FISHERIES

Alligator gar king of the Mississippi River floodplain

Alonda McCarty, a master's degree student under the direction of Dr. Bill Kelso, is working on a project through the U.S. Fish and Wildlife Service to identify aquatic habitat conditions that promote healthy alligator gar populations at St. Catherine's Creek National Wildlife Refuge.

As the Mississippi River rises and falls each year, fish use inundated floodplain habitats for foraging and reproduction. One major consequence of anthropogenic alterations to the river has been the sequential loss of connectivity of floodplain habitats. In light of these changes, a concentrated effort has been made to restore the integrity of the lower Mississippi River floodplain.

An integral part of restoration efforts depends on understanding characteristics of aquatic habitats that promote reproduction, growth and survival of floodplain-dependent fish. Data obtained from McCarty's study will assist in developing sound conservation strategies throughout the lower Mississippi River valley and in identifying priority areas for floodplain restoration projects.

In addition to the habitat-based work, they are interested in stress levels in alligator gar on the floodplain. Seasonal variations in water levels on the floodplain force alligator gar on the refuge to become concentrated in small ponds. They can be stranded in these areas for several months, depending on the annual flood cycle, and with declining oxygen levels, changes in metabolic rates and a declining food base, these fish are likely experiencing severe stress as the low water period progresses.

Plans are to monitor uric acid, protein, free fatty acids and carbon monoxide levels in alligator gar blood and tissue over the extended period of isolation to assess their adaptations to extreme conditions of "boom and bust cycles" on the floodplain. Refuge managers could use this data in their design of water control structures that could allow river access for floodplain fish during low water periods, potentially reducing stress and increasing growth and spawning success.

McCarty will also be evaluating the use of side-scan sonar as a noninvasive tool for mapping and quantifying adult alligator gar abundance and habitat use during the summer low-water periods. The research team hopes to develop specific recommendations for standardized implementation of this technology for other alligator gar research efforts. Alligator gar exhibit several characteristics (namely their massive size and hard outer surface) that make them good targets for sonar imaging. Hopefully large fish can be identified, counted and mapped from sonar imagery, providing a low-cost alternative to handling these animals.

Alonda McCarty and fellow graduate Nick Smith with an alligator gar collected on the floodplain at St. Catherine's Creek Refuge.

Using a small fish to answer big questions

Many people use small fish, such as the Cocahoe minnows, to catch bigger fish, but some researchers are trying to use them to answer big questions about the Deepwater Horizon Oil Spill. Dr. Chris Green and master's degree student Chelsea Bonner are using this small baitfish to look at reproduction and fitness across different generations.

Dr. Green's lab has joined with Dr. Fernando Galvez at LSU and Dr. Andrew Whitehead of the University of California at Davis in a project funded by the National Science Foundation and the National Institutes of Health to examine aspects of the oil spill on both human and fish health. Green's lab is looking at the reproductive consequences of adult minnows exposed to oil. The lab has then been able to create an environment for the fish to spawn so the eggs and resulting larvae will be either examined for fitness and physiological health or reared to sexual maturity. The ability to look at multigenerational effects will provide important insight into any lasting effects we might see along the affected Louisiana coastline for years to come.

Bonner began her graduate work with this research project this year and is performing work on Cocahoe larvae produced from adults exposed and not exposed to oil. Tests have been designed to determine their tolerance to different salinities and temperatures, as well as oil effects on body composition. Blood and other tissues have been collected from adults to examine how well the adults have been able to develop eggs and produce the critical hormones needed to coordinate reproduction.

Collaborators on this project will look at the development of these embryos and specific genes throughout the life of several generations of these fish as they are experimentally exposed to oil. Importantly, this research will look at various levels of biological organization and will reveal a lot about the current and future health of fish exposed to the oil spill.

Chelsea Bonner works on the Cocahoe Minnow project.

On the trail of Louisiana's rare crayfish

Dr. Mike Kaller and his master's degree student Will Budnick are studying the biogeography of Louisiana crawfish, with particular emphasis on rare crawfish in the genus *Orconectes*. In a state that is world-renowned for the culture of more tasty members of the crawfish world, there hasn't been much focus on the ecology of lesser-known species that inhabit the state's streams, rivers, bayous and lakes. Even basic information on crawfish distribution is often lacking for many species, so the species occurrence and distribution data that is being collected will itself provide important information on these crustaceans.

Orconectes hathawayi blacki, O. h. hathawayi and *O. maletae* are of particular interest for the study because they are closely related. Even though these sister species are found in neighboring drainages, their documented ranges do not overlap. Budnick's thesis will focus on identification of environmental gradients that may explain the observed distribution

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DIRECTOR'S COMMENTS


Allen Rutherford

It's been a good year in the LSU School of Renewable Natural Resources. Our programs continue to thrive.

We currently have 258 undergraduate students in the school and have been adding an average of about 30 students per year over the past five years. The master's and doctoral degree programs currently have 60 students, which is down from over the past few years. However, we believe that decline likely is associated with declines in faculty numbers and state and federal budget reductions, so we hope it will rebound as the economy rebounds.

The success of these programs is a tribute to the school's faculty, staff and alumni recruiting efforts. As always, we ask each of you to serve as ambassadors for the LSU School of Renewable Natural Resources by letting potential students know about the diverse career opportunities our programs offer.

I know many of you were as dejected as we were to hear that the historic bachelor's degree in forestry was eliminated by the LSU Board of Supervisors as a result of ongoing low enrollment issues. Fortunately, we were quickly able to reconstitute the program as an area of concentration under the bachelor's degree program in natural resource ecology and management. So while we lost a long-held tradition during the process, we continue to train highly qualified, tech savvy undergraduates who have excellent technical and communication skills. We currently offer the following nine areas of concentration:

Conservation biology – Students in this specialization are interested in conserving endangered species. Students learn about habitat manipulations and genetic approaches to enhancing these species.
Fisheries and aquaculture – Students are prepared for managing, conserving and enhancing populations of aquatic organisms in the wild or through the use of aquaculture.
Wildlife habitat conservation and management – Students in this concentration learn to manage habitats to promote wildlife.
Wetland science – The wetland science area of concentration was designed for students who wish to specialize in wetlands, which are valued as wildlife and fish habitat, for maintaining water quality and for economic benefits.
Wildlife ecology –Offers a broader range of wildlife than other specializations, including recreationally and culturally important game species and ecologically important nongame species.
Pre-Vet wildlife /wildlife and fishieries – Students are preparing for a career as wildlife or zoo veterinarians typically working for state or federal agencies, nongovernmental environmental organizations, wildlife rehabilitation facilities or zoos and aquariums.
Ecological restoration – Students in this specialization are interested in using the principles of forestry and natural resource management to conserve and restore ecologically important landscapes.
Forest management – Students are prepared for the diverse challenges of managing forested landscapes for various sustainable uses.
Forest enterprise – Students in this specialization focus on the business aspects of forestry and wood products.

After several years without an upland game biologist, we are excited to report that Dr. Bret Collier has joined our faculty. Dr. Collier comes to us from Texas A&M University and has extensive experience working with wildlife habitat of white-tailed deer, turkeys, white-winged doves and golden-cheeked warblers.

As many of you know Dr. Frank Rohwer took a job as executive director of the Delta Waterfowl Foundation last July. We have been given approval to begin a national search for a new waterfowl ecologist. Although Frank will be difficult to replace, we are hoping to have someone for the fall semester.

As you read this newsletter, you will get a glimpse into the students we are training and the quality of our faculty. We are all proud of our long and diverse academic history and the part each of you has played in the school's continued success. We appreciate those of you who contribute financially to our programs, but we also appreciate those who promote our programs throughout the nation.

If you couldn't join us for homecoming, please send me an email and a picture sharing where you are and what you are doing. Or contact us on the school's Facebook page found at www.rnr.lsu.edu. We always love hearing from you and hope to hear from each of you soon!

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In Memorium

Dr. Stanley B. Carpenter, 75, passed away Aug. 20, 2013. He was a longtime resident of Baton Rouge, La., for 22 years and a former director of this school.

A native of Searcy, Ark., he proudly served in the U.S. Army as a first lieutenant and artillery officer at Fort Hood, Texas. He also earned a bachelor's degree from the University of Idaho; a master's degree from the University of Washington; and a doctoral degree from Michigan State University.

Carpenter served as professor and head of the Department of Forestry at Oklahoma A&M University before accepting the position of director of the LSU School of Renewable Natural Resources (then LSU's School of Forestry, Wildlife and Fisheries) in 1988 and serving in that position until 1997. Carpenter was instrumental in the establishment of the Louisiana Forest Products Laboratory (now the Louisiana Forest Products Development Center) by the Louisiana legislature. He was a strong advocate for water quality in the state, particularly Louisiana's forest streams and rivers, and he orchestrated and initiated the best management practices now used by our forestry community. He also had a strong interest in medicinal plant use, primarily the use of medicinal trees, and with Dr. Zhijun Liu, established the school's Medicinal Plant Laboratory.

Carpenter is survived by his loving wife of 50 years, Jane Carpenter; two sons David Stanley Carpenter and wife Michele and Carl Barton Carpenter and wife Wretha; and grandchildren Jeb Carpenter, Andrew Ball and Jacob Ball. Stan will be missed by both his family and his colleagues.

RNR welcomes new faculty member

Dr. Bret Collier recently joined the LSU School of Renewable Natural Resources as an assistant professor of wildlife biology.

His areas of expertise are wildlife population dynamics, primarily focused on upland and migratory game birds, deer and feral hog management, and application of computational methods to wildlife population demography.

He received a bachelor's degree from Eastern Illinois University, a master's degree from Oklahoma State University and a doctoral degree from the University of Arkansas while in the U.S. Geological Survey's Arkansas Cooperative Fish and Wildlife Unit at that university. For the past seven years, he has been a research scientist at the Institute of Renewable Natural Resources and adjunct faculty in the Department of Wildlife and Fisheries Sciences at Texas A&M University.

Collier and his wife, Dr. Reagan Errera, who holds her doctoral degree in oceanography, as well as their nonfurry 2-year-old daughter Kennedy and their furry daughter and his hunting partner Lyla, are really looking forward to beginning their journey at LSU.

From a teaching perspective, Collier plans to develop undergraduate courses in wildlife management techniques and population dynamics. At the graduate level, he plans to develop courses in applied population dynamics and computational programming for ecologists, as well as developing other course offerings that will be fairly flexible depending on departmental graduate student needs. In addition, he plans to initiate a study abroad program in Swaziland for both undergraduates and graduate students.

