I genuinely hope you enjoy reading our WFSC newsletter and that it reminds you of your time in Aggieland and the Department. There are many new and significant developments in WFSC to relate to you in this newsletter. WFSC is going through its seven-year reaccreditation review in May. These reviews involve months of preparation to summarize activities and achievements over the last seven years and goals of the coming years. A team of four outside reviewers from peer institutions will come to campus for four days to review our documents, tour our facilities, and interview our faculty, staff, and students. The review team completes the process with a report to the Dean and Provost evaluating the Department, complementing us for our strengths, and suggesting actions for our weaknesses. These are important reviews and can lead to changes to Departmental directions and resources. In the fall newsletter, I will let you know the outcomes and impacts of the review. Another Departmental development are changes in staff and faculty. We have lost Shirley Konecny (retirement), Tomi Johnson (advancement), and Sylvia Ware (advancement) from our staff. They will be missed but I am pleased to announce that Melissa Brackman (Business Associate III), Theresa Bramson (Business Coordinator I), and Jamie Schneringer (Administrative Coordinator II) staff those positions now. Jamie was promoted from Senior Office Assistant in the WFSC business office. Please welcome Melissa, Theresa and Jamie to the WFSC family. Dr. Jim Cathey (Professor and Extension Wildlife Specialist) after his 15-year career in WFSC has advanced to a position with IRNR (Institute of Renewable Natural Resources). Please congratulate Jim if you have the opportunity. We are also moving forward on our search for a new faculty position, a Fish Ecologist. In fact, interviews of our top three candidates will occur within the next few weeks with a projected hiring date of September 1, 2017. This is a critical research and teaching position for the Department. WFSC is reviewing and considering changes to our undergraduate wildlife curriculum. A committee is working with Dr. Debra Fowler of the Center for Teaching Excellence to review the current undergraduate curriculum, evaluate student and hiring clientele needs, and make suggestions for updating courses, creating new courses, and eliminating courses. This is a major undertaking but one that is necessary to meet the changing educational and experiential needs of our undergraduate students.

Finally, the new building is almost complete. We will be able to walk through it in April and plan to start moving into it at the end of May. Please mark your calendars and plan to attend our Departmental open house on September 15, 2017 and a football game tailgate on September 16th. We truly hope to see many of our alumni and friends.

Please contact me if you have any questions or suggestions for WFSC. My phone is 979-845-6295 and email at m-masser@tamu.edu. I sincerely enjoy visiting with our alumni.

Dr. Michael Masser

New wildlife & fisheries building as of March 1, 2017
A Legacy and Opportunity to Protect and Enhance Our Natural Resources: A Conversation with Students

Congratulations on being enrolled in Texas A&M University’s WFSC, truly one of the most prestigious and respected colleges in the world. You have demonstrated the ability to make the transition from high school to college along with all the associated challenges. In this new phase of your life, you have shown an interest in our vast natural resources with hopes of a career that will further enhance our resources as well as providing support for yourself.

The protection and sustainability of our natural resources begins with the education phase followed by the management phase. The research phase can never sleep due to the constant barrage of changes in our ever-changing society. The past best management practices, developed by research and implemented in the field, may no longer be the best as adaptations of the resources themselves cannot sleep as well. Therefore, it is important for students to begin acquiring the tools that will enable them to make a difference while remaining gainfully employed.

As a humbled and privileged member of this Legacy Committee, I would like to reach out to you with various ideas on your future employment. As a biologist, the world of our natural resources is simply fascinating to me and I continue to find it incredible how nature adapts to survive. However, as a business owner, for over 36 years, I have also had to adapt to survive. Being fortunate enough to have found a career dealing with certain aspects of our natural resources, by far, the most challenging type of commitment while just a paycheck is TV dinners and pot pies. Regardless, I made a commitment promising to give it my all and I took my education and applied it along with hard work. Then after about 8-10 years, luck came along and the learning and hard work started paying off. Yes, there were many long, sleepless nights of doubt, questions of my sanity, driving a 14 year old truck and living on TV dinners and pot pies. Regardless, I made a commitment promising to give it my all and ride the horse until it fell. Thankfully, that horse is still alive and kicking! A career requires that type of commitment while just a paycheck is the easy way out.

Experience is everything and perhaps the best way to land a good job is to participate as an intern during summer breaks. An intern program allows you to become acquainted with a particular type of business and helps you determine if this is something to pursue. It also provides an opportunity to showcase your skills and gives the business an opportunity to evaluate your work. Should the stars align on both sides, you will become that first-round draft pick and have a much better chance of landing a full-time job with more than starting pay.

