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National Wetlands Research Center

Migratory Bird Pathways and the Gulf of Mexico

Importance of Louisiana's Coast

Because of its geographic position, Louisiana plays an important role in the hemispheric-scale phenomenon known as the Nearctic-Neotropical bird migration system. Each year millions of landbirds migrate across or near to the coast of the Gulf of Mexico. Birds migrate in large, broad fronts that sometimes exceed 2 million individuals, and there is an advantage for them to take a direct north-south route (the shortest distance).

- During migration seasons, nearly all of the migratory landbird species of the eastern United States, as well as many western species, use the coastal plains of the western gulf.
- Spring migrants arrive with depleted energy reserves and depend on Louisiana's coastal habitats to provide food and cover after long gulf crossings.
- Fall migrants depend on Louisiana's coastal habitats for food to store fat reserves just prior to gulf crossings in autumn.
- Mortality during the migratory period can be high. Recent research on the black-throated blue warbler (*Dendroica caerulescens*) indicates that more than 85% of the annual mortality for the species occurs during migration.

Migrants en route tend to concentrate in habitats adjacent to ecological barriers; DOI land managers need to identify key coastal landscape features that are important to these birds.

Because of the vastness of the North American continent, it is nearly impossible to delineate movement patterns and migration pathways by using traditional ground-based surveys.

For more information, contact

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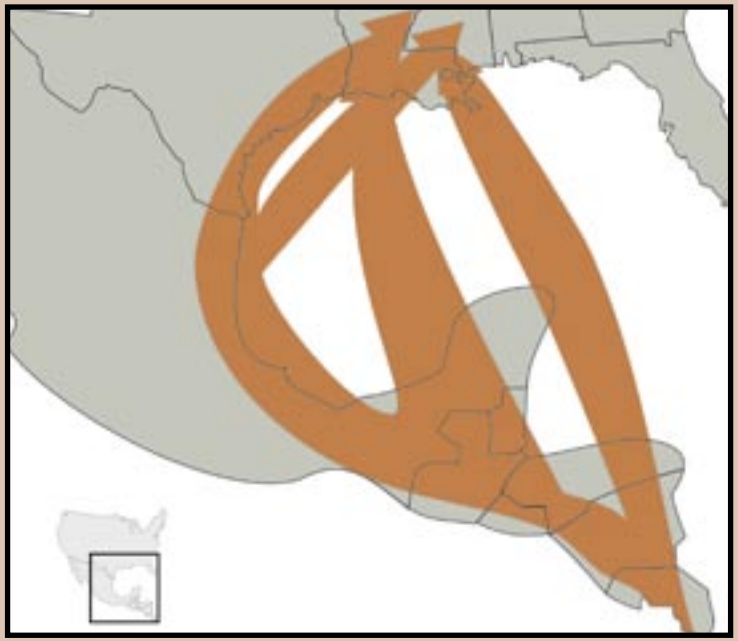

Opportunities for Radar Technology

- Instantaneous quantification of migratory bird movements on a broad scale.
- Identification of critical habitats for restoration.
- Identification of priorities for critical habitat acquisition.
- Improved surveys of migrating and wintering birds.
- Adaptive assessment of ecological restoration projects.
- Understanding potential effects of wind energy and communication towers on migratory birds.

Next Steps

Convene a national conference across appropriate government agencies and the migratory bird research and management communities to ensure that the best available technology developments are applied to migratory bird assessments and management.

Develop an interagency agreement between the U.S. Geological Survey and the National Oceanic and Atmospheric Administration (NOAA) that supports research and development, training, and a scientist exchange program focused on refining "target discrimination" technologies of mutual benefit to NOAA and the Department of the Interior.

Develop new resources to support technological development for Next Generation Weather Radar (NEXRAD), Level II data.

U.S. Department of the Interior
U.S. Geological Survey

Fact Sheet 2005-3069
June 2005