

Louisiana Natural Resources News

Newsletter of the Louisiana Association of Professional Biologists
March, 2008

CONTENTS	Page
LWF Resolutions – <i>Paul Whitehead</i>	1
John Pitre Honored with National Award	2
Louisiana Brown Pelicans – <i>Scott T. Walter</i>	5
Big-eared Bats – <i>Chris Rice</i>	9
Quail and Grassland Bird Efforts – <i>John Pitre</i>	12
Hog Monitoring and Management – <i>Nan Huff</i>	15

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LWF Resolutions. *Paul Whitehead*

The LAPB is an affiliate of the Louisiana Wildlife Federation, which is holding its annual convention at the New Iberia Holiday Inn, March 14-16. The LAPB business meeting, as of right now, will be held from 3 to 5 pm in the Courtyard Room on Friday, March 14th. The Resolutions Book, which is the accompanying PDF to this newsletter, contains draft versions of resolutions to be considered at the convention. The agenda for the convention can also be found in the accompanying PDF. Saturday, March 15th, Conservation Committee meetings will be held to discuss, possibly modify, and either approve or disapprove each resolution. On Sunday, the final day of the convention, the General Assembly of Delegates meets to give final consideration and ratification

of the resolutions. This year, the LWF convention had to be moved up to avoid Mardi Gras and also because initial plans for a Natchitoches venue fell through. That doesn't leave a lot of time, but I would still like to get any input from LAPB members regarding the resolutions. In the past, this input has been extremely valuable. Several times, members have objected to a resolution, giving specific reasons for their objection. Based on this, the resolutions were usually modified in such a way as to remove the objection. If efforts to amend a resolution fail, I vote against it. So, other than relying on just my own knowledge and experience, input allows me to better vote the wishes of the LAPB.

Please read over the Resolutions Book and send comments on any changes you would like to make to me at pwhitehead@wlf.louisiana.gov. Be sure to identify those you think should be voted against. Thanks.

John Pitre recognized at 2008 NWTF National Convention

John Pitre, long time LAPB Treasurer and Natural Resources Conservation Service (NRCS) Wildlife Biologist received an award and was recognized "for his outstanding efforts to build partnerships that help landowners protect and improve wildlife habitat" from the National Wild Turkey Federation (NWTF) at the NWTF 32nd Annual National Convention and Sports Show. The 2008 Convention was held at the Georgia World Congress Center in Atlanta, Georgia, February 20 through 24. John's award was presented at the Technical Committee luncheon by the Chief of NRCS, Arlen Lancaster. Also at the luncheon Chief Lancaster and Dr. James Earl Kennamer, NWTF's Senior Vice

President of Conservation Programs, renewed the MOU between NRCS and NWTF.



The NRCS in Louisiana has developed a great working relationship with the NWTF. The NRCS partnered with NWTF, and the Louisiana Department of Wildlife and Fisheries (LDWF) to administer the Louisiana Longleaf Pine Initiative which allows restoration on eligible longleaf pine soils. The NWTF received a grant to fund 500 acres. NRCS utilized the Environmental Quality Incentives Program (EQIP) funds to site prepare and establish tree seedlings, and Wildlife Habitat Incentive Program (WHIP) funds to establish the herbaceous understory and conduct maintenance burns. The NRCS, NWTF, and LDWF provided technical assistance and public outreach. Within a week of sign-up the allotted

acreage cap was reached. The NWTF is currently pursuing funding to continue this effort.

The NWTF is also a partner on the Louisiana Native Plant Initiative (LNPI), and the Louisiana Quail and Grassland Bird Task Force. The LNPI is an effort to get local plant ecotypes into production for conservation use and to provide alternative crops and economic stimulus to farmers/growers. The Louisiana Quail and Grassland Bird Task Force is currently developing a comprehensive plan for the State to coordinate grassland habitat restoration efforts and set the direction for reversing the decline of grassland associated wildlife as a local step down plan from the 35 state Northern Bobwhite Conservation Initiative (NBCI).

