



SOUTHERN DIVISION – AMERICAN FISHERIES SOCIETY

2019 ANNUAL MEETING SYMPOSIA

Note: Organizers of symposia with an asterisk () are pursuing the option of peer-reviewed publication of manuscripts associated with papers presented*

Advances in the Conservation and Management of North American Gars*

Contact: Nate Smith (nate.smith@tpwd.texas.gov)

Subsequent to their designation as vulnerable in a review of conservation status of North American fishes in 2008, great efforts have been undertaken to understand the biology of the Alligator Gar. This symposium aims to disseminate this information in support of applied management and restoration of Alligator Gar populations across North America. While the focus is on Alligator Gar, we are also considering presentations aimed at management of other species in the family Lepisosteidae. Presentations (oral and poster) will include research related to life history, biology, ecology, culture, and management of gars. We also encourage submission of associated manuscripts for publication in a special section of *North American Journal of Fisheries Management*.

Morone Biology and Management

Contact: Jake Norman (jake.norman@tpwd.texas.gov)

An overview of current research and management topics dealing with Striped Bass, Hybrid Striped Bass, White Bass and other pertinent Morone species within the Southeastern US. Presentation topics will include stocking procedures, sampling methods, angler motivations/creel surveys, Striped Bass and Hybrid Striped Bass Culture, evaluating year class strength in wild Morone stocks, and others. The broad scope of this symposium will help biologists incorporate new ideas into their respective state's Morone research and management and provide a great setting for biologist to discuss issues across the southeast region. While Morone culture has been deeply studied, there is a paucity of published research focused on Morone fisheries and associated management. This symposium will highlight what biologists already know and what information is still needed to improve our Morone fisheries across the US.

Small Impoundment Management: Addressing Multifaceted Objectives in Fisheries

Contact: Marcos De Jesus (marcos.dejesus@tpwd.texas.gov)

Southern states are experiencing a population boom. More people are targeting southern states and their large cities to pursue new opportunities. As fishing competes with other fast-paced activities in growing communities, fisheries professionals are challenged to keep recreational fishing relevant in the coming years. More concerning, population growth has outpaced license sales in many states. It is important to serve our existing anglers; however, it's also important to generate new anglers and increase future license buyers. With today's time and money constraints, fishing opportunities need to be affordable and close to home. Small impoundments (< 200 hectares) are usually optimal for anglers looking for these attributes. With many operated publicly, state conservation agencies can partner to manage these systems to provide optimal fishing experiences. Issues like pond aging, limited fish habitat and access, population dynamics, and angler recruitment, reactivation, and retention are among many that are addressed by fisheries professionals across southern states. The private industry and university researchers have also approached similar issues in ways that could transpose to public small impoundment management. This symposium will provide a venue to share localized management approaches with the fisheries community to help address defined challenges we face as small impoundment managers.

American Eel Research and Conservation in the Gulf of Mexico: What Are We Doing and Where Are We Headed?

Contact: Stephen Curtis (stephen.curtis@tpwd.texas.gov)

American Eel *Anguilla rostrata* in the Gulf of Mexico (GoM) and associated drainages are understudied. With the evolving worldwide demand for freshwater eels, American Eel have received increased attention as a species of commercial harvest in recent years. Much of our recent efforts to understand the life history of American Eel have been focused on the eastern coast of North America. Gulf of

Mexico American Eel present unique challenges and opportunities for fisheries researchers and managers as we work to better understand their distribution and abundance, life history and movement patterns, and population structure within the GoM region. This symposium looks to share some of the methods and approaches being used to assess the status of American Eel throughout the greater GoM, Southeast United States, and Caribbean to better inform and coordinate research frameworks and conservation actions.

Congratulations on Your Promotion to Management: Considerations for New Supervisory Biologists

Contact: Cecil Jennings (jennings@uga.edu)

The aim of this symposium is to provide an overview of the roles and responsibilities of mid-level managers in natural resource organizations to mid-career biologists considering applying to a supervisory position or those who have been recently-promoted to such a position. The information presented will cover a range of non-scientific topics (e.g., personnel, budgets, procurement, safety) with which the new supervisor will have to contend, and do so without formal training in those areas. The need for this type of information is great as many state, federal, and NGO natural resource agencies nationally are facing large-scale retirements as the last of the baby boomers reach retirement age. Accordingly, many mid-level biologists at these agencies will be recruited to fill the recently or soon-to-be vacated supervisory positions, but without the benefit of formal training in this area as these topics are seldom covered in graduate fisheries curricula. This symposium will introduce new and aspiring supervisors to the opportunities and challenges inherent in their new position as well as to a cadre of professionals from whom they can learn. The topics covered in this symposium will facilitate a smooth transition from mid-career biologist to a supervisory biologist and will help fulfill agency mission in natural resource stewardship.

Aquatic Vegetation Management

Contact: John Findeisen (john.findeisen@tpwd.texas.gov)

Aquatic vegetation management of both native and non-native species is a continuous task for resource managers of public and private water bodies. Traditional uses of biological, chemical, and mechanical methods are included in many Integrated Pest Management (IPM) plans. However, these IPM plans can be costly and may take years to reach the desired goal, only to become problematic again in a short time or provide a separate challenge with emergence of a new problematic species. New herbicides and biological control agents as well as the development of endocides and use of innovative herbicide combinations provide resource managers with new tools to control nuisance aquatic vegetation. Some of these new tools as well as the inclusion of adaptive management techniques are showing promise with the control of targeted, problematic vegetation while protecting valuable aquatic habitat by limiting collateral damage to non-target species. The purpose of this symposium is to share information regarding new or future vegetation management tools and adaptive management techniques for resource managers to implement in controlling problematic aquatic vegetation.