Collier's research over the past decade has focused on wildlife ecology and management of game species, with most of his efforts leaning toward demographic parameter estimation and spatial modeling of mammalian and avian species. He has a variety of active projects, including 1) research on the ecology and management of wild turkeys in Texas, Arizona, South Carolina, Louisiana and Georgia; 2) research evaluating harvest dynamics of white-winged doves, as well as developing an aging key for white-winged doves for use by the U.S. Fish and Wildlife Service; and 3) a long-term project on white-tailed deer movement ecology, breeding dynamics and harvest management in South Carolina. His research also has allowed him significant amounts of time on development of open source software for use by wildlife biologists, primarily focused on methods useful for spatially explicit questions relating habitat selection and wildlife demographics.

In his spare time, Collier trains hunting dogs and hunts woodcock, ruffed grouse, pheasants, ducks and white-tailed deer; does a little hiking and running; tries to hit the gym regularly; and watches copious amounts of Oklahoma State University football.

School of Renewable Natural Resources Research Matters - Spring 2014
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FISHERIES

On the trail of Louisiana's rare crayfish

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patterns of these sister species and hopefully provide evidence about why they may not co-occur or enter into neighboring drainages. He also is bringing the crawfish back to the lab and is going to conduct shelter competition experiments between *O. h. blacki* and a more common species from another drainage to determine whether aggressive interactions between species also could be contributing to restricted distribution.

Will Budnick excavates a crayfish burrow in Mill Creek, near Oakdale, La.

The field and laboratory studies that Budnick is conducting will provide data that can be used as baseline information for future studies and hopefully will explain some of the mechanisms that determine the distribution patterns of the state's rare crawfish species.

Understanding blue crab diseases in Louisiana

The blue crab is an economically important, and tasty, benthic predator in Louisiana. To sustain a profitable fishery and keep blue crabs on the menu, blue crab populations must be healthy and relatively stable.

The health of the populations around Louisiana has been questioned in the past few years, following the Deepwater Horizon oil spill. Wth the absence of baseline data from pre-spill years, however, effects of the spill on blue crab population health, specifically prevalence of diseases and parasites, are unknown. But a new project by Dr. Julie Anderson and graduate student Holly Rogers is beginning to fill some of these knowledge gaps.

By sampling at four areas of the coast known for blue crab fishing as well as blue crab shedding facilities, they are looking for common diseases that, while they pose no threat to humans, can harm the blue crab population. These seven diseases and parasites, which include shell rot, buck shot, white spot virus, black gill, bitter crab and a parasitic barnacle, can cause suppression in growth, loss of appetite, loss of reproductive capacity, dwarfed size, lethargy and even death.

Black gill is triggered by *Lagenophrys callinectes*, which causes the crab's gills to turn black and can lead to asphyxiation in the worst cases. No prevalence estimates (percentage of the population that carries a specific parasite) currently exist in Louisiana, but data collected in this study indicates widespread infestation with this parasite at both the field sites and shedding facilities. In many sample sets, the prevalence is 100 percent. These results could help us understand how severe a threat some of these diseases are to blue crabs. With 100 percent prevalence, it is clear some level of black gill can be tolerated by infested blue crabs.

A Louisiana blue crab collected near Chauvin, La., being examined for diseases and parasites.

Other parasites and diseases have had very low prevalence rates, or are still undetected in our samples. Some of these are associated only with summer months in other parts of the blue crab range and may be a problem only seasonally for our blue crabs.

Overall, we hope this project will shed greater light on disease and parasite threats for Louisiana blue crabs and contribute to keeping their populations healthy and keeping seafood producers, processors and consumers happy.

FORESTRY

When teaching and research get together:
Undergrads gain research experience in cypress-tupelo swamp environment

Marcus Rutherford, a master's student under the direction of Dr. Jim Chambers, is implementing a research project on baldcypress regeneration within the Maurepas Swamp Wildlife Management Area and portions of the Atchafalaya Basin in southeastern Louisiana.

Scant long-term hydrological data is available to predict the success of baldcypress seedlings used in restoration or regeneration in the swamps of south Louisiana. To overcome the lack of such hard data on hydrology, Rutherford will attempt to develop a system using current vegetation and site conditions to predict successful first-year survival and growth under a variety of conditions.

The first research objective is to establish a correlation between flood hydrology and present vegetation, coupled with site factors. The second objective is to establish the site and flooding factors with greatest effects on first-year baldcypress seedling survival and growth. Finally, the results will be combined to develop a site suitability index that will categorize sites according to their potential for successful artificial regeneration of baldcypress. This research has the potential to aid in the development of management recommendations for sustainable timber production of semipermanently to permanently flooded cypress-tupelo forests.

This semester, 10 undergraduate students, Eric Boone, Alexis Burris, Collins Fairley, Audrey Hughes, Kameron Langlois, Mark Maxwell, Kyle Reed, Matthew Repp, Parker White and Seth Wilton, will venture into south Louisiana swamps. The students are enrolled in an undergraduate course to help them learn more about field research techniques, study design and methodology and the biology and ecology of coastal wetland forests.

The students also will provide hands-on assistance with implementing certain field aspects of the study, such as installing water-level recording devices, seedling plantings and measurements for baldcypress seedlings. In addition to spending a great deal of time in the outdoors, the students will keep journals of their field research activities and "lessons learned." Students will gain additional credit by writing a term paper or conducting a literature review on related coastal wetland research.

Students are exposed to unique environments and, as a result, acquire skills, knowledge and experience not normally received in a traditional classroom setting. Experience from the research will provide additional insight to these students as they pursue their related degrees in renewable natural resources fields.

(Left to right) Kameron Langlois, Mark Maxwell and Alexis Burrus prepare the study site for planting of one- and two-year-old cypress seedlings.

Students (left to right) Parker White, Matthew Repp and Audrey Hughes shuttle research gear into cypress/tupelo swamp.

FORESTRY

Research produces a novel relationship between stand growth and stand density

Everyone has a sense that parts of a tree grow in a coordinated fashion. It is what makes some species recognizable just from their silhouettes.

Coordinated morphology appears to play more of role in forest dynamics than simply tree recognition, however. It appears to have a large role in how competition affects individual tree growth and ultimately how the collective growth of the stand is related to stand density.

Silhouette of a loblolly pine tree showing the coordinated morphology between the crown and the stem

In a recent paper published in the Canadian Journal of Forest Research, Thomas Dean, School of Renewable Natural Resources professor, and colleagues at Mississippi State University and the University of Maine showed that stand growth, when expressed on a structural basis, is linearly related to stand density for at least four species. Not only was this the first time that a consistent pattern of this relation has been seen among species, it was the first time competition's effects on crown and stem growth of various species were shown to respond similarly to crowding.

In many ways, the constant species-to-species relationships between stand growth, as defined by Dean and his colleagues, and stand density is a logical result of the consistent manner in which a stem size and taper varies with crown size and live-crown ratio across species as predicted with simple biomechanics. Competition affects where the trees can add new foliage, feeding back to where the stem needs to add girth to support the crown. When tallied across all of the trees in the stand, the collective growth becomes a predictable function of stand density.

The analysis conducted by Dean and his colleagues points to height growth as the main mechanism driving stand growth from a morphological perspective. This finding harks back to the turn of the 20th century when Eichorn first presented data showing standing volume as a consistent function of average stand height. Eichorn's "rule" was dismissed when researchers found that the curve varied with stand density. The research conducted by Dean and his colleagues confirms that density changes the production/height function, but it also shows that density effects on the "rule" can be explained systematically with coordinated growth between the stem and the crown as trees gain height, producing new insights into stand dynamics.

Forest landowner perceptions of wildland fire in the Florida parishes

Forests in the Florida parishes of Louisiana are experiencing rapid development as bedroom communities to New Orleans and Baton Rouge, creating classic wildland/urban interface issues.

Many of these new residents are apprehensive about the logging and prescribed burning they see on nearby commercial forests. To better cope with the new interface, the Louisiana Department of Agriculture and Forestry asked the LSU School of Renewable Natural Resources to conduct a study of the new residents' perceptions of wildfire risk, prescribed fire as a risk mitigation tool and smoke management.

Landowners in East Feliciana, West Feliciana, Livingston, Tangipahoa, St. Tammany, St. Helena and Washington parishes were surveyed. According to the nearly 1,300 surveys returned, a third owned 6 to 25 acres, a third owned 26-100 acres, a sixth owned 101-250 acres and a sixth owned more than 250 acres. In terms of perceived risk, the senior landowners thought their forests more at risk from wildfire than younger owners.

Many of the landowners are already familiar with controlled burning. The majority of the respondents (74 percent) reported they were familiar with controlled burning. Thirty percent of respondents reported having personally used controlled burning, but 40 percent had not.

Almost 24 percent of respondents reported experiencing wildfires on their land. Causes reported were lightning (2 percent), brush pile or leaf burn that got out of control, controlled burn that became uncontrolled (6 percent), arson (6 percent), negligence (e.g., campfire left unattended; 4 percent), unknown (5 percent) and other (2 percent).

Half of the respondents agreed with the statement that smoke from controlled burns is manageable, while 24 percent disagreed. A large majority of respondents (78 percent) agreed that occasional smoke from controlled burns is acceptable, while only 6 percent disagreed. Perhaps more significantly, 18 percent of respondents have someone in their household who is unable to tolerate any smoke. This has significant implications for smoke management in controlled burns, as well as implications for wildfire fuel reduction activities.

Half of the respondents are interested in learning more about controlled burning (47 percent), wildfire danger and prevention (53 percent) and smoke management (46 percent). These percentages are encouraging because they indicate residents are interested and invested in becoming better educated about their environs. In addition, the handwritten comments on the survey instruments were very common, voluminous and often strongly opinionated, indicating a strong interest in the topic and likely a strong attendance for educational efforts on wildfire, controlled burning, forest health and property protection.

WETLANDS

What's happening at Catahoula Lake?

Catahoula Lake in central Louisiana is one of the most important wetlands in Louisiana for migratory waterfowl and an unusual kind of lake that nearly dries every year. Waterfowl habitat on the lake has declined because of water elm encroachment that shades out plants important for waterfowl food.

In cooperation with the Louisiana Department of Wildlife and Fisheries (LDWF), the LSU School of Renewable Natural Resources (RNR) has been working to understand exactly why these changes are happening and how to better manage water in the lake to maintain the habitat of this internationally important wetland. Expanding water elm is an ongoing problem that is costly for the LDWF to manage by periodic mechanical removal.

Karen Doerr Latuso, a master's degree student, working with Drs. Richard Keim and Sammy King, analyzed historical aerial photos and satellite data to map the locations and timing of tree establishment. Using these maps in conjunction with tree ring data collected by Sanjeev Joshi, an LSU master's degree graduate, we found that water elm has expanded by more than 30 percent since 1940. This rate is quite high, particularly in light of the ongoing efforts to remove trees.

