



TEXAS A&M  
UNIVERSITY  
CORPUS  
CHRISTI

HARTE  
RESEARCH INSTITUTE  
FOR GULF OF MEXICO STUDIES

2016

**Fellowships  
Scholarships  
and  
Internships**

# MANY THANKS

When Ed Harte founded the Harte Research Institute for Gulf of Mexico Studies in 2000, he directed us to “make a difference.” One of the ways we do that is by seeking support to fund the needs of our students and research programs. This report profiles HRI students, visiting faculty and workshops that are funded by donors sharing Ed’s vision. HRI is housed on a growing campus with a student population increasingly in need of financial support. Our endowments, scholarships and internships enable us to educate the next generation of researchers whose work will ensure an economically and ecologically sustainable Gulf of Mexico. With the aid of our donors, we funded a total of 35 doctoral, masters and undergraduate students in 2016. As Texas A&M University–Corpus Christi seeks to become an Emerging Research University, the support of our donors in attracting world–class students, researchers and international collaborators is more important than ever before. We thank them for their generosity.



Larry McKinney, PhD  
Executive Director

# Crutchfield Fellowship Endowment

In May 2012, the Crutchfield Fellowships were established by John H. Crutchfield in honor of his late father, John W. Crutchfield. The purpose of the endowment was to fund educational expenses for Harte Research Institute masters and doctoral students. These expenses include, but are not limited to, tuition, books, travel to meetings and workshops, and necessary research supplies or equipment.

Since inception, this endowment has provided \$172,500 in funding for students. For fiscal year 2016 the fellowship was able to fund nine students with \$60,500.

Our 2016 Students...

Crutchfield Fellow

## Elizabeth Del Rosario

### Hometown

*Canton, Missouri*

### PhD Student

*Coastal and Marine Systems Science*

### Dissertation

*Water resource management in Texas as it pertains to Senate Bill 3*

**Graduation Date:** *May 2020*



Elizabeth Del Rosario is a Ph.D. student in the Coastal Marine System Science program at Texas A&M University–Corpus Christi. She received her M.S. in Environmental Science from Texas A&M University–Corpus Christi. She received her B.S. in Fisheries and Wildlife Science, B.A. in Biology, and minor in Natural Resources from the University of Missouri–Columbia. Elizabeth's research focus is in marine policy with Dr. Richard McLaughlin and co-chair Dr. Paul Montagna. Her emphasis area is in water resources management, freshwater inflow policy and regulation. Elizabeth has received the NOAA EPP ECSC fellowship to support her research. Her M.S. thesis research focused on pumped inflow via the Rincon Bayou Pipeline into the upper delta of the Nueces Estuary, TX. She is a co-author on several publications for the Coastal Bend Bays and Estuaries Program and has a forthcoming publication in the Texas Water Journal.

Crutchfield Fellow  
**Amanda Gordon**

**Hometown**

*San Antonio, Texas*

**MS Student**

*Fisheries and Mariculture*

**Thesis**

*Freshwater inflow effects on mobile epifauna and estuarine dependent crustaceans in Rincon Bayou in the Nueces Delta*

**Graduation Date:** *August 2016*



Amanda M. Gordon received her B.S. in Biology from Texas A&M University – San Antonio in 2012, followed by a volunteership with the A.E. Wood Fish Hatchery in San Marcos, TX. Her A&M system experience and hatchery experience encouraged her to pursue a degree in Fisheries and Mariculture at A&M – Corpus Christi. Amanda entered the program in 2014 under the advisement of Dr. Paul A. Montagna. Her research with Paul investigated higher trophic dynamics of the Rincon Bayou epifaunal community. This research was an additional contribution to an ongoing marsh restoration project studying the impacts of reduced freshwater in the Nueces Delta, Corpus Christi, Texas. Amanda is currently working as an adjunct in the Biology departments of both her alma maters and has accepted a position with Global Blue Technologies Shrimp Hatchery in Taft, Texas, beginning early December.

Crutchfield Fellow  
**Meredyth Herdener**

**Hometown**  
*Reno, Nevada*

**MS Student**  
*Marine Biology*

**Thesis**  
*Effect of salinity changes on the macrofauna species of the Upper Rincon Bayou, TX*

**Graduation Date:** *December 2015*



Meredyth Herdener recently graduated from Texas A&M University — Corpus Christi with her master’s degree in marine biology. While completing her graduate work, Meredyth was the primary investigator for a government-funded project, collaborating with both internal team members as well as with government officials and stakeholders. She was also in charge of project management, data compilation, and statistical analysis, quarterly progress and budget updates as well as a final report and a public presentation of results. Meredyth volunteered at the Texas State Aquarium as both an exhibit guide and as a volunteer at the shore bird rehabilitation facility at SeaLab. Following her graduation she completed four-month internships with both Mote Marine Lab for manatee husbandry and the Navy Marine Mammal Program for sea lion and dolphin husbandry and training.

