



# The Land Between

Cottage Country's Conservation Organization

[www.thelandbetween.ca](http://www.thelandbetween.ca)

WRITTEN BY ANDREW COUTURIER, BIRD STUDIES  
CANADA, 2008



# AVIAN DIVERSITY

## BREEDING BIRD ABUNDANCE AND DISTRIBUTION IN THE LAND BETWEEN



PHOTO: RON REID

# Characterizing Avian Diversity

Column By: Andrew Couturier, PhD, GIS Analyst, Bird Studies Canada

Maps: Bird Studies Canada

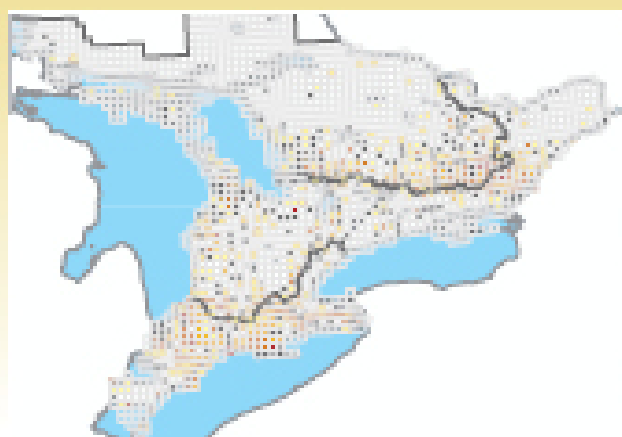
Which bird species are strongly associated with The Land Between, both in terms of range overlap and abundance? Within the study area, where specifically do they occur? What do patterns of bird species richness tell us about conservation threats and opportunities? More broadly, does the distribution of birds across southern Ontario provide clues as to the true boundary of The Land Between?

Andrew Couturier from Bird Studies Canada is investigating these questions using new and exciting results from the Ontario Breeding Bird Atlas. The Atlas, conducted from 2001-2005, benefited from the heroic efforts of several thousand volunteer "citizen scientists" who logged an incredible 152,000 hours while surveying the province's breeding birds. The project gathered data on both the distribution and abundance of birds across the province in an impressive database that will reap conservation benefits for years to come.

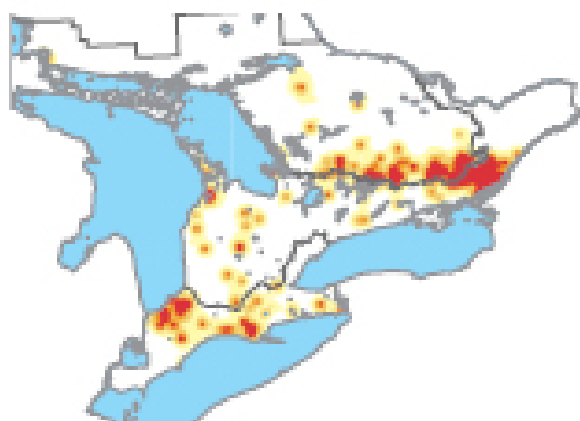
Results from the Atlas are mixed. Some species groups, such as forest birds, are generally thought to be improving relative to the first atlas project that was conducted in the early 1980s. Other groups are not faring well at all. Of particular note are marked declines for grassland birds and aerial insectivores. Declines in grassland birds can, among other factors, be traced to agricultural intensification and trade-offs with other habitat types, i.e., as old fields once present during the first atlas project 20 years ago regenerate into forest habitat, less open country habitat is now available. Declines in aerial insectivores, however, are more difficult to unravel, as they do not appear to be habitat-related, but rather are thought to reflect broader environmental factors.

The Land Between, because of its unique topography, mix of southern and northern habitats, micro-climatic conditions, and other factors, is home to an impressive diversity of birds. Preliminary results show that a number of species are strongly associated with the study area (see sample maps). The project will quantify the degree to which bird species are associated with The Land Between so that planners and decision makers will recognize the contribution of the area to the province's avian diversity. At a finer scale, examining patterns of abundance and richness within the study area will help to direct conservation efforts and promote appropriate stewardship activities.

