



American Robin

Turdus migratorius

The American Robin is a familiar songbird commonly found in all natural regions throughout Alberta during the breeding season.

Conservation Status: AEP - Secure

Taxon data collected: 1997 - 2019

Data Summary: Full

Introduction

Over its decade-plus of operations, the ABMI has generated a comprehensive dataset on Alberta's species, their habitats, and the extent and type of human footprint across the province. With this information, the ABMI has developed analyses to predict species' relative abundances and examine species' responses to vegetation and soil types, as well as human footprint in Alberta. These methods have been applied to hundreds of species; this profile provides summary results for one.

There are three main results sections in this species profile. The first section summarizes what vegetation, soil, and human footprint types the species uses in Alberta. Next, the data are used to identify which land use activities have the biggest impact (positive or negative) on the species' relative abundance. Finally, a series of relative abundance maps illustrate the species' predicted distribution under current and reference conditions, and where it's expected to have increased or decreased as a result of human-caused changes to its habitat.

The target audiences for species profiles are resource managers in Alberta. Summary data can be used to support land-use planning and mitigate the risks of development on a species of interest. While developed to support resource management, these species profiles are also of wider interest to anyone wanting information on species that live in Alberta, what habitats they are found in, and how our land use affects their populations.

Please note that the results are predictions based on the best available data at the current time. All results must be considered with caution; interpretation caveats are presented with each result. As with any statistical model, our confidence in the modelled outputs will increase as we gather more data and refine our models; to that end we update the summary results annually based on new data. As an internal check, for species with additional information in the literature, we examine whether our models produce ecologically meaningful results. For data-poor species, our predictions are the first contribution towards developing an understanding of the species' ecology.

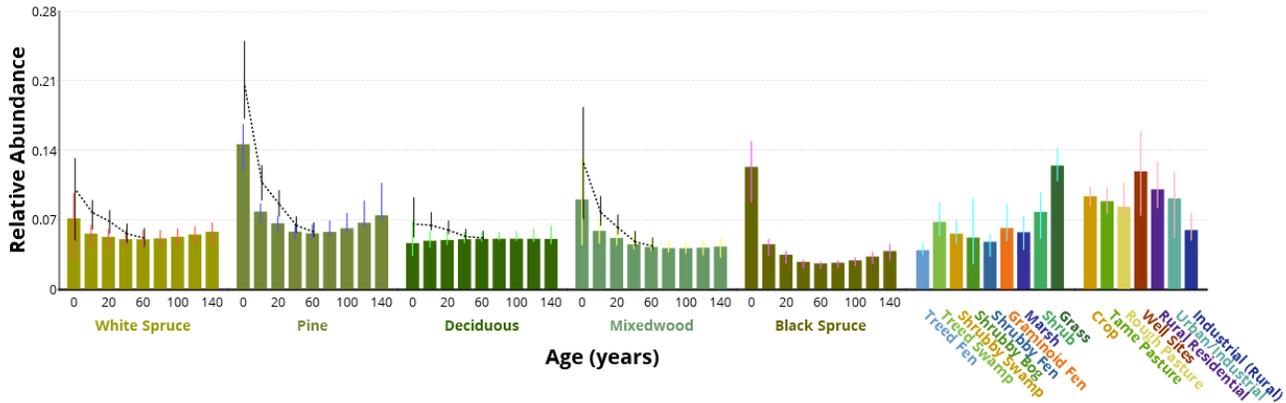
Please refer to the [ABMI Species Website Manual](#) for a complete description of methods and limitations associated with the analyses included in this species profile.

Habitat & Human Footprint Associations

The American Robin is a very adaptable bird that can be found in a range of habitats from natural settings such as forests and riparian areas to anthropogenic settings like urban areas, agricultural areas, and campgrounds. They generally prefer edge habitats that can be naturally or anthropogenically created.