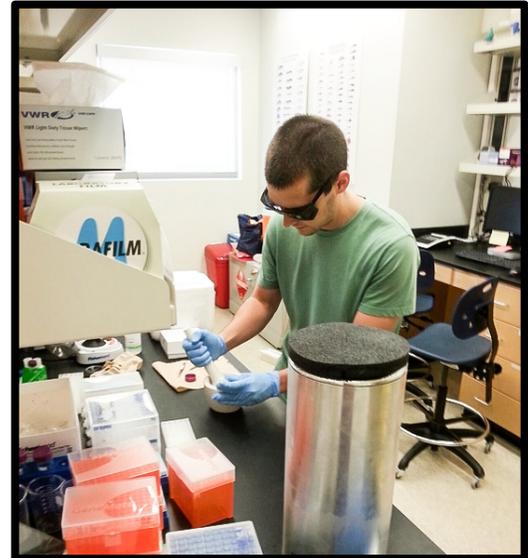
Crutchfield Fellow  
**Christopher Hollenbeck**

**Hometown**  
*Bastrop, Texas*

**PhD Student**  
*Genetics*

**Dissertation**  
*Genomic studies of Red Drum in U.S. waters*

**Graduation Date:** *May 2016*



Chris Hollenbeck has worked on the molecular genetics of fishes since he was an undergraduate, and has been involved in a number of studies. His dissertation research used genomics to address issues in population genetics and the conservation of natural resources. Specifically, his research investigated ways that next-generation DNA sequencing and genetic mapping can be used to understand population dynamics of red drum, a marine fish species of considerable economic importance in the Gulf of Mexico and along the U.S. southeast coast. Chris received a B.S. in Biology in 2009 from Texas A&M University and a Ph.D. in Genetics from Texas A&M University.

Crutchfield Fellow  
**Melissa Rohal**

**Hometown**  
*Columbus, Ohio*

**PhD Student**  
*Coastal and Marine Systems Science*

**Dissertation**  
*Ecosystem services provided by benthic infauna of the offshore environment in the Gulf of Mexico*

**Graduation Date:** *Fall 2018*



Melissa Rohal is a Doctoral Candidate in Coastal and Marine System Science working under Dr. Paul Montagna in Benthic Ecology. A native of Columbus Ohio, her dissertation research explores the role and value of microscopic animals living on or in the sediment. She holds a Master's Degree in Biological Oceanography from Florida State University under the advisement of Dr. David Thistle and a Bachelor's of Marine Science from Coastal Carolina University. Prior to her time in Florida she worked at the Columbus Zoo and Aquarium and as a marine mammal observer in the Gulf of Mexico. While at Texas A&M – Corpus Christi she has served as the adjunct professor of Oceanography, the adjunct professor of Environmental Biology, and is a member of the science fair scientific review committee. She was also a participant of the East Asian and Pacific Summer Institute where she studied in South Korea for two months under Dr. Wonchoel Lee learning taxonomic identification techniques.

Crutchfield Fellow  
**Matthew Streich**

**Hometown**  
*Lilburn, Georgia*

**PhD Student**  
*Marine Biology*

**Dissertation**  
*Ecology of Red Snapper in the western Gulf of Mexico: Comparisons among artificial and natural habitats*

**Graduation Date:** *December 2016*



Matthew “Matt” Karl Streich attended the University of Georgia and majored in Fisheries and Aquaculture at the Warnell School of Forestry and Natural Resources. During his undergraduate work he spent several field seasons assisting with research on endangered sturgeon populations in the Altamaha River Estuary near Darien, Georgia. Matt’s undergraduate thesis research investigated the use of the estuary as a nursery for Bull Sharks. After graduating with a Bachelor of Science degree in May 2010, Matt continued at the University of Georgia where he earned a Master of Science degree under the supervision of Dr. Doug Peterson in August 2012. In collaboration with the Georgia Department of Natural Resources, Matt’s thesis research focused on the seasonal residence and habitat use of Tripletail in the estuarine waters of Ossabaw Sound near Savannah, Georgia. Matt then moved to Texas, entering the doctoral program at Texas A&M University-Corpus Christi in fall 2012. There he joined the Fisheries and Ocean Health Laboratory of Dr. Greg Stunz at the Harte Research Institute for Gulf of Mexico Studies to begin his research of artificial reefs and Red Snapper. Matt is a member of the American Fisheries Society and has presented his research at various local, regional, and national conferences. He is also an avid sportsman and a member of the Coastal Conservation Association and Ducks Unlimited. Matt will earn a Doctor of Philosophy degree in Marine Biology from Texas A&M University in December 2016. Following graduation, he will begin a position as a post-doctoral research associate in the Center for Sportfish Science and Conservation at the Harte Research Institute for Gulf of Mexico Studies.