Understanding how the business world works and the skills you are expected to have will give you an edge in landing that first full-time job. You see, what many students don’t realize is that college is your first full-time job and education and preparation for your future is your paycheck. Yes, it’s sometimes hard to get by and peer pressure is constant. But, a successful, long-term career mindset is what you have to set sight on. Otherwise, you may be destined to a life after college of job-hopping and living day to day. These and many more are the cold hard facts and I see it every day. And, from our natural resource’s perspective, who would you rather have in your corner to help protect and enhance the myriads of diverse species - someone paid minimum wage or someone who has been blessed by our finest educators and researchers?

As a business owner, we are always looking for individuals who can demonstrate the skills and abilities to become successful. A degree gets you in our door and puts you first in line for an interview. Once employed, we evaluate performance annually to determine how well you did your current job and the potential you have to move up the proverbial corporate ladder. We consider many things such as attendance, creativity, dependability, quality of work and productivity. But, without a doubt, what I consider to be most important is an employee’s initiative, drive and the ability to learn quickly. An employee’s ability to communicate both written and orally with other employees as well as clients is also paramount. Arriving to work on time is important, but the employee who arrives 15 minutes early and has the willingness to stay late is who catches my eye.

The multidisciplinary approach of WFSC covers a huge range of natural resource conservation disciplines and provides many opportunities for students to choose their field. You are the future and our resources need your help more than ever. And, with the new WFSC building located in the Agriculture and Life Sciences Complex nearing completion, students will have the best of the best in education and technology. Please join us for the Grand Opening on Friday, 15 September 2017. Good Luck in all your future endeavors!

Mac McCune, President
Lake Management Services, L.P.
Mission

The Department of Wildlife and Fisheries Sciences discovers and communicates knowledge relevant to the conservation and management of wildlife and fishery resources and the ecosystems that sustain them through integrated academic instruction, research, and extension programs. We subscribe to a multidisciplinary approach that fosters interdepartmental collaboration and outreach to agencies, nonprofit organizations, and public and private interests over a wide range of natural resource topics, including environmental quality, sustainable management of natural resources, bioinformatics, biocomplexity and environmental quality. We intertwine innovative research and extension endeavors with high-level teaching of undergraduate and graduate students, who represent the next generation land stewards and conservation professionals. We also extend the university to the general public to relate research results in a meaningful way that can be understood and implemented to make positive impacts on natural systems.

AWARDS

Undergraduate 2016 Best Undergraduate Student Presentation Award, Texas Chapter of Ecological Restoration Society, Lela Culpepper; Student Poster Presentation Award, 2nd place in Texas Chapter Wildlife Society’s 53rd Annual Meeting 2017, Hannah Gerke; Applied Biodiversity Science Conservation Scholars, Andrew Richardson, Jasmin Diaz, Paola Camposeco, and Jennifer Borski; 2017 Clarence Cottam Award, 1st Place in Texas Chapter Wildlife Society meeting, Lalo Gonzales.

Graduate Best Abstract/ Travel Award, United States Aquaculture Society, San Antonio 2016, Min Ju and Sergio Castillo; Spotlight Competition Award, United States Aquaculture Society, Min Ju (1st place), Sergio Castillo (2nd place); Walter Landry Memorial Travel Award, Striped Bass Growers Association, Min Ju; Aqualogic Best Poster, United States Aquaculture Society, Brittany Peachey; Alltech Innovation Aquachallenge (1st place), Alexander Lumbrano, Brittany Peachey, Fernando Yamamoto, Misael Rosales, Sergio Castillo, Waldemar Rossi; 2016 Health, Nutrition, Kinesiology and Physiology Oral Presentation (2nd place) at Student Research Week, Fernando Yamamoto; Mohamed Bin Zayed Species Conservation Fund Grant, Phoenix Zoo Grant, and Chicago Herpetological Society Grant, Nikki Roach; TCAFS Scholarship, Friedrick Keppeler; Harry Tennison Scholarship, Jennifer Morton; American Society of Mammalogist Student Science Policy Award Recipient, Jessica Gilbert; Texas Ecolab Grant ($16,423.46), Charlayna Cammarata and ($13,782.97), Wesley Neely; 2017 Texas Water Resource Institute Mills Scholarship ($5,000), Sierra Cagle, Best Student Presentation, Southeast Deer Study Group, Jared Beaver.

