

The Northern Long-eared Bat



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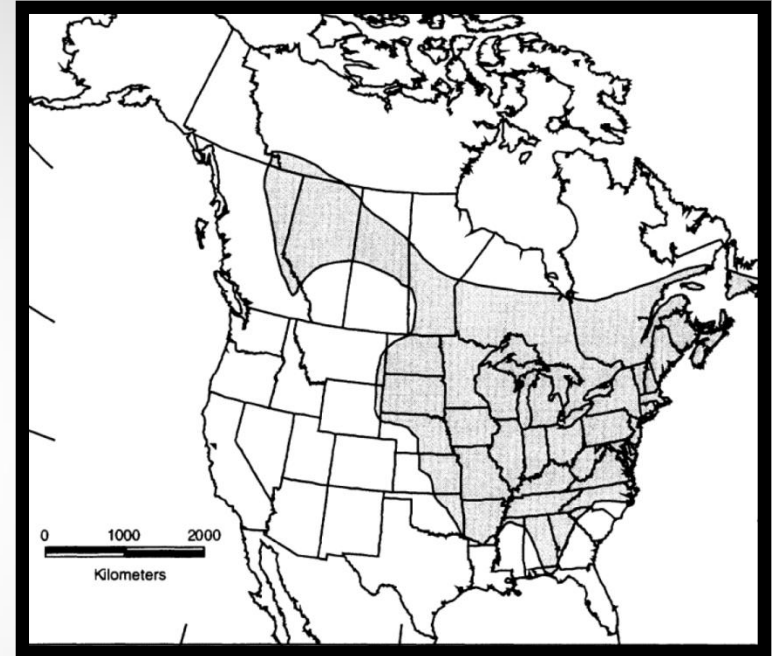
Species Description

- Medium-sized bat.
- Weighs 5 to 8 g.
- Medium to dark brown.
- Distinguished by long ears and tragus.



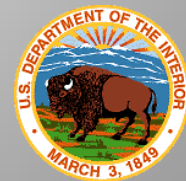
Distribution

- Found in 38 states, the eastern Canadian provinces, and west to the southern Northwest Territories, and eastern British Columbia
- Prior to white-nose syndrome (WNS) the species was common in the northeast and Ohio Valley, more rare in west



Winter Habitat (described in detail for PEPs later in the presentation)

- Hibernates in cracks and crevices in caves, mines, tunnels, and potentially other types of habitat that have not been documented yet.
- Prefer areas with higher humidity and lower, constant temperatures.
- Roosts singly or in small groups – rarely in large numbers.



Summer Habitat (described in detail for PEPs later in the presentation)

- Typically consists of forest stands with trees ≥ 3 " dbh, but may also use man-made structures (buildings, bat houses, etc.).
- Males and non-reproductive females may also roost in caves and mines.
- Migrates distances averaging between 40-50 miles (range of 5-168 miles) between their winter hibernacula and summer habitat.



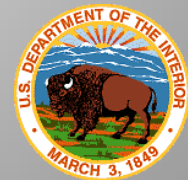
Maternity Colonies

- Pregnant females aggregate in small colonies of 30-60 at the beginning of the summer after migrating from hibernacula.
- Size of colony often decreases as summer progresses.
- Females give birth to 1 pup in late May - early June, but could be later in northern portions of range.
- Juveniles cannot fly until mid-July (or later in northern portions of range).



Summer/Maternity Roosts

- Opportunistic in roost selection.
- Observed using over 35 species of trees.
- Structure of habitat and availability of roosts may be more important than tree size or species.
- Roost under exfoliating bark or in cavities.
- Males and non-reproductive females will often occupy the same area in the summer.



Summer / Maternity Roosts



Photo: Chris Boggs, ESI



Photo: Roger Perry, USFS



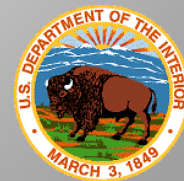
Photo: Roger Perry, USFS



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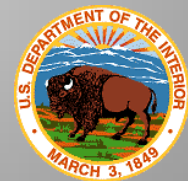
Photo: Roger Perry, USFS



Summer / Maternity Roosts

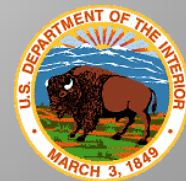


- Roosts can be small trees.
- Adult female observed roosting in this tree.
- Old deer rub tree above the Green River in Hart County, KY.



Foraging

- Hawks and gleans – i.e., picks forage items off of leaves and branches while hovering.
- Forages along forest edges, over forest clearings, at tree-top level, and occasionally over ponds.
- Primarily eats insects.



Endangered Species Act Petition/Listing

- January 2010: Listing petition (Center for Biological Diversity)
- June 2011: 90-day finding – substantial; status review initiated
- October 2013: Proposed recommendation (list NLEB as endangered primarily due to white-nose syndrome) published in Federal Register
- December 2013: First public comment period ends (was extended several times)
- January 2015: Draft 4(d) rule published (only if listed as “threatened”)
- Listing decision April 2, 2015 as threatened with an interim 4(d) rule (effective May 2, 2015)



Threats

- Predominant threat to the species is white-nose syndrome.



