

PROGRAM

74TH ANNUAL GULF & CARIBBEAN FISHERIES INSTITUTE



GULF AND CARIBBEAN
FISHERIES INSTITUTE



NOVEMBER 1 - 12, 2021

ABOUT GCFI

The Gulf and Caribbean Fisheries Institute (GCFI) was founded in 1947 to promote the exchange of information on the use and management of marine resources in the Gulf and Caribbean Region. From its beginning, GCFI has endeavored to involve scientific, governmental, and resource-use sectors in providing a broad perspective on relevant fisheries issues. The GCFI membership comprises over 40 nations and territories representing university faculty and students, governmental agencies, policy-makers, private sector, fishers, non-governmental organizations, and other stakeholders.



CONFERENCE THEME

The theme of this year's conference is Marine and Estuarine Ecosystems of the Gulf of Mexico and Caribbean Region in a Changing Time: Interactions between Science and Governance. The meeting will bring together regional stakeholders to share experiences and present success stories from around the Gulf and Caribbean. Providing the opportunity to discuss stakeholders' experiences related to managing marine resources and fisheries in the face of climate change will increase knowledge. By bringing together scientists, academics and practitioners to share case studies, we can collaboratively identify lessons learned and present strategies for managing multispecies fisheries options that could be scaled-up around the world.

GCFI74 will highlight approaches that lead to successful outcomes such as those that:

- Identify best practices for effective conservation and sustainable use of Gulf and Caribbean resources.
- Strengthen alliances between science and beyond by conveying innovative cooperative relationships that support implementation of ocean-related solutions.
- Promote transboundary, and national initiatives, transdisciplinary networks and research partnerships



GCFI74: OUR VIRTUAL APPROACH

While we are disappointed that we can't reunite in person, we are excited to share our plans for our fully virtual meeting. For GCFI74, we will use a new Conference Platform (Whova), which will hopefully help to recreate many experiences from our in-person meetings. You can access the platform via the mobile app or from your web browser!

OUR TECHNICAL PROGRAM

Pre-recorded presentations will be available for viewing from November 1, 2021 within the Conference Platform and during the week November 8-12, 2021 there will be a series of themed panel discussions which will involve live Q&A as well as moderated discussions with experts.

- Convenience: You can view all presentations and sessions at your own convenience, post questions, participate in polls or discussion forums and even reach out to speakers directly.
- Personalize your experience: You can create personalised agendas, take notes, share documents, communicate with attendees etc
- Everything in one place: All your private chats, discussion boards & shared documents will stay in the app. Typically with video streaming software, once you close the video conference window, your messages are gone.
- The Poster Session: will operate just like an in-person event! Each poster has the ability for attendees to ask questions and even join a private meeting room and engage in discussions with the presenter

NETWORKING OPPORTUNITIES

- The Matchmaking Feature helps attendees to meet the right people based on common interests, location, industry, and anything else they've included in their profiles. This way, attendees can create virtual meet-up groups, exchange e-business cards, or start one-on-one conversations, increasing chances for business and career opportunities.
- The Community Board allows anyone to start discussions & engage with others.
- Whova meet-ups allows attendees to chat one-on-one like in the hallways. You can use video or text to start instant conversations conveniently all within the app

OUR SOCIAL EVENTS

Grab a drink & join us after work for themed happy hours & other fun activities! Or why not make it a family film night & broadcast the CINEFISH Film Festival on your Smart TV! Reunite with GCFI attendees new & old as we share stories & experiences from the field through our annual Story Slam.

For more information, please visit www.gcfi.org/gcfi74



MONDAY 1ST NOVEMBER

GOVERNANCE PRESENTATIONS

- **Joy Hazell** Defining Property Amid Changing Governance in an Offshore Fish Aggregation Device (FAD) Fishery
- **Stacey Mac Donald** Clash or understanding? The case of fishery co-management on Bonaire
- **Daniel Matos-Caraballo** Puerto Rico's DNER Fisheries Research Laboratory, 50 Years Monitoring Fisheries, a look into the achievements and future challenges
- **Anna Barboza** Determining the Enabling Conditions and Actionable Steps in Successful Alternative Livelihood Projects (ALPs) within the Mesoamerican Reef (MAR) Region
- **Miranda Willis** A review of Florida limited-entry, marine life fishery sector: Lessons on how to build social capital in support of a sustainable industry
- **Brittany Aguiar** Developing a Billfish Ecotourism Framework: Lessons from Popular Billfish Sportfishing Sites
- **Emily Melvin** Complicating Conservation: How Marine Genetic Resources Challenge High Seas Biodiversity Negotiations

SMALL SCALE FISHERIES PRESENTATIONS

- **Hazel Oxenford** Moored Fish Attracting Devices (FADs) in Dominica: Have they achieved their intended objectives?
- **Pethrolyna Isaac** Fisheries Regulations to Protect the Parrot Fish Species and Healthy Oceans
- **Jeff Georges*** Overfishing of sea cucumbers and parrotfish: a major socio-ecological threat in Caracol Bay in the 3 Bays National Park
- **Ivy Baremore*** Abundance and distribution of deepwater fishes in MesoAmerica
- **Jesus Rivera Hernandez*** Building Capacity for Sustainable Fisheries Management in the U.S. Caribbean: Queen triggerfish age, growth, and maturity



