A quarterly publication of the Louisiana Sea Grant College Program at Louisiana State University, Baton Rouge

Oyster Hatchery on Grand Isle Opens

Officials with Louisiana Sea Grant (LSG) and the Louisiana Department of Wildlife and Fisheries (LDWF) celebrated on Aug. 12 the opening of the newly constructed Michael C. Voisin Oyster Hatchery on Grand Isle.

Construction on the oyster hatchery began in April 2013. The elevated and temperature-controlled hatchery features a state-of-the-art re-circulating water system that will enable production of hatchery-raised larvae and spat to occur year-round, significantly increasing the production capacity over previous years. The facility was funded through the Deepwater Horizon oil spill Natural Resource Damage Assessment early restoration process.

"Oysters are very important to the history and culture of our state," said LDWF Secretary Robert Barham. "This oyster hatchery is a very important tool in rehabilitating the state's valuable oyster resources in the wake of the Deepwater Horizon oil spill."

Since 1993, LSG has operated an oyster hatchery on Grand Isle in various locations. In 2005, the hatchery was destroyed by Hurricane Katrina and LSG moved its operations to the LDWF Grand Isle marine research lab, which allows LDWF and LSG to merge academic research projects and hatchery programs that benefit both the commercial harvesting sector and aid in management of the public seed grounds.

"Louisiana Sea Grant has a long history of supporting our state's oyster industry, and an equally long history of working in partnership with the Department of Wildlife and Fisheries," said Robert Twilley, LSG executive director. "With this partnership, we look forward to entering into a new commitment of research and service that benefits our state's oyster growers and harvesters."

LDWF is responsible for operating and maintaining the new oyster hatchery facility. Through an agreement with the department, LSG will provide technical direction on production of larvae and spat and training for LDWF staff under supervision of Louisiana Sea Grant and LSU AgCenter bivalve specialist John Supan.

Currently, LDWF deploys hatchery-raised oyster larvae (*Crassostrea virginica*) on the public seed grounds through remote setting spat on-shell and by deploying free swimming larvae. Approximately 13 million spat and 400 million larvae were produced each year, on average, with past operations for use by LDWF in public seed ground rehabilitation projects.

The new hatchery is capable of producing 1 billion *Crassostrea virginica* oyster larvae annually. Those larvae will be utilized by LDWF for augmentation of six early restoration cultch plants. Any excess diploid larvae will be used for various oyster rehabilitation projects on the public seed grounds.

Rep. Gordon E. Dove of Houma, through legislation, named the hatchery after the late Michael C. Voisin of Houma. Voisin, who passed away in 2013, was a respected innovator in the oyster industry and served in many leadership roles, including Louisiana Wildlife and Fisheries Commissioner and chairman of the Louisiana Oyster Task Force.

Louisiana Sea Grant Mourns the Passing of Van Lopik, Becker

Louisiana Sea Grant lost two of its founders recently.

Ron Becker, who served as associate director from 1970 through 2010, died on March 28, 2015, at the age of 86. Jack Van Lopik, who served as executive director from 1960 through 2005, died on July 31, 2015. He also was 86.

Dr. Van Lopik was the longest serving state Sea Grant director in the history of the national network. He earned his Bachelor of Science degree



Jack Van Lopik

in 1950 from Michigan State College, Master of Science in 1953 and Ph.D. in 1955 in geology from Louisiana State University (LSU). He was widely published in scientific journals on subjects ranging from lunar surface analysis, remote sensing, coastal land loss, and sedimentation and land building in the Mississippi Delta.

He worked as a hydraulics engineer for the U.S. Army Corps of Engineers, Waterways Experiment Station in Vicksburg, Miss., and in the science service division at Texas Instruments in Dallas, Tx., before returning to LSU in 1968 to implement the Louisiana

Sea Grant College Program. Dr. Van Lopik was instrumental in promoting research in various marine science programs while dean of LSU's Center for Wetland Resources from 1976-1991. He was instrumental in the study of environmental impacts of the Louisiana Offshore Oil Port (LOOP). Dr. Van Lopik also helped establish the Louisiana Sea Grant John P. Laborde Endowed Chair for Sea Grant Research and Technology Transfer in 1994.

He was preceded in death by his wife, Annagreta Hojhdal Van Lopik; parents Gerrit (Guy) M. Van Lopik and Minnie (Grunst) Van Lopik; and stepson Charles

Manning.

Mr. Becker earned a geological engineering degree from the Colorado School of Mines and spent six years on active duty in the U.S. Army Corps of Engineers. His service assignments included combat engineer units in Japan and Korea and a mobile geodetic survey detachment created before the invention of modern global positioning systems to provide the Army Map Service with precise global positioning capabilities.



