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Bridges as roosting habitat for bats in southeastern Missouri

Studies have correlated bridge characteristics with use as day roosts by several species of bats in North America. Structural type and composition, size, thermal variability, availability of water and surrounding land use patterns have been found to influence utilization of a particular bridge. The objective of this study was to determine the importance of bridges as roosting habitat in southeastern Missouri and the characteristics related to use. Bridges may provide roosting habitat previously unrecognized by land managers, and thus may influence future management decisions. A list of bridges and their location was obtained from the Missouri Department of Transportation bridge maintenance database. Bridges in the St. Francis and Black River watersheds were sampled for presence of bats or evidence of past use. The latter was determined by occurrence of guano. Structural type and composition, dimensions, and orientation were measured to describe the physical characteristics of bridges that might influence bat use. Surrounding land use, level of traffic use, habitat beneath bridge, and temperature across length of bridge were measured to describe the habitat characteristics. A total of 78 bridges were inspected. Bats were found roosting beneath 4 bridges and guano has been found at 30 bridges. Guano amounts, classified as low, medium or high, were used to indicate possible levels of use. Data presented are the preliminary findings. Continued surveys in spring and summer of 2004 will further elucidate patterns in bridge use by bats.