TUESDAY 2ND NOVEMBER

STONY CORAL TISSUE LOSS DISEASE RESEARCH

- **Aldo Croquer** Status of Stony Coral Tissue Loss Disease across the northern coast of the Dominican Republic: What do we really know?
- **Nuria Estrada-Saldívar** Ecological consequences of the rapid spread of the Stony Coral Tissue Loss Disease in Cozumel
- **Claude Bouchon** Importance of the Stony Coral Tissue Loss Disease (SCTLD) on the reefs of Guadeloupe Island (Lesser Antilles)
- **Michael Studivan** Can reef sediments serve as a stony coral tissue loss disease reservoir?
- **James Evans** Biofilms as a potential transport mechanism for Stony Coral Tissue Loss Disease (SCTLD) into new regions
- **Katherine R. Eaton** Rhodobacterales, Rhizobiales, Desulfovibrionales, and Clostridiales are Significant Taxa Associated with Stony Coral Tissue Loss Disease in *Montastraea cavernosa* and *Orbicella faveolata*
- **Caroline Dennison*** Algal symbionts in the genus *Breviolum* increase the susceptibility of corals to stony coral tissue loss disease (SCTLD)

STONY CORAL TISSUE LOSS DISEASE RESPONSE

- **Alizee Zimmermann** SCTLD in the Turks & Caicos Islands - A case study
- **Karlisa Callwood** Inspiring Bahamian Divers to Action Against SCTLD: A Pilot Study Applying the Values-Beliefs-Norms Theory to Predict Participation and Design Communications
- **Sonora Meiling** Local intervention efforts lead to species-specific reductions in stony coral tissue loss disease prevalence in the United States Virgin Islands
- **Nathan Berkebile** Multi-species Coral Rescue in Response to the Stony Coral Tissue Loss Disease on the Florida Reef Tract
- **Kelly Pitt** Testing coral probiotics as an in situ treatment for stony coral tissue loss disease
- **Sandra Mendoza Quiroz** A case study on the offspring of *Pseudodiploria strigosa* affected by Stony Coral Tissue Loss Disease (SCTLD)



TUESDAY 2ND NOVEMBER

SARGASSUM PRESENTATIONS

- **Donald Johnson** Pelagic Sargassum in the Tropical Atlantic and the importance of West African/Gulf of Guinea consolidation areas.
- **Kristie Alleyne** A preliminary assessment of sargassum associated biodiversity: Implications for management
- **A. Karima Degia** Mapping Exposure to Sargassum Impacts in Eastern Caribbean small island states as a basis for strategic management
- **Mariana C. León-Pérez*** Characterizing Sargassum Accumulations along the Coastline using Satellite Data and Google Earth Engine
- **Bethia Thomas*** A Community-based Participatory Approach to Vulnerability Analysis with Adaptation Planning for Pelagic Sargassum Influxes in the Eastern Caribbean: a Saint Lucia Case Study.

MARINE PROTECTED AREAS PRESENTATIONS

- **Arjan de Groene** Working towards sustainable financing on the three windward islands in the Dutch Caribbean
- **Pelayo Rico Fernández*** Defining a protocol for recreational scuba diving carrying capacity within a marine protected area (MPA)
- **Leslie Acton** Staking claims to ocean space through a failed large-scale marine protected area proposal
- **Emma Doyle** Progress Towards MPA Sustainable Financing by the MPACONnect Network
- **Julian Walcott** Insights into Marine Protected Area management throughout the Wider Caribbean Region
- **Lisamarie Carrubba** Protecting Species and Places: A Partnership for Place and Species-Based Conservation



WEDNESDAY 3RD NOVEMBER

REEF RELATED FISHERIES PRESENTATIONS

- **Christy Pattengill-Semmens** Goliath Grouper (*Epinephelus itajara*) population trends in Florida, USA: Evaluating objective evidence of assumed recovery
- **David Kochan*** Winners and losers of reef flattening: A trait-based assessment of Florida coral reef fishes
- **Jack Olson** Spatio-temporal patterns and recruitment of young of the year snappers: mutton snapper (*Lutjanus analis*), lane snapper (*L. synagris*), schoolmaster snapper (*L. apodus*), gray snapper (*L. griseus*) and yellowtail snapper (*Ocyurus chrysurus*) (Lutjanidae) in the Middle Florida Keys between 2007-2019
- **Laura Jay Grove** Are mesophotic coral reefs a potential refuge for fishery targeted reef fish species in the US Virgin Islands?
- **Gretchen Goodbody-Gringley** Impacts of reduced human activity due to COVID-19 on reef fish populations in the Cayman Islands
- **Katherine Overly*** (Age and Growth) The First Steps: Determining Essential Fish Habitat for Queen Snapper (*Etelis oculatus*) in Puerto Rico Using Ensemble Species Distribution Modeling
- **Léa Vignaud*** Spatial Variations In Isotopic Niches Of Two Herbivorous Fishes In The Caribbean Reefs
- **Anna Millender*** Reproductive Parameters of Female Red Snapper Differ Across Depth

