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## **Bat Activity in Woodland Vernal Pools**

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## Abstract

A major interest in bat conservation is identifying, understanding, and protecting key resources and habitats. This project sought to understand the dependence of bats on 17 woodland vernal pools and 2 outgroups in northern Wisconsin and the Michigan Upper Peninsula. Bat species use was documented with mist nets and the Anabat II detection system. Bat relative activity was compared to the available invertebrate prey base, as measured by UV light traps. Of the 55 bats captured in 5 rounds of mist-netting (190 mist-net-nights), little brown bats (*Myotis lucifugus*) dominated the captures (41 individuals) and Anabat calls (7814). Northern myotis (*M. septentrionalis*, 13 individuals captured, 753 calls) and big brown bats (*Eptesicus fuscus*, 1 individual captured, 94 calls) also were documented at multiple sites. Bat activity was at a maximum ca. 30-60 minutes after sunset. Weak yet significant relationships revealed that big brown and little brown bat use of woodland vernal pools decreased as the pools dried up. Although the total number of invertebrates captured across rounds and sites were closely tied to temperature, no clear relationships were discovered between bat activity and invertebrate abundance (in sum or across orders). This work shows the importance of woodland vernal pools to several bat species throughout the summer months, which spend a considerable amount of time foraging at these sites. Continued Anabat and mist-netting surveys in summer 2005 will help elucidate trends in bat activity, and further refine call identification in these oftentimes structurally cluttered habitats.