

Centennial Honors College
Thomas E. Helm Undergraduate Research Day 2024

ABSTRACT

Major: Biology

Poster

Faculty Mentor(s): Maggie MacPherson

Parasitic Presence in Migratory Ducks

Amelia Sugden

Wild duck populations are known to host parasitic infections that are capable of causing a zoonotic spillover event into human populations. My project's goal is to explore the presence of blood parasites in four scaup duck species that are native to the Mississippi Flyway in Illinois: Lesser Scaup (LESC: *Aythya affinis*), Ring-Necked Duck (RNDU: *Aythya collaris*), Canvasback (CANV: *Aythya valisineria*) and Redhead (REDH: *Aythya americana*). I joined the efforts of a long term monitoring scheme that is run by the Illinois Natural History Survey to catch, mark (i.e., application of a uniquely numbered leg band), and release these species (February-March, 2024). After each duck was captured, its species and biometrics (i.e., sex, size, body condition) were assessed and recorded during the banding process. I collected samples for blood smears through medial metatarsal (leg) venipuncture (LESC = 17, RNDU = 1, CANV = 20, REDH = 19). My objective is to use microscopically to assess blood smear slides to identify parasites and assess their abundance.

The results of my research will provide a snapshot of blood parasite diversity and abundance in Illinois' wild migratory duck population. I expect to find a variety of avian malarial parasites whose identity and abundance will vary across duck species. This will add to our general knowledge of scaup as potential competent hosts of disease across North America. In practice, the results of my research will inform risk of contact with disease for hunters and the potential for spillover to commercial poultry farms.