FISH SPAWNING AGGREGATIONS PRESENTATIONS

- **Brice Semmens** Recovery breeds reorganization: changes in migratory and spawning behaviors of Nassau Grouper (*Epinephelus striatus*) across 2 decades of population growth in Little Cayman, Cayman Islands
- **Martha C Prada** The adaptive process of improving fisheries management of vulnerable fish spawning aggregations in the Caribbean: the case of Nassau grouper and mutton snapper
- **Ronald Hill** Sound drifters and the detection of grouper spawning aggregations
- **Haibo Xu** Numerical simulations of the transport and dispersal of fish eggs and early larvae from marine protected areas (MPA) in the US Virgin Islands and off the Eastern Puerto Rico shelf

MEGAFAUNA AND PELAGICS PRESENTATIONS

- **Jeffrey Bernus** The Caribbean Cetacean Society, a local network breaking the islands frontiers for Cetacean conservation !
- **Jaime Bolanos** The killer whale (*Orcinus orca*) in the Wider Caribbean Region: a review of their ecology, exploitation, and interactions with fisheries
- **Carissa Gervasi*** Bottom-up conservation: Using translational ecology to inform conservation priorities for a recreational fishery
- **Elsa Gutierrez*** Age and growth of Blackfin tuna (*Thunnus atlanticus*) in the Northern Gulf of Mexico

THURSDAY 4TH NOVEMBER

INVASIVE SPECIES PRESENTATIONS

- **Holden Harris** The Bioeconomic Paradox of the Commercial Lionfish Fishery
- **Stephanie Green** Broad-scale acoustic telemetry reveals long distance movements and larger home ranges for invasive lionfish on Atlantic coral reefs
- **Kaylin Clements** Regional Synthesis of Invasive Lionfish Citizen Science Programs in the Tropical Western Atlantic
- **Alexandra Davis** Multiple drivers of invasive lionfish culling efficiency in marine protected areas
- **Aylin Ulman** Policy recommendations for the Mediterranean lionfish invasion based on lessons from the Western Atlantic
- **Melanie Esch*** Predicting the potential distribution of a new Caribbean invader using a species distribution model

HABITATS PRESENTATIONS

- **Ellis, Robert** Juvenile Goliath Grouper (*Epinephelus itajara*) habitat use and movement patterns in South Florida Estuaries
- **Antonella Rivera** Impact of sanitation best management practices on human and coral reef health: Half Moon Bay, Honduras case study
- **Kelly Kingon** The fish and invertebrate community associated with the invasive seagrass, *Halophila stipulacea* in St. Eustatius
- **Francesca Pella** Networking and partnering to tackle the challenge of being sustainable, holistic, and pragmatic: lessons learnt from an Ecosystem Based Management Decision Support System pilot application in the Caribbean and its spreading in the Mediterranean and the Red Sea.
- **Iris George** Determining drivers of detectability for reef fish species between marine survey techniques
- **Lizzie McNamee** Food web modeling to assess interactions between artificial reefs and natural reefs
- **Lisa Chong*** Spatial considerations can determine net socioecological effects of artificial reefs on recreational fisheries and their management

INVERTEBRATES AND AQUACULTURE PRESENTATIONS

- **Megan Davis** A Fishers Operated Pilot-Scale Queen Conch (*Aliger gigas*) Hatchery & Nursery Facility for Restoration and Sustainable Seafood Supply in Puerto Rico
- **Elizabeth Duermit-Moreau*** How do stone crab *Menippe mercenaria* fishing practices impact disease and trophic ecology?
- **Katherine Rose** The impact of trap confinement on the condition of the Florida stone crab *Menippe mercenaria*
- **Wilmelie Cruz Marrero** In situ habitat assessment of mesophotic queen conch in the west coast of Puerto Rico
- **Lizzie McNamee** Characterization of the queen conch (*Aliger gigas*) artisanal fishing prior and after the 5 year ban at Chinchorro Bank Biosphere Reserve, Mexico
- **Miguel Mateo Sabido Itzá** Spatial considerations can determine net socioecological effects of artificial reefs on recreational fisheries and their management

FRIDAY 5TH NOVEMBER

CLIMATE CHANGE PRESENTATIONS

- **Eduardo Boné Morón** The Caribbean fisheries of today and the future: Opportunities for a regional climate vulnerability assessment
- **Desireé Hernández-Narváez** Impacts of the rise in sea level in a coastal municipality of Colombia: local management of climate change
- **Caren Eckrich** Coral Bleaching in the Bonaire National Marine Park 2016-2020

MARINE LITTER PRESENTATIONS

- **La Daana Kanhai** Plastic Pollution in the Caribbean Large Marine Ecosystem (CLME): Status and Future Perspectives
- **Dalila Aldana Aranda** An overview of research on microplastics in the wider Caribbean Sea
- **Joel Baziuk** Abandoned Lost and Discarded Fishing Gear in the Caribbean - A Regional Approach
- **Tricia Lovell** Abandoned, Lost and Discarded Fishing Gear (Derelict gear) in Eastern Caribbean Small-Scale Fisheries: A Legal Gap Analysis
- **Erin Kimak** The Distribution, Composition and Management of Drifting Fish Aggregating Devices (dFADs) in the North Atlantic Ocean

