



## McGraw Sponsors Workshop to Save Coastal Wetlands

**By Ashley R. Booth/Louisiana State University**

**Photo by the Louisiana Department of Wildlife & Fisheries**

For me, the Workshop for Coastal Wetland Wildlife Managers started not with presentations or a field trip into the marsh, but a late-night airport run. Bad weather and cancelled flights meant a 10:30 p.m. pickup in Baton Rouge and a three-hour drive to our destination in Grand Chenier, La. My passenger was Dr. Leigh Fredrickson, arguably the father of wetland management for waterfowl.

As Dr. Fredrickson hopped in the truck, my 2-year old lab made herself at home in his lap, and we headed west, across the largest contiguous stretch of swamp in the continental United States, and then south, deeper and deeper into Acadiana. The last 40 miles followed LA 82, a road bordered on both sides by flooded marsh, all the while dodging skunks, possums, armadillos and even alligators soaking up the day's warmth on the asphalt.

The rain pattered as we talked about his research and things he has learned over the years. Some of his most interesting ideas, Fredrickson said, were the result of bringing people from different disciplines to his field sites. Inviting people from different fields or career paths to participate in his research often generated new and interesting questions

or changed his perspective on a wetlands management issue. This idea of bridging disciplines to tackle a difficult management issue was at the heart of the workshop, held in late May, 2018.

Organized by Dr. Andy Nyman of Louisiana State University and financed by the McGraw Center for Conservation Leadership and Rockefeller Wildlife Refuge, the workshop included 35 participants from regulatory agencies, academic institutions, state and federal agencies, and environmental consulting firms, representing Texas, Louisiana, Mississippi, Florida, South Carolina, Pennsylvania and New Hampshire. The hope was to increase the effectiveness of wetland management and restoration through a four-day conversation about the challenges facing coastal wetlands and those who manage them.

For nearly a century, wetland management has centered on waterfowl productivity, but there has been little research into how management practices can affect marsh sustainability. For many coastal wetlands, persisting in a changing environment means maintaining elevation within a small tidal range. Now, the health and longevity of coastal wetlands is being brought into question by rising sea levels and high rates of subsidence. The workshop was designed in part to start a conversation about how management can influence elevation and inspire researchers to work toward a better understanding of these systems.

Dr. Nyman started the conversation, explaining how management may influence wetland elevation and why this is important. In marshes managed to produce food for waterfowl, water levels and salinity are decreased to allow certain plant species to grow. This practice may also alter root production and decomposition, both of which influence marsh elevation in systems where elevation depends on peat accumulation. If marshes are unable to maintain their position in the tidal frame, they may be submerged and convert to open water.

Dr. Fredrickson spoke about variability within wetlands and the challenges of marsh management. He reminded us that even with decades of experience, working within an ever-changing natural system can be unpredictable. Creating a plan to manage for elevation is particularly difficult, as there are still many processes and factors that are poorly understood in relation to elevation change.

Despite the myriad challenges of marsh management, the message was clear: as rising sea levels begin to encroach on coastal wetlands that are losing elevation, it is time to expand the management focus from waterfowl production to include managing wetlands for elevation and long-term sustainability.

Other marsh experts from around the country such Dr. David Burdick of the University of New Hampshire, Jena Moon of the U.S. Fish and Wildlife Service, Stan Howarter of Merritt Island National Wildlife Refuge, Jeffrey Carter of Rookery Bay National Estuarine Research Reserve, Leigh Anne Sharp of Louisiana's Coastal Protection and Restoration Authority, and Dr. Angelique Bochnak of Environmental Consulting and

Technology, Inc. spoke about specific management challenges and restoration approaches in their regions.

Afternoons were spent exploring some of Louisiana's most productive marshes at Rockefeller Wildlife Refuge. In a train of 12 airboats, we observed marshes under different management regimes and environmental conditions. Getting out of the boats, we dug up plant roots and took sediment cores, all the while batting at mosquitoes and taking in the scenery.

Refuge Manager Scooter Trosclair explained historic management practices at Rockefeller. Participants then had the opportunity to ask questions, incorporate thoughts from the week's talks, and start conversations about new ideas for improving management in their respective wetland regions.

Rockefeller was the perfect place to show why marsh sustainability and maintaining elevation is important. When the Refuge was established in 1919, it was a pristine, 86,000-acre refuge for declining waterfowl and other wildlife. Almost a hundred years later, Rockefeller is still a near-mythic example of Gulf Coast wetlands and wildlife productivity, boasting the state's densest population of alligators and serving as a home to tens of thousands of birds during migration.

However, due to coastal erosion, subsidence, and human alteration, the Refuge has lost 17,000 acres of marsh in the last century. These problems are not isolated to Rockefeller. Louisiana alone comprises 40 percent of the continental United States' wetlands, but experiences 80 percent of the country's wetland losses; since the 1930's, Louisiana has lost coastal wetlands roughly the size of Delaware. As sea level rises globally, coastal wetlands around the world are projected to disappear at a similar rate.

The week ended, much as it began – with good conversations about improving wetland management, though this time over ice chests full of boiled crawfish and cold beer. As the evening of our last day faded, I drifted among groups, listening as they talked about ideas for collaborative projects or improving wetland management in their home region. Most were still talking about how to improve wetland conservation.

For me, the future of Louisiana's wetlands was on my mind. In a place that is rapidly disappearing and dear to my heart, the Workshop for Coastal Wetland Wildlife Managers provided a unique opportunity to start a conversation about how best to manage coastal wetlands in the face of sea level rise. With the support of McGraw and through the ideas and connections generated at this workshop, the possibility of securing the future of these important coastal marshes became more real.