Ron Becker

Later, Becker studied geotechnical engineering at Purdue University, where he earned a master's degree and completed Ph.D. course requirements. He worked at Texas Instruments before he was recruited by Dr. Van Lopik to help grow Louisiana Sea Grant into one of the most highly rated programs in the Sea Grant network.

After retiring, Mr. Becker dedicated an additional two years of service to LSG in an advisory capacity, helping to review proposals and investigating new systems for program planning and evaluation.

He is survived by his wife, LSG retired communications director Elizabeth Coleman, and a son, Michael.

New GIS Specialist Joins Sea Grant

Louisiana Sea Grant has a new GIS specialist – Rebekah Jones joined the staff in February. Her duties include developing storm surge, subsidence and sea-level rise scenarios in support of the Weather-Ready Nation program; conducting advanced analysis on environmental and socioeconomic data sets; mapping support for LSG's Sci-TEK initiative; and providing GIS support to LSG's Marine Extension personnel, with a focus on translating research into visualizations and diagrams for community outreach.

Her work also has a strong focus on coastal erosion, as Jones is manually mapping coastal oil, gas and sulfur canals and networks and coupling that information with land loss data to determine areas where land loss could be attributed to canal construction.

Before joining Sea Grant, Jones worked as a coastal resources scientist for the Louisiana Coastal Protection and Restoration Authority developing a storm surge vulnerability index, researching and testing the sensitivity of models to various climate change scenario impacts, modeling sea level rise impacts, and contributing to the state's 2017 Coastal Master Plan. Jones earned her master's degree in geography and mass communication from LSU in 2014. She completed her undergraduate studies in 2012 at Syracuse University, where she

earned degrees in geography and newspaper and online journalism.

"Rebekah will continue the efforts of Louisiana Sea Grant in developing GIS tools that can promote public



Rebekah Jones

safety from flooding during extreme weather events," said LSG Executive Director Robert Twilley. "In addition, the new GIS techniques that she brings to LSG will help support our efforts in translating Traditional Ecological Knowledge (TEK) from constituents who have a lifetime of understanding how the delta works. Such TEK can be transcribed into GIS tools that can then be used to impact decisions on best management practices for coastal resources and development."

Jones was born in Pennsylvania, but lived in south Mississippi during her formative years and finished high school back in Pennsylvania before moving to New York.

Of her affiliation with Louisiana Sea Grant and her return to the Gulf coast, Jones said, "I love being able to work out in the field, experiencing the coast rather than just studying it. The diversity of projects I'm able to work on keeps me focused and driven."

As a scientist who lived through Hurricane Katrina up-close, she said her experiences during and after the storm led her to her current work. "If I can contribute to research that helps reduce the risk of natural disasters, I'll call my career a success. I lived through Hurricane Katrina from the perspective of a Mississippi Gulf Coast resident, and I work to try to ensure that what happened then doesn't happen again," she said.

Four Join Coastal Science Assistantship Program

Four students pursing master's degrees this fall are new participants in the Coastal Science Assistantship Program (CSAP), a partnership between the Louisiana Coastal Protection and Restoration Authority (CPRA) and Louisiana Sea Grant that provides graduate students with up to three years' financial support.

CSAP students receive \$25,000 annually while working on applied coastal ecosystem restoration research important to CPRA. The program also creates a pool of researchers and scientists from which CPRA can recruit.

Sujan Baral is pursuing his master's degree in civil engineering from the College of Engineering and Science at Louisiana Tech University. His research will evaluate the anti-erosion ability of various vegetation – such as grasses and trees – for coastal protection. After earning his degree, his goal is to become a researcher in the field of civil engineering.

Meagan McCoy is working toward her master's degree in the Department of Biology at the University of Louisiana at Lafayette. Her research is designed to improve scientific understanding of how sediment diversions may influence plant community composition and productivity, and the resulting data could be utilized to further refine predictive modeling of the effects sediment diversions have on coastal ecosystems. After earning her master's degree, she plans to work in wetland restoration.

Bo Wang is pursuing a master's degree in watershed science from the School of Renewable Natural Resources at Louisiana State University. His research focuses on determining sediment accretion and availability in the lower Mississippi River. Riverine sediment is a valuable resource for Louisiana's coast, but there are some unknowns about the variability of riverine sediment and actual divertible quantity in its lowermost reach in Louisiana. His research hopes to answer some of these questions. Following graduation, Wang plans to become a hydrology and watershed researcher.

Celeste Woock is working toward her master's degree in the Department of Earth and Environmental Sciences at the University of New Orleans. She will be investigating patterns of subsidence across coastal Louisiana using a variety of datasets, such as waterlevel gauges, LIDAR, benchmarks, GPS stations and stratigraphic relationships. Short and long-term subsidence patterns remain one of the largest unknown aspects of the coastal zone and the intent of her project is to provide a better understanding of these patterns. Following graduate school, she plans to pursue a career in geophysical exploration.