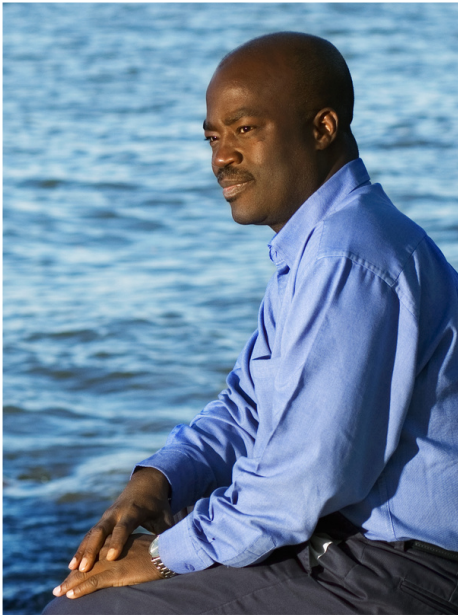
SCIENCE, DATA & INNOVATION PRESENTATIONS

- **Tony Marshak** Characterizing and Comparing U.S. Marine Fisheries Ecosystems: Successful Factors in Moving Toward Ecosystem-Based Fisheries Management
- **Tabitha Stadler** Influencing Governance and Conservation of the Simpson Bay Lagoon, Saint Martin Through the First Economic Valuation Study of a Caribbean Island Coastal Lagoon
- **Christopher Cusack** Applications of electronic reporting to improve science and management in the Caribbean.
- **Megan Davis** eConch: eLearning for Growing Queen Conch (*Aliger gigas*)
- **Jessica Quinlan*** Using fisher-contributed secondary fins to fill critical shark-fisheries data gaps



MONDAY 8TH NOVEMBER

GCFI74 OPENING CEREMONY & KEYNOTE | 9:00 - 10:30 (EST)



GCFI74 KEYNOTE: DR. RASHID SUMAILA

Why and How to Finance a Sustainable Ocean Economy

Dr. Sumaila is a Professor and Canada Research Chair (Tier 1) in Interdisciplinary Ocean and Fisheries Economics at the Institute for the Oceans and Fisheries, and the School of Public Policy and Global Affairs, University of British Columbia. His research focuses on bioeconomics, marine ecosystem valuation and the analysis of global issues such as fisheries subsidies, marine protected areas, illegal fishing, climate change, marine plastic pollution, and oil spills. Dr. Sumaila received his Ph.D. (Economics) from the University of Bergen and his B.Sc. (Quantity Surveying) from the Ahmadu Bello University.

He won the 2017 Volvo Environment Prize and was named a Fellow of the Royal Society of Canada in 2019. His interest in the environment started early in life when his grandfather used to say people should “walk as if the ground feels pain” – this is sophisticated environmentalism! His specific interest in ocean and fisheries was picked in Norway. Sumaila enjoys exploring novel ideas and mentoring future thinkers. He loves waking up each day thinking of how best to contribute to ensuring that we bequeath a healthy ocean to our children and grandchildren so they too can have the option to do the same.

PANEL DISCUSSION | 10:45 - 12:00 (EST)

Governance of Coastal and Marine Resources: Challenges, Opportunities and Lessons Learned

Panelists: Joy Hazell, Stacey Mac Donald, Daniel Matos-Caraballo, Anna Barboza, Miranda Willis, Brittny Aguiar, Emily Melvin

Moderator: Manoj Shrivani (University of Miami)

PANEL DISCUSSION | 12:00 - 13:15 (EST)

Small Scale Fisheries in the Wider Caribbean Region: Opportunities and Threats to Developing Sustainable Fisheries

Panelists: Hazel Oxenford, Pethrolyna Isaac, Jeff Georges*, Ivy Baremore*, Jesus Rivera Hernandez*

Moderator: Eric Wade (FAO)

FISHERS FORUM | 13:15 - 14:30 (EST)

OPENING SOCIAL | 18:00 - 19:00 (EST)

TUESDAY 9TH NOVEMBER

SPECIAL SESSION | 9:00 - 10:30 (EST)

Stony Coral Tissue Loss Disease Research and Innovations

This special session will highlight the latest developments in stony coral tissue loss disease (SCTLD) research and response from around the wider Caribbean region. The session will help share knowledge, promote collaboration, and highlight innovative research, treatment, and rescue approaches to the disease throughout the region.

Session Chairs: Caroline McLaughlin (Florida Sea Grant), Dana Wusinich-Mendez, (NOAA Coral Reef Conservation Program), Emma Doyle (GCFI)

STONY CORAL TISSUE LOSS DISEASE RESEARCH

- **Aldo Croquer** Status of Stony Coral Tissue Loss Disease across the northern coast of the Dominican Republic: What do we really know?
- **Nuria Estrada-Saldívar** Ecological consequences of the rapid spread of the Stony Coral Tissue Loss Disease in Cozumel
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- **Michael Studivan** Can reef sediments serve as a stony coral tissue loss disease reservoir?
- **James Evans** Biofilms as a potential transport mechanism for Stony Coral Tissue Loss Disease (SCTLD) into new regions
- **Katherine R. Eaton** Rhodobacterales, Rhizobiales, Desulfovibrionales, and Clostridiales are Significant Taxa Associated with Stony Coral Tissue Loss Disease in *Montastraea cavernosa* and *Orbicella faveolata*
- **Caroline Dennison*** Algal symbionts in the genus *Breviolum* increase the susceptibility of corals to stony coral tissue loss disease (SCTLD)
- Q&A Opportunity

