INTRODUCING THE SFAAS "NEWSREEL"
Number 1 / September 2020

Welcome to the "SFAAS Newsreel". For some time, we have been trying to develop a better way to let present and former members of the SFAAS know what is happening within the School. It has been difficult to get people to contribute to a traditional newsletter, and the standardized School web page does not lend itself well to routine news, so I would like to try this "newsreel" approach using a Power Point format. Please send "blurbs" to me (2-4 sentences and a picture or two) about new grants, notable publications, new people in the lab, people graduating, etc. Whenever I have a dozen or so blurbs, I will send them to Faculty, staff, students, alumni, and our retired folks. Let's make this work!

Joe Tomasso
Professor & Director (and Newsreel editor!)

AUBURN UNIVERSITY
SCHOOL OF FISHERIES, AQUACULTURE AND AQUATIC SCIENCES

RETIREMENT — GREG WHITIS

Greg Whitis retired at the end of August.

He took an MAq from Auburn in 1983 and became an aquaculture extension specialist in 1987, spending his entire career in West Alabama.

Most recently, he helped with the editing of Wayne Shell's history of the Auburn Fisheries Program and plans to soon publish a hard copy of the internet version.

RETIREMENT — CHIA CHEN WENG CHEN

Chia Chen Weng Chen recently retired from **Rex Dunham's** lab after 10 years of service as a Laboratory Technician II.

During her career, she managed the lab and conducted molecular genetics analyses.

PROMOTION

Bill Walton has been promoted to professor, effective Fall semester 2020.

Dr. Walton took a PhD from the University of Maryland in 2003, joined us as an assistant professor in 2009, and was promoted to associate professor in 2014.

He hold an extension/research appointment and is director of the Auburn University Shellfish Lab on Dauphin Island.

During his time with us, he has supported the successful development of the oyster farming industry along the Alabama coast.

NEW FACULTY MEMBER — DR. TIM BRUCE

Dr. Tim Bruce will join us in January as an assistant professor working in the area of aquatic animal health.

Dr. Bruce holds a PhD from South Dakota State University and comes to us from a posdoc at the University of Idaho.

He has expertise in vaccine development, disease challenges, and immunology.

Dr. Bruce's lab and office will be at North Auburn.

Many of our faculty members are looking forward to productive collaborations with Dr. Bruce.