Charismatic and Enigmatic Megafauna*

Contact: John Mohan (jmohan@tamu.edu)

Aquatic megafauna exhibit diverse life history strategies, and play important trophic roles in marine ecosystems. The behavior and ecology of megafauna are often enigmatic, as many are characterized by low abundances, high longevity and a propensity for long-distance movements. Advanced research techniques, including the use of electronic instrumentation, genetic primers, and natural chemical biomarkers have increased our understanding of megafauna behavior, population structure, and responses to environmental and anthropogenic stressors. This symposium will focus on current research in aquatic megafauna ecology and management including: 1) life history information such as age, growth, reproduction and feeding ecology; 2) population dynamics including migration patterns, population connectivity and stock structure; and 3) behavioral and physiological responses to environmental and anthropogenic stressors. Studies employing traditional fishery dependent and independent datasets, advanced electronic tags (acoustic & satellite telemetry), and innovative natural tags (genetics, stable isotopes, trace elements) with results directed at management applications, are especially encouraged.

Embracing the Fisheries Opportunities in the Urban Landscape

Contact: Niki Ragan (niki.ragan@tpwd.texas.gov)

As populations continue to shift toward growing metropolitan areas, the number of urban fisheries - and their importance - is increasing. Urban fisheries' accessibility and proximity to large portions of the population present increased angling and recreational activities to urban residents. However, urban fisheries also face challenges that traditional fisheries do not, including perceived and genuine absence of fishing opportunities, environmental challenges associated with urbanized watersheds, impeded access for anglers and resource managers, and atypical levels of fishing pressure. Resource managers, recreation specialists, and angling advocates are finding new opportunities to overcome challenges like these while connecting urban residents to fishing resources and angling. This symposium brings together ideas and approaches for addressing fisheries management, expansion, and promotion in urban centers.

Reservoir Fisheries Habitat Enhancement

Contact: Tom Lang (tom.lang@tpwd.texas.gov)

Reservoirs provide a plethora of tremendously important societal benefits including but not limited to water supply, flood control, hydropower, ecosystem services, and recreational activities including boating, hunting, and fishing. However, over time, the ability of reservoirs to provide significant benefits diminishes as habitat impairments intensify. Fisheries managers are uniquely positioned to

recognize evidence of reservoir aging-related impacts early in their expression through their regular fisheries population and habitat assessment duties. Thus, while construction of reservoirs was typically conducted with fisheries as an afterthought, fisheries managers are increasingly finding themselves leading the charge to restore reservoirs. This dynamic provides great opportunities for fisheries resource interests to be a primary concern in restoration efforts but also brings challenges like developing and managing partnerships and volunteers, and fundraising efforts. The Reservoir Fisheries Habitat Partnership (RFHP), one of 20 Fish Habitat Partnerships comprising the National Fish Habitat Partnership, has been providing granting and networking opportunities to fisheries professionals and lay users of reservoir resources since 2010. A tremendous number of partnership efforts among fisheries management agencies, municipalities, corporations and anglers have occurred. Habitat restoration efforts, best management practices, Friends of Reservoirs Chapter efforts, outreach, education, fundraising, and research efforts will be discussed as well.

Recovering America's Wildlife Act: The Grand Vision and Funding for Conservation

Contact: Tom Lang (tom.lang@tpwd.texas.gov)

Fish and wildlife face a myriad of threats in the United States including loss of habitat, degradation of habitat, pollution, climate change, invasive species, and disease. Although Pittman-Robertson, Dingell-Johnson, and Wallop-Breaux have provided unparalleled funding for wildlife and sportfish restoration and have garnered many conservation successes, State Wildlife Action Plans collectively have identified nearly 12,000 species nationwide that are in need of conservation attention and action. These species of greatest conservation need are at-risk of moving onto the threatened and endangered species lists. The Blue Ribbon Panel on Sustaining America's Diverse Fish and Wildlife Resources (a nonpartisan panel of 26 national leaders representing conservation organizations, the energy industry, outdoor recreation retailers, sportsmen's group, and governmental agencies) was organized to develop recommendations for securing dedicated funding that would fully provide for our nation's fish and wildlife species. The panel developed a recommendation that would eventually become HR4647 the bipartisan "Recovering America's Wildlife Act" sponsored by Rep. Jeff Fortenberry (R-Neb.) and Rep. Debbie Dingell (D-Mich.). If passed this Act would dedicate \$1.3 billion annually in existing revenues from the development of energy and mineral resources on federal lands and waters to the currently unfunded Wildlife Conservation and Restoration Account. These funds would then be distributed to the state natural resource agencies to implement State Wildlife Action Plans which are designed to conserve at-risk species and keep them off of the threatened and endangered list. This symposium will provide a detailed examination of HR4647 and its current status, include reviews of multiple State Wildlife Action Plans and their important activities that would be funded through this Act, review of AFS and our partner's efforts to support the Act, and ways that AFS members, Sections, and Chapters can help to support this visionary bill that could change the future of fish and wildlife indefinitely.

Best Student Presentation Symposium – Oral or Poster

Contact: Nicole Rankin (nicole_rankin@fws.gov)

The Southern Division of the American Fisheries Society supports awards for Best Student Presentation and Best Student Poster at the annual SDAFS meeting. Students interested in competing for the Best Student Presentation or the Best Student Poster should select the appropriate symposium at the time of abstract submission. Finalists for the Best Student Presentation and Best Student Poster will be selected based on submitted abstracts and notified prior to the meeting. Finalists selected for the Best Student Presentation Symposium will present on Saturday, 26 January 2019. Submissions for Best Student Poster will be judged during the Poster Session on Friday, 25 January 2019.