:

- **INSECT PEST MANAGEMENT:** Bats eat many of the beetles, moths, flies, & mosquitoes that harm crops or spread disease to people and animals. When you consider this, bats save lives, crops, and billions of dollars - and they do it for free.
- **IMPORTANT ECOLOGICAL ROLE PLAYERS:** As mass consumers of insects, bats keep ecosystems in balance. Moreover, in caves and mines, bats and bat guano serve as indispensable nutrient sources in unique underground ecosystems.

**Harvesting:** Per New York State regulations for all species and federal protections for select species, the harvest, taking, or possessing of bats is prohibited at any time. For both human and bat safety, do not handle bats.

## WHAT TO DO ABOUT A BAT INDOORS?

### IF YOU ARE IN A PUBLIC BUILDING OR BARRACKS AT WEST POINT AND FIND A BAT:

- 1) Isolate the bat in a room/hall if possible. If not possible, do not try to corral it. Keep an eye on it from a distance.
- 2) Leave the bat alone. Do not try to catch it. Keep lights on. Remove all people, pets from room if possible.
- 3) Call (845) 938-2316 to arrange service order to remove bat. Note any physical, if any, anyone has had with the bat.

### IF YOU ARE IN A PRIVATE RESIDENCE AT WEST POINT AND FIND A BAT:

- 1) Isolate the bat in a room/hall if possible. Shut all doors leading from that room to other rooms in the residence.
- 2) Leave the bat alone. Do not try to catch it. Keep lights on. Remove all people, pets from room if possible.
- 3) Call Balfour Beatty (RCI housing) or DPW (ODIA housing). Note any physical, if any, anyone has had with the bat.

**Health & Safety:** If a person has been bit, been in direct contact with a bat or asleep in a room with a bat, then that bat should be caught and tested for rabies. The individual person involved should seek immediate medical attention.

## DISEASE RABIES

Rabies is a viral central nervous system disease in mammals, transmitted in saliva, usu. by a bite from an infected animal. **Vectors:** Any mammal can become infected /w rabies but its most often in bats, raccoons, skunks, coyotes and foxes. **Symptoms:** no fear, hyper-aggressiveness, self-mutilation. No coordination, drooling, paralysis, difficulty breathing. **Human health risk:** serious; can be transmitted to humans and pets and is almost always fatal w/o post-exposure treatment.

## BASIC WILDLIFE SAFETY REVIEW

### *Do these things to keep people and animals safe:*

- **NEVER FEED WILDLIFE** - Nuisance animal issues often begin over food. Feeding wild animals is illegal.
- **KEEP YOUR DISTANCE** - Never approach, corner or handle wildlife. Risks incl. disease, bite, & scratch.
- **REPORT ANIMAL ISSUES** - Call a wildlife responder if human or animal well-being is a concern.

## REPORTING BAT ISSUES

### *Know when and what to report and who to contact*

- **WHEN TO REPORT:** Call right away If you see bat(s) 1) indoors 2) injured, sick, or killed, 3) handled 4) has bit, been in direct contact, or in room with sleeping person(s)
- **WHAT TO REPORT:** Please report 1) when & 2) where bat issue happened, 3) what the bat did 4) where bat is now (if known), 5) your name and phone number.
- **CONTACT:** For a bat indoors, call (845) 938-2316 or call Balfour Beatty/ODIA. For all other issues, call Natural Resources: (845) 938-7122, -2314 (M-F, 0800-1630)





## BATS AT WEST POINT

Bats are one of the most remarkable groups of animals in the world. They are mammals but they are capable of true flight as only birds and insects otherwise are. They use sound to not only communicate with other bats but to see and help them move and hunt. In summer they can eat half their weight in a single night but in winter, they can go months without feeding. And as consumers of plant-eating and disease-spreading insects, bats provide an important service to us and yet many people fear them.

In New York, there are nine native bat species and all have been detected here at West Point at some point. This brochure seeks to inform readers about bats in general and some of their amazing abilities, introduce the specific bats we have here at West Point, discuss the disease wiping some of them out, and talk about staying safe around bats. While we hope it informs and prepares readers, this brochure is by no means a comprehensive guide.

For more see NYSDEC's website: [www.dec.ny.gov](http://www.dec.ny.gov)

### FLIGHT

- While a few other mammals such as flying squirrels can glide, bats are the only group of mammals capable of true, sustained flight thanks to some key features:
- **Patagia:** super-thin wing membranes made of special skin tissue, muscles, nerves and fibers allow bats to get lift and special hair cells relay information to bats.
- **Specialized skeletons:** thin, light bones are easy to carry. Special arm, wrist, and ultra-long finger bones support wings. Flexible joints allow maneuverability.