Sujan Baral



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Meagan McCoy

Bo Wang



Celeste Woock

2016 Knauss Fellow Named

Casey Pickell, a May 2015 graduate of the Paul M. Herbert Law Center at Louisiana State University, has been named a Knauss Fellow. He was nominated by the Louisiana Sea Grant College Program.

The Knauss Fellowship, sponsored by the National Sea Grant College Program, provides a unique educational



experience to students who have an interest in ocean and coastal resources and national policy affecting those resources. The program matches graduate students with hosts in federal legislative or executive branch offices in Washington, D.C., for one year. Pickell's fellowship begins in February 2016.

Pickell worked as a legal intern with Louisiana Sea Grant for two years. During the summer of 2014, he received a clerkship with

Casey Pickell

the Environmental Protection Agency (EPA) and later a legal internship with the Edison Electric Institute (EEI), both in Washington, D.C.

"I found the experience interesting in how important minute technical differences can be when shaping policy that can be applied to a variety of situations," he said. "At EPA, and later at EEI, I had the opportunity to work extensively on EPA's proposed Clean Air Act regulation for reducing carbon emissions at existing power plants. By working on the rule at both EPA and EEI, I had the unique experience to write about a variety of issues from both the perspective of the government regulator and the regulated entity."

Pickell is the son of Ted and Glad Pickell of West Jefferson, NC.

After completing the fellowship, Pickell plans a career in public service. "One of my toughest decisions in college was whether I should eventually go to law school or go for a master's in public administration. While I eventually decided on the law school route, I have always made a conscious effort to position myself for a career in the public sector."

Pickell was one of 120 Knauss Fellowship applicants from across the country. Sixty were selected for the 2016 class.

Delcambre port director Wendell Verret (third from left) accepted the Spirit of Community Award on behalf of the Town of Delcambre during the Gulf of Mexico Climate Outreach Community of Practice annual meeting in St. Petersburg, Fla. Delcambre was honored for its efforts to build a more resilient community. Others at the Climate Community of Practice from Louisiana congratulating the town included (from left) Nicole Love of the Nature Conservancy, Jennifer Gerbasi from Terrebonne Parish Planning and Zoning, Lauren Land and Dianne Lindstedt of Louisiana Sea Grant, Henri Boulet of the LA 1 Coalition, and Jim Wilkins, Melissa Daigle and Katie Lea from Louisiana Sea Grant.



Photo courtesy Mississippi-Alabama Sea Grant

LaDIA Faculty Fellows Selected

Wei Xu, assistant professor, Aquaculture Research Station, LSU AgCenter





Aly Mousaad Aly, assistant professor, Department of Civil and Environmental Engineering, Louisiana State University



Katie Costigan, assistant professor, School of Geoscience, University of Louisiana at Lafayette





Tracy Quirk, assistant professor, Department of Oceanography and Coastal Sciences, Louisiana State University



Louisiana Sea Grant has selected 11 tenure-track faculty from five university campuses as 2015 LaDIA Fellows. Louisiana Discovery-Integration-Applications (LaDIA) Fellows will receive training from national experts in science communication and outreach, as well as broaden their knowledge of coastal concerns, during three workshops over the course of the 2015-16 academic year.



Malay Ghose-Hajra, assistant professor, Department of Civil and Environmental Engineering, University of New Orleans



Chris Green, associate professor, Aquaculture Research Station, LSU AgCenter

Celalettin Emre Ozdemir, assistant professor, Department of Civil and Environmental Engineering, Louisiana State University



Candace May, assistant professor, Department of Sociology and Anthropology, University of Louisiana at Lafayette





Brian Marks, assistant professor, Department of Geography and Anthropology, Louisiana State University

In 2014, LaDIA's pilot year, four fellows received communication training and worked directly with LSG Extension agents who served as outreach mentors. Fellows explored specific outreach objectives in coastal communities and provided their assessments of how to connect researchers with community residents. For more information about LaDIA, visit www.laseagrant.org/outreach/ladia/fellowships/.

Giulio Mariotti, assistant professor, Department of Oceanography and Coastal Sciences, Louisiana State University

Sister Storms: Revisited – 10th Anniversary of Hurricanes Katrina & Rita

August 29 and September 24 mark the tenth anniversary of Hurricanes Katrina and Rita, respectively. A short film by Louisiana Sea Grant (LSG) examines recovery efforts and accomplishments following the two storms and what work remains.

"The Cameron community is better prepared and more resilient since Hurricane Rita," said Kevin Savoie, LSG and LSU AgCenter Marine Extension agent in Cameron Parish. "The community adopted the International Building Code and implemented storm mitigation practices. Those who followed the new codes when rebuilding made it through Hurricane Ike (in 2008)."