In addition to historical reconstructions of tree establishment, Latuso used sediment chemistry to measure the rate of accumulation on the lake bed. Analyzing the results in the context of previous geologic work at Catahoula Lake by LSU researchers, we have found the rate of sedimentation accumulation in the lake over the past several decades has been about triple the rate prior to European settlement. We will combine this work with hydrological analysis to determine whether this rate of sedimentation is sufficient to cause a shift in the lake ecosystem to favor trees.

In ongoing work, Lincoln Dugué, a master's degree student, is using historical data to model the natural range of fluctuations in lake water levels and will compare these results to lake levels under current management. Dugué is from the Haitian Ministry of Agriculture and is studying under a U.S. Department of Agriculture fellowship. Through his work at Catahoula Lake, he not only will help understand this important wetland but also potentially gain experience to improve management of wetlands in Haiti, as well.

The Catahoula Lake project has been in progress since 2012 and is an example of cooperative research with state and federal managers to solve applied problems using science and adaptive management.

Catahoula Lake is an important feeding and migration stopover for thousands of ducks, geese and shorebirds in the Mississippi Flyway. (Photo by Karen Doerr Latuso)

Fertilization increases nutria herbivory

The Mississippi delta historically is defined by impermanence. With an ability to look eons into the past, we would see that year to year, decade to decade, coastal Louisiana changed shape, size and character, depending on a suite of external factors.

We would see the fall hurricanes, diligently reshaping the coast as the season subsided, working in conjunction with a Mississippi River that was free to move. Driven by the power of spring floods, lumbering from side to side like an elephantine garden hose, it periodically abandoned course for a more efficient one, scouring away old land here and creating new land there.

The system here was never a closed one in the past. For all that was carried away, equal parts were deposited. Now, however, without the traditional influx of sediment, the region is left with a declining balance, and the most stubborn adversary left standing is the persistent disappearance of the land itself.

This struggle colors much of the conservation management within the delta. Recent research has identified the disconnect between the Mississippi River and its surrounding wetlands as one of the major causes of land loss, and over the past several decades, diversions have been constructed to reconnect the historic flow of water from the main channel to the marshes and approximate the original hydrology. In addition to the much-needed sediments and minerals, river systems now carry additional levels of nitrates, phosphates and sulfates from upstream agricultural runoff, a result of the ongoing industrial struggle to feed a ballooning global population.

Researchers also have found that there is a likely link between higher levels of nutrients, such as those carried within the river-borne agricultural runoff, and increased feeding by grazing herbivores. Nutria, which scarcely needs an introduction in a region so attuned to the preservation of existing wetlands, can do extraordinary damage to large areas of marsh in short periods of time. Although a recent bounty system has done a great deal to keep nutria numbers down, it would be extremely important to know if current wetland restoration work involving river diversions should take into account the possibility of increased nutria activity in areas of its influence.

To explore this question, wildlife biology master's degree candidate James Ialeggio, working with Dr. Andy Nyman, captured 10 nutria during the summer of 2012 to conduct a study on the effects of fertilization on feeding. The nutria were caught from the LSU aquaculture ponds, using Have-a-Hart traps baited with pieces of sweet potato, and they were housed in the Veterinary Medicine center of LSU, with the help of Dr. Rhett Stout and staff.

Since nutria inhabit marsh within a range of salinity, three plant species were gathered from across that spectrum. Maidencane (*Panicum hemitomon*), bulltongue (*Sagitaria lancifolia*) and saltmeadow cordgrass (*Spartina patens*) represent dominant plant species of fresh, fresh-brackish, and brackish marsh, respectively, and all are eaten by nutria in the wild. To approximate the effect of a river diversion on wetland plants, half of each group of gathered plant samples was grown with a commonly used fertilizer while the other half was grown without – to represent vegetation growing outside of a diversion's influence. Nightly feeding trials were then conducted, during which an individual nutria was removed from the communal holding pen, placed in a separate test pen and offered both fertilized and unfertilized samples of each type of vegetation. Before and after each 12-hour trial, the plants were weighed to assess damage. Results showed nutria favored fertilized vegetation over nonfertilized vegetation, since fertilized plants were consumed approximately 11 percent more than those without nutrient addition.

A nutria being used in the feeding trials.

A link between increased nutrient levels and nutria herbivory should not serve as evidence against the use of diversions as restoration and management tools, because the evidence is strong that they serve their intended purposes. These results, however, could potentially arm wetland conservation against previously unforeseen hurdles in maximizing efficiency of diversions.

In addition, this study's results might add to current discussions about wetland restoration methods. An ability to better weigh the risks and benefits of wetland management, in a time of great attention and expense, will only lengthen the lease south Louisiana residents have on their most precious commodity, land itself.

Marsh plants used in the nutria feeding trials.

Jean Elbers with adult gopher tortoises at Sandy Hollow (photo credit Charleston Shirley).

First gopher tortoise nest on Sandy Hollow's northern tract

Doctoral student and Gilbert Fellow Jean Elbers, along with Dr. Sabrina Taylor, are investigating how genetic variation influences gopher tortoise immune response to better understand this threatened species' susceptibility to an infectious and occasionally fatal upper respiratory tract disease.

While working on the northern tract of the Sandy Hollow Wildlife Management Area in Tangipahoa Parish this past fall, Elbers came across a nest of baby gopher tortoises just as they were coming out of the ground. This is a significant find since reproduction had not previously been documented on Sandy Hollow's northern tract – an area set aside for depositing tortoises of unknown origin within the range of the species but without any natural residents.

Seven baby tortoises and one unhatched egg were found. The babies were placed in the adjacent adult tortoise burrow, which they eagerly scurried into. Here's hoping for continued growth at this as well as other Louisiana gopher tortoise populations!

A gopher tortoise hatchling at Sandy Hollow (photo credit Jean Elbers).

Gopher tortoise hatchings inside a burrow (photo credit Jean Elbers).

Louisiana bald eagles are back...
But where did they go?

America's national symbol, the bald eagle (*Haliaeetus leucocephalus*), was a common south Louisiana resident in the early 1900s, nesting in the state during the winter. After experiencing drastic population declines, which occurred throughout the nation, numbers were precariously low by the early 1970s. Since then, nesting in Louisiana has increased exponentially with at least 387 active nests in 2008.

Despite the recovery of the nesting population and the removal from the threatened and endangered species list, however, bald eagles are rarely seen in Louisiana during the summer.

While studying the recovery and nesting of Louisiana's population of bald eagles, master's degree student Nick Smith also is tracking eagles to better understand their movements and figure out where these birds go for the summer. In cooperation with the Louisiana Department of Wildlife and Fisheries, Smith is studying bald eagles under the supervision of Dr. Alan Afton and collaborator Tom Hess (recently deceased), an LSU School of Renewable Natural Resources alumnus and head of the state's bald eagle program. Smith fitted five adult and four subadult bald eagles each with a satellite GPS transmitter that sits on the bird like a backpack and is programmed to record the bird's location every hour. From this data, he will document migration, home ranges and habitat use, as well as look at any variations between birds and across years for individuals.

Preliminary results from the first spring of the study showed that all the marked birds left Louisiana and headed north for the summer, but the amazing thing was how far north they traveled. Every bird flew to Canada for the summer, with one bird traveling all the way to the Northwest Territories and another to British Columbia. After staying there for a while, the birds made their way back south and returned to Louisiana by early November. During the following spring, all eagles started their way back north again, following similar routes as those used the previous year.

Nick Smith releasing a bald eagle.

We now know where at least some of Louisiana's eagles are going for the summer. It will be interesting to see what other results are obtained as the study continues and new locations are recorded.

An evaluation of the waterfowl hunter recruitment and retention conceptual model

In 2008, the Human Dimensions Working Group of the Mississippi Flyway Council developed a conceptual for waterfowl hunter recruitment and retention that included three potential explanations for consistent hunting participation. An understanding of how duck hunters are engaged into and retained to the sport is important to managers because the number of duck hunters has been declining nationally. We developed questions to represent each of the three explanations (decision to hunt, identity development, and capacity to hunt) and tested them in the 2011 Survey of Mississippi Flyway Waterfowl Hunters. We hypothesized that a consolidated model including questions from all three explanations would provide a better prediction of hunter participation than models based on the explanations individually.

We mailed surveys following the 2010-2011 waterfowl hunting season to a geographically stratified random sample of 6,400 waterfowl hunters in all 14 states of the Mississippi Flyway. We received 1,512 usable responses, a 24% response rate. For the decision to hunt, we identified hunter motivations, constraints and satisfaction. For identity development, we obtained hunter self-identity, the relative importance of waterfowl hunting as a recreational activity, and important sources of identity development. For capacity to hunt, we questioned hunting club membership, membership in waterfowl conservation organizations, participation in hunter mentoring, and perceptions of family and community support for waterfowl hunting. We used this information to predict consistency of waterfowl hunting participation over the past five years, separating respondents who hunted all five seasons (74%), from those who hunted < five seasons (26%).

A consolidated model combining variables from each of the three explanations was able to accurately predict the level of participation (five years vs. < five years) of 88% of respondents, exceeding the predictive accuracy of models testing the explanations individually. Additionally we learned –

- Respondents rating "enjoying uncrowded areas" as 'very important' were 6.7 times more likely to hunt consistently as those rating the issue 'not important'
- Respondents rating "areas open to the public" as 'not important' were 4.3 times more likely to hunt consistently than those rating the issue 'very important'
- Respondents rating "availability of guides" as 'not important' were 4.0 times more likely to hunt consistently than those rating the issue 'very important'
- Respondents reporting that they were 'very dissatisfied' with the past hunting season were 3.8 times more likely to hunt consistently than those reporting they were 'very satisfied'
- Respondents rating "bagging ducks and geese" as 'slightly important' were 2.4 times more likely to hunt consistently than those rating the issue 'very important'
- Members of waterfowl conservation organizations were 1.6 times more likely to hunt consistently than respondents who were not members.

Consistency of participation (five of five years) was not statistically different by hunter age or state of residence. Those who hunted consistently averaged more days afield last season (38 versus 20 days) and were more successful (average harvest per day 2.1 versus 1.7 waterfowl).

Our findings support, but do not prove, the hypothesis that a consolidated model incorporating decision to hunt, identity development and capacity to hunt is a better predictor of waterfowl hunting participation. Future research will investigate experience preferences of low participation waterfowl hunters to identify new management practices to enhance waterfowl hunting participation.

This research was awarded second place for best doctoral student oral presentation at the sixth North American Duck Symposium and Workshop in Memphis, Tenn.