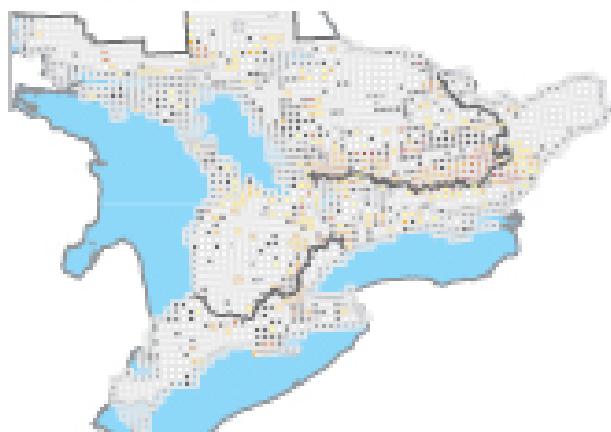
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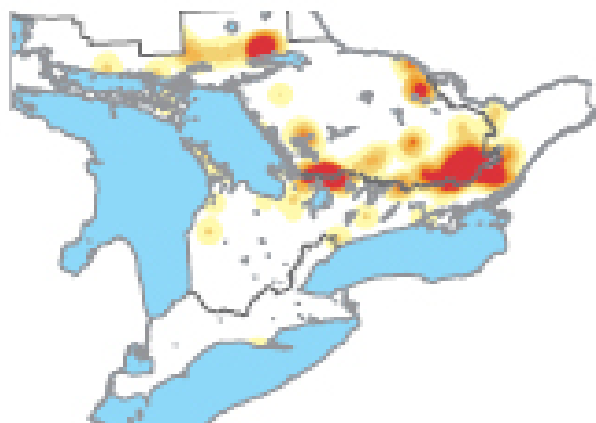
Breeding Evidence-Yellow-throated Vireo



Relative Abundance-Yellow-throated Vireo



Breeding Evidence-Golden-winged Warbler



Relative Abundance-Golden-winged Warbler

# Avian Diversity Cont'd

Of additional interest are birds whose ranges largely terminate within The Land Between (see sample maps). There is a large number of species that are abundant in southern Ontario, but which rapidly decrease in number at the edge of the Canadian Shield. The same is true of northern species whose southern ranges terminate in The Land Between. Quantifying the nature of this transition area will help us understand the true location of The Land Between.

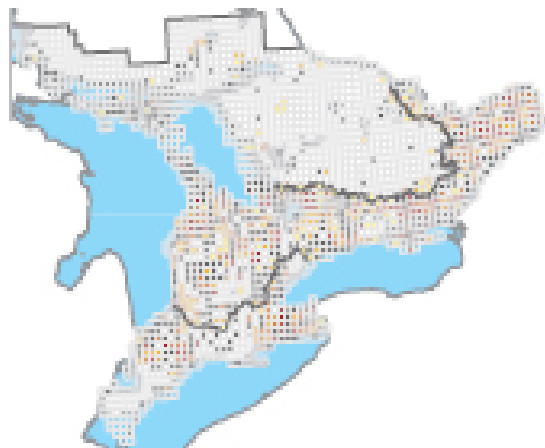
Research results from this project are expected to be released in 2008. For more information contact Andrew Couturier ([acouturier@bsc-soc.org](mailto:acouturier@bsc-soc.org)) or Leora Berman ([lberman@thelandbetween.ca](mailto:lberman@thelandbetween.ca)).

Maps reproduced with permission from: Cadman, M.D., D.A. Sutherland, G.G. Beck, D. Lepage, and A.R. Couturier (eds.). 2007. *Atlas of the Breeding Birds of Ontario, 2001-2005*. Bird Studies Canada, Environment Canada, Ontario Field Ornithologists, Ontario Ministry of Natural Resources, and Ontario Nature, Toronto.

