

Threatened and Endangered Species Services



Assessing Threatened and Endangered Species

Biodiversity Research Institute (BRI) has a strong team of experts working with threatened and endangered species. Our staff include former state and federal employees with expertise in the implementation of the Endangered Species Act (ESA), the Migratory Bird Treaty Act, and the Marine Mammal Protection Act, as well as relevant state conservation laws.

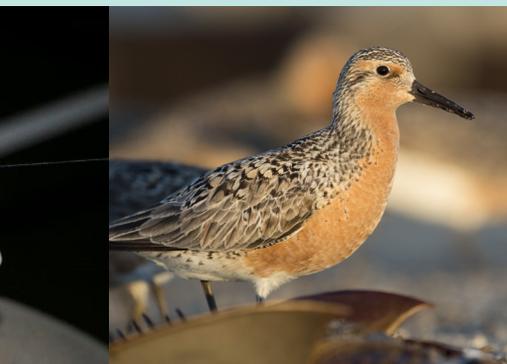
Our experience includes:

- Using the best available science and tools to develop Biological Assessments, species lists, and effects determinations for threatened and endangered species
- Guiding the consultation process and connecting clients with federal agencies through our relationships with regulatory staff
- Conducting ESA compliance studies including critical habitat surveys, presence/absence surveys, roosting/nesting surveys, and tracking studies
- Leading robust data processing and data analytics in collaboration with in-house quantitative experts
- Developing survey reports to the highest standards required by state and federal regulations

*BRI staff have worked with hundreds of species, from endangered bats and elusive mammals to threatened shorebirds, guided by scientific best practices shaped through decades of field experience. From left to right: Indiana bat (*Myotis sodalis*), Canada lynx (*Lynx canadensis*), Northern long-eared bat (*Myotis septentrionalis*), and rufa Red Knot (*Calidris canutus rufa*).*

Field Expertise

- ✓ Federally permitted for all species and activities relevant to endangered bat work across the US
- ✓ Acoustic surveys for bats and birds, including nest monitoring
- ✓ Non-invasive tissue collection and sampling expertise for an extensive list of species and activities
- ✓ Expertise in boat-based marine bird surveys
- ✓ Federal Bird Banding and Marking Permit holders on staff
- ✓ Tracking and telemetry expertise including animal tagging and work with Motus, handheld VHF tracking, and drone-based aerial telemetry
- ✓ Year-round capabilities and equipment ready for immediate deployments



Gulf of Maine Bat Monitoring

Location: Gulf of Maine

Partners: Biodiversity Research Institute, Maine Department of Inland Fisheries and Wildlife (MDIFW), Maine Coast Fishermen’s Association, Bat Conservation International



Monitoring set up consisting of a Wildlife Acoustics SM4 bat acoustic reader enclosed in a pelican case and microphone on a pole.

BRI has teamed up with Maine landowners and fishermen to understand the where and why of bats traveling offshore over the Gulf of Maine. We use acoustic detectors with ultrasonic microphones to listen for and record the high frequency calls of bats to document species presence.

With support from MDIFW, BRI deployed acoustic detectors in 2024 on opportunistic vessels, including a bottom-trawling fishing vessel and a seafloor mapping vessel, that traversed different regions of the Gulf of Maine, as well as on islands and at coastal sites around the Gulf.

BRI collected bat acoustic data from July through October 2024 for a total of 223 monitoring nights across 3 vessel platforms, five islands, and at two coastal sites. Data from vessels included 119 bat passes, representing a few notable species, including the hoary bat (*Lasiurus cinereus*) and eastern red bat (*Lasiurus borealis*), which are known as migratory tree bats. We also detected the big brown bat (*Eptesicus fuscus*), a species more commonly associated with urban or forested habitats. The most frequently detected bat out at sea was the eastern red bat, which was also the species found farthest offshore, with one pass recorded 136 km from Cape Cod, MA.

Upland Sandpiper Ecology

Location: Maine

Partners: Biodiversity Research Institute, Maine Department of Inland Fisheries and Wildlife, The Nature Conservancy, Maine Outdoor Heritage Fund

Upland Sandpipers (*Bartramia longicauda*) have been disappearing from many breeding sites along the Atlantic flyway, particularly in the northeastern states, where Maine represents a stronghold for the species.

From 2021–2024, BRI and partners conducted the first studies to fill key knowledge gaps about Maine’s Upland Sandpiper ecology. This work documents habitat use, local and regional movements, and trans-Atlantic migration routes, including important stopover and wintering areas, providing essential data to guide conservation and management.



Map (top) highlights seasonal migration routes: solid lines for fall and dashed for spring. A tagged Upland Sandpiper (left) is shown as part of our tracking efforts.

For more information, contact:

Nate Fuller, Ph.D.; Director of Science Operations
nate.fuller@briwildlife.org

Dustin Meattety; Director of Field Operations
dustin.meattety@briwildlife.org