Drs. Jun Xu and Andy Nyman participate in wetlands forum held in China

Last summer Dr. Jun Xu collaborated with the Chinese Academy of Sciences to organize an International Forum on Wetland Ecosystems and Services throughout northeastern China. In addition to organizing the forum, Xu secured travel funds from the Chinese Academy of Sciences to cover travel-related expenses for several American scientists to participate in the forum. The forum began with two days of meetings in Changchun, Jilin, and then continued with four days of field visits to wetlands in the region. One major site was 350 miles northeast of Changchun – Xingkai Hu (Xingkai Lake) National Nature Reserve. This large lake is twice the size of Lake Pontchartrain and spans the boundary between Heilongjiang, China, and Siberia, Russia, with Russia owning the southern part of the lake and China owning the northern portion of the lake. A large wetland area near the lake has been designated a Ramsar Wetland of International Importance.

(Left to right) Professor Changchun Song, of the Key Laboratory of Wetland Ecology and Environment, Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences; Professor Jun Xu, of the LSU School of Renewable Natural Resources; and Professor Emeritus Irv Mendelssohn, of the LSU Department of Oceanography and Coastal Sciences, overlook wetlands near Xingkai Hu from an observation tower. Behind them is a relict beach supporting woody vegetation with marshes on either side, which is a geomorphology similar to the cheneirs and wetlands of southwestern Louisiana.

Dr. Cao in front of a giant red cypress tree (Chamaecyparis formosensis Matsum). This 2,800-year-old tree is in the Xitou Nature Education Area in Central Taiwan.

Dr. Quang Cao was invited to Taiwan during the summer of 2013. He gave lectures at the Taiwan Forestry Research Institute and the National Chung Hsing University. He discussed future cooperative research with various Taiwanese forest researchers during the visit.

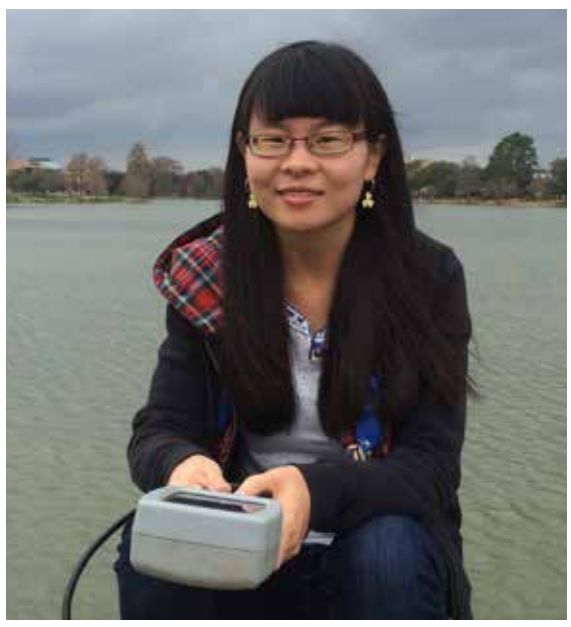
A FEW OF OUR GRADUATE STUDENTS

Chelsea Bonner, a master's degree student with Dr. Green, is investigating the effect of chronic oil exposure on reproduction in adult Gulf killifish.

Cory Garms, a master's degree student with Dr. Dean, is quantifying the static bending properties of baldcypress to estimate the maximum wind speeds baldcypress can withstand.

Graduate student Barcley Pace is investigating the physiological and immune response to white spot syndrome virus in red swamp crawfish with Dr. Green.

Joy Das, from India, joined Dr. Vlosky in the Louisiana Forest Products Development Center to pursue a Ph.D. in forest sector business development.



Songjie He, a doctoral student with Dr. Xu, is studying coastal hydrology and water quality.

Holly Rogers, a master's degree student with Dr. Anderson, is investigating the prevalence of common diseases in Louisiana blue crabs.

Lincoln Dugué is a master's degree student from the Haitian Ministry of Agriculture who is modeling the hydrology of Catahoula Lake with Dr. Keim.

Angélica Hernandez Palma (shown with an Amazonian pygmy owl, Glaucidium hardyi) is a doctoral student with Dr. Stouffer studying the conditions of birds in Amazonian forest fragments and regenerating second growth.

Molly Rybovich, a master's degree student with Dr. La Peyre, is examining the effects of salinity and temperature on eastern oyster life history dynamics.

Kaci Fisher, a doctoral student with Dr. Xu, is studying the effects of best management practices on water quality.

Erin Johnson is studying how river flow modifications affect floodplain forests in the White River floodplain in Arkansas as she works toward a master's degree with Dr. Keim.

Lauren Sullivan is comparing water bird habitat quality between natural and artificial wetlands on a master's degree with Dr. Nyman.

Policy class "plays" at Big Branch Wildlife Refuge for class credit

In February, 16 students from RNR, participated in Work and Play Day at Big Branch Marsh National Wildlife Refuge. Organized by Friends of Louisiana Wildlife Refuges, the morning "work" session consisted of students from the natural resources policy class breaking up into teams to help pull vines, clear trails, weed, mulch gardens and generally clean up grounds at the refuge's historic headquarters in Lacombe, La. After lunch, students were treated to "play" – a tour of the refuge visitor's center, canoeing on Bayou Lacombe and a hike on the nature trail at Big Branch Marsh.

U.S. Fish and Wildlife Service supervisory park ranger David Stoughton instructed students on the location and geophysical setting of Louisiana's coastal wildlife refuges, the unique birds and animals that use them, efforts to protect endangered and threatened species and the role of staff and volunteers in managing these properties. The importance of volunteer service to wildlife conservation and environmental protection is one of the topics emphasized in the natural resources policy course taught by instructor Luke Laborde.

Shelby Fletcher, April Simmons and Jeni Ewing enjoy canoeing on Bayou Lacombe. As Friends of Louisiana Wildlife Refuges' volunteers, Joseph Guercio and Rush Maxwell paddle in the background.

Rush Maxwell, Joseph Guercio and John Clark put the finishing touches on clean-up of the grotto pool at Southeast Louisiana Refuges headquarters in Lacombe.

Gabby Rodriguez, Casey Jackson, Mikayla Mettler and Allie Medine weed camellia gardens near the visitor's center at Big Branch Marsh National Wildlife Refuge.

The 2013 silvicultural prescription class. Back row (left to right): Dexter Courville, Jeff Sanders, Ben Guarisco, Stephen Upton, Jared Riddle and Margaret Whitsell. Front row (left to right): Dr. Joe Chang, Kasie Dugas, Charles Pell, Raymond Andrews, Justin Day and Dr. Thomas Dean.

Silvicultural prescriptions class brings it all together at spring camp

Silvicultural prescriptions is taught during the last week of spring camp and is intended to bring together all of the material students have learned to that point and help them write a comprehensive prescription for a stand or groups of stands. The course also introduces the students to economics to allow them to make rational decisions on profitable combinations of establishment treatments, thinning schedules and thinning intensities.

The exercise for the 2013 prescriptions course was conducted on a privately owned woodlot in West Feliciana Parish. Students interviewed the five owners of the woodlot to determine their wants and desires from their land and found their prescription would need to accommodate objectives ranging from simple profit motives to managing for squirrel habitat.

The students were divided into two crews, and each crew conducted its own stand exam and prepared its own prescription. The stand exam included measures of site quality, standing inventory and regeneration potential, as well as other parameters. Each crew made a formal presentation of its prescription to the landowners at Lee Forest the final camp week after sharing a steak dinner with them.

Wylie Harvey stands next to one of the loblolly pine trees on his property. Thanks to the Roberts family for their hospitality and for allowing us to conduct our exercise on their property.

In addition to the proposed treatments for the current stand and those to establish a new stand sometime in the future, the owners were provided with expected revenues from managing their current stand as well as long-term land expectation values for their woodlot. The students benefitted from performing a realistic project, and the owners benefitted because this was their first exposure to forest management and forestry education within the LSU School of Renewable Natural Resources.

Students learn, serve and restore coastal wetlands

Service-learning is a credit-bearing, education experience in which students participate in an organized service activity.

Students enrolled in the RNR 3108 course provide service to public trust agencies and nongovernmental organizations that manage, restore and protect habitat for wildlife and fishes owned by all Americans.

During spring of 2013, RNR students traveled to the marshes at the very end of the Mississippi River to perform service at Louisiana's Pass A Loutre Wildlife Management Area. Some restoration efforts there are a response to recent losses in freshwater vegetation and projected declines in freshwater inflow.

Most of the salt-tolerant species expected to dominate those wetlands in the future already exist in small, scattered locations, but the black mangrove (*Avicennia germinans*) currently is absent from the area. Several restoration efforts have attempted to initiate populations of black mangroves that can expand at Pass A Loutre if salinity continues to increase, as expected. The Louisiana Department of Wildlife and Fisheries lacks the resources for experimental planting efforts such as this one that attempts to establish saltwater vegetation in these areas. The Restore the Earth Foundation, a small nongovernmental organization based in Ithaca, N.Y., has attempted several plantings but lacks the resources to determine if those efforts have been successful. The students in RNR 3108 worked to determine if previous planting efforts have been successful.

Students spent their spring break at the Pass A Loutre. While there, they determined that the foundation's latest planting had survived the recent hurricanes. Students also planted their own mangroves in another location and put fences around study plots to try to exclude feral hogs and help determine the effects of feral hogs on other wetland vegetation.

The students in the 2014 class of RNR 3108 will determine if those previous planting projects have survived, as well as a new one the Restore the Earth Foundation installed during the fall. They also may repair the fencing, if needed. We will provide more updates as our students continue their quest to learn, serve and restore.

CLASSROOM NEWS

Wetlands class visits prairie potholes and Mississippi headwaters

Three RNR faculty members led a small group of graduate students on a trip that took them through prairie potholes and to the Mississippi headwaters.

Drs. Sammy King, Richard Keim and Michael Kaller led a group of seven graduate students on a nine-day trip through Wisconsin, Minnesota, South Dakota and North Dakota. The trip, funded by a generous donor, was sensational, according to participants. The group visited the Upper Mississippi National Wildlife Refuge and learned about innovative restoration techniques used to restore islands in the Upper Mississippi River. In addition, throughout the trip, they learned how biologists are struggling with excessive sediments from agricultural runoff.

Students proceeded to the prairie potholes in South Dakota to visit the wetlands that are part of "the duck factory" of the United States and that produce many of our wintering waterfowl. Participants said they were stunned by the amount of wetland drainage going on in that region. Biologists from the U.S. Fish and Wildlife Service (USFWS) and professors from South Dakota State University, who are actively involved in wetland restoration and management in the region, led the group on a tour of wetlands and grasslands in the region.