Crutchfield Fellow  
**Heather Wade**

**Hometown**  
*Austin, Texas*

**PhD Student**  
*Coastal and Marine Systems Science*

**Dissertation**  
*Coastal resiliency in the built and natural environments, social vulnerability to coastal hazards, and the effect of sea level rise and coastal flooding on ecosystem services*

**Graduation Date:** *Spring 2018*



Heather Wade is a PhD student in the Coastal and Marine Policy and Law Program under Dr. Richard McLaughlin. Wade's research focuses on how coastal planning, management, and policy can be used to enhance coastal resilience to flooding and sea level rise in the built and natural environment. Her research interests include coastal hazards, wetland ecosystem services, modeling, coastal policy, and land use planning. Wade is the Associate Director of the Texas Sea Grant College Program. She leads strategic planning, reporting, and database management for the program. She is also responsible for the organization's sponsored projects portfolio. Wade joined the staff in June 2011 as the program's and state of Texas' first Coastal Planning Specialist. She developed and implemented the coastal planning program to provide planning expertise and assistance to coastal communities and natural resource managers. She provided technical assistance to urban planners and coordinated and facilitated small and large workshops related to land use and environmental planning. In 2015, Wade took a position with the State of Oregon as the Coastal State-Federal Relations Coordinator for the Oregon Coastal Management Program and Department of Land Conservation and Development. She received a bachelor of science in Environmental Studies with minors in Geography and Earth Sciences from Texas A&M University and a Master of Urban Planning with a focus on Land Use and Environmental Planning with a certificate in Environmental Hazards Management, also from Texas A&M University.

Crutchfield Fellow  
**Travis Washburn**

**Hometown**

*Nixa, Missouri*

**PhD Student**

*Marine Biology*

**Dissertation**

*The impacts of oil on macrofauna and humans in the deep Gulf of Mexico*

**Graduation Date:** *May 2017*



Travis Washburn received a Master of Marine Science from the College of Charleston and a Bachelor of Science in marine science/biology from the University of Alabama. His focus of study is benthic ecology or animals that live in the sediment. His dissertation research examines macrobenthic communities in the deep Gulf of Mexico, using the communities to examine effects of the 2010 Deepwater Horizon spill on the deep-sea environment, describe communities associated with natural hydrocarbon seeps, and explore ways in which the deep sea benefit humans. Travis has taken part in several research cruises during the DWH response and assessment as well as for C-Image. Recently, he participated in University-National Oceanographic Laboratory System training activities, and a stakeholder's workshop exploring deep-sea ecosystem services. Travis was also on the coordinating committee for the 2016 BLUE on Tour – Corpus Christi Film Festival and was one of the founders of the BLUE Gulf Film Competition. He has published studies examining the effects of development on coastal watersheds, ecosystem services associated with the deep Gulf of Mexico, and benthic indicators of deep-sea oil spills.

Crutchfield Fellow  
**Danielle Zimmerman**

**Hometown**  
*Katy, Texas*

**MS Student**  
*Marine Biology*

**Thesis**  
*Effects of salinity and disease on scope for growth of oysters *Crassostrea virginica**

**Graduation Date:** *December 2017*



Danielle Zimmermann is a master's student in marine biology currently studying the effects of salinity and disease on oyster growth under the direction of Dr. Jennifer Pollack in the Coastal Conservation and Restoration Ecology lab. When she was younger, she dreamed of becoming a marine biologist, and as a graduate student at HRI Danielle gets to live that dream daily. Since beginning her graduate education she has participated in numerous research projects, many of which focus on the conservation of the Texas coast. Danielle enjoys being involved in outreach programs like the "Sink Your Shucks" oyster reef recycling program that help educate the public about oyster reef restoration and how they can help by recycling oyster shells. In her personal life Danielle spend as much of her time outdoors as possible. She loves to go fishing and scuba diving, and enjoys volunteering for the Houston Livestock Show & Rodeo, where her main focus is to raise money for youth educational programs.