Species-habitat Associations in the Forested Region



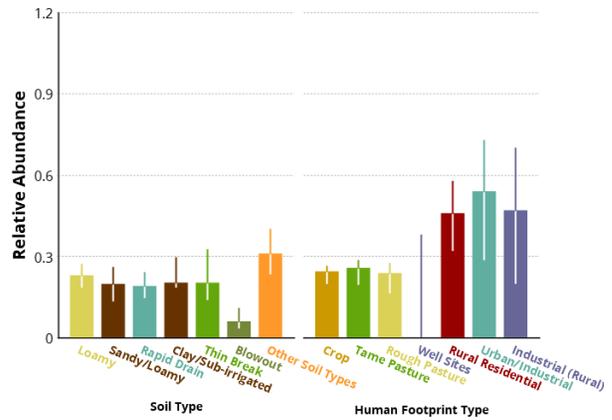
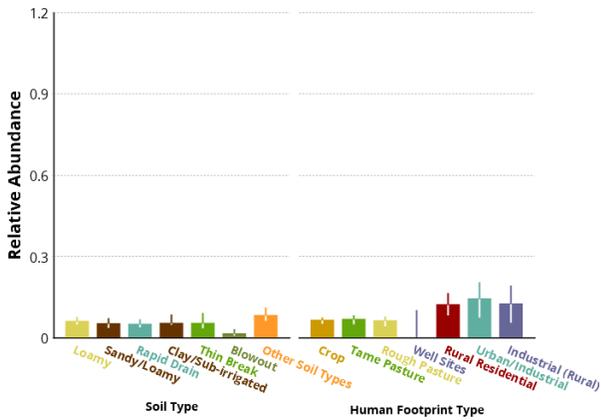
Forested Region - Species Habitat Association Graph: Predicted species relative abundance (bars) as a function of vegetation and human footprint type in the forested region. Dots are added to forest types where harvesting occurs and show the predicted species abundance in harvested stands of various ages. Vertical lines represent 90% confidence intervals.

- American Robin commonly occur across all forest, vegetation and footprint types in the forested region.
- American Robin predicted relative abundance is higher in young harvested stands compared to naturally disturbed stands of similar age and type in the forested region.



Species-habitat Associations in the Prairie Region

Non-Treed Sites in the Prairie Region Treed Sites in the Prairie Region

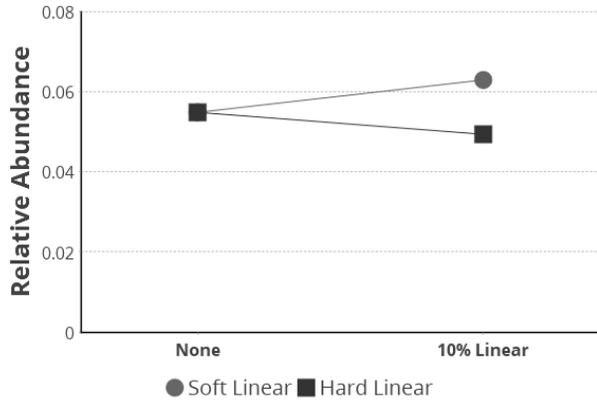


Prairie Region - Species Habitat Association Graph: Predicted species relative abundance (bars) in each soil type and human footprint type in the prairie region. Vertical lines indicate 90% confidence intervals. The presence/absence of trees greatly affects the presence and abundance of many species; therefore, separate figures are presented for treed and non-treed sites in the prairie region.

- American Robin relative abundance is higher at treed sites compared to non-treed sites in the prairie region.
- While occurring at sites in all soil types and human footprint types, American Robin relative abundance is highest in urban/industry human footprint in the prairie region.

Relationship to Linear Footprint

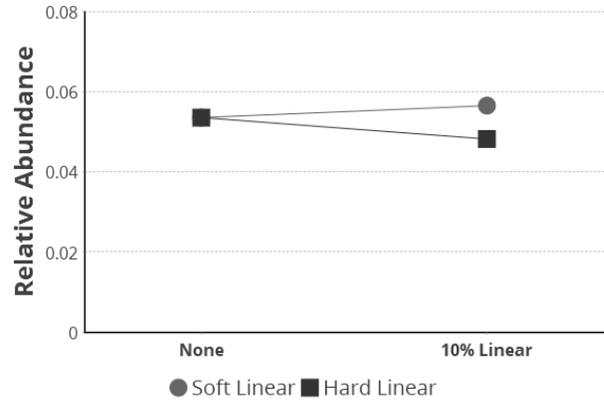
Relationship to Linear Footprint in the Forest Region



Linear Footprint Graph: Species relative abundance predicted for habitat with no human footprint compared to habitat in which 10% of the area is converted to either soft or hard linear footprint.