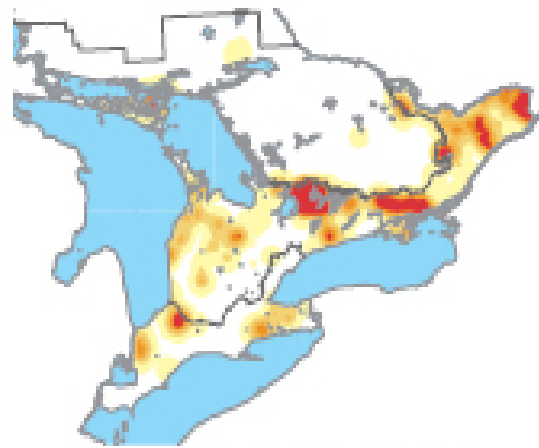
The Breeding Evidence legend applies to all species

### Breeding Evidence

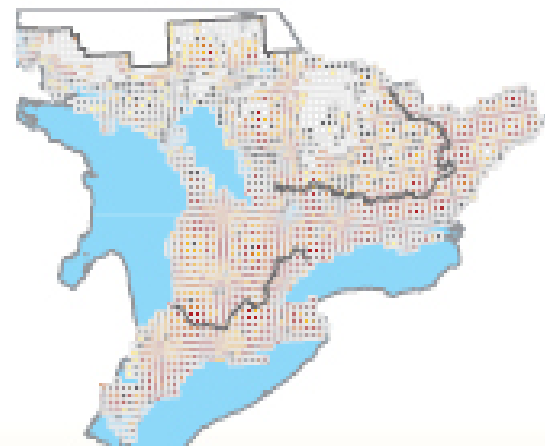
- Possible
- Probable
- Confirmed
- Square with adequate coverage
- Found in second atlas but not in first
- Found in first atlas but not in second



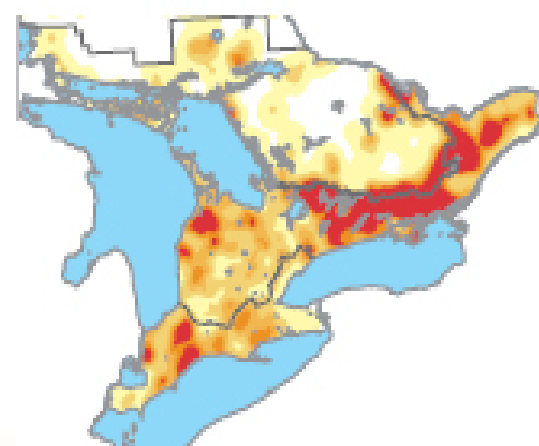
Breeding Evidence-Upland Sandpiper



Relative Abundance-Upland Sandpiper



Breeding Evidence-Brown Thrasher



Relative Abundance-Brown Thrasher

**Yellow-throated Vireo**  
Relative Abundance  
Birds per 25 Point Counts

- 0.00
- 0.01 - 0.14
- 0.15 - 0.26
- 0.26 - 0.37
- 0.38 - 0.48
- 0.49 - 4.62

**Upland Sandpiper**  
Relative Abundance  
Birds per 25 Point Counts

- 0.00
- 0.01 - 0.32
- 0.33 - 0.62
- 0.63 - 0.82
- 0.83 - 1.21
- 1.24 - 7.76

**Brown Thrasher**  
Relative Abundance  
Birds per 25 Point Counts

- 0.00
- 0.01 - 0.41
- 0.44 - 0.85
- 0.86 - 1.27
- 1.28 - 1.70
- 1.71 - 7.44

**Golden-winged Warbler**  
Relative Abundance  
Birds per 25 Point Counts

- 0.00
- 0.01 - 0.13
- 0.14 - 0.24
- 0.25 - 0.35
- 0.36 - 0.46
- 0.46 - 1.62

**Eastern Meadowlark**  
Relative Abundance  
Birds per 25 Point Counts

- 0.00
- 0.01 - 1.69
- 1.70 - 2.47
- 2.48 - 5.37
- 5.38 - 7.39
- 7.40 - 17.64