

The background image shows a dark, overcast sky filled with a large flock of birds in flight. Below the sky is a dark treeline, and in the foreground, there is a body of water surrounded by tall, dry grasses and reeds. The overall scene is dimly lit, suggesting dusk or dawn.

RRNWR Biotechs
Create and Maintain Wildlife Habitat
and Monitor Endangered and
Threatened Species

Introductions



Lillian Self

- Born and raised in South Carolina
- B.S. in Biological Sciences from the University of South Carolina
- Participated in undergraduate research
- Founding member of the Carolina Herpetological Society
- Was executive committee member of UofSC chapter of Alpha Omega Epsilon
- Worked as an Intern for Ohio River Island NWR Summer 2022
- Graduated May of 2023
- Started working as a bio tech for Red River in May of 2023





Justin Talley

- Born in Knoxville, Tennessee
- B.S. in Wildlife and Fisheries with a concentration in Wildlife from Tennessee Tech
- U.S. Marine
- TWRA Wildlife Intern
- Felsenthal NWR Feral Swine Technician
- Red River NWR Biological Technician
- Duck Banding in Northern Saskatchewan



What do we do?

- Monitor threatened and endangered species
- Invasive species control
- Maintenance around refuge
- Wildlife surveys
- Training!!!!





Threatened and Endangered Species Monitoring

- Alligator Snapping Turtles
- Little Brown and Tricolored Bats
- Bald Eagles

Why Alligator Snapping Turtles?

•Range

- Southern United States – Ranging from as far east as Georgia and Florida, as west as Texas, and as North as Southeastern Iowa.
- Found in rivers and streams that feed into the Gulf of Mexico

•Feeding Behavior

- Ambush predators
- Primarily carnivorous
- Most active at night
- Specialized tongue lore





Life History

- 3 genetically distinct sub-populations
 - Mississippi Watershed
 - Gulf coastal rivers east of Mississippi River
 - Suwannee River discharge in Florida
- Spend most of their time in the water
 - Can stay submerged for 40-50 minutes
- Only live in Freshwater
 - Tend to prefer deeper beds of large rivers
- Reach sexual maturity between 11-13 years old
 - Mate in early Spring
 - Females lay eggs on the banks of rivers
 - Lay 1 clutch a year or every other year
 - Sizes range from 10 – 60 eggs
 - Incubate for 100 days

Conservation Status

- Threatened
 - Habitat loss
 - Over harvesting
 - Predation

Fun Facts!

- Largest freshwater turtle in North America
- They smell with their throats!



Why Little Browns and Tricolors?

Little Brown Bats

- Found across North America
- Federally endangered
- Threats
 - **White-nose syndrome**
 - Habitat loss and degradation
 - Pesticide use
 - Climate Change

<https://www.fws.gov/species/little-brown-bat-myotis-lucifugus>



Tricolor Bats

- Found in the Eastern United States
- Endangered status has been proposed (September 2022)
- Threats
 - **White-nose syndrome**
 - Habitat loss and degradation

<https://www.fws.gov/species/tricolored-bat-perimyotis-subflavus>



Procedures for surveys

Turtles

- Scouting for monitoring sites
- Catching bait
- Hoop nets
- Searching for nesting sites
- What do we do when we catch an AST?



Bats

- Scouting for monitoring sites
- Readying monitors
- Setting monitors
- Analyzing data



Invasive Species Monitoring and Management

- Weeds
- Wild Pigs
- Water plants (giant salvinia, water hyacinth)



Refuge Maintenance

- Mowing, weed eating, tree trimming, trail maintenance
- Equipment maintenance
- Monitoring water levels
- Running equipment
- Construction



Wildlife Surveys

- Aerial waterfowl counts
- Daily ground waterfowl counts
- Waterfowl banding
- Bird banding (MAPS – Monitoring Avian Productivity and Survivorship)



Trainings

Motorboat Operation

ATV/UTV

First Aid/CPR

Herbicide Application

Flight Safety

Heavy Equipment Operation

Rocket Net

Explosives

A photograph of a swampy forest. The scene is dominated by tall, thin, vertical trees, likely cypresses, with some showing characteristic buttresses at their bases. The ground is covered in water, which reflects the sky and the trees. The sky is a deep blue with some light, wispy clouds. The overall atmosphere is quiet and somewhat somber. The text "Questions?" is overlaid in the center of the image in a white, sans-serif font.

Questions?