### ECHOLOCATION

- **Echolocation (aka bio sonar)** is the use of sound by an animal to navigate through its environment. Bats and a few other animals like whales, dolphins do this.
- **How it works:** Bats emit calls that bounce off objects in the environment. When waves (echoes) bounce back, bats learn where and what objects are.
- With it bats negotiate obstacles and find prey. This lets bats thrive at night, avoiding same competition and risk of predation they'd face if they lived during day.

### HIBERNATION

- Hibernation is a period of inactivity and low metabolism in some warm-blooded animals in winter when food is scarce. Like bears, bats hibernate.
- In fall, cave bats feed heavily to boost their fat reserves. They then enter caves, mines, rock crevices, or buildings and sleep for the next 4-6 months.
- Bats efficiently use energy by greatly slowing their breathing, heartbeat, and metabolism. They also greatly drop their body temperature (something bears are unable to do in hibernation.)

## White Nose Syndrome: An Existential Threat

White-nose syndrome (WNS), caused by the fungus *Pseudogymnoas destructans* (Pd), is the main threat to bats today. WNS gets its name from the white fuzzy growths Pd causes on bats' noses, ears, and wings. The fungus Pd grows in cold, damp places like the caves and mines bats winter in.

As the fungus infects bats, it irritates and arouses them from hibernation, increases their metabolism and depletes their fat reserves. Sadly, infected bats awoken in winter have no insects around to eat and if they cannot re-enter hibernation, must go flying in search for food. The bats often end up dying from starvation, exposure, and physical stress. WNS first appeared in the U.S. in caves in upstate NY in 2007 but has spread to over 30 U.S. states, killing millions of bats across the country and up to 90-100% of some bat species in affected areas, including West Point.



**Stay Out:** Do not enter caves, mines or natural areas where bats may hibernate. WNS can be brought to bats by humans. WNS was first found in Howe Caverns, NY, a tourist site and was likely brought there by people.

## MEET THE BATS OF WEST POINT

### Big Brown Bat (*Eptesicus fuscus*)



The big brown bat is a large (~4½ - 5½ in long, 0.3 - 0.75 oz) brown bat /w 12-16 in. wingspans. Since they commonly roost in buildings, tunnels and bridges, people encounter them more than our other bats. They also roost in trees. In winter they hibernate in caves, mines, and attics. Our most common bat and largest cave bat, it can be affected by WNS but the species has fared better than others.

### Tri-colored Bat (*Perimyotis subflavus*)



The tri-colored bat is a small (1½ - 2 in long, 0.2 - 0.3 oz) light brown bat /w an 8 -10 in wingspans and tricolored back hairs (gray base, yellow/tan middle, red/brown top). They roost in tree notches or hollows in summer and hibernate solitarily or in small groups in caves and mines in winter. AKA Eastern pipistrelles. Our smallest bat, it has declined due to WNS, but of yet it's neither state nor federally listed.

**Cutting:** Do not cut standing dead trees (snags) or live trees if it can be helped. Both provide for bats and other wildlife. Trees that must be cut, should be cut after October or before April to reduce harm to bats.

### Little Brown Bat (*Myotis lucifugus*)



The little brown bat is a small (3-4 in. long, ~0.3 oz) mouse-eared brown bat /w an 8-10 in wingspan and dark face mask. They roost under loose bark in trees and occasionally in houses in summer and hibernate in colonies caves and mines in winter. One of the most widespread bat species in the country, they have been hard hit by WNS but as of yet, are neither NYS nor federally listed.

### Northern Long-Eared Bat (*Myotis septentrionalis*)



The northern-long eared bat is a small (3-3 ¼ in. long, 0.2 - 0.3 oz) mouse-eared brown bat /w a 9-10 in wingspan and long ears. They roost under tree bark or in tree hollows in summer and hibernate in caves and mines in winter. At one time, they were common in our area but were hit hard by WNS. They are a state threatened species and in 2015, were federally listed as a threatened species.

### Indiana Bat (*Myotis sodalis*)



The Indiana bat is a small (~2 in. long, 0.2 - 0.3 oz) mouse-eared brown bat /w a 9-11 in. wingspan and keeled calcars, special cartilaginous heel spurs. They roost under tree bark in summer and hibernate in colonies caves and mines in winter. They are a NYS and federally endangered species (one of the first listed species in 1967). Due to WNS, they are even more imperiled now.

### Eastern Small-Footed Bat (*Myotis leibii*)



The eastern small footed bat is a small (~2½ - 3 ¾ in. long, 0.2 - 0.3 oz) mouse-eared brown bat /w an 8-10 in wingspan, black face and ears, and small feet. They roost in rock crevices like talus slopes or quarries in summer and hibernate in caves and mines in winter. One of our smallest bat species, they are listed as NY state species of special concern but as of yet, not federally listed.