STONY CORAL TISSUE LOSS DISEASE RESPONSE

- **Alizee Zimmermann** SCTLD in the Turks & Caicos Islands - A case study
- **Karlisa Callwood** Inspiring Bahamian Divers to Action Against SCTLD: A Pilot Study Applying the Values-Beliefs-Norms Theory to Predict Participation and Design Communications
- **Sonora Meiling** Local intervention efforts lead to species-specific reductions in stony coral tissue loss disease (SCTLD) prevalence in the United States Virgin Islands
- **Nathan Berkebile** Multi-species Coral Rescue in Response to the Stony Coral Tissue Loss Disease on the Florida Reef Tract
- **Kelly Pitt** Testing coral probiotics as an in situ treatment for stony coral tissue loss disease
- **Sandra Mendoza Quiroz** A case study on the offspring of *Pseudodiploria strigosa* affected by Stony Coral Tissue Loss Disease (SCTLD)
- Q&A Opportunity

TUESDAY 9TH NOVEMBER

PANEL DISCUSSION | 11:45 - 13:00 (EST)

Managing the Sargassum Influx in the Caribbean: Opportunities for Research and Innovation

Panelists: Donald Johnson, Kristie Alleyne, A. Karima Degia, Mariana C. León-Pérez*, Bethia Thomas*

Moderators: Hazel Oxenford (CERMES) & Shelly Ann Cox (Blue Shell Productions)

PANEL DISCUSSION | 13:00 - 14:15 (EST)

Marine Protected Areas in the Wider Caribbean Region: Insights and Opportunities

Panelists: Arjan de Groene, Pelayo Rico Fernández*, Leslie Acton, Emma Doyle, Julian Walcott, Lisamarie Carrubba

Moderator: Emma Doyle (MPA Connect)

FISHER HAPPY HOUR | 16:00 - 17:30 (EST)

POSTER SESSION | 18:00 - 20:00 (EST)

See List of Poster Presenters



POSTER SESSION: LIST OF AUTHORS

- **Antoine, Johann** Elemental composition of holopelagic Sargassum along Jamaica's coast
- **Asantewa, Kamaria*** Heavy metals in the Atlantic Goliath Grouper in Trinidad
- **Augustinus, Ely** Community response to the threat of SCTLD in Utila, Honduras
- **Beltran, Ana** Spatial and Temporal Variability of Herbivorous Fish on Bahamian Coral Reefs
- **Bouchon, Claude** Biodiversity associated with the seagrass beds of the invasive species *Halophila stipulacea* in Guadeloupe Island (Lesser Antilles)
- **Callwood, Karlisa** A Tale of Two Bahamian Fisheries: Using Social Science to Understand Management Implications of Fisher Behavior, Knowledge, and Perception
- **Collins, Angela** One fish, two fish, twelve years of huge fish: An overview of The Great Goliath Grouper Count in Florida
- **Collins, Courtney*** The removal and reintroduction of Symbiodiniaceae in *Montipora capricornis*
- **Costa, Sophia** The impacts of *Halophila stipulacea* on growth and survival of economically important *Ocyurus chrysurus*
- **Escalante-Dominguez, Andy Emanuel** Age and growth of gray snapper (*Lutjanus griseus*) in the northern coast of the Yucatan Peninsula
- **Gibson, Quetta** Has the lionfish invasion of The Bahamas resulted in the predicted negative consequences to the fisheries sector?
- **Graham, Roxanne*** Development of a policy analysis and comparison tool to support decision making and coherence in the context of marine debris management
- **Guifarro, Zara** Assessing the effectiveness of topical antibiotics in treating corals affected by Stony Coral Tissue Loss Disease in Roatan, Honduras.
- **Gutierrez, Luis** An Updated Red List Assessment of Endemic Reef-Building Corals in the Caribbean
- **Hagedorn, Samantha** Modification of a lobster trap to catch the invasive lionfish (*Pterois* spp.)
- **Henry, Tyann** Connectivity of Populations and Gene Flow in Tobago's Queen Conch Resources
- **Horton, Argel** A Cross-Sectorial Approach in the Monitoring and Treatment Efforts of SCTLD In The British Virgin Islands
- **Jaggernaut, Adara** Community Participation in Monitoring for Stony Coral Tissue Loss Disease in St. Vincent and the Grenadines and Grenada
- **Johnson, Nikita** From data to change: single use plastic ban in Roatan Honduras
- **Johnston, Sarah** Spatial Patterns of Trawling Vessels around Louisiana's Artificial Reefing Zones
- **Lennon, Ellery*** Seascape attributes driving mangrove-associated fish assemblages in South Biscayne Bay
- **Matos-Carballo, Daniel** Puerto Rico's Commercial Fishery Census 2019: The fishing industry in the two years after Hurricane Maria
- **Matos-Carballo, Daniel** Overview of Spiny Lobster *Panulirus argus* Puerto Rico's Commercial Fishery Carapace Length Data 1990-2019
- **McConney, Patrick** Thinking of stewardship in Caribbean small-scale fisheries
- **Millender, Anna*** Defining the reproductive biology of two species of cownose ray, *Rhinoptera bonasus* & *Rhinoptera brasiliensis*, in the northern Gulf of Mexico
- **O'Sullivan, Christine** Caribbean-Centered Collaborations in Response to Stony Coral Tissue Loss Disease in 2021