Faculty 2017 Vice Chancellor’s Award in Excellence for Research, College of Agriculture and Life Sciences, Kirk Winemiller; USDA Sustainable Agriculture Grant to conduct CEA trainings on wildlife management, John Tomecek; 2016 Vice Chancellor’s Award in Excellence for International Involvement, Thomas Lacher.
Collection of Birds at Biodiversity Research and Teaching Collections Adds a Rare Bird and Reaches 24,000 Specimens

by Heather Prestridge

The Collection of Birds at the BRTC now contains over 24,000 specimens! Historically the collection has focused on specimens from the United States and Texas (63% of the collection) and Mexico (14%), but it also includes specimens from 64 additional countries. Over the past eight years, the collection has grown from ca. 14,500 specimens, and has added material not only from Texas, but from expeditions to Armenia, Benin, Democratic Republic of the Congo, Italy, and South Africa. In fact, 5% of the collection is now from South Africa. These international expeditions have been related to research being conducted by Dr. Gary Voelker (Professor and Faculty Curator of Birds), his graduate and undergraduate students, and BRTC staff. Because of these expeditions, the collection has not only grown in numbers, but in species diversity as well. This diversity is represented by 1,662 species, from 785 genera and 163 families. The majority of specimens are prepared as study skins; however, the collections include nearly 1,950 skeletons, 315 fluid preserved specimens, 434 egg sets and 3,201 open wings. The Collection also maintains a rapidly growing collection of tissues (over 8,200) and blood samples associated with voucher specimens.

Since the inception of the BRTC, research projects by faculty, students and staff at Texas A&M University have provided most of the material in this collection; however, the collection has also grown through acquisition of the ornithology collections of Guadalupe Mountains National Park, Austin College, Southern Methodist University, Midwestern University and the University of North Texas. And, we have a network of people that salvage specimens for us. Our fantastic cadres of interns and volunteers have been instrumental in helping us deal with this influx of specimens, via preparing specimens and assisting in collection curation. As the only active ornithology collection in Texas, in terms of research activities, we anticipate continued growth in numbers and diversity that will not only benefit research, but the many Wildlife and Fisheries Sciences students taking courses that extensively utilize the collection.

Specimen number 24,000 is a federally endangered Whooping Crane. This specimen is one of two birds illegally shot in east Texas earlier this year. We’ve been working with USFWS Special Agents to ensure that these specimens and their data are made available to the scientific community thru accession into BRTC. This specimen represents only the 37th specimen of Whooping Crane from Texas, with a majority of the other specimens dating from the late 1800’s.

Values

The faculty, staff, and students of the Department of Wildlife and Fisheries Sciences value scholarship in all its forms – discovery, integration, application, and teaching. We value understanding for its own sake, for the betterment of people, and for the conservation of the natural world. The department encourages, appreciates and rewards various forms of scholarly activity in teaching, research, extension, and public service, including integration of these activities. Diverse viewpoints, ethical consideration, and approaches to pursuing and manifesting scholarship, including constructive criticism, are accepted and nurtured.
Dr. Nova Silvy
Regents Professor and Faculty Fellow, with Department of Wildlife & Fisheries Sciences since 1974

Dr. Nova Silvy has been actively involved in efforts to control a screwworm outbreak in the endangered Florida Key deer. Silvy first worked with Key deer during his doctoral research over 49 years ago. Prior to this, there had been no screwworm outbreaks in the U.S. for the past 30 years. However, one began last July on Big Pine Key. Over the following months, screwworms infested the Key deer population, which is spread across multiple islands in the Lower Florida Keys and it led to 135 Key deer deaths, mostly males which sustained wounds during the rut. Screwworm fly larvae feed on warm-blooded animal tissue, so the open wounds from the deer rut provided an environment for screwworms to infest and lay eggs. The screwworms eat the flesh around the wound until the deer becomes incapacitated or dies.

To help control the outbreak and assess the survivability of the Key deer, Dr. Silvy along with Drs. R Roel Lopez and Israel Parker and others from the Texas A&M Institute of Renewable Natural Resources have traveled to the Florida Keys to conduct deer population estimates and projections. With the U.S. Fish and Wildlife Service as the lead agency, they have been researching screwworm impacts and spatial distribution, as well as deer population density based on sex ratio and age. Dr. Silvy noted that while interagency efforts to date have been highly successful in halting the outbreak, further concern over screwworm infestations may appear in the spring as Key deer does start giving birth. Therefore, Dr. Silvy and the rest of the team also have placed radio collars on 30 Key deer does to help find if they may be vulnerable to screwworm flies while giving birth. Through use of antiparasitic medications and the U.S. Department of Agriculture releasing over 140 million sterile male screwworms flies to mate with wild female flies (female flies only mate once,) the screwworm fly population has been significantly reduced and further screwworm infestation has been stopped.
Adrian Castellanos

