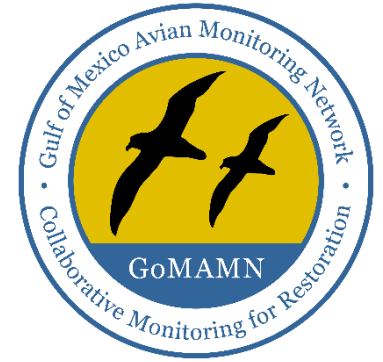# Gulf of Mexico Avian Monitoring Network (GoMAMN)

The Gulf of Mexico Avian Monitoring Network is a Community of Practice working collaboratively to leverage existing resources, capacities and expertise to develop and implement Gulf-wide, coordinated and integrated avian monitoring.

BACKGROUND

The Deepwater Horizon oil spill (April 10, 2010) directly impacted birds and their habitats at an unprecedented scale within the Gulf of Mexico and highlighted the lack of adequate baseline bird data to inform decision-makers, as well as the lack of any comprehensive, integrated approach that would permit evaluation of realized damages or response to future on-the-ground restoration efforts. Designing a coordinated, integrated, and collaborative avian monitoring program for this system has

Credit: Yvan Satgé

many challenges: (1) the scope and scale of the Gulf of Mexico ecosystem; (2) the number of partners, stake holders, and required capacity and technical expertise; and (3) the amount of funding required. Yet meeting these challenges is imperative to understanding population trends and cause-and-effect relationships that underscore demographic processes that drive trends, as well as providing a basis for evaluating Gulf of Mexico restoration efforts.

GULF OF MEXICO BIRDS & HABITATS

Birds are a remarkable natural resource within the Gulf of Mexico. They occur across a variety of habitats and ecological niches across this region. Barrier islands, beaches, marshes, coastal forests, and the open ocean support hundreds of species and millions of individuals. Colonial-nesting waterbirds feed near the top of the food chain in shallow water, whereas overwintering shorebirds forage on mudflats and beaches, and secretive marsh birds forage in marsh grasses at the interface of open water and land. Twice a year, coastal habitats provide essential stopover sites for billions of Neotropical migrant songbirds and serves as one of the most important areas for wintering waterfowl on the continent. Yet coastal habitats are increasingly stressed by a variety of anthropogenic activities and natural events that are often at odds with birds and their use of these habitats. Stressors such as

Credit: Michael Seymour

land development, oil and gas activities, hurricanes, sea-level rise, degraded water quality, and pollution can result in habitat fragmentation, degradation, and loss in sensitive coastal ecosystems. Quantifying the magnitude of these impacts as well as evaluating contemporary restoration and management actions is a critical but complex and challenging task given the scope, scale and inter-connectedness of the Gulf of Mexico ecosystem.

Credit: Eric Soehren

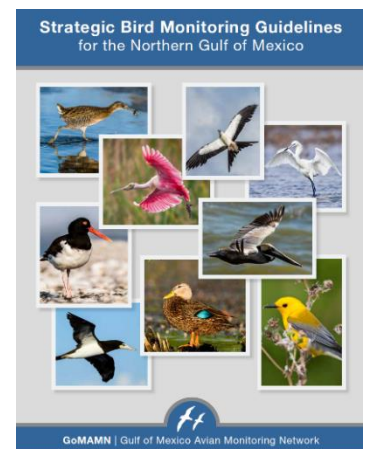## APPROACH

Credit: Ernest Love

GoMAMN, as an ad-hoc working group of conservation partners representing >20 agencies and organizations has been utilizing a Structured Decision Making framework to identify a set of core values and fundamental objectives that underpin avian monitoring needs within the Gulf of Mexico. Through a series of facilitated workshops, the working group agreed that any on-going or proposed avian monitoring efforts should:

(1)   maximize the relevance of monitoring data by: (a) establishing reliable estimates of population size and trends, (b) evaluating management effectiveness on these avian populations, and (c) providing a means to understand how ecological processes affect birds and their habitats;

(2)   maximize the scientific rigor underpinning all surveys; and

(3)   maximize the integration of surveys across agencies and organizations.

We then used those values to establish monitoring priorities for each taxonomic group of birds as well as avian health, which were published in 2019 in the *Strategic Bird Monitoring Guidelines for the Northern Gulf of Mexico* (pictured right; available on gomamn.org).

We are also working to identify priority monitoring needs that are not being addressed by current monitoring efforts.

Ultimately, GoMAMN aims to serve all those involved in bird monitoring in the Gulf of Mexico (or using bird monitoring data) by providing a forum for the sharing of knowledge and expertise, networking with new collaborators, and continuing integration of Gulf monitoring efforts.

TO GET INVOLVED

Check out https://gomamn.org/ to sign up for our newsletter, connect with GoMAMN's working groups, learn about upcoming Community of Practice meetings, and download GoMAMN's information products and other resources. Questions may be directed to GoMAMN Chair Auriel Fournier (auriel@illinois.edu).

Credit: Reese Lukei