ABMI Species Profile Series

Alaska Birch

Betula neoalaskana/papyrifera

Taxon data collected: 2003 - 2019

Data Summary: Forest

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.

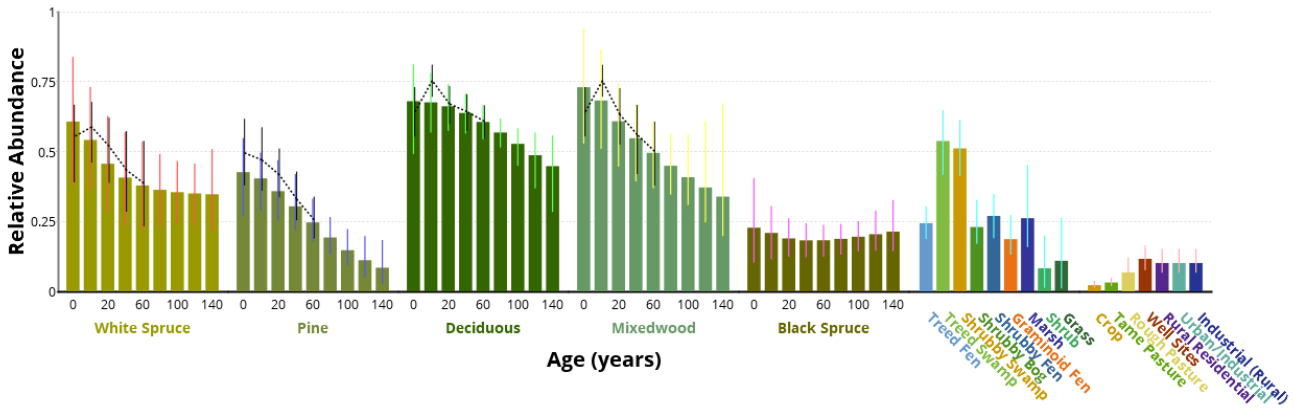
The target audiences for species profiles are resource managers in Alberta. Summary data can be used to support land-use planning and mitigate the risks of development on a species of interest. While developed to support resource management, these species profiles are also of wider interest to anyone 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

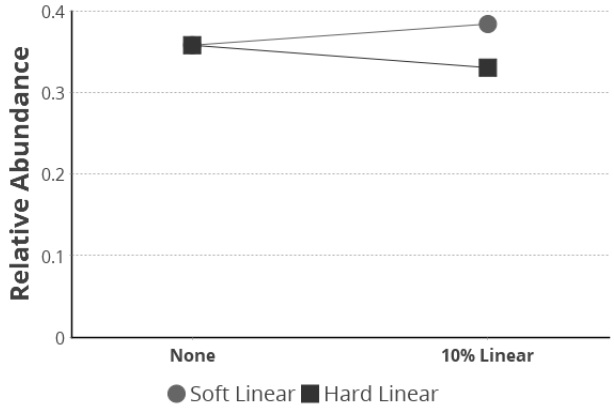
Species-habitat Associations in the Forested Region



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.

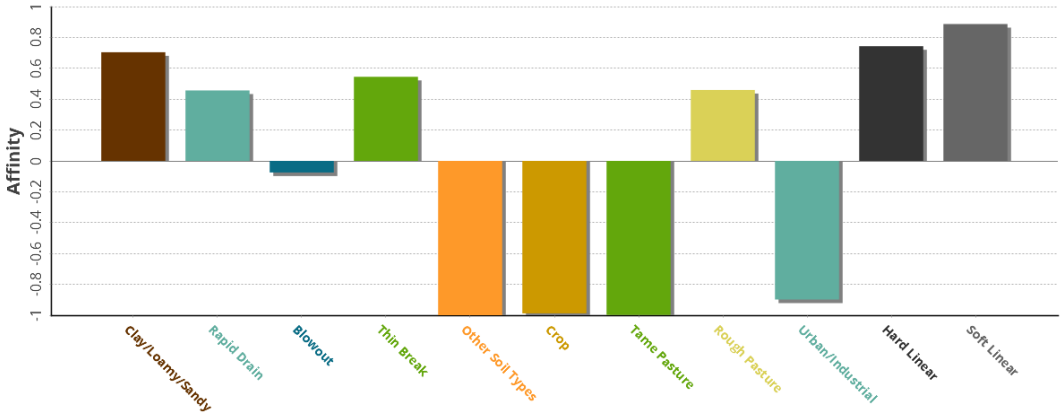
Relationship to Linear Footprint

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.

Habitat Associations for Species with Few Detection in the Prairie Region

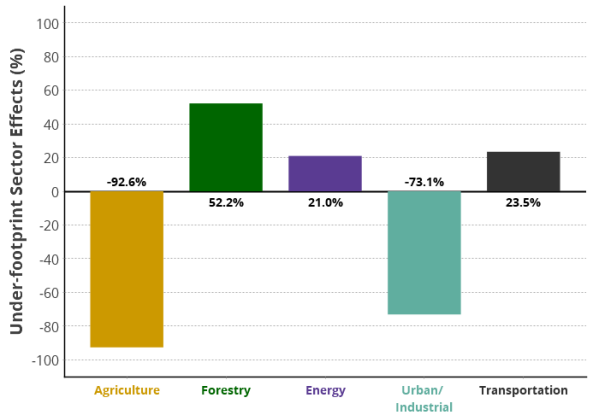


Use-availability index graph: Index of species habitat use based on the proportion of species detections in each native vegetation and human footprint type in comparison to the habitat availability. The index (bars) range from -1 (avoidance) to +1 (preference), given availability of a particular vegetation or human footprint type.

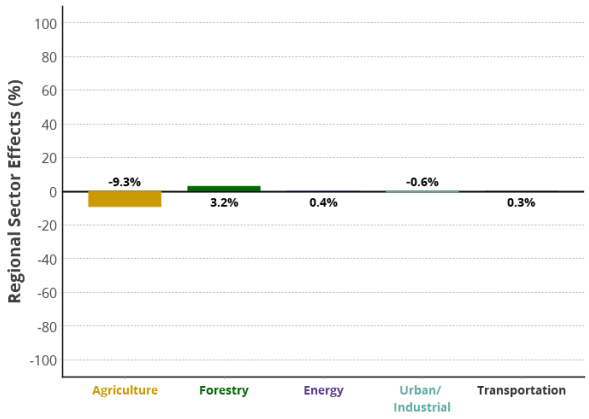
Impacts of Human Footprint

Human Footprint Effects in the Forested Region

Under-footprint Sector Effect



Regional Sector Effect



Predicted Relative Abundance

Reference Conditions

- The reference condition shows the predicted relative abundance of the Alaska Birch 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 Alaska Birch taking current human footprint (circa 2012) into account.

Difference Conditions

References & Credits

Data Sources

Data collected by ABMI.

Recommended Citation

Alberta Biodiversity Monitoring Institute. 2020. Alaska Birch *(Betula neoalaskana/papyrifera).* ABMI Website: abmi.ca/home/data-analytics/biobrowser-home/species-profile?tsn=40.

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.