White-nose Syndrome Status Update for ENSAC – 5/20/09

NJ Update-

- WNS has been positively confirmed at 5 hibernacula throughout the state although we suspect it is affecting additional sites. Confirmed sites are those from which we have collected specimens that were sent to the National Wildlife Health Center and testing confirmed the presence of the *Geomyces* sp. The confirmed sites are the Hibernia Mine, both Mt. Hope mines and the Upper and Lower Copper mines.
- Since the mode of transmission is not currently known it was decided early on that we not enter any additional hibernacula in an effort to document the occurrence of WNS. Current knowledge suggests that the WNS fungus may be transmitted from bat to bat and from humans to hibernacula. Therefore, all future efforts to document WNS-affected sites will be done externally by observing other "symptoms" of affected sites.
- The Hibernia Mine bat population has suffered very high mortality in the first year of WNS. Typically, during our full biennial surveys, we count between 26 and 29 thousand bats using the human accessible portion of Hibernia Mine. This is considered a conservative estimate of the population, as we know bats are able to access portions of the mine that we cannot. On April 18, 2009 we went into Hibernia to get a sense of the mortality that occurred this year. Only 750 bats were counted and at least 75% had visible fungus on their bodies (muzzle, ears, wing and tail membranes). In a typical year, bats would not be expected to have emerged by this early date. If this is the case this year, then the population suffered greater than 95% mortality. However, it should be noted that biologists in other states (specifically PA) have noted that bats were returning to their summer roosts about 2-3 weeks earlier than in past years. Therefore, we won't have an accurate assessment of the mortality at Hibernia Mine until bats return for the winter. At that time we'll know how many survived the '08-'09 winter and '09 summer. (See attached photo of bat mortality in Hibernia Mine)
- To date, we have checked one large summer roost site located only a couple of miles from the Mt. Hope and Hibernia mines. In the past more than 800 bats have been counted from this summer roost. As of the first week of May, not a single bat was seen at the roost.
- It has recently been reported to our office that bats were observed flying during the winter months in some municipalities that are a considerable distance from any WNS-confirmed hibernacula. Therefore, we suspect that these bats originated from hibernacula and that these sites may also be affected. We will continue to conduct external monitoring of known hibernacula during the '09-'10 winter season for aberrant behavior.
- We recently began a study to evaluate an experimental treatment that a NJ bat rehabilitator claims to have had success with. She received a number of bats during the winter months from municipalities around Hibernia and Mt. Hope mines. The bats were given supportive care and stabilized prior to receiving the experimental treatment that involved washing the affected areas with a dilute apple cider vinegar solution. Approximately 7-10 days after receiving the bats they began to develop

holes in their wing membranes. At that time, the wash was applied to the affected areas and the tissue began to heal. This project is designed to evaluate whether the wash kills the fungus on the affected bats. We wrote the project proposal and it was peer reviewed by Anne Ballmann (wildlife pathologist with NWHC), Allison Robbins (DVM at Tufts Univ.), Susi vonOettingen and Annette Scherer (USFWS) and Christina Kocer (biologist with CT Div. of Wildlife). I have attached a copy of the proposal for your review.

- We are currently gearing up to conduct a monitoring project at summer roost sites. One of the primary focuses will be to determine if WNS affected bats (females) are able to bear and raise young. We plan to monitor known roost sites this season to see if bats are successfully producing and raising young. Adult bats will be trapped to evaluate their wing and tail membranes and determine whether the bats were affected by WNS this past season.

Regional Update

- A group consisting of 11 states, Cornell University, Bat Conservation International, Metro Parks Ohio, Western PA Conservancy and Quebec Ministry of Natural Resources and Wildlife applied for and received a competitive State Wildlife Grant to support a region-wide coordinated response to WNS. The funding will be used to 1) investigate the causative agent(s), transmission, and control; 2) detect new occurrences; 3) detect and manage the threat to adjoining regions, and; 4) implement response and control strategies. The total grant amount is $1,372,809, including the 25% match required by the grant partners. New Jersey will receive $43,714 and will provide a match in the amount of $18,032. In NJ the funding will provide for 1) surveillance and monitoring; 2) summer concentration surveys; 3) fall swarming surveys; 4) focussed research on causation and transmission; and, 5) pilot studies to provide information on WNS control. Work may be adjusted to reflect new priorities and new information.
- The number of sites reported to be affected by WNS expanded significantly during the ‘08-’09 season
  For an update on ongoing research see the PowerPoint presentation (pdf, 410kb).