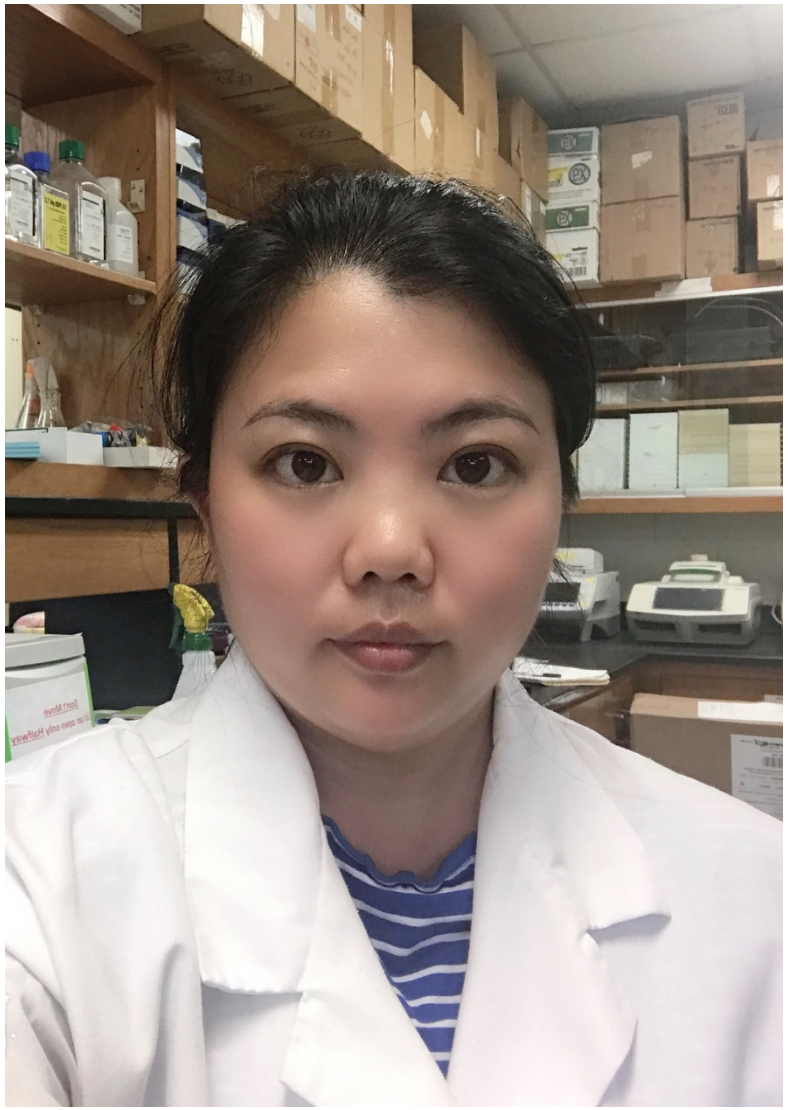
NEW FACULTY MEMBER — CALLIE NAUMAN

Callie Nauman has joined **Alan Wilson's** lab as a Research Assistant I.

She recently completed her MS from Bowling Green State University.

Prior to that, she earned her BS in Environmental Science and Water Science from Ohio State University.

NEW STAFF MEMBER — MEI SHANG



Mei Shang has joined **Rex Dunham's** lab as a TES lab technician.

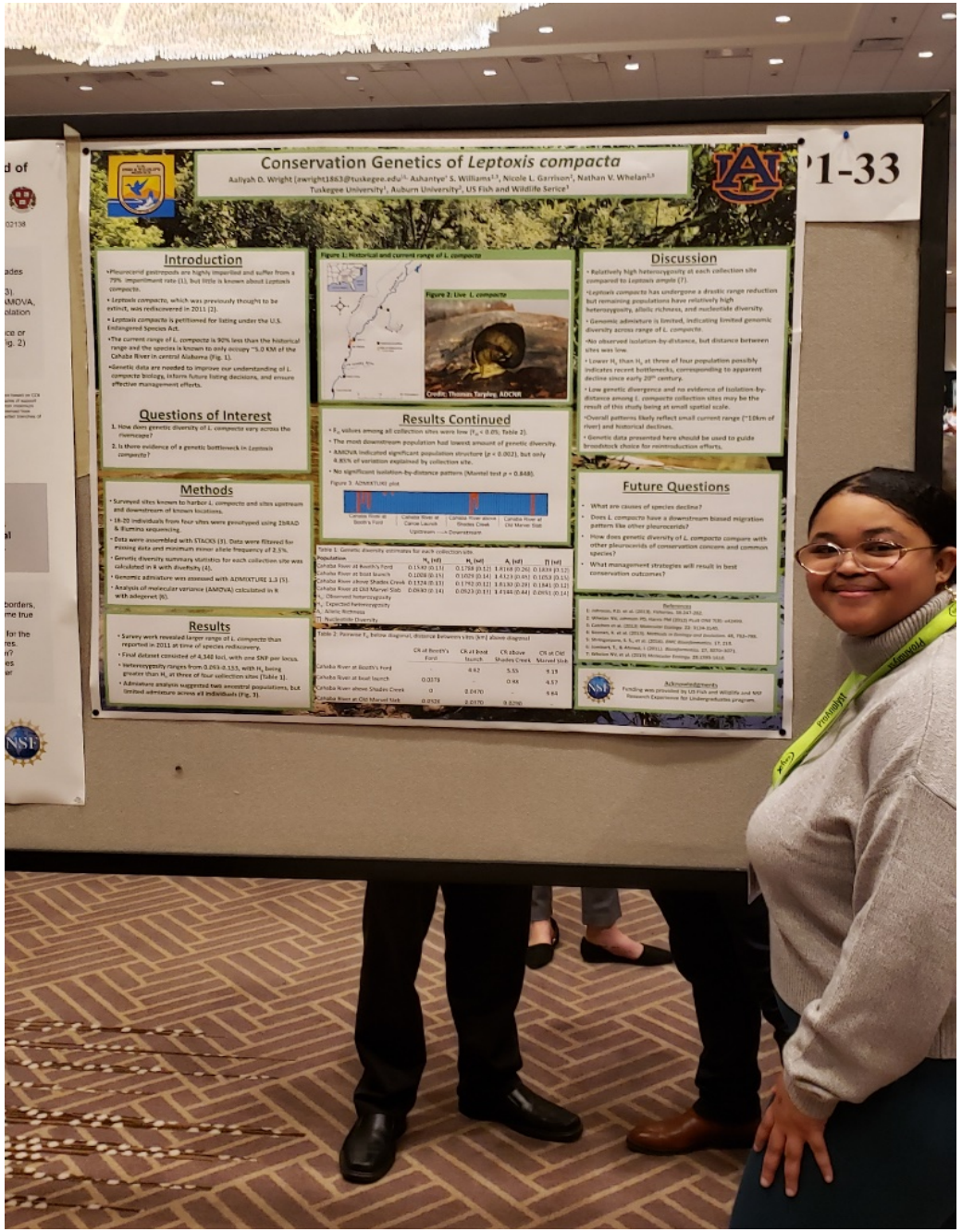
She holds a PhD from SFAAS and spent four years as an assistant professor at the Heilongjiang River Fishery Research Institute, Chinese Academy of Fishery Sciences.

