Greetings, Friends!

In the six months since our last edition of WaterWorks, the faculty of Fisheries and Aquatic Sciences (FAS), along with colleagues in the School of Forest Resources and Conservation (SFRC) and stakeholder representatives, began several related conversations about the future. Our aspirations are high and we know there is much to do to fulfill these expectations. Yet our optimism is also high. One reason for that optimism is our graduate students… past, present, and future.

The following pages feature just a few of our past graduate students to illustrate the variety of career paths taken after their degrees. Heather Hamlin’s path illustrates how passion and the Ph.D. led to a tenured faculty position in Maine, doing what she loves. Adam Munson’s path combined engineering expertise with an M.S. in FAS to become a Senior Lecturer in UF’s Warrington College of Business. Cecil Jennings’ doctorate helped prepare him for a career with the USGS Coop Unit at the University of Georgia, bridging academic and federal agency roles. As one of our early Master’s degree recipients, Judy Biss dedicated herself to Extension education and became a leader at the county level. Chuck Hanlon’s M.S. served as the springboard for a Water Management District career, continuing his focus on habitat management. Eric Nagid’s M.S. led to a similar career path with the Florida Fish and Wildlife Conservation Commission where, among other things, he continues to work with FAS graduate students. We’re proud of these featured graduates and all the peers they represent.

You’ll also notice inside that our current and recently graduated students are destined for comparable successes and career opportunities. Recent student awards winners are highlighted on page six, along with well-deserved faculty awards. Our fall 2017 graduates are celebrated on page 7. Clearly, the optimism mentioned above is well justified.

We want to give special thanks to those whose generosity created the Sharon Fitz-Coy Memorial Award. The recipients this year are recognized on page 7, along with information on how you can help that endowment to grow. Expanding the support of students is a priority and we appreciate your help.

Last but not least, Bob Swett, Nancy Montes and Roy Yanong have served for five fine years as Editors of WaterWorks. This January 2018 edition is their last as Editors. Please join me in thanking Bob, Nancy and Roy and then welcoming the new editorial team led by Will Patterson.

All the Best,

Bill
As a Senior Biologist and Commercial Production Manager at Mote Marine Laboratory’s Aquaculture Park, Dr. Heather Hamlin was becoming keenly aware of the importance of research for the advancement of commercial aquaculture production. She knew that progress, if any, would be slow without the same scientific rigor that had been advancing other sectors of agriculture. Although she was working full-time at Mote, she decided to pursue a Ph.D. in the Fisheries and Aquatic Sciences Program at UF to provide her with the research skills and competencies she thought would be crucial to the advancement of the aquaculture industry.

Working full-time at Mote while simultaneously pursuing her degree was challenging, but it gave her an opportunity to more fully appreciate the real-world applications of her studies. In fact, her Ph.D. centered around questions that would improve the culture of Siberian sturgeon, a key species of interest at Mote’s Aquaculture Park. Her research sought to understand how nitrate, a nitrogenous waste product that can build to relatively high levels in recirculating aquaculture systems, could alter the reproductive health of the fish residing in the systems.

At the same time, a world-renowned UF researcher in the Department of Biology and Ecology, Dr. Louis Guillette, was also examining questions related to nitrate exposure in aquatic wildlife, including American alligators. Working with Drs. Guillette and Ruth Francis-Floyd, Heather applied endocrinological approaches used to study reproductive dysfunction in wildlife and applied this to aquaculture species.

After graduating in 2007, Heather spent the next 3 years as a Postdoctoral Associate in Dr. Guillette’s laboratory, using alligators as a model to study how environmental contaminants, like nitrate, can impact reproductive health. This provided an excellent opportunity to continue to think about her interest in aquaculture in the context of approaches used in other disciplines. Dr. Guillette and his research mentorship had a profound impact on her future research approach.

Following her postdoc, Heather took a position as an Assistant Professor at the Medical University of South Carolina (MUSC), in the Department of Obstetrics and Gynecology, focusing on maternal-fetal health. While this may seem like an unlikely transition, MUSC had begun a new program located primarily at the Hollings Marine Laboratory in Charleston, dedicated to understanding how alternative models, like aquatic animals, could be used to answer questions related to human health. This was a fantastic opportunity to further broaden her skills using unique approaches to address a variety of research inquiries, and fully embrace “big picture” implications.

Dr. Hamlin grew up in Maine, where she received her B.S. in Biology and an M.S. in Marine Bio-Resources from the University of Maine, the state’s flagship university. While snowy winters may not be appealing to everyone, Heather longed to get back to New England, so when a faculty position in aquaculture was announced at U-Maine, she was eager to apply. The university was investing in aquaculture, and had established the Aquaculture Research Institute (ARI), to which she would become one of the first hires. As an ARI member, she was able to choose her home department, and began to establish her research program in the School of Marine Sciences in 2011.

