# 2023 ANKNEY AWARD RECIPIENT
## Jeffrey Edwards, MS Student

Jeffrey is an MS student at the University of Missouri and is advised by Dr. Lisa Webb (USGS Missouri Cooperative Fish and Wildlife Research Unit and University of Missouri) and Dr. Drew Fowler (USGS Louisiana Cooperative Fish and Wildlife Research Unit and Louisiana State University). Jeffrey completed his BS at the University of Wisconsin – Stevens Point where he performed undergraduate research in collaboration with the Wisconsin Department of Natural Resources analyzing an existing dataset to investigate nest site selection and nest survival of blue-winged teal in southeast Wisconsin.

For his MS research, Jeffrey is studying environmental factors influencing blue-winged teal movements, habitat selection, and survival during the non-breeding season.

Most blue-winged teal research has been focused on the breeding grounds, leaving substantial informational gaps related to the non-breeding period of the annual cycle including distribution, habitat use, and linking survival to environmental factors and individual decision making. Blue-winged teal populations fluctuate in response to water and habitat conditions on the breeding grounds, but there is limited information on the impact of wetland and water availability, spatially and temporally, during migratory movements and on the successful completion of life history stages. Knowing how this species responds to current environmental conditions and landscapes will provide insight into how they may respond to projected environmental conditions.

Understanding the factors influencing blue-winged teal migration can help managers understand the potential effects of environmental and anthropogenic factors and whether timing of management actions may affect various migration metrics. This information may assist in setting harvest regulations, season dates, and timing of management throughout the Mississippi Flyway in compliance with the Adaptive Harvest Management framework.

Using movement data from approximately 350 blue-winged teal, Jeffrey will link wetland inundation and habitat selection to blue-winged teal survival throughout the non-breeding season using an integrated step selection analysis. He will also examine what factors may be influencing blue-winged teal migration using discrete choice modeling to test the hypothesis that blue-winged teal migrations are driven primarily by photoperiod.