The NWTF also contributed (along with Quail Unlimited) matching funds which allowed LDWF and NRCS to acquire three No-till, Native grass/forb drills to facilitate establishment of native herbaceous habitats. This equipment was not available to landowners in Louisiana prior, and now for a nominal rental fee (which covers maintenance), landowners have access to it. This program is coordinated through the NRCS Resource Conservation & Development Councils. Louisiana's conservation efforts have also seen much coverage in recent NWTF magazines and outreach activities. In their latest (Spring 2008) "Get in the Game" magazine the insert is basically dedicated to NRCS, NWTF, and LDWF combined efforts.

Ecology and Conservation of the Brown Pelican in Louisiana. *Scott T. Walter, Ph.D. Student, University of Louisiana at Lafayette*



**The author at work.
Photo by Kyle Patton, ULL**

The brown pelican (*Pelecanus occidentalis*) has historically been an abundant member of the avifauna community nesting on Louisiana's coastal barrier islands, with estimates of up to 50,000 individuals in the early 1900's. Despite once large population sizes, the brown pelican was completely extirpated from Louisiana by 1963 due to contamination from the agricultural chemical insecticides DDT and endrin. These chemicals had entered the Mississippi River through agricultural runoff, and were ultimately introduced into the Gulf of Mexico where they interfered with pelican

reproduction, which lead to the population crash. Following the loss of brown pelicans, populations were re-established by the Louisiana Department of Wildlife and Fisheries and the Florida Game Department through translocations of 1276 chicks from Florida to Louisiana from 1968 to 1980. Although these translocations proved successful in re-establishing populations on select Louisiana barrier islands, the brown pelican remains a point of conservation concern due to various environmental factors that continue to threaten the species.

As we all know, the northern Gulf of Mexico coast is subject to strong tropical storms and hurricanes during summer and fall months. These destructive storm forces can cause direct mortality of nesting brown pelican adults and new-born chicks on Louisiana's unprotected, low-lying barrier islands.

Also, storm forces have the ability to severely degrade, or even entirely wash away limited nesting habitat. Because the majority of the population nests on only a few barrier islands, high numbers of birds can be negatively impacted from a single storm. This was demonstrated during the 2005 storm season that reduced the number of brown pelican fledglings by over half (from 39,021 in 2004 to 17,566 in 2006).

Given the continued conservation concerns regarding the brown pelican, in 2007 we initiated a research project on the ecology and conservation of the species. The 5-year project has been developed and implemented by several people from different organizations, including Debbie Fuller of U.S. Fish and Wildlife Service, Mike Carloss and Tom Hess of Louisiana Department of Wildlife and Fisheries, and Paul Leberg (professor) and Scott Walter (Ph.D. student) of the University of Louisiana at Lafayette. One of our primary project objectives is to further distribute nesting colonies over a greater number of barrier islands in Louisiana.

During our first field season within the Isles Dernieres Barrier Islands Refuge (near Cocodrie, Louisiana) in 2007, we set out with the basic, yet logistically complex and challenging goal of performing the first pelican chick translocations in several years. In June we gathered upwards of 20 people and a handful of boats to help with the translocation of 112 chicks aged 7 to 10 weeks. We collected chicks from the highly-populated nesting colony on Raccoon Island (~3600 brown pelican nests) and moved them in cardboard boxes to Whiskey Island that is currently void of nesting brown pelicans despite abundant suitable habitat (i.e., mangroves and protected bays for feeding). These translocations were made in an attempt to distribute nesting colonies over a larger geographic region in order to render Louisiana's population less vulnerable to reductions during future storm events. This approach is based on the innate nest-site fidelity practiced by brown pelicans. Our hope is that translocated chicks at maturity will return to their site of fledging on Whiskey Island to initiate a new nesting colony, thus spreading out the population to more islands within the coastal barrier island ecosystem.