For quite a while, I have been fascinated with natural history collections and how they document the past and present of our natural world. My research reflects this, as each aspect of it involves the use of natural history collections and the data they amass to answer questions about Central American biogeography and biodiversity. Central America is an intriguing study region as, despite only accounting for 0.4% of earth’s land area, it is home to an impressive array of species and an amazing geographic complexity. I am studying the phyleogeography of two lowland mammal species: the variegated squirrel (Sciurus variegatoides) and the gray four-eyed opossum (Philander opossum). By using molecular and morphological data and ecological niche modeling, I can document the distinct spatial and temporal patterns caused by Central America’s turbulent history of geologic and climatic change over the past few million years. My research aims to elucidate the particular mechanisms that have shaped the present diversity seen in these species, increasing our scant knowledge of Central American mammal evolutionary history in the process. Understanding how species such as these responded to past ecological and geological events is crucial to our future predictions of how ecosystems will react to changing temperatures and human built barriers, such as the disastrously proposed Nicaraguan Canal.

Additionally, I am looking at patterns of biodiversity amongst mammals, birds, reptiles, and amphibians in Central America. Most studies examining biodiversity focus on species richness, but this measure may cause an underestimate of biodiversity in the Neotropics where many cryptic species escape detection. By using previous phyleogeographic research, estimates of phylegetic diversity and phylegetic endemism can be determined. These alternative measures of biodiversity take into account the genetic diversity of the species under consideration and are recently being associated with ecosystem productivity and stability. Using these measures to compare with previous studies utilizing species richness will enable us to understand different, yet integral facets of biodiversity within this region. Determining these patterns of Central American biodiversity, how they differ among broad taxonomic groups and various measures, and their associations with Central America’s complex geography and suite of protected areas will allow for our future conservation efforts in this incredible region to be more well informed.

Lois-Anna Voelkel

As a sophomore undergraduate in the Wildlife and Fisheries Sciences department, my studies are focused on vertebrate zoology. Although I am seeking a future in veterinary medicine, I have a passion for conservation and preservation of the Earth’s fauna. This stemmed from a high school summer internship with Attwater Prairie Chicken National Refuge in Eagle Lake, TX. This opportunity made me realize how anthropogenic impacts affect populations of organisms, potentially increasing their risk of extinction.

In 2016, I joined the Texas A&M International Union of Conservation Nature (IUCN) Red List assessment team with Dr. Thomas Lacher, who serves as the Texas A&M representative of the IUCN Red List Partnership. The IUCN Red List of threatened species is a global database of described species and an evaluation of their extinction risk and conservation status. Assessments of extinction risk are made based on a series of criteria focused on species taxonomy, species distribution, habitat, population size, and current threats. Texas A&M assists in the assessments for the small mammal species of the Americas (~1500 species).

After contributing to over 50 species’ status assessments for the mammalian families, Soricidae and Cricetidae, through scholarly data mining for the 2016 Red List, my research now focuses on the implementation of the IUCN Red List data into national conservation and biodiversity policies. Working alongside Ph.D. student, Nikki Roach, and master’s student, Shelby McCay, we investigate the use of the IUCN Red List and National Red Lists in the Americas to understand how national governments implement policy pertaining to biodiversity.

In addition, we are examining the National Biodiversity Strategy Action Plans (NBSAPs), which explain a country’s current conservation goals and biodiversity strategies. Both Shelby and I are screening NBSAPs and available National Red Lists, and evaluating them against a set of key criteria used to inform policy decisions. Questions we search for within each document pertain to the which species are mentioned in plans, Red List status, policy action plans outlined, and protected areas mentioned, amongst others. Our goal is to achieve a better understanding of how national governments’ implement IUCN Red List and how effective its exhibition will improve the status of species on the brink of survival.

Latest Publications


Many communities and organizations rely on such citizen volunteers for implementing youth education programs; for operating parks, nature centers, and natural areas; and for providing leadership in local natural resource conservation efforts. In fact, a short supply of dedicated and well-informed volunteers is often cited as a limiting factor for community-based conservation efforts. The Texas Master Naturalist Program, sponsored by Texas Parks & Wildlife Department and Texas A&M AgriLife Extension Service, was established to help fill this void and is aimed to develop a corps of well-informed volunteers to provide education, outreach, and service dedicated to the beneficial management of natural resources and natural areas within their communities for the State of Texas.

What makes the work of a Master Naturalist so important is that they are not only individuals who love nature and offer their time, but are also trained naturalists with specialized knowledge of different ecosystems, species, habitats, and environmental demands that is priceless when determining how to best manage natural resources. In addition, private landowners depend on the expertise of these volunteers to help them gain a broader scientific understanding of the ecology and management of their natural resources.

