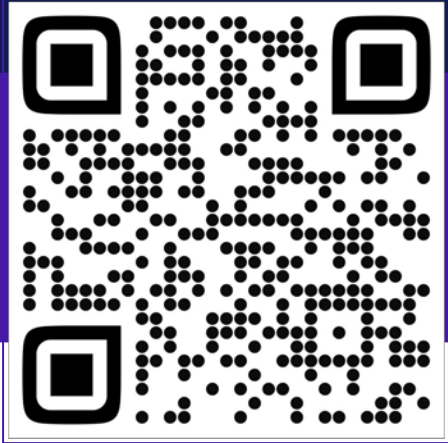


Adapting National Modelling Workflows for Models of Forest Landbird Distribution

Regional Applications in Eastern Canada: Impacts of Insect Outbreaks & Forestry Roads

Angela Moreras¹, Junior Tremblay^{1,2} and Steve Cumming¹

1. Faculté de foresterie de géographie et de géomatique, Université Laval 2. Environment and Climate Change Canada



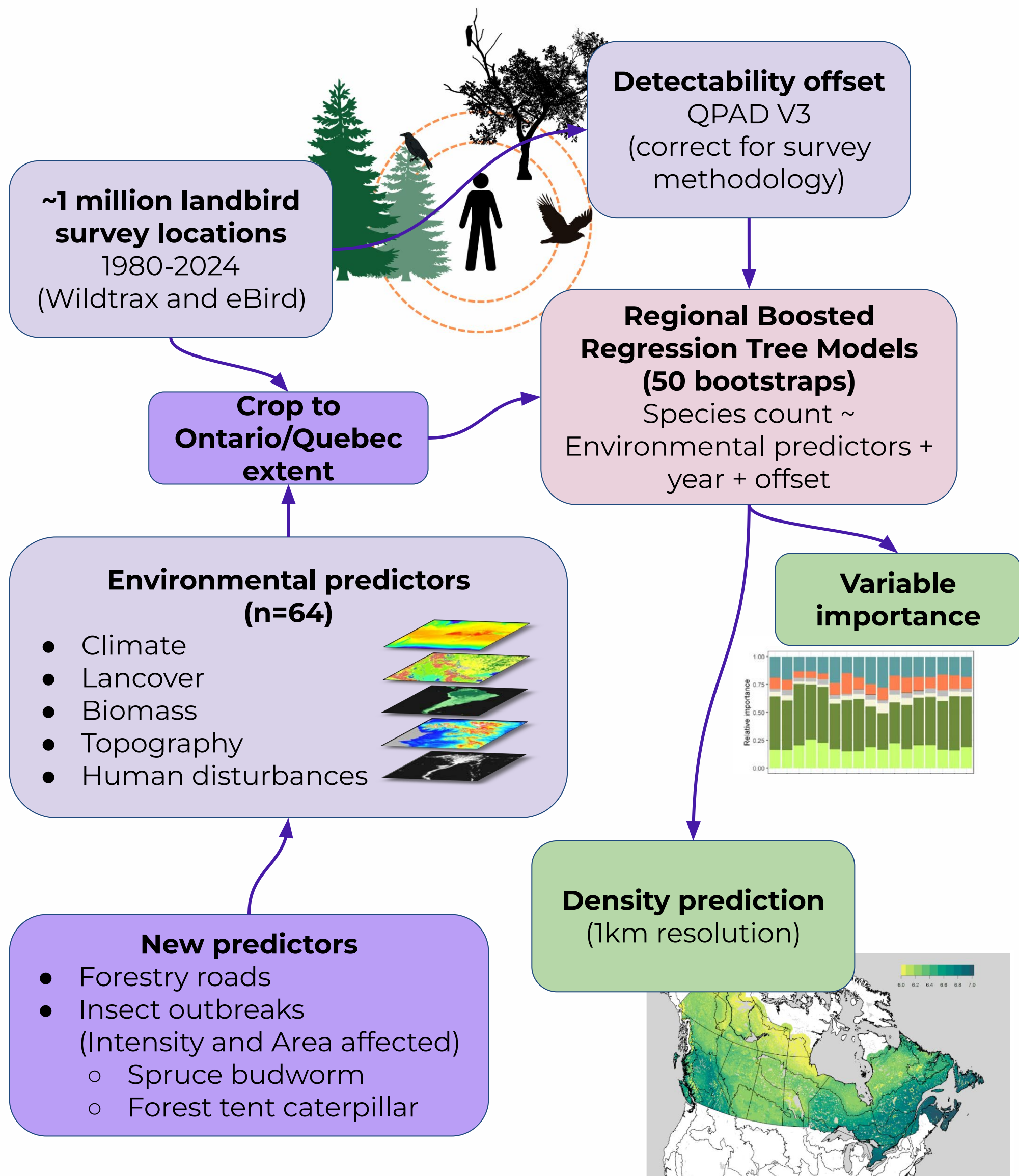
Introduction

With rapid environmental changes, species distribution models (SDMs) have become increasingly crucial for habitat management and conservation planning, as they explain spatial and temporal variations in species distributions and abundances. For over 20 years, our team—the Boreal Avian Modelling Project (BAM)—has developed national-scale SDMs for ~150 landbirds species. Those models incorporate a broad set of biophysical covariates to closely reflect ecological reality. However, this covariate set is not regionally specific, which may limit their applicability at a regional scale.