Her research has led to 14 research articles in the areas of molecular genetics and reproduction

NEW JOURNAL ARTICLE ON GENE EXPRESSION

Rex Dunham and colleagues recently published a journal article that reveals how gene expression changes during channel catfish development and what physiological and anatomical processes are associated with these genes during development

Ma, X., B. Su, Y. Tian, N. J.C. Backenstose, Z. Ye, A. Moss, T. Y. Duong, X. Wang and R. A. Dunham. 2020. Deep transcriptomic analysis reveals the dynamic developmental progression during early development of channel catfish (*Ictalurus punctatus*).IJMS (International Journal of Molecular Sciences). doi: 10.3390/ijms21155535



NEW JOURNAL ARTICLE ON OBLONG ROCKSNAIL

Aaliyah Wright, an undergraduate in the 2018 Warmwater Ecology NSF REU site at AU, was recently the lead author of a study with **Nathan Whalen** et al. to describe the landscape genetics of the oblong rocksnail (*Leptoxis compacta*), a species thought to be extinct as recently as 2011.

DOI:10.7717/peerj.9789

NEW MS STUDENT — EKATERINA MASHANOVA

Ekaterina Mashanova is a new MS student in **Rex Dunham's** lab.

She has a BS in Biology from the College of William & Mary with a minor in Art and Art History.

Ekaterina conducted an honor's thesis project resulting in a paper in *Evolution*. From her undergraduate work, she has two other journal articles.

NEW MS STUDENT — NIKI BAKER

Niki Baker is a new MS student in **Allen Wilson's** lab.

She completed a BS in Biology and Environmental Conservation from Rogers State University in 2019.

Recently, she has worked for the Army Corps of Engineers.

NEW MS STUDENT — BRIDGET GEROVAC

Bridget Gerovac is a new MS student in **Alan Wilson's** lab.

She completed her BS in Environmental Biology from Christopher Newport University in 2016.

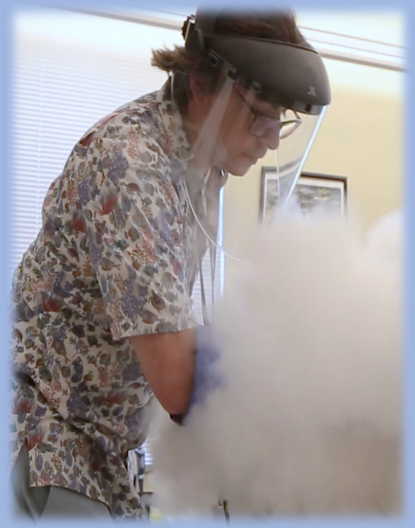
She has spent the past four years with Ocean Research and Conservation Association in Ft Pierce, FL, as a research associate.