Banding brown pelican chicks also kept us busy in 2007. To allow for future identification of the translocated birds we banded them with a large, yellow leg band with three letters or numbers that can be read through binoculars. In addition to the translocated birds, we banded 388 other chicks within Isles Dernieres and on Rabbit Island located within Calcasieu Lake, Louisiana. Currently, the movement and nesting patterns of north-Gulf Coast pelicans is poorly understood. Observations of these translocated and non-translocated banded birds in years to come will hopefully elucidate how much movement there is between colonies, how many of these birds move to uninhabited islands, and how this movement might lead to the establishment of new nesting colonies.



**Tom Hess preparing to band young pelican.
Photo by Kyle Patton, ULL**

Now with one field season under our belt, and some gained insight on how to work effectively out of a boat in the Gulf (especially for Scott who has worked primarily in forested mountains for the last 15 years!), we are ready to tackle a big list of research goals for the fast approaching field season. For starters, we are planning to translocate another batch of pelican chicks this summer. Also, we intend to band upwards of 1000 birds this year (based on Tom's excited and ambitious goal). Furthermore, surveys for previously banded birds will also begin. If YOU happen to see a pelican with one of our big yellow bands on its leg,

please let us know where and when you observed it (see email addresses at the end of article).

We also have a new and exciting project idea to implement this year. Bird decoys have been used for centuries to attract various species of birds, from waterfowl to non-game species for research purposes. So ... we have ordered 100+ goose decoys that we will modify with a long bill and paint to look like a brown pelican. We will place the decoys at various sites without nesting pelicans, paired up against nearby control sites, to determine if they have the



Photo by Kyle Patton, ULL

suggestive ability to attract the naturally gregarious nesting brown pelican. If this technique is successful in attracting nesting birds to new locations it would provide another method for distributing nesting populations over a greater number of islands.

In addition to those plans, we will measure brown pelican nest success and also quantify various habitat values. This information will hopefully provide us with a better understanding of what conditions these birds tend to nest in, and how habitat conditions may impact the number of chicks produced. If you have any questions, we would be glad to speak with you about the project.

For band observations contact:

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Mike Carloss: mcarloss@wlf.louisiana.gov

Tom Hess: thess@wlf.louisiana.gov

Roost Site Selection of Rafinesque's Big-eared Bat.

Chris Rice, MS Student, University of Louisiana, Monroe

(photos courtesy of Chris Rice)

Rafinesque's big-eared bat (*Corynorhinus rafinesquii*) is considered one of the least known bats in the eastern United States, and is listed federally as a species of concern. It is distributed in scattered localities throughout this range, where



it is known to roost in caves, culverts, cisterns, wells, abandoned buildings, and inside tree cavities. Maternity colonies consist of a few to several dozen adults, while the males are usually found roosting by themselves or with a few other individuals. One offspring is born in late May to early June (depending on latitude), and will reach adult size by August to early September.

Most research on the roosting behavior of this species has been conducted during warmer parts of the year which corresponds with the maternity season. It is not clear, however, where they roost during the winter. During the spring, summer, and fall this species thrives within water tupelo and cypress tree cavities in the southern states, but as winter time approaches and the ambient temperature drops....they seem to disappear. In order to implement an effective conservation plan, and/or status for this species, it is imperative that we better understand the roosting behavior throughout the year, not just 3/4 of the year.

I have been monitoring a streambed located in the Upper Ouachita NWR in northeastern Louisiana. I found all trees (59) within and out to 10m from the streambed that have cavities with basal openings, during 41 searches from 24

May to 26 December 2007. These cavities were monitored throughout this period in an attempt to determine species preference and frequency of tree use for both males and females. Site characteristics were also obtained for all 59 trees in an attempt to determine why certain trees are being selected over others. These characteristics included such variables as basal opening height, width and circumference, tree diameter, inside cavity height, canopy cover, tree species, tree forking, and the number of knotholes. Additionally, basal openings were classified either as having a ceiling or chimney at the top of the cavity.

