Project Proposal

10 April 2023 Henrie Friesen, Ella Hein, Reed Schubert

Title

Minnesotan Wildlife Epidemiology Tracker

Overall Summary

Our dataset allows researchers, natural resource managers, and other concerned citizens to explore recent data and long term trends in wildlife disease and mortality events in the state of Minnesota.

Potential Questions from the Dataset

- Which species of animals have the highest rates of parasitism (Trematodes) in Minnesota?
 - o Fields: Number Affected, States, Species, Event Diagnosis
- Which county area of Minnesota has the highest rate of parasitism?
 - o Fields: County, Event Diagnosis, Number Affected
- How has the rate of morbidity from parasitism changed from 1992 to 2023?
 - o Fields: Eventy Type, Number Affected, Event Start Date, Event End Data
- How does the wildlife mortality and morbidity rate in Minnesota differ between northern and southern MN?
 - Fields: County, Event Type, Number Affected
- Which disease(s) have reportedly caused the most mortalities in Canadian Geese from 2015-2020 in Minnesota?
 - Fields: Event Type, Number Affected, Event Start Date, Event End Date, States,
 Species, Event Diagnosis

Dataset Summary

This dataset includes events of wildlife morbidity and mortality in Minnesota collected by the Wildlife Health Information Sharing Partnership (WHISPers) from January 1, 1992 to January 1, 2023. Each datapoint includes county-level locations, onset and ending dates, species affected, and a diagnosis. The data are opportunistically collected and do not reflect every morbidity or mortality event in Minnesota.

For more information, see this dataset research guide.

User Roles

User role: Part-time biology/ecology research student

Goal: Identify a research topic based on wildlife mortality events in Minnesota.

Pertinent questions:

- Which disease caused the greatest number of concentrated, documented deaths in 2022?

User role: Full-time biology/ecology researcher

Goal: Identify which counties are most responsible for spreading parasitism.

Pertinent questions:

- Which county area of Minnesota has the highest rate of parasitism?

User role: Minnesota DNR resource management

Goal: Create a budget which allocates resources to minimize the spread of Trematodiasis in ducks.

Pertinent questions:

- Which counties have reported the highest number of Trematodiasis cases?

User role: Veterinary epidemiologist

Goal: Create a report on the top Minnesota lakes causing the spread of disease in migrating geese.

Pertinent questions:

- Which lakes have reported the highest rates of goose morbidity consistently for the past 10 years?

User role: Concerned citizen

Goal: To become more informed on the effects of parasitism in animals throughout Minnesota. Pertinent questions:

- Which species of animals have the highest rates of parasitism in Minnesota?
- Which area of Minnesota has the highest rate of parasitism?

User role: Hunter

Goal: To stay aware of illnesses and parasites in the geographical area of Minnesota they frequently hunt.

Pertinent questions:

- Which area of Minnesota has the highest rate of parasitism?