- American Robin predicted relative abundance has a positive relationship with hard linear footprint and no relationship with soft linear footprint in the forested region.

Relationship to Linear Footprint in the Prairie Region



Linear Footprint Graph: Species relative abundance predicted for habitat with no human footprint compared to habitat in which 10% of the area is converted to either soft or hard linear footprint.

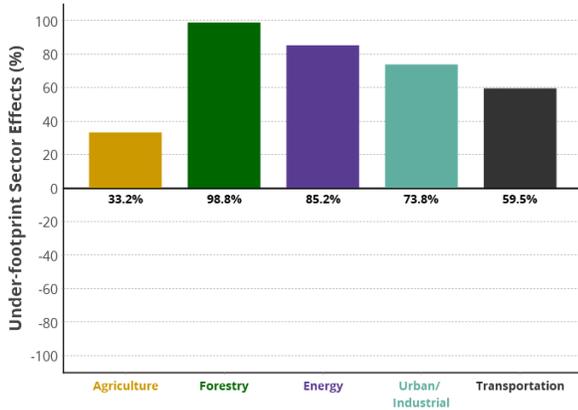
- American Robin predicted relative abundance has a positive relationship with hard and soft linear footprint in the prairie region.

Impacts of Human Footprint

The American Robin is adapted to many anthropogenic habitats including urban areas, agricultural areas, and young harvested forested stands. In northern Alberta, the distribution of the American Robin was found to be associated with both higher levels of human development (e.g. campgrounds, well pads, and roads) as well as the availability of non-native earthworms (Cameron and Bayne 2012).

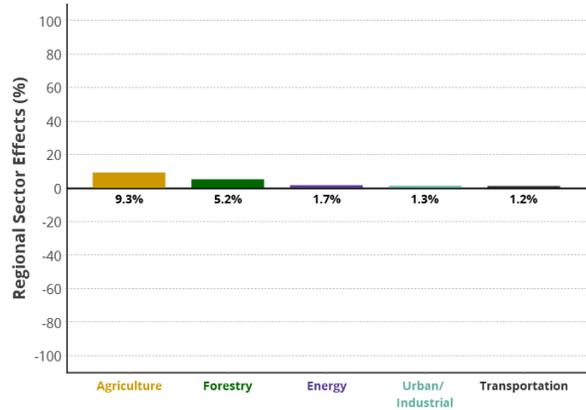
Human Footprint Effects in the Forested Region

Under-footprint Sector Effect



- All types of human disturbance greatly increase habitat suitability for American Robin in the forested region; therefore relative abundance of this species is predicted to be more abundant than expected in all human footprint categories compared to the habitat each footprint replaces.

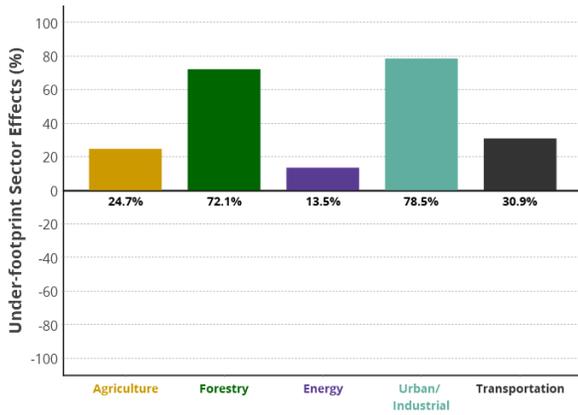
Regional Sector Effect



- At the regional scale, total population effects on American Robins for all industrial sectors are small in the forested region.
- Forestry has the largest population effect on American Robins because the forestry footprint covers the largest area in the forested region.