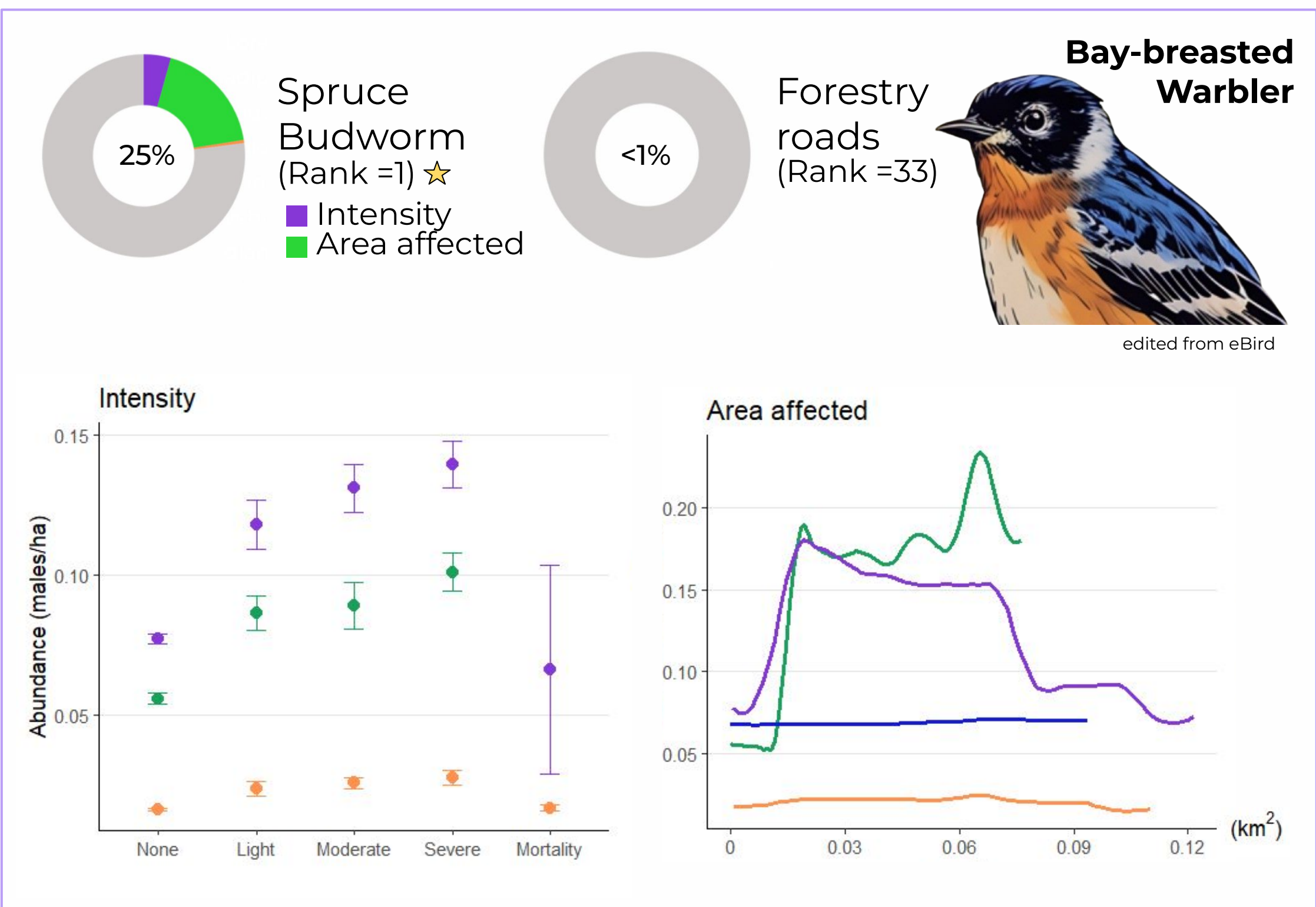
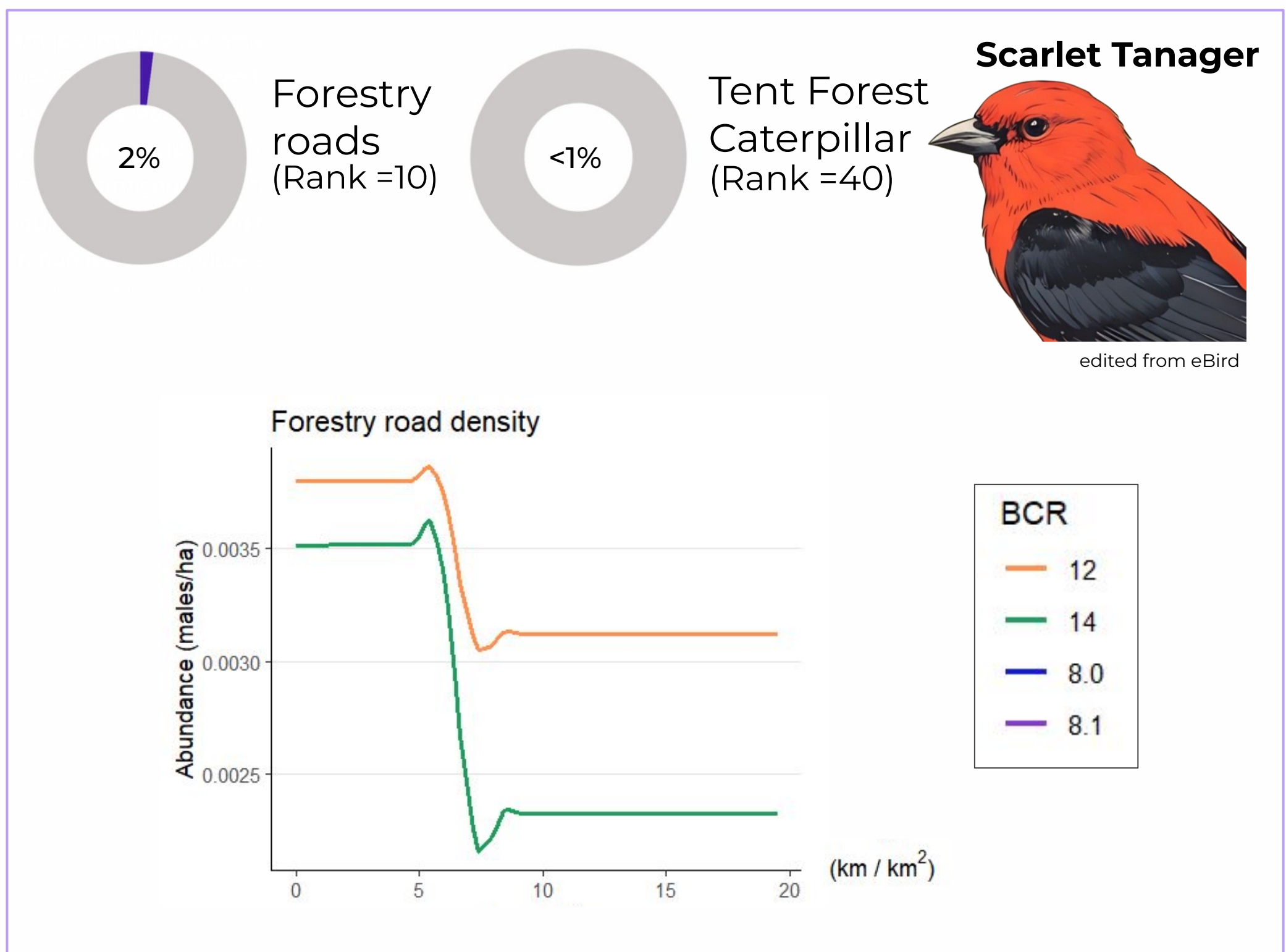
Objectives

1. Adapt BAM workflow to develop models to include:
 - Forestry road and Insect outbreaks
2. Test the influence of regional variables in the models using two model landbird species:
 - Scarlet Tanager (*Piranga olivacea*): Deciduous
 - Bay-breasted Warbler (*Setophaga castanea*): Coniferous

Methods



Results



Take-home message

- Workflow flexibility allows producing models tailored to different objectives.
- Account for local ecological processes can improve the model precision.