POSTER SESSION: LIST OF AUTHORS

- **Ospino-Sepulveda, Leonardo** Methodological direction and support to the management and environmental planning of the Colombian Coastal Zone
- **Oudith, Shirlena** Comparative analysis of liquid fish silage fertilizer versus urea on the plant vegetative and yield performance of Pak-choi (*Brassica rapa* subsp. *chinensis*)
- **Patrone, Will*** Using fish count surveys to examine the spatial and temporal distribution of the invasive lionfish *Pterois volitans* in the Florida Keys
- **Pena, Maria** Leadership in Caribbean fisherfolk organisations: a profile, capacities and gaps, and strengthening
- **Pierce, Sarah** Florida Fish & Wildlife's adaptive control strategies to combat invasive lionfish
- **Pizarro, Valeria** Stony Coral Tissue Loss Disease (SCTLD) spread in an artificial coral community: from coral susceptibility to management suggestions
- **Pratt, Meredith** Atlantic Sailfish (*Istiophorus albicans*) Distribution off the East Coast of Florida from 2003 to 2018 in Response to Sea Surface Temperature
- **Prato Valderramma, Julian** Variation on barrier reefs compositions and implications for wave attenuation ecosystem service at San Andrés Island, Seaflower Biosphere Reserve, Colombian oceanic Western Caribbean
- **Rivera Hernández, Jesús** Building Capacity for Sustainable Fisheries Management in the U.S. Caribbean: Application of 14C to validate ageing estimation for Caribbean parrotfishes
- **Sabido Itza, Miguel** Perception of artisanal fishermen on the invasion, control and affectation of lionfish in the Mexican Caribbean.
- **Santiago Soler, Wilson** Building Capacity for Sustainable Fisheries Management in the U.S. Caribbean: Age and growth of blackfin snapper from Caribbean waters.
- **Sherman, Krista** Population genomics and acoustic telemetry of Nassau grouper reveal fine-scale population structure and origins of aggregators
- **Shervette, Virginia** Caribbean hogfish population demographics
- **Small, Micaela** Impacts of cruise ship anchoring during COVID-19: Lessons worth sharing
- **Studivan, Michael** Optimizing stony coral tissue loss disease intervention strategies through whole-transcriptome gene expression profiling
- **Tittl, Jessica** Microbiome Characterization of Healthy and Diseased *Meandrina meandrites* and the Impact of Antibiotics on the Microbiome
- **Valek, Jessica** Changes in invasive lionfish age structure following the emergence of an ulcerative skin disease
- **Vega Cabrera, Alejandra Maria** Criteria for the environmental management of the Ramsar site Estuarine Delta System of the Magdalena River Cienaga Grande de Santa Marta, Colombian Caribbean
- **Voss, Justin** Investigating imposex and reproductive anomalies in Queen Conch, *Aliger gigas*, around Port Everglades, FL
- **Zajovitz, Sarah** Yellowtail snapper age and growth in northern Caribbean waters
- **Zambrano, Someira** Monitoring coral diseases in the Dominican Republic: an inclusive plan to understand a serious threat for Caribbean corals

WEDNESDAY 10TH NOVEMBER

KEYNOTE PRESENTATION| 9:00 - 10:30 (EST)



GCFI74 KEYNOTE: DR. WILL PATTERSON *Gulf and Caribbean Data Limited Reef Fisheries: New Approaches to Assessment for Effective Management*

Dr. Will Patterson is a Professor of Fisheries and Aquatic Sciences in the School of Forest, Fisheries, and Geomatics Science at the University of Florida. He and his research team examine population dynamics, trophic ecology, movement ecology and population connectivity, and habitat utilization of marine fishes, with reef fish ecology being an area of focus. They employ technology, such as mini remotely operated vehicles, large-scale three-dimensional telemetry, and genetics/genomics approaches, to address otherwise intractable problems in reef fish ecology.

Dr. Patterson serves on state, regional, and national advisory panels in which research products produced by multiple investigators are incorporated into fisheries assessment and management within a peer-review framework.

PANEL DISCUSSION | 10:45 - 12:00 (EST)

Exploring Reef Related Fisheries in the Wider Caribbean

Panelists: Christy Pattengill-Semmens, David Kochan*, Jack Olson, Laura Jay Grove, Gretchen Goodbody-Gringley, Katherine Overly*, Léa Vignaud*, Anna Millender*

Moderator: Brice Semmens (Scripps Institute of Oceanography)

PANEL DISCUSSION | 12:00 - 13:15 (EST)

The Mystery of Fish Spawning Aggregations: Opportunities for Monitoring and Management

Panelists: Brice Semmens, Martha C Prada, Ronald Hill, Haibo Xu

Moderator: Martin Russell (SCRFA)

PANEL DISCUSSION | 12:00 - 13:15 (EST)

Megafauna & Pelagic Species: Understanding the Giants of the Wider Caribbean Regions

Panelists: Jeffrey Bernus, Jaime Bolanos, Carissa Gervasi*, Elsa Gutierrez*

Moderator: TBC

CINEFISH FILM FESTIVAL | 18:00 - 20:00 (EST)

WEDNESDAY 10TH NOVEMBER

CINEFISH FILM FESTIVAL | 18:00 - 20:00 (EST)

Gather your family and friends and enjoy the CINEFISH Film Festival At Home!