OYSTER GARDENING PROGRAM TO EXPAND IN MISSISSIPPI

PJ Waters recently received additional funding to his Mississippi-Alabama Sea Grant project to expand The Mississippi Oyster Gardening Program. This expansion will encompass additional students who were not able to take part in the before. Specifically, this will be done by implementing lesson plans pertaining to oyster ecology and anatomy that will be able to be presented in the classroom and virtually. Additionally, PJ has been notified that an additional 5 years of funding ($500,000) for the program itself is to be awarded to continue the successes in the near term.

TESTICULAR MEDIATED PATERNAL EFFECTS IN AQUACULTURE

Faculty in SFAAS and the College of Veterinary Medicine have recently received **AgR-SEED** funding to test the "*Testicular-Mediated Paternal Effects Hypothesis for Aquaculture*". In this hypothesis, male reproductive performance indices (i.e. sperm quality and DNA methylation) are expected to predict crucial industry-relevant performance traits. These traits are especially important during early life stages that are prone to high mortality and developmental abnormalities. To accomplish this goal their objectives are to: (i) investigate how paternal age impacts offspring performance, (ii) evaluate impact of short-term storage (at 4^{o}C) and cryopreservation (at -196^{o}C) on sperm quality, and (iii) determine whether sperm storage leads to epigenetic changes affecting breeding success.



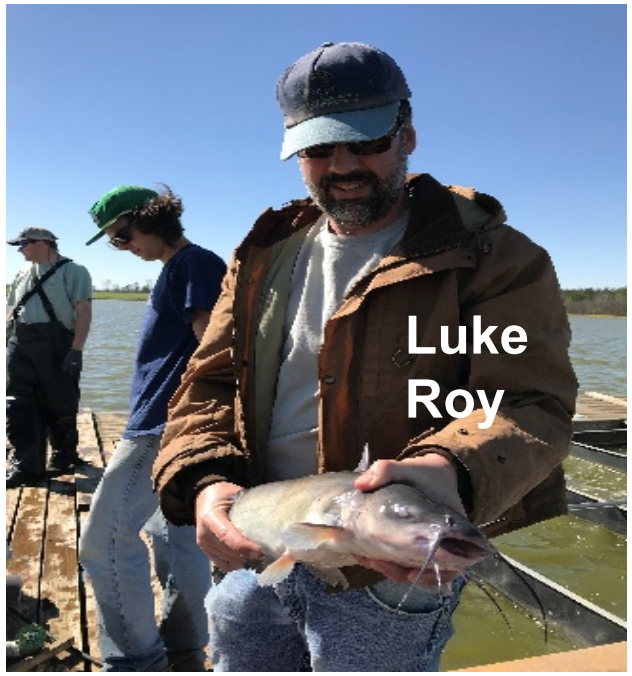
Dr. Ian Butts
(SFAAS)

Dr. Luke Roy
(SFAAS)

Dr. Rex Dunham
(SFAAS)

Dr. Xu Wang
(College of Vet Medicine)

INTENSIVE PRODUCTION OF LARGEMOUTH BASS



The most popular freshwater sportfish in the U.S. is the largemouth bass (LMB), *Micropterus salmoides,* and markets for LMB as a food fish are rapidly developing. However, traditional earthen pond production methods for LMB result in high mortality rates during the larval stages of production. To develop methods that would circumvent earthen pond productions, faculty in SFAAS and Biology at Auburn University recently received an **AgR-SEED** grant to investigate indoor hatchery technologies to increase survival. The objectives in this grant are: 1) identify the thermal tolerance range and limits for development and growth of larval largemouth bass, 2) elucidate the effects of temperature on phenotype and the associated molecular response (i.e., gene expression) on early life development, and 3) develop larval weaning strategies that target growth, survival, and digestive physiology.