However, Savoie notes that the commercial fishing industry in Cameron is still recovering from Rita. "The resource is still stable," Savoie said. "What we don't have are these larger offshore vessels." Dock and wharf infrastructure also hasn't returned, nor have the service companies that provide fuel, ice and other supplies.

"Overall, the fisheries recovery has been really strong," said Mark Schexnayder, a biologist with the Louisiana Department of Wildlife and Fisheries in New Orleans. When Hurricane Katrina struck, Schexnayder was a Marine Extension agent with LSG and the LSU AgCenter and was tasked as one of the recovery leads in the Orleans and Jefferson parish areas. "It took a long time because the destruction was so great, but communities like Shell Beach, Yscloskey, Venice and Port Sulphur – where you saw just bundles of boats on the water – they're all back."

Savoie, Schexnayder and LSG/AgCenter Marine Extension agent Rusty Gaudé – all storm responders – provide their insights on the state of the commercial fishing industry and the resiliency of the coastal communities in which they live and work in Sister Storms: Revisited. The 13-minute video is available online at *www.youtube.com/watch*?v=jG2VRsVAtTg.



Prior to Hurricane Katrina in 2005, New Orleans' Lower 9th Ward had a structure on every lot and a population of about 14,000. Pictured is the Lower 9th in spring 2015. The U.S. Census Bureau estimates the Lower 9th's current population at slightly more than 4,000.



Darcy Wilkins won the Best First-Time Director Award at the 2015 Honolulu Film Awards for "The Telling Tide," a Louisiana Sea Grant produced documentary. Wilkins was a research associate with Sea Grant when she directed the video. "The Telling Tide" can be viewed online at www.youtube.com/ watch?v=IPfvtrORo7s.

Message from the Executive Director

It's a time of new beginnings.

Students recently arrived on college and university campuses to start a fresh academic year, including our four new Coastal Science Assistantship graduate students. Another class of LaDIA (Discovery-Integration-Application) Faculty Fellows has started meeting to learn how to bolster their science communication skills and to be more engaged in solving challenges in coastal communities. And a recent Louisiana Sea Grant Law & Policy Program intern will soon travel to Washington, D.C., to initiate a yearlong study as a Knauss Fellow.

This fall we'll begin developing a new four-year strategic plan (2018-22) that will guide our research and outreach efforts. And in the next few weeks we'll announce a new group of competitive research projects to be funded in the 2016-18 omnibus cycle.

On Grand Isle, the ribbon has been cut and we've moved into a state-of-the-art oyster research and hatchery facility in partnership with Louisiana Department of Wildlife and Fisheries. Hurricane Katrina destroyed the old Sea Grant hatchery. Although it has been a decade since both Katrina and Rita devastated our state, Louisiana Sea Grant continues to rise to the challenge of making our coast better prepared for and more resilient to the next storm. 'Coastal Crisis Management' will always be a hallmark of our strategic planning process. We're accomplishing this through new as well as established research, outreach and education initiatives.

For a program that will celebrate a halfcentury of service in 2016, Louisiana Sea Grant continues to innovate and be a leader in bridging our state's academic expertise with the needs of those who manage, conserve, enjoy and make their living on our coast.

And as we look forward to the challenges of a changing future, we also reflect and celebrate the accomplishments and vision of two Sea Grant leaders who have passed in the last six months. Dr. Jack Van Lopik and Ron Becker served as Director and Associate Director, respectively, of Louisiana Sea Grant from its beginnings in 1968. Our program and the coastal research community are forever grateful to the more than three decades of leadership these men provided to establish and sustain the Sea Grant mission.

Robert Twilley, Ph.D. *Executive Director*

Louisiana Sea Grant College Program





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Louisiana Sea Grant Communications Receives APEX Award

Louisiana Sea Grant has been recognized with a 2015 APEX Award of Excellence for the redesign of the program's website. The Awards for Publication Excellence (APEX) are sponsored by Communications Concepts Inc., which helps publishing, public relations and marketing professionals improve their publications and communications.

Louisiana Sea Grant won in the Websites – WordPress Sites Category. LSG has operated a family of websites since the program first established an online presence about 15 years ago. Along with the programmatic umbrella site (*www.laseagrant.org*), there were separate Education, Fisheries and Law & Policy websites. With this redesign, the Law & Policy site became incorporated into *www.laseagrant.org*, and that department's website was decommissioned. Education and Fisheries websites will be incorporated into the new site over the coming months. The redesign launched August of 2014.

The 27th annual APEX Awards featured nearly 1,900 entries in 11 major categories and 100 subcategories. The awards recognize outstanding performance in areas including graphic design, editorial content and success in communications excellence. This year, 82 Grand Awards were given in the major categories, with 749 Awards of Excellence recognizing exceptional entries.