MEET STONY: This animated cartoon was used as an educational tool to teach persons in the British Virgin Islands (BVI) about what corals are, why they are important, the emergence of stony coral tissue loss disease (SCTLD) in the BVI, and how SCTLD was treated and managed via public-private partnerships.

Filmmakers: National Parks Trust of the Virgin Islands, Ministry of Natural Resources, Labour and Immigration, Unite BVI, the Governor's Office, and Misen Animation Studio (A Misen Creative Group company).



BAHAMIAN QUEEN CONCH - SHARING KNOWLEDGE FOR A SUSTAINABLE FISHERY: The Nature Conservancy (TNC) Bahamas program through its FishPath process connected researchers with conch fishers across multiple Bahamian islands to share important research and gather input from local communities to help inform management for the Queen Conch fishery. Through this exchange of knowledge, fishers learned how they can help restore Queen Conch populations, and TNC learned about the issues fishers are experiencing on a daily basis that threaten their livelihoods.

Filmmaker: Torrey Johnson



MISSING SHARKS is a journalistic investigation about shark hunting in Panama with the aim of raising awareness about the need for them in the ocean. The shark is demonized every day by the media and the movies and is suffering greatly from this. With this documentary we seek to change the reputation of the most feared animal in the ocean in order to protect it.

Director: Martina Alvarez. **Filmmakers:** Augusto Fernandez, Mike Bolton **Post production:** Jazmin Levis **Sound:** Bufanda Productora & Felix Alvarez



ENGAGING BELIZEAN FISHERS THROUGH MANAGED ACCESS: Belize Audubon Society highlights how a combination of live on board chats known as "Boat to Boat" and managed access are used to strengthen relations with fisherfolk of Lighthouse Reef Atoll towards sustainable fisheries management.

Filmmaker: Belize Audubon Society



GILLNET DOCUMENTARY: In 2015, Oceana produced a documentary about the use of gillnets in Belizean waters. This short film gives insight into how many local fishers felt about this indiscriminate fishing gear at a time when it was still legal. After years of Belizeans voicing their concerns, in November 2020, the Government of Belize officially banned the possession and use of gillnets in Belize.

Director: Oceana and Alex Ellis

WEDNESDAY 10TH NOVEMBER

CINEFISH FILM FESTIVAL | 18:00 - 20:00 (EST)

Gather your family and friends and enjoy the CINEFISH Film Festival At Home!



FISH SMART: This 4-min film is a call to action from fishers to their colleagues in the Wider Caribbean. It includes the description of the behavior that characterizes the species that aggregate to spawn, and the reasons why it's bad business to fish an FSA. It's also a call -from fisher to fisher- to participate in the decision making process and the search for alternatives; and ultimately FISH SMART, by protecting the spawning of these species.

Filmmaker: Ana Salceda / BelugaSmile Productions



TI WHALE AN NOU: This movie transcribes the work of an association, the Caribbean Cetacean Society founded by Jeffrey Bernus. This NGO works for the protection of cetaceans in the Caribbean and the movie shows a typical expedition at sea.

Filmmaker: Theo Stora & Esther Van de Pas



TOWARDS THE SUSTAINABLE MANAGEMENT OF SHRIMP TRAWLING & ITS BYCATCH: This audiovisual piece shows the problem of shrimp bycatch in Colombia in the social, economic, environmental and political fields, highlighting how the REBYC-II LAC project using the ecosystem approach with participation of the environmental and fishing authorities, including the users, have contributed to a change in the management balancing ecological and human wellbeing through good governance.

Filmmaker: FAO and Coastal Research Institute "Jose Benito Vives de Andreis" -Invemar.



NASSAU GROUPEL AGAINST THE CLOCK: Call to action addressed to decision-makers and enforcement officials that promotes the closed season for Nassau grouper from December to March. It shows the critical status of this species throughout the wider Caribbean, and the success stories documented by scientists studying its recovery within properly enforced, protected areas.

Filmmaker: Ana Salceda / BelugaSmile Productions



SWEET AND SOUR - A STORY SHARED BY MANY: This film is a short version of a 45min documentary, about how the dive industry and its people experience and survive the COVID-19 pandemic in Indonesia. In this short version, the film focuses on the relationship between people and their natural world in which they live and work. An underwater world impacted by the sanitary crisis, which has to face new challenges. This short movie is a message of struggle, adaptation and hope that all started with the world's lockdown in March 2020 and still continues to this day.