# Furgason Fellowship Endowment

In June 2007, the Furgason Fellowships were established by Ed Harte and Joe Hornblower in honor of Dr. Robert Furgason, President Emeritus of Texas A&M University-Corpus Christi and founding Executive Director of the Harte Research Institute for Gulf of Mexico Studies. The purpose of the endowment is to fund teaching and research fellowships at HRI exclusively from Mexican or Cuban universities. In August 2010, the purpose of the fellowship was expanded to include funding of conferences, workshops, and symposia on subjects related to the Gulf of Mexico.

Funding expended during fiscal year 2016 totaled \$58,000.

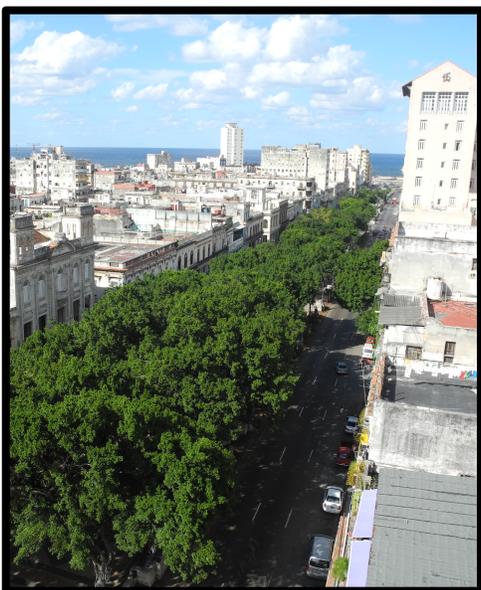
This year's funding supported two efforts...

## Ferguson Visiting Scholar – Dr. Patricia Arceo Briseño

HRI hosted Dr. Patricia Arceo Briseño of the Institute of Marine Sciences and Fisheries at Universidad Veracruzana in Veracruz, Mexico. Dr. Arceo –whose research interests include socio-economics, the economic evaluation of environmental services and fisheries economics and management – spent a year-long sabbatical at HRI beginning in summer 2015.



## Workshop on International Governance



Improving relations between the US and Cuba will bring opportunities to foster new working relationships and prepare for the potential impacts that exponential growth in Cuban tourism may have on the Gulf of Mexico. To encourage international collaboration in the next generation of Gulf marine researchers tackling these issues, HRI will host its Ferguson Fellowship International Student Workshop in Cuba for the first time. The workshop will focus on emerging issues surrounding tourism and environmental protection, as changes in U.S. travel restrictions are expected to bring new waves of visitors, putting increased pressure on the industry and environment. Ways to incorporate ecotourism into the budding Cuban tourist economy will also be explored.

# Margaret “Maggie” Bains Scholarship

In May 2013, the Margaret “Maggie” Bains Scholarship was established by the Chapel in the Hills Interdenominational Church in Wimberley, Texas, the Harte Research Institute for Gulf of Mexico Studies, and her former co-workers from the Harte Research Institute. Maggie, a former lab assistant at HRI, was recognized for her years of dedication to marine science with the establishment of an endowed scholarship in her name.

Beginning in fiscal year 2016, scholarships are ready and available to students.

About Maggie...

# Ageless Science

In 2006, Maggie became part of the HRI team, accepting a part-time job sorting Antarctic benthic samples in Dr. Paul Montagna's benthic ecology lab. She worked in the benthic lab studying samples of animals and plants living at the bottom of seas and lakes, and found her second career with HRI after more than 30 years teaching in Texas public schools.

Maggie retired again in 2011 and Montagna, Endowed Chair for Ecosystems and Modeling, says that in the short time she spent working with his benthic group, Maggie had a tremendous impact on the success of the research program. "Maggie is an inspiration to generations of marine biologists because her love of marine critters is so apparent and infectious.

*"It thrills me to know that this scholarship will help pass my love for marine science on to a new generation and help them acquire valuable knowledge about the Gulf of Mexico" – Maggie Bains*

Wimberley, Texas

BS Biology  
Rice University

MS Marine Zoology  
Texas A&M University Galveston

Taught in Texas Public Schools for over  
30 Years



# Dr. John “Wes” Tunnell Jr. Fellowship

In April 2016, a new fellowship was established to continue the teaching legacy of long-time educator, author and marine scientist Dr. Wes Tunnell, Harte Research Institute (HRI) for Gulf of Mexico Studies Endowed Chair for Biodiversity and Conservation Science. The fellowship will support a Mexican or American graduate student with a commitment to research in Mexico while he or she pursues graduate education at HRI. The Harte Charitable Foundation will establish the fellowship program in perpetuity, funding the program at \$50,000 per year for the first eight years before establishing a \$1 million endowment.