Atlantic salmon support the most economically important aquaculture sector in Maine, so choosing to address problems in the salmon industry became an early priority. Heather attended the Salmonid Hatchery Roundtable, an annual forum for salmonid producers in the region to discuss struggles in the hatchery process. At this meeting they described a decline in the survival of Atlantic salmon embryos. Consistent survival of 80-90% more than 10 years ago had dropped to around 50% today, and was a significant bottleneck in the hatchery process. Success with grants through the Maine Aquaculture Innovation Center and the USDA supported her research in this area. Her work with salmon has now expanded to address alternative therapies for the treatment of sea lice, the most economically important problem in their commercial culture.

Continued on Page 5
The Florida LAKEWATCH Program follows the Land Grant ethic with components of teaching, research and extension. Over the 30 plus years of Florida LAKEWATCH’s existence it has worked with over 35 graduate students, all on some aspect of lake management. Many of these graduate students have excelled in their careers and here we highlight only a few of those successful LAKEWATCH students.

Adam Munson

Adam earned his M.S degree from Fisheries and Aquatic Sciences in 1999. His thesis was titled “Water clarity in Kings Bay/Crystal River, Florida.”

A licensed Professional Engineer in the discipline of industrial engineering, Adam now teaches the undergraduate capstone course Operations and Supply Chain Management as well as a variety of graduate classes on the topics of optimization and empirical modeling, operations, database systems and project management.

Adam is currently working as a Senior Lecturer in the Information Systems and Operations Management at Warrington College of Business, University of Florida.

Cecil A. Jennings

Cecil earned his Doctorate degree from Fisheries and Aquatic Sciences in 1990. His thesis was titled “Fish community structure in some naturally acidic Florida lakes.”

Cecil’s Current position is Unit Leader and Adjunct Professor (GA Cooperative Fish and Wildlife Research Unit) Warnell School of Forestry and Natural Resources, University of Georgia.

Cecil credits much of his success to the scientific and professional training he received while a student in the Department of Fisheries and Aquatic Sciences at the University of Florida.
Judy Biss

Judy earned her Master of Science degree from Fisheries and Aquatic Sciences in 1987. Her thesis was titled “The limnological and biological characteristics of Cue Lake, an acidic lake in North Florida.” University of Florida, Gainesville, FL.

Since 2007 Judy has worked as Director for the UF/IFAS Extension Calhoun County office in north Florida. In that role, she provides a wide variety of educational extension programs on natural resources, agriculture, and horticulture for citizens of all ages.

Chuck Hanlon

Chuck earned a Master of Science degree from the Fisheries and Aquatic Sciences Program in 1988. His thesis was titled “The current trophic status and primary sport fish populations in two central Florida lakes 13 years after the introduction of grass carp.”

Chuck is currently a Sr. Environmental Scientist for the South Florida Water Management District. Much of Chuck’s work includes the assessment and management of emergent marsh habitats and near shore submersed plant communities, evaluation of in-lake habitat utilization by wading birds, fish and other wildlife, and annual monitoring and evaluation of the Kissimmee River fishery in response to river restoration projects.

Eric Nagid

Eric earned a Master of Science degree from the Fisheries and Aquatic Sciences Program in 1999. His thesis was titled “A limnological assessment of Lake Newnan, Florida.”

He is currently a Research Administrator for the Freshwater Fisheries Research Section of Florida Fish and Wildlife Conservation Commission and is housed at the UF-IFAS Millhopper Facility where he remains engaged with the faculty, staff, and students of that program.
A word from the Editors...

We would like to thank all the people that participated — submitting articles, notes, award winners info, publications, etc. — in the elaboration of the WaterWorks newsletter. We had the pleasure of editing and designing this newsletter since 2012. However, we think that it is time for a change promoted by the incorporation of new ideas brought by a new team of editors/designers. So, please welcome the new team (guided by Dr. Will Patterson).

WaterWorks most certainly maintain its excellence for many years to come.

Sincerely,

WaterWorks editing team
2012 - 2017

Florida Sea Grant Newell Scholarship

Florida Sea Grant launched a new scholarship opportunity this year called the Florida Sea Grant Newell Scholarship. It provides up to $1,000 of travel funds to Florida university students (BS, MS, PhD, JD) who use the funds to attend a professional conference to give a talk or poster.

The application process is straightforward and we hope our students successfully compete for it. The program is very broad in its scope so students may be conducting research related to coastal ecosystems, seafood, fisheries, aquaculture, resilient communities and coastal hazards.

Here is the link: https://www.flseagrant.org/students/scholarships/newell/

Heather Hamlin

As a Maine native, Heather is also keenly aware of the importance of the American lobster, which not only supports the greatest fishery in Maine, but is a hallmark of Maine’s cultural heritage. The ocean waters along Maine’s coast could be seen as “ground zero” for a rapidly changing climate, and are experiencing change at one of the fastest rates in the world. It is unclear how these changes could impact the lobster industry, so research aimed at understanding possible outcomes is an important part of her research.

