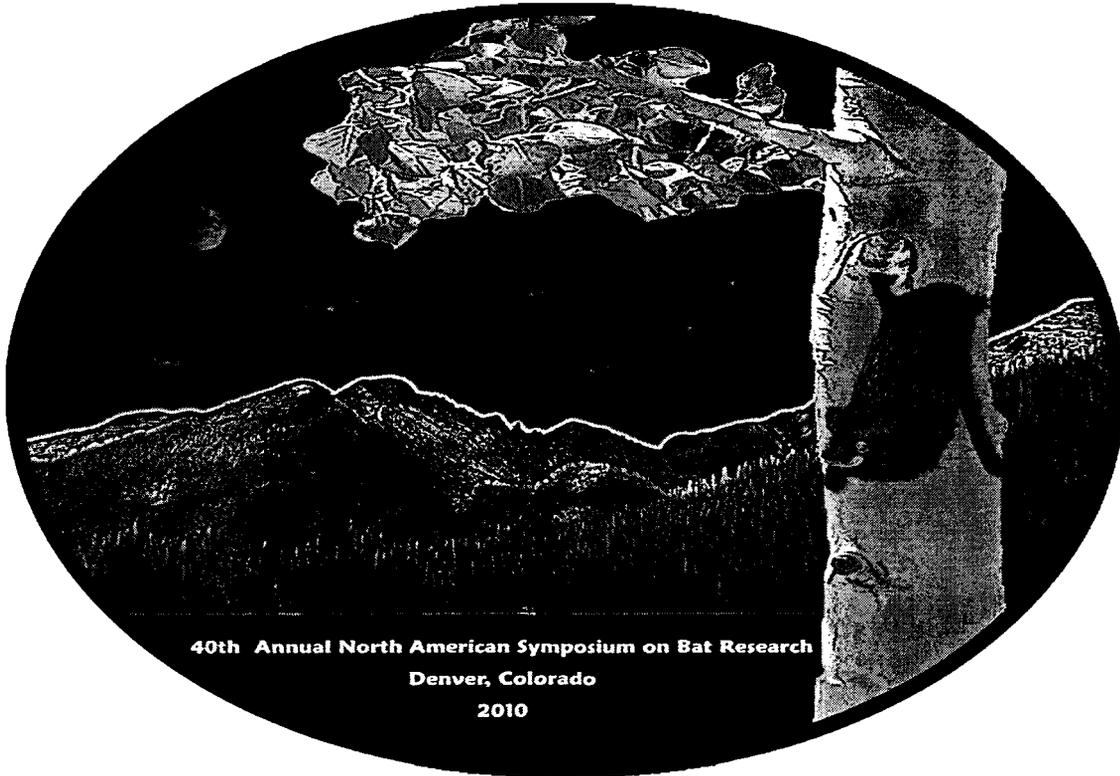


# ABSTRACTS

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**Evidence of Mating Readiness in Certain Bats Killed by Wind Turbines**

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Bats consistently die at wind turbines during late-summer and autumn. Migratory, tree-roosting species show increased susceptibility compared to other bats, yet the exact causes remain unknown. A hypothesized cause with strong conservation implications is that migratory tree bats die at turbines while seeking mates around tall tree-like structures. In this pilot study we histologically examined reproductive tracts of hoary bats (*Lasiurus cinereus*) and silver-haired bats (*Lasionycteris noctivagans*), found dead beneath wind turbines, for evidence of mating or mating readiness. We sampled 61 *L. cinereus* and 31 *L. noctivagans* killed by turbines in New York, USA, and Alberta and Manitoba, Canada between early July and late September. By August most adult male *L. cinereus* had

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sperm in the caudae epididymides (CE), indicating readiness to mate. About half of juvenile male hoary bats had sperm in their CE by August, revealing reproductive activity just months after birth. Sperm were seen in the uterus of the only adult female hoary bat collected in September, but we found no sperm in the other 17 females sampled in previous months. Ovaries of most adult and juvenile female *L. cinereus* had growing follicles, but they did not appear to be in estrus. Evidence of sperm in *L. noctivagans* was more limited, yet sperm were found in the CE of some adult and juvenile males. No female *L. noctivagans* contained sperm, but most adults and juveniles had growing follicles. These results indicate that adult and juvenile males of each species were ready to mate when they were killed by wind turbines, although evidence of copulation with females was limited. Results were insufficient to disprove the mating hypothesis – more thorough analysis of bats killed by turbines from late August through October and from a broader geographic area will be the next important step in assessing its merit.