About Dr. Tunnell...

# Local Legend

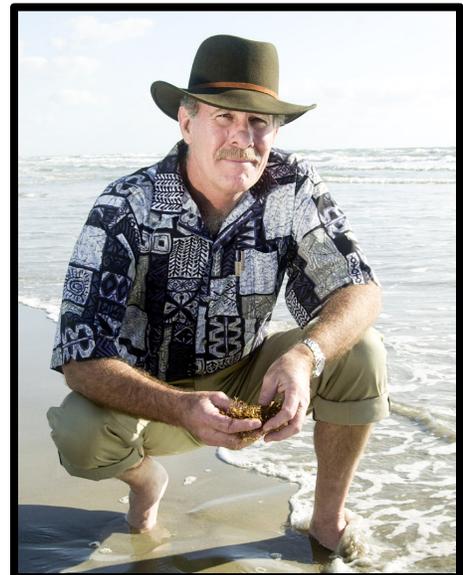
Dr. Wes Tunnell is a marine ecologist and biologist focusing primarily on coastal and coral reef ecosystems, and has been studying the banks off South Texas since his graduate research work in the late 1960s. He is founder and former Director of the Center for Coastal Studies, and he assisted in the development of the Harte Research Institute, served as its first Associate Director and helped design its building. Tunnell also assisted in the development of two Bachelor of Science degree programs along with four master's degree and two doctoral programs at Texas A&M–Corpus Christi. Tunnell was also instrumental in establishing seven graduate student scholarships in the Center for Coastal Studies and has advised or co-advised 70 M.S. students, 7 Ph.D. students and 4 post-doctoral research associates. For 32 years, Tunnell taught Coral Reef Ecology, taking students on two-week field trips to Veracruz and the Mexican Caribbean as part of an international teaching and research program. One of 18 classes Tunnell taught over the course of his career, he was known for making classrooms out of the deck of a boat and conducting his lectures while wearing scuba gear.

**Taft, Texas**

**BS Biology and MS in Biology**  
Texas A&I University  
(now Texas A&M University – Kingsville)

**PhD Biology**  
Texas A&M University

Dr. Tunnell has published over 115 articles, book chapters, and proceedings papers, as well as seven books



# R.N. “Dick” Conolly Endowed Scholarship

In August 2008, the R.N. “Dick” Conolly Scholarship was established by the Rotary Club of Corpus Christi to assist deserving full-time graduate students pursuing a master’s or doctoral degree at Texas A&M University–Corpus Christi. Funding is available to students at the Harte Research Institute for Gulf of Mexico Studies with a program of study within the research focus areas of fisheries conservation, particularly those in the Center for Sportfish Science and Conservation with HRI.

Beginning in fiscal year 2016, scholarships are ready and available to students through Dr. Greg Stunz, Endowed Chair for Fisheries and Ocean Health.

About Dr. Conolly...

# Gentleman Conservationist

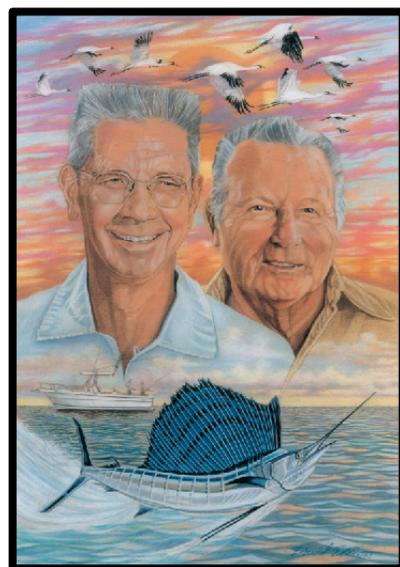
Gentleman Conservationist – a term coined locally that best described Richard Noble “Dick” Conolly. He moved to Corpus Christi as a young boy working his way through high school then going on to Texas A&M University (TAMU), earning a degree in Agriculture Economics and a member of the ROTC. After being discharged from the US Army Air Corps, Dick became a successful businessman who contributed both time and money to Corpus Christi and TAMU. Some of his favorite pastimes were fishing and hunting. When his good friend Harvey Weil passed away, Dick Conolly raised \$1 million to establish the Harvey Weil Sportsman Conservation Trust. This trust actively supports conservation efforts and wildlife initiatives throughout South Texas.