Filmmakers: Travel2Sea Productions

THURSDAY 11TH NOVEMBER



PANEL DISCUSSION | 9:00 - 10:15 (EST) **Lessons Learnt from the Tropical Western Atlantic Lionfish Invasion: Recommendations for the Mediterranean and Brazil**

Panelists: Holden Harris, Stephanie Green, Kaylin Clements, Alexandra Davis, Aylin Ulman, Melanie Esch*

Moderator: Alex Fogg (Ookaloosa County)

PANEL DISCUSSION | 10:15 - 11:30 (EST) **Exploring the Habitats of the Wider Caribbean Region: Opportunities for Research and Sharing of Best Practices**

Panelists: Robert Ellis, Antonella Rivera, Kelly Kingon, Francesca Pella, Iris George, Lizzie McNamee, Lisa Chong*

Moderator: Tony Marshak (NOAA)

PANEL DISCUSSION | 11:45 - 13:00 (EST) **Invertebrates & Aquaculture: Opportunities for Restoration and Management in a Changing Climate**

Panelists: Megan Davis, Elizabeth Duermit-Moreau*, Katherine Rose, Wilmelie Cruz Marrero, Miguel Mateo Sabido Itzá

Moderator: Richard Appeldoorn

PANEL DISCUSSION | 13:00 - 14:15 (EST) **Science, Data and Innovation**

Panelists: Tony Marshak, Tabitha Stadler, Christopher Cusack, Megan Davis, Jessica Quinlan*

Moderator: Read Hendon (USM)

STORY SLAM | 18:00 - 19:30 (EST)

FRIDAY 12TH NOVEMBER

PANEL DISCUSSION | 9:00 - 10:15 (EST)

Vulnerability of Coastal Habitats and Communities to Climate Change: Causes, Impacts and Solutions

Panelists: Eduardo Bone Moron, Desireé Hernández-Narváez, Caren Eckrich

Moderator: Environmental Defense Fund

PANEL DISCUSSION | 10:15 - 11:30 (EST)

Science, Management, and Solutions to Address Marine Litter in the Wider Caribbean Region

Panelists: La Daana Kanhai, Dalila Aldana Aranda, Joel Baziuk, Tricia Lovell, Erin Kimak

Moderator: Christopher Corbin (UNEP Caribbean Environment Program)

SPECIAL SESSION | 11:45 - 13:00 (EST)

Launch of the International Year of Artisanal Fisheries and Aquaculture (IYAFA)



FRIDAY 12TH NOVEMBER

KEYNOTE PRESENTATION| 13:00 - 14:30 (EST)



GCFI74 KEYNOTE: DR. DAVID GILL

Towards Effective & Equitable Marine Conservation

Dr. David Gill's research centers on marine coupled human-natural systems, focusing predominantly on marine management and tropical coral reef systems. Overall, his research aims to provide evidence-based insights into how marine management and conservation can lead to equitable and sustainable outcomes. This work is by nature both interdisciplinary and collaborative, drawing on key theories and analytical approaches from disciplines such as economics, community ecology, and political science, and working alongside researchers and practitioners to co-develop salient research questions, approaches and dissemination pathways.

His recent work includes global and regional assessments of the social and ecological impacts of marine conservation, valuation of economic dependence on coral reefs, and developing cost-effective approaches for monitoring socioecological systems in capacity-limited regions. David holds an MSc and PhD from the Centre of Resource Management and Environmental Studies, University of the West Indies, Barbados. His post-graduate career included two years as a Luc Hoffmann Fellow at the National Socio-Environmental Synthesis Center (SESYNC; 2014-2016) and a David H. Smith Conservation fellowship (2016-2018) based at George Mason University and Conservation International.

GCFI74 CLOSING CEREMONY | 14:30 - 15:00 (EST)



MONDAY 15TH NOVEMBER

SPECIAL WORKSHOP: TO CARI'MAM AND BEYOND **Hosted by Agoa Sanctuary (French Biodiversity Agency)**

The CARI'MAM project, standing for Caribbean Marine Mammals Conservation Network, co-funded by European Interreg funds, aims to strengthen the network of marine protected areas and organizations dedicated to the protection of marine mammals in the Greater Caribbean Region. While the funding ends in November 2021, the objective is to keep this network of highly dedicated people alive.

The objective of this workshop is to wrap up three years of common actions, related to monitoring, capacity building, awareness raising and management of marine mammals in the Caribbean, and share new interesting discoveries about these species. This meeting will be a major step to organize the follow up for the next years, reinforce old partnership and create new cooperation opportunities.

Contact: For more information or to become involved in this workshop, please email **Gérald Mannaerts** (gerald.mannaerts@ofb.gouv.fr)



CARI'MAM



WEDNESDAY 17TH NOVEMBER AND THURSDAY 18TH NOVEMBER | 3-6PM (EST)

SPECIAL WORKSHOP: REGIONAL CARIBBEAN BEST PRACTICE ALDFG CROSS-SECTORAL SOLUTIONS

**Hosted by the Global Ghost Gear Initiative (GGGI) and the
Caribbean Node of the Global Partnership on Marine Litter**

This workshop will be built on the foundations laid by a series of very successful joint FAO/GGGI ALDFG workshops held in 2019 in Vanuatu, Indonesia, Senegal and Panama respectively. This workshop will draw most heavily on the workshop delivered in Panama City in November, 2019, as many of the outcomes and lessons learned will be most directly attributable to the Caribbean region. Drawing on the extensive networks of both GCFI and GGGI, this workshop will bring together stakeholders from all over the Gulf and Caribbean region to discuss ALDFG in a regional context, gather relevant data and insights from local fishers and community members, and discuss the best methods to address ALDFG successfully in the Caribbean context. This workshop will draw on the GGGI Best Practice Framework for the Management of Fishing Gear as a way to frame the discussion and the various workshop activities.

**For more information, or to become involved in this workshop, please email
gpml-caribe@gcfi.org**

