



CONSERVE WILDLIFE
FOUNDATION OF NEW JERSEY

TO: Volunteers of the *Summer Bat Count*

FROM: Maria Grace, Education & Outreach Manager
MacKenzie Hall, Private Lands Biologist

DATE: April 1, 2009

SUBJECT: Summer Surveys of Bat Roosting Structures

Thank you for your interest in the *Summer Bat Count*, a partnership project between the Conserve Wildlife Foundation of New Jersey and the New Jersey Endangered and Nongame Species Program.

In New Jersey, bats are a major predator of night-flying insects, including mosquitoes. Thanks to bats, who can each consume thousands of insects each night, people can enjoy summer nights outdoors. More importantly, bats enable farmers and foresters to use fewer pesticides which save millions of dollars annually and reduce the amount of toxins in the environment. In other parts of the world, bats play key roles in pollinating flowers and dispersing seeds for important agricultural plants. It is to our benefit to have these wonderful creatures around us.

We currently know very little about the status and distribution of bats in New Jersey. The Conserve Wildlife Foundation of New Jersey is encouraging the general public to identify and survey bat roosting locations to promote bat conservation throughout the state. The data generated by the *Summer Bat Count* will help the Conserve Wildlife Foundation of New Jersey and the NJ Endangered and Nongame Species Program to create distribution maps for some of the state's nine species of bats, determine roosting and feeding habitats, and monitor bat populations over an extended period of time.

During the past few years, biologists in the northeast have discovered a mysterious affliction that is affecting bats in many of the New England and the Mid-Atlantic states, including New Jersey. The affliction has been named "white nose syndrome" (WNS) due to the white fungus observed around the nose of some of the affected bats. WNS has been observed in New Jersey's three largest hibernacula. Currently, very little is known about WNS and its cause. The states, federal government, several universities and private organizations are allocating significant resources to track and discover the cause of WNS. Summer roost sites identified during the 2009 *Summer Bat Count* may provide biologists with information needed to monitor summer roost sites for the possible presence of WNS in NJ. There is no evidence to suggest that WNS has any affect on humans. For more information on WNS please visit: www.fws.gov/northeast/white_nose.html If volunteers observe dead or dying bats in their area DO NOT handle the bats, but please contact

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the Division of Fish and Wildlife's Endangered and Nongame Species Program immediately by calling Mick Valent at (908) 638-4127.

This packet includes everything you need to participate in the 2009 *Summer Bat Count*. If you know of a building, bridge, bat box, tree, or other structure that bats roost in during the summer, then all you have to do is visit it twice during the summer and count the bats as they exit at dusk to feed. If you don't know of an existing roost but are still interested in participating, identify some old buildings, barns, or churches in your community and visit them at dusk and observe all sides of the building (more than 1 person is necessary to view all sides at the same time) for bats exiting. If you find bats leaving the structure, then you have discovered a new bat roost!

The *Summer Bat Count* can be an exciting, educational, and fun wildlife viewing activity. **Come and join the bat counters!**

**If you have any questions, please do not hesitate to contact
Maria Grace at (609) 984-0621 or MacKenzie Hall at (908) 782-4614 x. 104.**

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2009 SUMMER BAT COUNT

Conserve Wildlife Foundation of New Jersey
In partnership with the
NJ Endangered and Nongame Species Program



Name and Address of Surveyor completing this form: _____

Phone: _____ **Email:** _____

STRUCTURE INFORMATION

Structure Type (*circle one*)

- | | |
|---------------------------------|--|
| 1 – BARN | 5 – UTILITY BUILDING |
| 2 – CHURCH | 6 – BAT BOX |
| 3 – HOUSE (<i>occupied</i>) | 7 – BRIDGE |
| 4 – HOUSE (<i>unoccupied</i>) | 8 – OTHER STRUCTURE – please describe clearly: _____ |

Is the Structure used on a regular basis by people? (*please circle*) YES NO

Is the Structure scheduled for renovation or demolition? (*please circle*) YES NO

OWNERSHIP AND LOCATION OF SITE

Property Owners Name and Address: _____

Phone: _____ Email: _____

County: _____

Directions to site from major road: _____

REMEMBER TO ATTACH A MAP PINPOINTING THE SUMMER BAT COUNT SITE LOCATION!