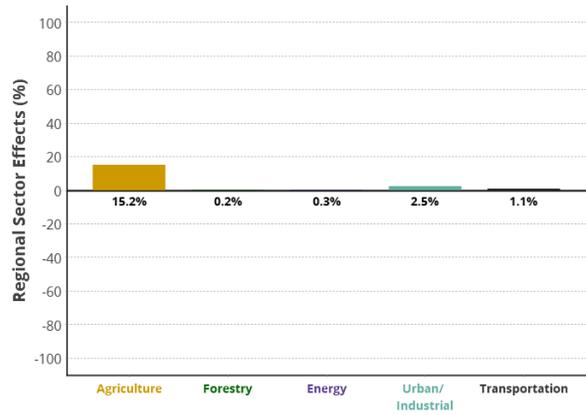
Human Footprint Effects in the Prairie Region

Under-footprint Sector Effect



- All types of human disturbance greatly increase habitat suitability for American Robin in the prairie region; therefore relative abundance of this species is predicted to be more abundant than expected in all human footprint types compared to the habitat each footprint replaces.

Regional Sector Effect



- At the regional scale, total population effects on the American Robin were small for all industrial sectors, except agriculture, in the prairie region.
- Agriculture has the largest population effect on American Robins because the agriculture footprint covers the largest area in the prairie region.

Predicted Relative Abundance

The American Robin is found throughout the province of Alberta.

Reference Conditions

- The reference condition shows the predicted relative abundance of the American Robin after all human footprint had been backfilled based on native vegetation in the surrounding area.

Current Conditions

- The current condition is the predicted relative abundance of the American Robin taking current human footprint (circa 2012) into account.

Difference Conditions

- American Robin relative abundance is predicted to be higher under current conditions compared to reference conditions across most of its Alberta range.

Other Issues

The North American American Robin population is generally considered to be stable to increasing, but it is vulnerable to pesticides and chemical pollution.

References & Credits

References

- Cameron, E.K. and E.M. Bayne. 2012. Invasion by a non-native ecosystem engineer alters distribution of a native predator. *Diversity and Distributions* 18:1190-1198.
- Cornell Lab of Ornithology. 2016. All About Birds: American Robin. https://www.allaboutbirds.org/guide/American_Robin . Accessed May 10, 2016.
- Sallabanks, R., F.C. James, N. Vanderhoff, P. Pyle and M.A. Patten. 2016. American Robin (*Turdus migratorius*) In: *The Birds of North America*, ed. P.G. Rodewald. Cornell Lab of Ornithology, Ithaca, NY. <https://birdsna.org/Species-Account/bna/species/amerob> . Accessed May 10, 2016.

Data Sources

Information from ABMI bird point counts was combined with information from other organizations and individuals:

- Environment Canada (North American Breeding Bird Survey and Joint Oil Sands Monitoring programs)
- Ecological Monitoring Committee for the Lower Athabasca (EMCLA)
- Dr. Erin Bayne (University of Alberta)

Recommended Citation

Alberta Biodiversity Monitoring Institute and Boreal Avian Modelling Project. 2020. American Robin (*Turdus migratorius*). ABMI Website: abmi.ca/home/data-analytics/biobrowser-home/species-profile?tsn=179759.

Additional ABMI Resources

Alberta Biodiversity Monitoring Institute. 2016. ABMI Species Website Manual, Version: 2016-12-02. Alberta Biodiversity Monitoring Institute, Alberta, Canada. Report available at: abmi.ca.

Alberta Biodiversity Monitoring Institute. 2014. Manual for Species Modeling and Intactness, Version 2014-09-25. Alberta Biodiversity Monitoring Institute, Alberta, Canada. Report available at: abmi.ca.

Alberta Biodiversity Monitoring Institute. 2014. Terrestrial field data collection protocols (abridged version) 2016-05-18. Alberta Biodiversity Monitoring Institute, Alberta, Canada. Report available at: abmi.ca.

Download [ABMI Species and Habitat Data](#).

View [ABMI Collaborations](#).