An individual gains the designation of Texas Master Naturalist after participating in an approved chapter training program with a minimum of 40 hours of combined field and classroom instruction, obtaining 8 hours of approved advanced training, and completing 40 hours of volunteer service. Following the initial training program, trainees have one year in which to complete their 40 hours of volunteer service and 8 hours of advanced training. To retain the Texas Master Naturalist title during each subsequent year, volunteers must complete 8 additional hours of advanced training and provide an additional 40 hours of volunteer service coordinated through their local chapter. Though that seems like a lot for a volunteer program, so many volunteers do even more; 52 volunteers have given over 5,000 service hours, and 9 volunteers have given over 10,000 service hours!

More information about the Texas Master Naturalist Program and to find your local chapter, visit our website: http://www.txmn.org.
Ph.D. student Elizabeth Silvy and Professor Todd Sink are looking to change the future of flounder aquaculture and stock enhancement along the Texas coast. A popular recreational game and commercial fish, wild southern flounder stocks are declining. In commercial aquaculture, much of the economic costs come from growing out and maintaining males as broodstock. Male southern flounder grow significantly slower than females and rarely reach market size. Through techniques that have been attempted by researchers at the University of North Carolina, Silvy and Sink are altering southern flounder gender through hormonal manipulation. Silvy is the first to run these techniques side by side using southern flounder.

Flounder broodstock was collected from Sea Center in Lake Jackson Texas, a stock enhancement hatchery that provides juvenile red drum, trout, and southern flounder to locations along the coast for stock enhancement purposes. Broodstock was strip spawned, and then eggs were divided into three treatments. One treatment served as the control, utilizing untreated milt and eggs. Two treatments utilized UV radiated milt mixed with unaltered eggs. The UV irradiated milt serves to fertilize the eggs, but does not provide DNA, ensuring that the larval fish that hatch are gynogenetic clones of the mother. These gynogenetic clones will then be treated with methyltestosterone after hatching to render them phenotypically male, while the flounder themselves remain genetically female. These females can be bred back to “normal” female flounder to produce an all female population of flounder that can be released for stock enhancement purposes. This process eliminates the need for costly male fish in commercial and stock enhancement hatcheries. And since one wild male fish will breed with hundreds of female fish, introducing thousands of female flounder larvae will benefit the recreational and commercial industry.

Silvy performed a second round of spawning and treatments over Spring Break.
Theresa Bramson
I started my employment with TAMU over twenty years ago. I started my position with Wildlife & Fisheries Sciences Department on February 20, 2017 as a Business Coordinator in Human Resources. This is my first time to work on the Extension and Research side at TAMU. During the summer I like spending my time at the lake with my family on the boat or jet ski.

Melissa Brackman
I’m your new Business Associate III. I have sixteen years financial experience at TAMU, my last position was at the Vet School in Small Animal Surgery and Research. While I love my work life, I also have a very active personal life. I am married with three children (four if you count my husband). We are a rodeo (team roping), baseball and volleyball family with 37 acres of farm life. I care for nine horses, 11 cows, three newborn calves, 22 chicks, three dogs and one cat. Most of my time is spent in the pasture or our arena. Feel free to come by my office for a visit.

Jamie Schneringer
I started working at Wildlife and Fisheries in September of 2016 as a part-time Senior Office Assistant in the business office. I am excited to be promoted to Administrative Coordinator II with Extension beginning April 3, 2017. I have thoroughly enjoyed working with all the faculty, staff and students for the last seven months and look forward to working full-time with Extension. Before September I was lucky enough to focus my attention on my three boys, but I am happy to be back in an office setting.

David Jacobsen
I started working at TAMU as a Research Specialist in the Wildlife and Fisheries Sciences Department in 1997. I have taken on many different positions in the department including Business Coordinator and Extension Assistant, and have thoroughly enjoyed working with all the faculty, staff and students. I am looking forward to the future at TAMU with the new building.

Latest Publications

Annual Texas A&M Wildlife & Fisheries Tailgate

The Department of Wildlife & Fisheries Sciences tailgate for the Aggies vs. Louisiana-Lafayette game is scheduled for Sept 16 (kickoff TBA) on the lawn next to the new Wildlife, Fisheries & Ecological Sciences Building on West Campus. We look forward to the event and hope to reconnect with former students and attract new students while creating awareness of the importance of ecosystems management. Hope to see you there!

If you are interested in giving to the Department of Wildlife and Fisheries Sciences, complete the pledge card below and mail to the Texas A&M Foundation. Contact: Dawn Miles | dmiles@tamu.edu | 979.845.6295

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