Shawn Papon, a private lands biologist for USFWS, not only helped plan the entire trip, but he fed the group, housed them and gave them an intensive and extensive tour of various wetland restorations. The group learned about the challenges with invasive hybrid cattail and the effects of the ethanol mandate and other farm bill measures on the widespread drainage of wetlands and the plowing of native and restored grasslands. The importance of the linkages among wetlands and adjacent grasslands for waterfowl production were clearly explained.

The group also trekked to Glacial Ridge and Agassiz National Wildlife Refuges in northern Minnesota. The Agassiz refuge provided a great lesson on how stabilized water levels can lead to vegetation control problems and how manipulation of wetland processes can be used to restore degraded wetlands. Participants were treated to dinner at Dr. Al Afton's place in Minnesota and they also visited the headwaters of the Mississippi River before closing out the trip at the International Crane Foundation and Aldo Leopold's Cabin.

While at the International Crane Foundation, the group was able to observe all 15 crane species in the world, learn about the foundation's efforts to work with people to conserve cranes and wetlands throughout the world and even got a great hydrology lesson at a couple of prairie wetlands. Participants said the International Crane Foundation visit and Leopold's cabin were an inspirational ending to a wonderful trip.

Trip participants span the Mississippi River within 100 feet of the river's headwaters at Lake Itasca State Park in Minnesota. Graduate class members and faculty who participated were (left to right) Dr. Mike Kaller, Lincoln Dugue, Dr. Richard Keim, Scott Allen, Sarah Hamilton, Erin Johnson (kneeling), Lauren Sullivan, Cullen Foley, Dr. Sammy King and Karen Doerr Latuso.

STUDENT NEWS

Aquaculture and fisheries students winners again

LSU students were well represented at the 34th annual meeting of the Louisiana Chapter of the American Fisheries Society held last spring. Among the awards and recognition were:

First place, abstract competition: Calvin Fisher. Manipulation of the divalent ions Ca2+ and Mg2+ and their role in biochemical and molecular homeostasis in larval Gulf killifish (*Fundulus grandis*). Second place, abstract competition: Brett Miller. Resource partitioning within the centrarchid assemblage of the Atchafalaya River Basin, La., based on stomach content and stable isotope analyses. Third place abstract competition: Paige O'Malley. A transitional feeding regime of live and artificial feeds for larval Gulf killifish (*Fundulus grandis*).

First place, poster competion: Joshua Patterson. Variation in reproductive and larval physiology of Gulf killifish (*Fundulus grandis*) fed diets deficient in essential n-3 fatty acids or supplemented with fish oil. Second place, poster competion: Paige O'Malley. A transitional feeding regime of live and artificial feeds for larval Gulf killifish (*Fundulus grandis*).

First place, oral presentation: Brett Miller. Resource partitioning within the centrarchid assemblage of the Atchafalaya River Basin, based on stomach content and stable isotope analyses. Second place, oral presentation: Justin Leonhardt. An industry in decline: Finding the optimal oyster stock and ideal salinity conditions for intensifying commercial production of eastern oysters (*Crassostrea virginica*) in Louisiana. Third place, oral presentation: A. Nikki Anderson. Alternative bait for the Louisiana commercial blue crab (*Callinectes sapidus*) fishery.

LSU students present at Aquaculture America convention

The Annual Convention of Aquaculture America was held Feb. 22 in Nashville, Tenn. Presenters included several LSU students and faculty members:

Josh Patterson, Robert Reigh, Calvin Fisher and Chris Green – Replacement of live *Atremia nauplii* with commercial diet at first feeding in larval Gulf killifish and subsequent growth effects of dietary protein level.

Josh Patterson and Chris Green – Reproductive performance of Gulf killifish fed plant-based diets with varying inclusion on corn oil and fish oil.

Paige O'Malley, Andrew Palau, Cortney Ohs, Louis D'Abramoand Chris Green – Feeding larval Gulf killifish: Utilizing a transitional feeding regime of live and artificial feeds.

Calvin Fisher and Chris Green – Manipulation of the divalent ions Ca2+ and Mg2+ and their role in biochemical and molecular homeostasis in larval Gulf killifish.

Noel Novelo and Terry Tiersch – User's guide to ultrasound imaging in aquaculture production of channel catfish for the laboratory and farm.

Aquaculture and Fisheries Club

The Aquaculture and Fisheries Club at LSU was active on and off campus during the 2013-2014 academic years. On campus, members and faculty advisers of the club volunteered at Louisiana Sea Grant's Ocean Commotion and at the LSU AgCenter's AgMagic to give school children a glimpse into fisheries and aquaculture. Off campus, members and faculty advisers helped

Outstanding student award

Margaret Whitsell was the recipient of the Outstanding Student Award given by the Louisiana Society of American Foresters at their annual meeting in January 2014. The award was presented by Dr. Niels de Hoop, faculty adviser to the student chapter at LSU. The award is based on a combination of leadership, service and academic performance.

Margaret Whitsell (left) receives the Outstanding Student Award from Dr. Niels de Hoop, faculty advisor to the LSU student chapter.

clean up the estuaries of southern Louisiana during the Louisiana Sea Grant Derelict Crab Trap Rodeo. Club members look forward to participating in these events again in 2014 and are looking to expand into other service-learning events.

Student Chapter of Society of American Foresters

The LSU student chapter of the Society of American Foresters had a busy year.

In one activity, the club visited the LSU Day Care Center and taught children how to identify different types of trees. It was a rewarding experience for the members. In January, members participated in the Arbor Day activities at LSU AgCenter Botanic Gardens, including demonstrations on log chopping and axe throwing and the use of a crosscut saw and bow saw. Arbor Day was a really cool event, which the club hopes to participate in again next year.

Graduating Senior Dexter Courville readies for the chainsaw competition that aired on ESPN-U, sponsored by Stihl.

The club's biggest events were participating in the 56th annual Southern Forestry Conclave at Auburn University during the spring of 2013 and just recently in the 57th event held at Virginia Tech University. Forestry Conclave is a competition in logger sports and technical forestry events spanning two full days.

Laborde receives multiple awards and honors

Congratulations to doctoral student Luke Laborde! He has been quite busy this year, working diligently on his research, currently under the direction of Dr. Frank Rohwer. In his spare time, however, he also has been earning awards and collecting honors. During the fall of 2012, Laborde received The Clark M. Hoffpauer Memorial Scholarship award, was elected to the board of directors for The Burden Foundation and also was elected president-elect of the LSU College of Agriculture Alumni Association.

The Hoffpauer Memorial Fund was established to benefit students enrolled in the graduate program in the LSU School of Renewable Natural Resources. The gift honors the memory of Clark M. Hoffpauer, who received his master of science in wildlife management from LSU in the 1960s. The recipient of this award must be a full time graduate student enrolled in the School of Renewable Natural Resources and must have an overall grade point average of at least 3.0.

Luke was also awarded second place for student oral presentations at the North American Duck Symposium held last January in Memphis, Tenn. The title of his presentation was "An Evaluation of the Waterfowl Hunter Recruitment and Retention Conceptual Model."

Luke Laborde (right), recieiving the Clark M. Hoffpauer award from Dr. Allen Rutherford, director of the School of Renewable Natural Resources.

Luke Laborde (right) and major professor Frank Rohwer with the North American Duck Symposium award for best doctoral student oral presentation.

Dexter Courville and Jeff Sanders prepare for the crosscut saw competition, placing 5th out of 14 competing schools.

Ten students competed at the Southern Forestry Conclave in 2013.

Among them, Jeff Sanders placed first in the timber volume estimation competition, Paige O'Malley and Connor "Chuck" Smith attained second place in the wildlife identification competition, Stephen Upton placed third in the pole classification competition and Jared Riddle fourth place in the pole felling competition.

The 2014 conclave competition proved to be an exciting event as well. Participants were David Bernasconi, Hayden Carter, Dexter Courville, Kasie Dugas, Paige O'Malley, Jared Riddle, Jeff Sanders, Connor Smith, Corrine Tanner, Stephen Upton and Maggie Whitsell, along with Dr. Niels de Hoop as faculty adviser.

As usual, our students brought their southern hospitality and hosted crawfish boils at both events. Students and faculty really enjoyed LSU's camp "passing a good time" and getting to taste some of our excellent cuisine.

Maggie Whitsell and Kasie Dugas start their practice cut in the Jill and Jill crosscut saw competition. They completed the cut in 15.465 seconds. Cheering them on are (left to right) David Bernasconi, Jared Riddle, Chuck Smith, Paige O'Malley, Jeff Sanders, Dexter Courville and Stephen Upton.

STUDENT NEWS

Xi Sigma Pi – Forestry Honor Society

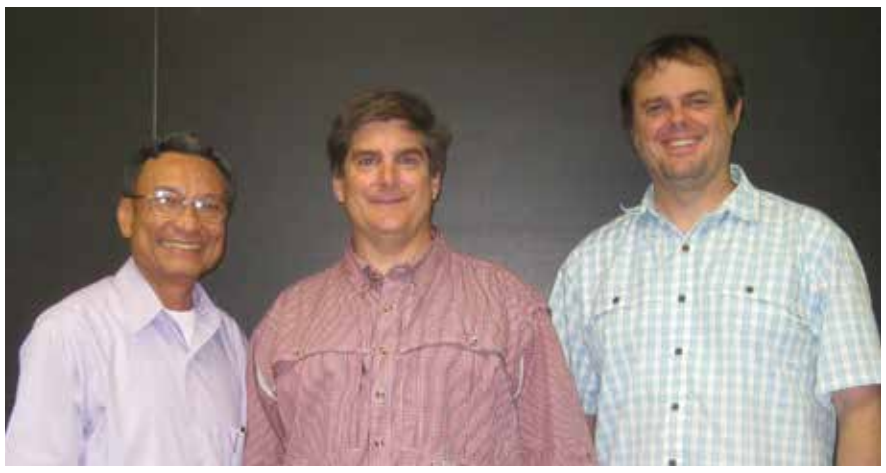
Each fall, the Nu chapter of Xi Sigma Pi, the forestry honor society, awards a scholarship to a student in recognition of excellent scholastic achievement and outstanding activity or leadership in forest resource management.To qualify, candidates for this award must have completed their sophomore year just prior to the fall semester.

The 2014 Outstanding Sophomore Award went to Kasie Dugas, who received a $1,000 scholarship and a plaque. She represented LSU competing against applicants from seven other universities in the west central region! Congratulations Kasie! RNR has been doing very well in receiving this prestigious award, winning six times in the last twelve years.

2014 looks to be a busy and exciting year for Xi Sigma Pi! Dr. Quang Cao, Xi Sigma Pi's faculty adviser, says, "New constitutional changes will now allow all RNR students with an interest in forestry and, of course, a minimum 3.0 GPA eligibilty for membership." Jared Riddle joined this past semester and four new members joined in March.

