

### 33. HOO'S OUT THERE? SURVEYING FOR NOCTURNAL OWLS IN SOUTHEAST ALASKA

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Little is known about the distribution and abundance of nocturnal owls continent-wide, and most owls are not adequately monitored by existing multi-species, broad-scale surveys (e.g., Breeding Bird Survey). We conducted repeated surveys to develop a standardized survey technique for nocturnal owls in southeast Alaska and to determine the

influence of temporal, weather, and lunar factors on vocalizations of forest owls. We surveyed owls at count stations in the Petersburg ( $n=60$ ) and Juneau ( $n=37$ ) areas using silent and broadcast methods over 10 10-day intervals extending from 28 February to 7 June 2005. We detected five species of owls totaling 192 detections during the entire survey period. Our detection rate was approximately 21%. Northern saw-whet ( $n=87$ ) was the most common species detected, followed by barred ( $n=51$ ) and western screech-owl ( $n=39$ ), respectively. Combining all species, the peak period of detection was between 9 April and 8 May when 50% of all owls were recorded. The majority (75%) of detections recorded during silent surveys occurred during the first two minutes of the survey. However, broadcast surveys were more effective, particularly for western screech-owl with 10 times the number of individual owls detected using the broadcast method. We also conducted a pilot radio-telemetry study to prepare for field efforts planned for 2006 breeding season. We captured, radio-tagged, and tracked two western screech-owls and two northern saw-whet owls during 2005. In 2006, we will capture and attach radio transmitters to 10 pairs of western screech-owls to estimate detection probability and the effective area surveyed. These two components are necessary to estimate abundance and evaluate the conservation status of forest owls in southeast Alaska.

# *11<sup>th</sup> Alaska Bird Conference*

*February 7 - 9, 2006  
Juneau, Alaska*

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