GPS COORDINATES OF ROOST SITE IN DEGREES/MINUTES/SECONDS (*if known*):

Latitude: _____° - _____' - _____”

Longitude: _____° - _____' - _____”

HABITAT INFORMATION

Distance in yards to nearest body of water: _____

Name of water body: _____

COMMENTS: _____

Habitat Codes and Percentages

3 most common habitats
< 100 yards

5 most common habitats
100 yards to 0.5 miles

Code	%

Code	%

*Refer to page 3 with
 habitat codes and descriptions*

EMERGENCE INFORMATION*Please conduct 2 counts between late May and August*

	DATE	Start Time	End Time	Temp °F	% Cloud Cover	Wind (see below)	% Humidity	Total BATS Counted
1st count								
2nd count								

Beaufort Wind Scale (do not survey if wind is over 4)

Code Number	Wind Speed	Description	Observation
0-2	0 - 7 mph	Calm to very slight breeze	Leaves still to lightly rustling
3	8 - 12 mph	Gentle Breeze	Leaves and twigs in motion and rustling
4	13 - 18 mph	Moderate Breeze	Small branches begin to move
5	19 - 25 mph	Fresh Breeze	Small trees sway

HISTORICAL INFORMATION (if known)

If you have monitored or observed this roost for many years, please estimate the number of bats using this roost this year vs. last year or previous years (before the discovery of White Nose Syndrome in New Jersey): _____

INSTRUCTIONS*Please read carefully to ensure accurate data collection*

Country churches, barns, and other old structures provide the best opportunities for finding large colonies of bats. The largest colonies are generally found in unoccupied buildings although some sizable colonies can be found in permanently occupied dwellings. The bat species encountered will usually be little brown and big brown bats. If you know how to identify bats and are certain of the species, make a note in the comments.

Most bat roosts surveyed in the *Summer Bat Count* will be man-made structures. However, a summer concentration of bats found in a natural roost would be a significant find. Likely natural roosts would be trees with exfoliating bark or cavities that get a significant amount of sun.

1. Arrive at site ½ hour before sunset. Please remember to ask permission from the landowner and respect private property. Position yourself for easy viewing of bats exiting. **Often there will be more than one exit and more than one person is needed for an accurate count.**
2. Locate where the bats are exiting the structure and count them as they exit, remembering not to count bats seen re-entering the structure. **This may require more than one surveyor if exits are located on multiple sides of a building.** If bats exit in large numbers, attempt to estimate the number seen exiting. Record date, start and end time, weather, and count totals in the "Emergence Information" section.
3. Immediately before or after the bat count, fill out the first side of the data sheet. Record the surveyor's name and address, structure information, and contact information for the landowner.
4. **Location information is critical to analysis.** Please include detailed directions to the roost site and **include a copy of a map** with the site pinpointed. **Be as specific as possible** so that someone not familiar with the area can find the site. If you have a GPS unit, report the coordinates.
5. Habitat Information: Please enter the 3 most common habitat codes (on page 3) and percentages for the area 100 yards around the site and 5 most common habitat codes and percentages for the area 100 yards to ½ mile around the site.
6. **Survey the site two times through the summer between late May and August 1st.** Survey when temperatures are over 65°F and winds are ≤4 on the Beaufort scale.
7. Fill out the first side of the data sheet on your first night of surveying. Use the same data sheet on your second visit, just remember to add the date, time, weather, and count totals to the "Emergence Information" table above.
8. If time does not permit an emergence count and the roosting bats can be counted, a visual estimate may be recorded in the comments. This is most useful for surveying multiple bat boxes where a light can be shined up in the bat box and roosting bats counted. **Record visual estimate and counting method in comments.**

RETURN COMPLETED DATA SHEET AND MAP BY SEPTEMBER 5th TO:

CWF Summer Bat Count
PO Box 400, Trenton, NJ 08625-0400

HABITAT CODES AND DESCRIPTIONS

CODE	HABITAT
00	NO DIFFERENT HABITAT WITHIN 100 METERS
10	URBAN/SUBURBAN - primarily residential
11	URBAN/SUBURBAN - not residential/commerical
12	RURAL - residential including out-buildings
13	RURAL - other buildings, eg. commercial properties
14	HARDTOP ROADS, RIGHT-OF-WAYS (paved or unpaved)
15	UTILITY RIGHT-OF-WAYS
16	AGRICULTURE - cropland or pasture
17	AGRICULTURE - orchard/nursery/tree farm
18	AGRICULTURE - other agriculture (<i>note on data sheet</i>)
19	OPENLAND - non-pasture, herbaceous openlands <1/3 shrubs
20	OPENLAND - >1/3 area covered with shrubs and brush
21	FOREST TRANSITIONAL - mainly over 2/3 area in brush, some trees, mostly less than 4" dbh, reverting to field or second growth forest
22	FOREST, 90% DECIDUOUS TREES - trees mainly over 4" dbh
23	FOREST, 90% EVERGREEN TREES - trees mainly over 4" dbh
24	FOREST, MIXED - neither deciduous nor evergreens comprise >90% of stand
25	FOREST OPENINGS - herbaceous clearing, unshaded logging roads or other clearings <100m from forest
26	BARREN - strip mine, gravel pit, quarry
27	BARREN - other barren areas, eg. talus slope, beach (<i>note on data sheet</i>)
28	WETLAND - forested bog, wooded swamp or floodplain, elevated depressional wetlands
29	WETLAND - nonforested marsh or floodplain
30	WATER - stream, canal, or river
31	WATER - pond, lake, or reservoir
32	WATER - other body of water (<i>note on data sheet</i>)