On March 28, four undergraduates were initiated (left to right): Raymond Andrews, Anna Claire Ferchaud, Emily Sloane and Christian Rossi.

Kasie Dugas receives the Outstanding Sophomore Award from master's student, Marcus Rutherford, the Xi Sigma Pi forester.



In April, Dr. Emile Gardiner gave a presentation to the renewable natural resources community on "Outlook for forests in the Lower Mississippi Alluvial Valley" at the recent Xi Sigma Pi meeting. Members, as well as other LSU School of Renewable Natural Resources students and faculty attended Gardiner's presentation. (left – right) Xi Sigma Pi's advisor, Quang Cao, Emile Gardiner and Richard Keim.

LSU student chapter of the Wildlife Society

Under the new leadership of adviser Luke Laborde, the LSU student chapter of the Wildlife Society started the 2013-2014 academic year off with a bang! For its first meeting in August, the organization served jambalaya and had a live band.

The organization also offered the first ever conclave prep class during the fall to give students opportunities for hands-on learning of skills, help them prepare for conclave and let them voice their needs to expand on techniques that may not have been part of the regular curriculum for our program. The first class was full, and students got the chance to practice things like flyfishing, buck scoring, axe throwing and wildlife immobilization. They also heard from talented guest speakers from around the state.

Members have volunteered at several on-campus activities, including the LSU AgCenter's AgMagic, Louisiana Sea Grant's Ocean Commotion and the LSU Raptor Rehab center.

The chapter just returned from the Southeastern Wildlife Conclave in March.

Students had opportunities to meet with wildlife professionals, hear guest speakers from various wildlife occupations and network with other student chapter members.

LSU students placed in the top three categories in four events: First Place, Shotgun – Hunter Fuqua; Third Place, Canoeing – Terrel Christie and Kayla Smith; Third Place, Orienteering – Emily Gibson and Olivia Colton; Third Place, Photography – Alonda McCarty.

A total of 21 students attended conclave this year – the largest group LSU has ever taken.

Members of the LSU Wildlife Society student chapter at the 2014 conclave event.

STUDENT NEWS

Seven travel to Australia

Last June, seven RNR students traveled with International Student Volunteers to Phillip Island, Australia, to assist with habitat restoration work for endangered Little Blue Penguins. Students were busy building nest boxes and removing invasive plants to try to improve nesting conditions for the penguins, with hopes of increasing their population size.

Pictured (left to right) are Kinsey Veron, Jonathan Blood, Emily Gibson, Jocelyn Miller, Sarah Lessard, Gerald Soderstrum (biology), Marissa Burridge and Codi Whittington.

Han wins Forest Products Society's Wood Award

Jingquan Han, a doctoral degree student under Dr. Qinglin Wu, won first place in the 2013 Forest Products Society Wood Award competition with a paper "Self-Assembling Behavior of Cellulose Nanoparticles During Freeze Drying: Effect of Suspension Concentration, Particle Size and Crystal Structure." The Wood Award is intended to recognize and honor outstanding research conducted by graduate students in the field of wood and wood products. The Wood Award is the most prestigious Forest Products Society award in the area of graduate research in wood and wood products.

David Smith, chair of the 2013 Wood Award Selection Committee from Oregon State University, commented that the paper was fascinating and impressive.

2013 – 2014 Scholarship Recipients

RNR Scholarships

Pauline Bateman Stanley Scholarship ..... Megan Arias
Paul Y. Burns Scholarship ..... Anna Evans
Hunter Barrilleaux Memorial Scholarship ..... Cody Coryell-Turpin
F. O. Bateman Memorial Scholarship ..... Jamie Amato
Mark Dupuy Jr. Wildlife Conservation Scholarship ..... Sarah Lessard
William A. Knight Forestry Scholarship ..... Kasie Dugas
William A. Knight Forestry Scholarship ..... Jacob Robarts
Billy W. Weaver Scholarship ..... Christian Rossi
Forestry, Wildlife, and Fisheries Alumni Association ..... Jace Hood
Forestry, Wildlife, and Fisheries Alumni Association ..... Andrea Howells
Forestry, Wildlife, and Fisheries Alumni Association ..... Elizabeth Weltman
Lehmann Scholarship ..... Zachary Goodnow
Ben and Pauline Stanley Excellence Award
for Outstanding Ph.D. Student ..... Josh Patterson
Clark M. Hoffpauer Scholarship RNR Graduate Students ..... Holly Rogers

College of Agriculture Scholarships

College of Agriculture Alumni Association
Endowed Scholarship ..... Leah Delahoussaye
Charles Stewart Churchill Memorial Scholarship ..... Kasie Dugas
Charles Stewart Churchill Memorial Scholarship ..... Jennifer Tuohy
Dean's Excellence Scholarship ..... Zachary Goodnow
Dean's Excellence Scholarship ..... Sarah Zaunbrecher
E.M. Barham Memorial Scholarship ..... Ivy Phillips
Emile A. Maier Scholarship ..... Carver Montgomery
First South Farm Credit Scholarship ..... Kaitlyn Matherne
John W. Melton Scholarship ..... Anna Claire Ferchaud
Lee Berwick Scholarship ..... Raymond Andrews
Mac Kasaoka Scholarship ..... Madelyn McFarland
S. W. "Buck" Gladden, Jr. Scholarship ..... Tevin LeJeune
Staplcotn Scholarship ..... Peyton Leathem-Boe
Tiger Athletic Foundation Scholarship ..... Erin Esh
Tiger Athletic Foundation Scholarship ..... Ryan Silva

Louisiana Forestry Foundation Scholarships

Robert H. Crosby, Jr. Scholarship ..... Hayden Carter
Commander Bertrand Dean Scholarship ..... Kasie Dugas
Weaver Brothers Scholarship ..... Chris Hebert
George M. Houston Scholarship ..... Jared Riddle
Thomas Hansbrough Scholarship ..... Jacob Romer
Norwin E. Linnartz Scholarship ..... Marcus Rutherford
Roy O. Martin, Sr. Scholarship ..... Margaret Whitsell

Les Voyageurs

Les Voyageurs is a carefully selected group of 16 students from the LSU College of Agriculture who represent the college and LSU in recruitment, alumni and development activities. A special thanks to these students and all that they do! Members from the LSU School of Renewable Natural Resources are: Kasie Dugas, Emily Sloane, Anna Claire Ferchaud, Jennifer Tuohy, Avery Kravet and Maggie Whitsell.

Snapshots of RNR undergrads and their summer leisure!

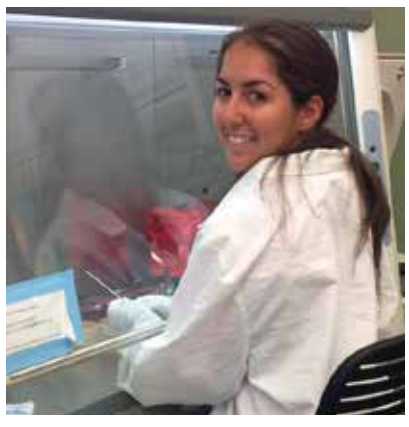
Charles Smith worked as a summer research assistant for Dr. Megan Lapeyre and her graduate students Eva Hillman and Kristin DeMarco. Smith assisted with research on the environmental factors influencing the occurrence and abundance of submerged aquatic vegetation in the fresh to saline coastal marshes of the northern Gulf of Mexico in Texas, Louisiana and Alabama.

Brad Hester worked with graduate student Will Budnick last summer collecting data to investigate habitat and water quality influences on the distribution and abundance of rare crawfish in small streams within the Red River drainage.

Emily Sloane worked for Dr. Julie Anderson last summer on her blue crab project. Sloane and another student, Anna Claire Ferchaud, helped with field work related to seining, trawling and trapping blue crabs, as well as setting up lab tank studies for bait diffusion and crab bait choice experiments.

Hunte Fuqua spent the summer working with the U.S. Fish and Wildlife Service tagging alligator gar in floodplain habitats of the St. Catherine's Creek National Wildlife Refuge near Natchez, Miss. Fuqua assisted with netting operations designed to identify preferred habitats of floodplain-dwelling fish.

Megan Arias spent her summer researching at the University of South Carolina in Columbia. She worked in a molecular microbial ecology lab determining growth curves and antibiotic resistance profiles of Vibrio vulnificus*, a common aquatic disease organism, and also got to go to the Bahamas for some field work.*



ALUMNI NEWS

Ken Addy (B.S.F.'74) is the regional manager for F&W Forestry Services in Huntsville, Texas. His email address is kaddy@fwforestry.com

Francisco X. Aguilar (Ph.D. forestry '07) was promoted to associate professor and granted tenure in the School of Natural Resources at the University of Missouri.

O.M. Becton (B.S.F.'62) had a knee replacement and is doing well in Silas, Ala.

Bob Blackmon (Ph.D. forestry '69) had an entry in one of the most prestigious art competitions in eastern New York and won a gold ribbon (third place in the oil painting category). His painting also tied for the Members Choice Award. He has painted lots of Baroque style still life work and has recently done some Irish landscapes, based on several trips to Ireland. Visit his website at blackmonstudio.com

Seth Bordelon (M.S. wildlife '05) lives in Lafayette with his wife, LaShaun, and their three children. He is a biologist with the U.S. Fish and Wildlife Service primarily reviewing wetland mitigation banks and evaluating wetland development projects (regulated by the U.S. Army Corps of Engineers) for potential effects on federal trust fish and wildlife resources.

Kevin Borne (B.S.F.'09) and Charmaine Burg Borne (BS NREM '10) were married this past June. Kevin is working for the Louisiana Department of Environmental Quality in Baton Rouge, and Charmaine is attending LSU Law School after working as a biologist for the Louisiana Department of Wildlife and Fisheries.

Alum wins Emmy!!

Mike Campbell (B.S. fisheries '08) won an Emmy for "Best Technical Achievement" for the onboard film and data collection recorded by the cameras and instruments sunk with the USS Mohawk last July. The World War II warship USS Mohawk CGC was deployed to its final resting place 90 feet under water, roughly 28 nautical miles off Sanibel Island, creating the first Veterans Memorial Reef dedicated to all U.S. veterans using a military ship. The 165-foot WWII Mohawk served in the Battle of the Atlantic and launched 14 attacks against submarine contacts between 1942 and 1945. One of its most famous deeds was being the last ship to radio Gen. Dwight D. Eisenhower that the weather was clearing for the D-Day invasion. Campbell's position as the artificial habitat director/environmental specialist for the Lee County, Fla., DNR Marine Program put him in a unique position to participate in the hands-on project. Just goes to show you never know where all that class and field/lab work can take you. For more information about the project, visit https://www.facebook.com/USSMohawk

Mike, first from the left, proudly displays his Emmy award in this photo.

