**Introduction**

- The eastern coyote (*Canis latrans*) is a generalist species that is able to adapt to new habitats and food sources easily.
- Originated in West, had a historic range across North America.
- Recent expansion into the Northeast resulting from the extirpation of the gray wolf, new habitats due to human development, and its generalist nature.
- Found in New York state around 1920 first arriving in North.
- Recently moving into major urban areas in New York City (NYC).
- Little in known of the genetic relatedness between sites across the New York metropolitan area.

**Methods**

- Extracted fecal samples for mitochondrial DNA PCR (species identification) and microsatellite DNA PCR (identify unique individuals/relatedness).
- Analyzed genotypes through Geneious®, ML-Relate®, Miro-Checker®, and Colony® programs.

**Results (cont.)**

- Of the 144 mitochondrial DNA (mtDNA) PCR reactions, 78 samples were coyote, 6 were dog, and 60 were inconclusive.
- Of the 190 microsatellite DNA (msatDNA) PCR reactions, 82 sample genotypes had at least 4 loci amplify.
- After comparing the Queller and Goodnight relatedness coefficients of the msatDNA samples, 65 unique individuals were isolated.
- Of these unique samples, 38 were male, 15 were female, and 12 were of unknown sex.

**Future Research**

- Replicating the genotypes from this study.
- Performing additional extractions and microsatellite PCRs.
- Using these replicated results in a landscape genetic framework.

**Acknowledgments**

Special thanks to the National Science Foundation, Louis Calder Center Biological Field Station, Gotham Coyote Project, American Museum of Natural History (AMNH), Dr. Linda Gormezano, Dr. Mark Weckel, Dr. Chris Nagy, Nicole Fusco Catharina Grubaugh, and Matthew Combs.