Threats

- Other threats to the NLEB include:
- Winter and summer habitat destruction or disturbance
- Wind energy development
- Climate change
- Contaminants



Interim 4(d) Rule

- Section 4(d) of the ESA allows the FWS to establish special regulations for threatened species, subspecies, and Distinct Population Segments.
- 4(d) rules can take the place of the normal protections of the ESA.
- The ESA specifies that 4(d) rules must be "necessary and advisable to provide for the conservation of the species."
- Does not remove, or alter in any way, the consultation requirements under section 7 of the ESA.

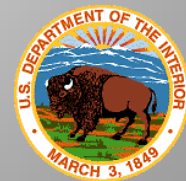


Interim 4(d) Rule

In parts of the country not affected by WNS, the interim 4(d) rule allows any take from certain activities to be exempt from the take prohibitions of section 9 of the ESA. For areas of the country impacted by WNS, the measures provided in the proposed 4(d) rule except take from:

- Forest management practices
- Maintenance and limited expansion of transmission corridors and utility rights-of-way
- Removal of trees and brush to maintain prairie habitat
- Limited tree removal projects (1 acre or less)
- Capture, handling, and related activities for NLEBs for 1 year if currently permitted to conduct these activities on other bat species.
- Removal of hazard trees
- Removal from human dwellings

**IT DOES NOT COVER ACTIVITIES ASSOCIATED WITH
SURFACE OR UG COAL MINING**



NLEB/IN Bat

- **Habitat:**
 - Trees as small as 3”dbh (as opposed to 5” dbh) can be suitable for roosting.
 - Uses abandoned mine portals more frequently.
- Prior to WNS, NLEBs were a commonly captured bat:
 - More “known habitat”.
 - Fewer locations to survey.
 - Increased need for a Protection and Enhancement Plans.



Coordination

- The 1996 Biological Opinion and Conference Report requires that each State “must implement and require compliance with any species-specific protective measures developed by the FWS field office and the regulatory authority with the involvement, as appropriate, of the permittee and OSM.”
- In order to address this requirement, the FWS, Office of Surface Mining (OSM), and State Regulatory Authorities (RA) must implement species-specific protective measures, as specified in Protection and Enhancement Plans (PEP), to minimize adverse effects to federally listed species and avoid jeopardy.



FWS Recommendations

- Until such time that NLEB-specific PEP guidelines are developed, the FWS recommends that applicants address potential adverse effects to the NLEB by utilizing the Rangewide Indiana Bat Protection and Enhancement Plan Guidelines, Revised 2012
- Projects within known NLEB habitat:
 - (a) submit a PEP for the NLEB
 - (b) demonstrate a lack of adverse effects.
- Projects within potential NLEB habitat:
 - (a) assume presence and submit a PEP for the NLEB
 - (b) conduct the appropriate surveys to determine probable presence/absence, or
 - (c) demonstrate a lack of adverse effects to avoid project delays once the species is listed.



FWS Recommendations

- While the FWS recognizes that the protective measures in the IN Bat PEP will provide a certain level of protection to the NLEB, applicants should use the definitions of suitable NLEB habitat to evaluate whether or not habitat is present within the project area to minimize the potential for incidental take.
- Refer to Appendix H of the NLEB Interim Conference and Planning Guidance.



Habitat Descriptions for NLEB PEPs

- Suitable forested habitat: Suitable forested habitat is used to describe known or potential summer maternity/non-maternity habitat and known or potential spring staging/fall swarming habitat. Suitable habitat for NLEB consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures.
- This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥ 3 inches dbh that have exfoliating bark, cracks, crevices, and/or cavities), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Isolated trees are considered suitable habitat when they exhibit the characteristics of a suitable roost tree and are less than 1000 feet from the next nearest suitable roost tree, woodlot, or wooded fencerow.



Habitat Descriptions for NLEB PEPs

- Suitable winter habitat: Suitable winter habitat is used to describe known or potential hibernacula that include underground caves and cave-like structures (e.g. abandoned mines, railroad tunnels). These hibernacula typically have large passages with significant cracks and crevices for roosting; relatively constant, cooler temperatures (0-9°C) and with high humidity and minimal air currents.
- Potential NLEB habitat: includes any suitable forested habitat or winter habitat within the range of the species, but for which no survey or other data is available showing that NLEB are present.



Habitat Descriptions for NLEB PEPs

Known NLEB habitat includes the following minimum buffers around documented NLEB occurrences:

1) Known Summer Habitat:

- Suitable forested habitat within 1.5 miles of a NLEB summer roost tree/trees;
- Suitable forested habitat within 3.0 miles of a NLEB summer capture or acoustic detection.

2) Known Spring Staging/Fall Swarming:

- Suitable forested habitat within 5.0 miles of a NLEB hibernaculum.

3) Known Winter Habitat:

- Underground caves and cave-like structures where NLEBs have been documented.



Other Considerations

- **Projects that have issued permits, but still have the potential to adversely affect the NLEB may be at risk of Section 9 ESA violations because take is not covered.**
- **Projects with an existing approved NLEB PEP, IN Bat PEP, or IN Bat/NLEB PEP with a pending or issued permit are in compliance.**
- **Projects with a valid presence/absence survey with a pending or issued permit are typically in compliance.**
- **Projects with an issued permit that have no potential to adversely affect NLEBs have no further consultation/coordination obligations.**



Future Status Assessments

Little Brown Bat



Tricolored Bat



QUESTIONS?