William H. Conner (Ph.D. forestry '88) received the Society of Wetland Scientists Presidential Service Award. He is a professor and assistant director at Clemson University.

Chris Dicus (Ph.D. forestry '00) and his son Nick were in town to attend the Ole Miss game last fall. Dr. Dicus is now a professor and graduate coordinator at Cal Poly at San Luis Obispo in California, where he teaches fire ecology.

Lanny Dreesenn (B.S.F.'68) is retired and "working for God" and enjoying his granddaughters.

David Evans (B.S.F.'78, M.S. forestry '81, Ph.D. forestry '86) is a professor of forestry at Mississippi State University and is teaching dendrology, remote sensing and advanced spatial technologies. His current research with graduate students involves looking at uses of LiDAR data in characterizing wildlife habitat and for individual tree growth assessments in Douglas fir. He also is working on high resolution satellite remote sensing of longleaf pine systems. He was awarded the Sharp Distinguished Professorship in fall of 2012, and he just completed edits on a second edition of the Mississippi Trees book published by the Mississippi Forestry Commission.

Heng Gao (M.S. forestry '07) received a Ph.D. in civil and environmental engineering at LSU in December 2010. She currently is working as a research associate in the LSU Department of Environmental Sciences. Her research includes investigation of environmental effects of the Deepwater Horizon Oil Spill on marine systems and environmentally friendly remediation technologies.

Keith Hawkins (M.S. forestry '86), area forestry agent for the LSU AgCenter, celebrated six years of service with the LSU AgCenter in July 2013. He also was awarded the 2013 Achievement Award by the Louisiana County Agricultural Agents Association.

Pictured above are Xi Jinping, president of China (left), Dr. Chung Hse (center) and Li Keqiang (right), premier of China.

Elizabeth Hingle currently is somewhere in the remote areas of Peru.

Elizabeth Hingle (B.S. NREM '2010) accepted an internship through the Conservation Research and Environmental Education Toward Sustainability foundation and currently is somewhere in the remote areas of Peru. Hingle says she stumbled upon the opportunity while job searching earlier this past year and that it sounded like a great way to get hands-on conservation research experience, so she applied and was accepted. The only catch is that it is an unpaid internship, so Hingle spent a lot of time working, fundraising and reaching out to potential sponsors to help pay for the upfront costs of the trip. Since it is a six-month program and she left for her adventure in October, she should be returning soon. We hope to catch up with her for updates and pictures from her adventures. In an e-mail to Director Rutherford, Elizabeth said she was hoping for us to "post her story to open up fresh ideas to other students who might also want to participate in this unique program." Hingle's adventures can be followed at http://www.gofundme.com/Save-a-Rainforest.

Prestigious award for LSU alumnus

Chung-yun Hse (M.S. forestry '63) received the International Science and Technology Cooperation Award in Beijing, China, on Jan. 10, 2014. The nonmonetary award is one of the highest honors the People's Republic of China offers to recognize scientists who have made significant contributions to China's scientific advancement. Hse has been a long-time adjunct professor with the LSU School of Renewable Natural Resources and has served on several graduate student committees at LSU. Hse considers himself lucky to be in such a fortunate position. Hse also was promoted with the USDA Forest Service's Southern Research Station in Pineville, La., to GS-15. This is a rare accomplishment for scientists who are not project leaders.

Ernie Hsu (M.S. forest products '72) retired from Louisiana-Pacific Corp. in 2006 but has not stopped working on oriented strand board, OSB. Erin has worked as a part-time consultant for OSB companies and a research institute since 2007. He has written a book "Oriented Strand Board" that is in the publishing process now, which is based on his more than 30 years of experience in research and development and mill work of OSB. He also recently designed new wood strand orientators for making reconstituted strand lumbers that have achieve high mechanical properties with lower variation than the existing OSL and LSL products.

Jefferson "Jeff" Hughes (B.S.F.'49) reports that "the biggest news from the Hughes household was the election of his older son Jeff D. Hughes III to the Louisiana State Supreme Court. The younger Hughes is an alumnus of LSU and LSU Law School. He also is a member of the Louisiana Forestry Association and a participant in the family tree farm.

A winner 'beneath the waves'

Austin Humphries (M.S. '10) spends most of his time in the ocean, swimming and counting things on coral reefs off the coast of east Africa. Sounds like fun, but he's actually working on his Ph.D. in marine biology.

In March, Austin won the People's Choice Award at the *Beneath the Waves Film Festival* held in Savannah, Ga. His video production

Austin Humphries (center) spends "most of his time in the ocean, swimming and counting things" on coral reefs off the coast of east Africa.

"Mikono ya Wavuvi (In Fishermen's Hands)" is a short documentary about fishing and marine conservation in Kenya.

Humphries earned his master's degree in fisheries under the direction of Dr. Megan La Peyre in the LSU School of Renewable Natural Resources. An avid fisherman, his work in Louisiana examined how creating and restoring oyster reefs influence the fish and invertebrates that use them for habitat – explaining why we like to fish near these shallow reefs.

Results from his work have contributed to oyster reef restoration projects in coastal Louisiana and what we can expect these reefs to do for fish and invertebrate species. Humphries remains involved in oyster reef research in Louisiana, working to better understand links between oyster reef restoration and provision of ecological services.

His current doctoral degree work is focused on the effects of fishing on herbivores and what this means for seaweeds and corals on reefs in Kenya. He has worked throughout east Africa since graduating from the School of Renewable Natural Resources in 2010, including places like the Seychelles, Mozambique, Tanzania and South Africa. Through his earlier research with oyster reefs in Louisiana estuaries and current studies on tropical coral reefs, he is curious about how humans are altering coastal ecosystems and what this means for ecological processes.

To check out Austin's award-winning short film about marine conservation in Kenya, go to his website: www.austinhumphries.com.

Jimmy Kimberly (B.S.F.'67) has been working for the past seven years as a lecturer at Arizona State University. He is in the Aviation Programs Department of Human and Environmental Systems in the College of Technology and Innovation at the Polytechnic Campus of Arizona State. Kimberly lives in Chandler, Ariz., and is teaching courses on aircraft power plants (piston and turbine) and aircraft structures, metals and systems to professional pilot, air traffic control management and air transportation management majors. In 2005, he retired from America West Airlines as a B-737 captain after 16 years with the company. Before that, in 1988, he retired from the U.S. Air Force, after serving 20 years as a pilot on mostly tactical fighter and observation types of aircraft, with one tour in Vietnam. He is married to Debra Kimberly and has two sons and three grandkids.

Nick Margrave (B.S.F.'48) moved from Camden, Ark., in 2007 after 41 years there to be with his daughter and her family in Texarkana, Texas. The Margraves have three great grandchildren and say they are very happy and trying to be Texans, which is not easy, being a graduate of LSU and a native of Arkansas.

Charlie Mestayer (M.S. fisheries '80) retired after 32 years with the Coastal Management Program as a coastal scientist supervisor with the Louisiana Department of Natural Resources and earlier with the Louisiana Department of Wildlife and Fisheries. He has formed Mestayer Environmental LLC located in Lafayette, La. Contact information is mestayerc@cox.net and 337-247-0838.

Alexander Michalek (M.S. forestry '03) is employed by the U.S. Bureau of Reclamation. He recently was promoted and subquently moved to Sonora, Calif. Sonora is in the Sierra Nevada Foothills near Yosemite in northern California.

Mark Milligan (B.S.F.'87) is the president of F4 Tech in Tallahassee, Fla. His company hosted a conference last year with Dr. Quang Cao as a featured speaker. "Dr. Cao was really the highlight of the conference, and I am so happy he agreed to be a part of the program," Milligan said. "LSU is very lucky to have such a standout expert and dynamic speaker."

Stephen Pecot (B.S.F.'94, M.S. forestry '96) is a forester and environmental specialist with Larson & McGowin of Mobile, Ala. He and his wife, Erin, live in Fairhope, Ala. He recently completed a three-year, $6.2 million stimulus project geared toward fighting the invasive plant cogon grass in the state of Alabama, where he was referred to jokingly as the "cogon grass czar."

Louie "Pete" Heard (B.S.F.'60, M.S. wildlife '61) retired from the USDA's Natural Resources Conservation Service in June 2011 after 51 years of employment, 46 of which were with the USDA.

Bill Ryals (B.S.F.'83) and his wife, Niki, have one son and three daughters. Bill, along with his family, owns and operates Rocking R Dairy, a goat and cow dairy operation in Tylertown, Miss. They specialize in cheeses served in restaurants and sold at farmers markets in New Orleans and Baton Rouge. They also maintain a beef goat herd and have raised numerous champion goats over the years.

Danny Semple (B.S.F.'83) is married and has five children. He lives in Plaucheville, La. Semple owns Pine Depot, which consists of two sawmills in Alabama and is in the process of acquiring a third mill. His company supplies Lowes and Home Depot with 1-by-4 and 1-by-6 treated lumber and fencing.

Keith Ward (B.S.F.'83) and Michele Mills (B.S.F.'85) were married in 1988. They have two sons. The older one received his bachelor's degree from LSU in 2011 and currently is working on his master's degree in plant pathology at LSU. Their younger son is studying engineering at Mississippi State University. Ward is the regional manager for F&W Forestry Services in Jackson, Miss. They earlier lived in Georgia for 10 years but have been in Jackson since 2000.

Bin Yu (M.S. forestry '09) is the founder of Hitlights in Baton Rouge, La. The company provides LED lights for residential and industrial applications.

We want to hear from you!

The alumni news is compiled and written by Dr. Todd Shupe. We are continuously working to update and manage our alumni files and database. If you have any news items are address changes that you would like to share, please e-mail Todd at tshupe@agcenter.lsu.edu

The LSU School of Renewable Natural Resources currently offers a bachelor's degree in natural resource ecology and management with nine areas of concentration:

- Conservation biology
- Fisheries and aquaculture
- Wildlife habitat conservation and management
- Wetland science
- Wildlife ecology
- Pre-Vet wildlife /wildlife and fisheries
- Ecological restoration
- Forest management
- Forest enterprise

See page 2 for more information or visit www.rnr.lsu.edu.

RNR alums meet a world away

Alex Sayok (B.S.F.'84) sends greetings from Malaysia, where he is in his sixth year as a faculty member at the Universiti Malaysia Sarawak. In his years since graduation, Sayok has held several positions, including lecturer in the University of Technology, Papua New Guinea, from 1992 until 1996; as an environmental consultant in Malaysia, 1996-2002; and an expert in peat swamp forest for UNDP/GEF project, 2002 to 2008. He notes that there are quite a number of lecturers who graduated from LSU at his current university and that the trend may be similar throughout Malaysia. His most recent contact with an LSU School of Renewable Natural Resources alum was with **Dr. Steve G. Platt (B.S.F.'85)**. Platt is in Kuching on his first trip "to tame our notorious man-eating crocodiles." Platt has been working as a herpetologist with WCS in Burma and living there since 2011.

