



2021 ANKNEY AWARD RECIPIENT

Michael Johnson, PhD Student

Michael is a PhD student at Colorado State University. He is modeling long-term data sets to further the understanding of environmental and demographic drivers of diving duck species. To address the complexities of this system, he will focus specifically on breeding season data from two species (canvasback and redheads) during two time periods (c. 1983-1990 and c. 2015-2020) from Minnedosa, Manitoba. This project is taking advantage of two long term data sets spread out over time.

The primary objectives of this project will focus on the following:

- 1) Estimated breeding pair densities of canvasback and redheads in SW Manitoba have shifted dramatically since counts first began in the 1950's from 3 canvasbacks for every 1 redhead to a contemporary ratio of 1:2.7. Mike plans to assess how nest parasitism has changed over time and how the population has changed.
- 2) Michael plans on examining changes in the assemblage and size of wetlands, in addition to other characteristics, and how they may impact local long-term reproductive success for certain species.
- 3) By taking a closer look at diving duck demographics, Mike will explore the functional relationship between various demographic parameters and pair surveys as an index of reproductive success.
- 4) Lastly, to ensure that all components of these long-term datasets are archived for future analyses.

