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ASSESSING HABITAT USE BY MIGRATORY BIRDS USING MARINE RADAR

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The importance of non-coastal habitats for migratory passerines is poorly understood. Counts of birds on the ground are frequently used to measure habitat use by migrating birds but this is time-consuming. The objective of this study was to develop a method to assess the use of habitat by migratory passerines during stopover. I used marine radar to sample the airspace above a site in the Gaspereau Valley with a variety of different underlying habitats. From data collected between September and November 2011 I extracted data from four nights with intense migration. From each night I then further extracted 20 minute time periods corresponding to times when passerines were likely arriving and departing: immediately before and after sunrise, immediately before and after sunset, and 80 minutes after sunrise. 20 minutes post civil dawn and 20 minutes post civil twilight had the most intense activity and parameter estimates of fitted models show that houses and hedgerows were associated with the highest bird densities. I then selected the lowest altitude targets from multiple detections of individuals and showed that the relationship between these targets and habitat varied depending on the time period. Using radar for assessing habitat use by migratory passerines shows promise for land managers to remotely assess site importance.



Dominique Comeau graduated from Citadel High School in Halifax, Nova Scotia in 2009 and is currently completing her honours degree in biology. She has spent countless hours volunteering at the Wolfville Animal Hospital as well as participating in S.M.I.L.E. (Sensory motor instructional leadership experience) at Acadia. She currently works part-time for the Avon Animal Hospital, caring for many animals and helping with a variety of procedures. Dominique and her horse, Thomas, hope to move to PEI next September so that she may attend the Atlantic Veterinary College and pursue a career in veterinary medicine.