Much of her current work seeks to understand how increasing ocean acidification and temperatures alters the health of larval and sub-adult lobsters.

The skills she learned in graduate school in Florida, including the ability to take research approaches from a wide variety of disciplines and apply it to commercially important species has been extremely valuable. Heather received tenure in 2017, and credits some of her success to her graduate experience in IFAS, and she looks forward to using those skills to advance commercial production in Maine.
Awards

Faculty

Congratulations to Rob Ahrens. He will engage in a year-long program sponsored by the Roche Teaching Scholarship. The program includes four intensive professional development sessions, course development/redesign, and a department level project.

Jeff Hill is the currently serving as the President of the Florida Chapter, American Fisheries Society.

Kai Lorenzen was recognized as an IFAS 2017 University of Florida Research Foundation Professor.

Congrats to Roy Yanong. He received a ‘Presidential Service Award’ in September from the American Association of Fish Veterinarians “…for outstanding service in advancing the Fish Specialty Practice and for endless commitment and support [of AAFV]”.

Students

Isigi (Nellie) Kadagi (Advisor: Rob Ahrens) received the Alec Courtelis Award. This award is given annually to three outstanding international graduate students, in recognition of their academic excellence and outstanding contribution to the university and community.

At the American Fisheries Society (147th Annual Meeting):

Natalie Simon (Advisor: Huiping Yang) and Katie Lawson (Advisor: Jeff Hill) received the Roger Rottmann Memorial Scholarship. Simon is also the Student Subunit Vice President, Amanda Croteau (Advisor: Chuck Cichra) is Student Subunit President, and Allison Durland Donahou (Advisor: Jeff Hill) is the Secretary Student Subunit for the Florida Chapter.

Durland, Tim Lyons (Advisor: Jeff Hill), and Mike Sipos (Advisor: Matt DiMag-gio) received Florida Chapter Student Travel Grant for this conference.

Shane Ramee (Advisor: Matt DiMag-gio) received the “Fish Culture Section” travel award (competitive), the UF CALS William C. and Bertha M. Cornett Fellowship, and the Florida Chapter Student Travel Grant.

Tim Lyons won the “Best Poster Award” at the Marine Aquarium Conference of North America (MACNA) – New Orleans, LA.

Carrie Schuman (Advisor: Shirley Baker) was awarded a Sanford N. Young Scholarship for 2017. The scholarship provides travel stipend (up to $500) to attend a technical meeting.
Fall 2017 Semester FAS Graduates

**Doctor of Philosophy**

**Zachary Siders**
Dissertation Title: “The Role of Habitat in Aquatic Intra- and Interspecific Interactions”
Chair: Micheal Allen

**Nathan Johnson**
Dissertation Title: “Genetic Investigations Reveal New Insights into the Diversity, Distribution, and Life History of Freshwater Mussels (Bivalvia: Unionidae) Inhabiting the North American Coastal Plain”
Chair: James Austin

**Marine Sciences Interdisciplinary Studies Major**

**Summer**
John Roig III
Raquel Schoneck
Amber Barefoot
Bethany Gaffey
Victoria Parks

**Fall**
Alexandria Cook
Monica Ditch
Tanya Hahn
Casey Leigh Mccrackin
Laura Palomino
Mami Hamazaki

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**Sharon Fitz-Coy Memorial Award**

Sharon Fitz-Coy, SFRC Fisheries and Aquatic Sciences (FAS) Program senior biologist for 23+ years, unexpectedly passed away in 2016. Sharon was the “Jamaican mother” for many graduate students over the years. As education coordinator for “Fishing for Success,” Sharon personally conducted face-to-face hands-on outdoor education programs for over 150,000 children and their parents. She likely introduced more children to fishing than any other person in Florida. Sharon always greeted folks with a big smile, a laugh, and a will to get things done!

In honor of Sharon’s commitment to youth, an endowment, the Sharon Fitz-Coy Memorial Award, was established, with proceeds from the endowment awarded annually to UF students making an impact on youth in their community. This fall, 26 students applied for the award, which was presented at the 11 November FAS Family Fishing Day, which honored veterans and Sharon. This year’s recipients are Keara Clancy, a junior in Wildlife Ecology and Conservation ($500), and Amanda Desormeaux, a PhD student in the UF School of Natural Resources and the Environment ($250).

Over time, we hope the endowment grows so that a larger scholarship can be provided to deserving students. Donations (tax deductible) can be made payable to UF Foundation, Inc. and sent to UF/IFAS Development, P.O. Box 110170, Gainesville, FL 32611-0170. Please note Sharon Fitz-Coy in the memo area.

Donations can also be made online at: www.uff.ufl.edu/appeals/Fitz-CoyMemorial

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**Keara Clancy        Dr. Cichra**
Amanda Desormeaux
Recent Publications By Our Faculty


Daudin, 1802 in Florida (USA).” BioInvasions 8. https://doi.org/10.1111/are.13558