Steve Platt (left) visits with Alex Sayok (right).

IN MEMORIUM

John Adams (B.S.F. '69, M.S. forestry '73 and Ph.D. forestry '76)

Dr. John Adams passed away in November 2012 from a heart attack. A native of south Louisiana, he was an officer in the Marine Corps and served a tour of duty in Vietnam. He later attended Louisiana State University, where he

earned bachelor's, master's and doctoral degrees in forestry. In 1976, Adams moved to Ruston, La., where he became a professor for the School of Forestry at Louisiana Tech University and later retired as director emeritus.

His teaching aspects included forest ecology, silviculture, forest tree improvement and hardwoods. His primary research interests were forest genetics, pine silviculture, bottomland hardwood restoration and water oak provenance studies. He authored or co-authored more than 50 scientific papers. He served the forestry profession in the Society of American Foresters, where he held the honor of fellow. Adams worked with medicinal plants in conjunction with Dr. Zhijun Lui, of the LSU School of Renewable Natural Resources, in trials of camptotheca, a plant that yielded chemical properties for cancer treatment. The two studied cultural treatments to grow the plant in Louisiana.

In his 36 years of dedication to the School of Forestry at Louisiana Tech, Adams taught and mentored numerous students on their way to becoming foresters and natural resource managers. Teaching was a great joy to him. Adams loved his family, his wife, his children at home and his students in the classroom. He was a true woodsman who will be missed by both students and collegues.

Maurice F. Hamm (B.S.F. '54)

Maurice F. Hamm (B.S.F.'54) died on Aug. 24, 2012. He worked for three decades for the Woodlands Division of Tennessee Pulp & Paper Co. in Counce, Tenn, and he was the first president of the Tennessee Forestry Association. Civic duties were very importatnt to Hamm. He was secretary of the McNairy County Airport Authority and served on the McNairy County Economic Development Committee. He also served two terms as a McNairy County Commissioner and two terms as Selmer City alderman, as well as serving as a long-term chairman of the McNairy County Election Commission. He was an avid fan of all things LSU, especially football, and was a proud member of the LSU Alumni Association. His favorite spot, besides McNairy County, was Tiger Stadium during football season.

Robert H. Chabreck (B.S.F. '56, M.S. wildlife '57 and Ph.D. botany '70)

Dr. Robert H. Chabreck passed away on Dec. 30, 2013. His personal life focused on his wife and children, hunting and all things LSU sports.

Chabreck came to LSU on a football scholarship but decided that his future was in forestry, not football. He earned his bacherlor's degree in forestry in 1956 and his master's degree in game management in 1957, both in the LSU School of Forestry, Wildlife and Fisheries. His thesis was one of the earliest at LSU to address Louisiana wetlands issues, and his subsequent career focused on wetlands and wildlife.

During the early 1970s, he created a wildlife course, Taxonomy and Ecology of Wetland Plants, which continues to be taught. In 1973, he authored the first peer-reviewed paper by an LSU faculty member that focused on wetlands. He also was very active in American alligator research and management.

Chabreck retired in 2000, having directed 65 graduate students and published more than 130 scientific and popular articles and a book dealing with a broad range of issues in wetlands. His most recent publication was in 2011 (a chapter in the Wildlife Techniques Manual coauthored with LSU School of Renewable Natural Resources Professor Dr. Andy Nyman).

According to Nyman, whose M.S. thesis in 1989 was directed by Dr. Chabreck, *"My life would have been very different if Doc had not been such a nice person and such a patient teacher. I'm not the only one; there are scores of people like me who can never repay what he gave us."*

Thomas J. Hess Jr. (M.S. wildlife '75)

Rockefeller Wildlife Refuge and Cameron Parish lost a champion for the outdoors on March 11, 2014. Thomas J. Hess, Jr., age 63, passed away at his residence.

Hess was born in Wilmington, Del., where he learned to hunt and fish and developed his love and passion for the outdoors. He was a graduate of Louisiana Tech University with a bachelor's degree in wildlife management and later went to LSU to receive his master's degree in wildlife management. His love of the great outdoors helped him in 1972 when he was hired as a biologist assistant at Rockefeller Refuge. In 1975, Hess accepted employment with Little Pecan Properties as the general manager and the wildlife land manager. Being a wildlife biologist allowed him the opportunity to work with bald eagles, brown pelicans and whooping cranes reintroduced into the southwest area. Hess concluded his career as program manager of Rockefeller Wildlife Refuge in Grand Chenier, La.

Hess was a mentor and role model for his sons, grandchildren, community and the people he worked with. He showed what it meant to pursue your dreams and passion. Those left to cherish his memory are his loving wife of more than 40 years, Charlotte Beach Hess, his sons Brandon and Timothy Scott Hess and four grandchildren.

In lieu of flowers, Hess requested donations be made to the Whooping Crane Foundation.

Donald L. 'Don' McFatter (B.S.F. '49)

Donald L."Don" McFatter passed away March 7, 2014. A native of Sugartown, La., he formerly worked for and headed the Louisiana Forestry Commission.

McFatter proudly served in the U.S. Navy from 1943 until 1946, with service in the Pacific theatre. He graduated from Louisiana State University with a bachelor of science degree in forestry in 1949. That same year he joined the Louisiana Forestry Commission and served as state forester.

McFatter retired in 1984 after 35 years of service. Eighteen of those years were spent in DeRidder as District Forester. During that career, he logged over 2,300 hours flying fire patrol over southwestern Louisiana, reporting fires and directing fire crews. As an honor during his career, in 1960, he received the Charles E. Dunbar Career Service Award in recognition of distinguished public service.

During 1969-70 McFatter also served as Rotary International district governor. In addition, he served as president of the National Association of State Foresters during 1979-80 and received the Lifetime Achievement Award from the National Association of State Foresters and LSU School of Forestry Alumnus of the Year in 1984.

McFatter is survived by his wife of 63 years, Bobbie Batchelor McFatter; daughter, Donna Miller and her husband Wade; two grandchildren and five great grandchildren.

Santiago "Sonny" Porcella III (B.S.F. '42)

Santiago "Sonny" Porcella III died at the University Medical Center of Princeton on Jan. 19, 2013. He had been a resident of Pennington, N.J., for 47 years. A graduate of LSU, he did postgraduate work at the Inter-American Institute of Tropical Agriculture in Turrialba, Costa Rica, before spending eight years in Cacoapa, Liberia, as assistant vice president of the Liberia Co., working on the Firestone Rubber Plantation. He later returned to the United States and joined and eventually retired from the New Jersey Forestry Service in 1977. He was former past president of the New Jersey Society of American Foresters and past president of the New Jersey Soil Conservation Society, past chairman of the New Jersey Tree Farm System and a member of the New Jersey Forestry Association. He was past chairman of the Pennington Shade Tree Commission and grand marshal of the Memorial Day Parade in Pennington. In 2002, the New Jersey Forest Service, New Jersey Foundation and the New Jersey Forest Community Council presented Porcella with the Green Community Achievement Award for his work with the Pennington Shade Tree Commission. He also was honored for his work with the Tree City USA Program, spanning more than 20 years in Pennington. He died at the age of 97.

Plato Touliatos (B.S.F. '57)

Plato Touliatos (B.S.F.'57) died during November 2011. He was a long-term nurserymen, plantsman, forester and entrepreneur in Memphis, Tenn. Touliatos and his wife, Sarah, owned Trees by Touliatos, a 20-acre retail nursery, and Touliatos Nature Center & Arboretum. The couple quietly closed the nursery in September after 50 years in business.

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The faculty and students in the School of Renewable Natural Resources acknowledge the generosity of our alumni and other donors with gratitude. Gifts both large and small have made the School a better place to teach, to learn and to conduct research. To maintain and enhance the rich tradition of programs in the School during these challenging economic times, outside support is essential.

The establishment of endowed chairs and fellowships as well as comprehensive renovation of the building in which the School is housed remain pressing objectives. If you would like to take part in our quest to grow and expand the School's current program, simply contact me or donate online by visiting the LSU Foundation website (www.lsufoundation.org) and click on the Giving tab. Be sure to designate your gift to the LSU AgCenter and School of Renewable Natural Resources.

We are moving forward. How far we go depends on you!

D. Allen Rutherford, Director
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www.rnr.lsu.edu

Drainage of wetlands and wet climatic cycle have resulted in dramatic growth of some lakes in the prairie potholes area. See article on page 4. Photo by Karen Doerr Latuso.

Duck man migrates north

We are sad to report that since our previous newsletter Dr. Frank Rohwer has decided to leave the LSU School of Renewable Natural Resources faculty for a full-time position as president of Delta Waterfowl.

Dr. Rowher has a long association with Delta, going back to his days there in the mid-1970s as a field technician and including serving as the scientific director of the foundation along with overseeing its research program on management of breeding waterfowl. Rowher always has been involved at the national level, including service on the steering committee for the North American Waterfowl Management Plan. His willingness to serve is certainly one of his greatest strengths.

Much like the waterfowl Rowher has spent decades studying; he kept a pretty interesting flight pattern before eventually migrating south to LSU. He earned a bachelor's degree in wildlife from Kansas State University, a master's degree in wildlife at Washington State University and his doctoral degree at the University of Pennsylvania and also served a postdoctoral fellowship at Queen's University in Ontario and in a position at the University of Maryland. In 1991, he finally moved south and began his profession of teaching and research in the LSU School of Renewable Natural Resources.

Over the past 23 years of working in Louisiana, Rowher has had the best of both of worlds – researching ducks that winter in Louisiana and then following those species up to the Dakotas to do breeding ground research. He has undertaken numerous waterfowl research endeavors, subsequently training many graduate students and teaching numerous wildlife classes.

Of the more than 50 graduate students he has directed, only four have worked on something other than waterfowl. Students always have found his courses to be innovative and interesting, and Frank's passion for the subject matter was at all times evident. LSU students labeled him as the "duck man."

Rowher served the School of Renewable Natural Resources as coordinator of our seminar program, on the undergraduate committee and as an editor for the school's newsletter. It should be noted that he has been particularly missed in that task during this first issue without him!

Our loss is Delta's gain. We know he will represent Delta as well as he represented RNR over the past two decades. Even though he will not be involved with us on a daily basis, Frank will continue his service to the school as an adjunct professor. We hate to see him leave, but we wish him the best of luck!