CAFMS Newsletter

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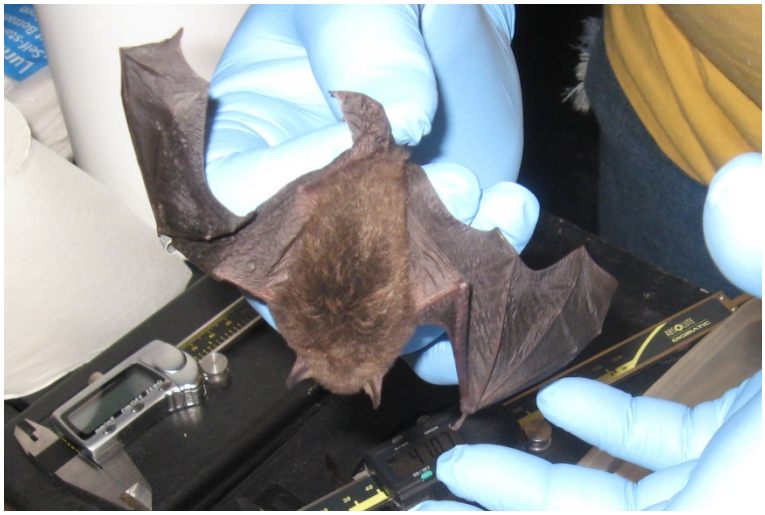
Discussing the relationships between fire management and the quality of foraging habitat for bats: A workshop for scientists and land managers

Mark your calendars for this event on April 30th and May 1st, 2014, at Mammoth Cave National Park, Kentucky. The primary focus of this workshop will be a synthesis of research funded through the Joint Fire Science Program (JFSP #10-1-06-1). Results will be presented in a multi-trophic context that that will be relevant for stewards and scientists alike across the Appalachians and Oak Woodlands Consortia.

Prescribed fires in mixed-oak forests are hypothesized to have positive effects on foraging and roosting habitat that may outweigh the risks to forest bats from smoke and heat exposures during fires. Published data on fire and bat foraging habitat are few for this ecosystem, however, particularly for the critical periods before and after hibernation. This project has focused on testing hypotheses about the relationships between fire's effects on insect prey availability and canopy structure and their relationship to bats' selection of foraging areas during the pre- and post-hibernation periods at Mammoth Cave National Park (MCNP) in Kentucky. Habitat quality pre- and post-hibernation is critical because bats must go into hibernation with sufficient fat reserves and they often leave hibernation in poor condition. Bat condition may become even more important with the arrival of the White-nose Syndrome (WNS), which was detected at MCNP during the winter of 2012-2013.



Studies have been ongoing at MCNP since fall of 2010, resulting in a data set that is comprehensive in its coverage of forest vegetation, insect herbivores, and bats prior to and concurrent with the arrival of WNS a this burned landscape. This study has elucidated relationships between bats and forest vegetation, with data suggesting that varied bat species (including the Indiana bat and other *Myotis* species) are responsive to forest canopy conditions in ways that are directly relatable to fire management prescriptions. These models of activity patterns across a burned landscape will be discussed in relation to prey consumption patterns and measurements of insect abundance and diversity. Discussion will also encompass the applications of LiDAR-mapping efforts for other management applications, as well as describe multi-year effects of prescribed fire and herbivory on oak seedlings. Registration will begin in February of 2014 on www.cafms.org.

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Join CAFMS:

The consortium is for all land managers and researchers in the region who deal with any aspect of fire. To join, simply provide us with some contact information at the web site listed below.

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