The R.N. “Dick” Conolly Scholarship was established by this trust and is managed by the Rotary Club of Corpus Christi.

**Born**  
Athens, Georgia

**Home**  
Corpus Christi, Texas

**Bachelor’s Agriculture Economics, 1937**  
Texas A&M University



Conolly Scholarship  
**Charles Downey**

**Hometown**

*Corpus Christi, Texas*

**MS Student**

*Marine Biology*

**Thesis**

*Reproduction and diet of Red Snapper *Lutjanus campechanus* on natural and artificial reefs in the northwestern Gulf of Mexico*

**Graduation Date: December 2016**



Chas Downey is a Master's student in Marine Biology under Dr. Greg Stunz in the Center for Sportfish Science and Conservation. His thesis research covers the value of artificial reefs in comparison to natural reefs to Red Snapper in the western Gulf of Mexico. He is evaluating the feeding habits and reproductive potential among several structure types to shed some on this important question. Growing up in Corpus Christi gave him an appreciation for the natural resources available in the area. He graduated in 2013 with a Bachelor's Degree from Texas A&M University – Corpus Christi and wants to contribute to the conservation of the marine environment. He is also interested in film, photography, and communicating research through these media. He participated in the BLUE Gulf Film Competition by submitting a film titled "Texas Tigers: Banks and Borders".

# Texas Parks & Wildlife and Coastal Conservation Association Summer Internship Program

In May 2002, the Coastal Conservation Association-Texas (CCA) and Texas Parks & Wildlife Department (TPWD) partnered to support a summer internship program. The program was designed to give TAMUCC students hands-on experience in the field working along side state agency personnel. When the students are not in the field working with gill nets or bag seines, they are back at the office repairing gear and completing data entry. It started with one student, and the program has grown to funding seven student interns for a total of \$44,500 in 2016. This growth was possible with the addition of other partners, Mr. and Mrs. Big Tournaments. These two organizations have joined CCA in sponsoring the summer internships to expand the program. Since 2002, the internship program has provided students over \$335,000 in funding.

Summer 2016 Interns...

## 2016 Summer Interns funded by CCA-Texas

**Zach Crain**  
*Corpus Christi Bay*

**Melisa Garcia**  
*Corpus Christi ERP*

**Marie Pendleton**  
*Upper Laguna Madre*

**Julie Rohl**  
*Perry R. Bass*

**Courtney Wallis**  
*Aransas Bay*



## 2016 Summer Interns funded by Mr. and Mrs. Big Tournament



**Danielle DaVacque**  
*Upper Laguna Madre*

**Eric White**  
*Upper Laguna Madre*

# TPWD Summer Interns Since Inception

## 2002

Steven Dial

## 2003

Kevin Kolodziejczyk

## 2004

Brian Bartram

## 2005

Aaron Baxter

## 2006

Adriana Leiva

## 2007

Elani Morgan

## 2008

Paul Cason  
Sunnie Hart

## 2009

Daniel Pritchard  
Brian Witherell  
Abigail Lashbrook  
Cynthia Kelly

## 2010

Lee Schoech  
Bobby Johnson  
Jeffrey Long  
Abigail Lashbrook  
Colin Nash

## 2011

Amanda Gruber  
Nathan Gurierrez  
Aaron Otero  
James Sanchez  
Marcie Durocher

## 2012

Zaida Hager  
Nathan Huysman  
Elliot Briell  
Nicole Poluson  
Michael Birchfield

## 2013

Clinton Witherell  
Danielle Zimmerman  
David Norris  
Gloria Alacraz  
Erin Buschfort

## 2014

Sarah Kimbrough  
Meghan Martinez  
Nicole Thomas  
Maria Cooksey  
Greg Purtle  
Heidi Ballew

## 2015

Braden Gross  
Erica Phillips  
Roxie Miller  
Daniel Lord  
Courtney Knauer  
Julie Rohl  
Autumn Torres  
Drew Duarte

## 2016

Eric White  
Danielle DeVacque  
Marie Pendleton  
Courtney Wallis  
Zach Crain  
Melisa Garcia  
Julie Rohl

*Thank you for investing in our students whose work will make a difference in the Gulf of Mexico for years to come.*



If you wish to contribute, please contact us at 361-825-2020 or [info@harterresearchinstitute.org](mailto:info@harterresearchinstitute.org)



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