My primary project was to radio-track this species (15 September – 26 December 2007) in an attempt to determine where they go during the winter. USFWS provided the project with 12 transmitters; 6 were attached to females and 6 to males. Tree cavity searches were used to find this species, then the basal opening was netted, and the bat was caught after nightfall. I attached the 0.42g radio transmitters using surgical cement. After holding the transmitter in place for 30 minutes, the bat was released back into the capture tree to minimize disturbance. Tracking began the next day.

We knew going into this research that the bats would disappear during the last quarter of the year....we just didn't know when or where they were going. We found that when the



ambient temperature became cold (below 8 degrees celcius) they were selecting an alternate type of roost tree. We classified this tree as Type 3 (no basal opening and a chimney opening). I believe that all 3 types of trees provide

different microclimatic temperatures that are needed at different parts of the year. I hypothesize that Type 1 and 2 trees provide warmer temperatures during the summer time to promote gestation, while type 3 trees provide cooler temperatures which allows the bat to enter torpor to survive during ambient temperature fluctuations during the winter time.

In the upcoming year I am going to test my hypothesis. I have been provided with some temperature data loggers, that will be placed in each “Type” of tree (1, 2, and 3), to record ambient temperature. I want to see how the temperature fluctuates in all 3 tree types throughout the summer and winter time.

This research shows that this species needs a diverse habitat to survive throughout the entire year. Also, many unsuccessful bat boxes have been built for this species. This data may aid in the development of new box designs, and possibly propose the importance of microclimatic temperature within the boxes to simulate the natural environment.

Northern Bobwhite Quail and Grassland Bird Efforts in Louisiana.

John Pitre, LAPB Treasurer and Fred Kimmel, LAPB Past President

Until relatively recently Northern bobwhite quail were a byproduct of our landuses. Few people managed specifically for quail because it was unnecessary. Quail prospered on farms with weedy fence rows and ditches, in pine forestlands that were occasionally burned, and in grazing and haylands that



contained primarily native range plants. Because these landuses provided most of the habitat requirements, quail management was largely about food plots. This was the icing on the cake – the food plots improved what was already pretty good habitat. However for many years we were stuck in food plot mode, even though landuses had drastically changed and no longer met the basic needs of quail. We are now focusing conservation efforts on the basics – nesting cover, brood rearing habitat, winter cover, and year around food. In our attempts to “improve” our land over the past 30+ years, we have eliminated these elements that are the foundation of habitat for quail and other grassland birds.

In response to declining quail populations, wildlife agency directors in the 16 states that comprise the Southeastern Association of Fish and Wildlife Agencies, charged the Southeast Quail Study Group with developing a plan for

the restoration of bobwhites. The Northern Bobwhite Conservation Initiative (NBCI) was the result of this effort and was finalized in 2002. The NBCI is a landscape level plan that establishes goals and objectives for restoration of bobwhites. This plan lays the groundwork for multi-state and interagency cooperative efforts to restore bobwhite populations. Unlike waterfowl, quail are a resident game species under the jurisdiction of the state wildlife agency, so until the advent of the NBCI, no coordinated national effort was made to address the needs of this declining species.

Many states, including Louisiana, are using the goals and objectives of the NBCI to develop state plans for the recovery of bobwhites. The Louisiana Quail and Grassland Bird Task Force was organized to develop and implement a recovery plan for Louisiana. The Louisiana plan is now in development and will emphasize a landscape level, habitat based approach.



For many years, a “shotgun” approach of 10 acres here and 40 acres there was the rule when it came to bobwhite management. However, the habitat base has deteriorated to a point where even if a landowner developed great habitat on his small piece of property, he may not have many quail if the surrounding landscape does not provide adequate habitat.

We believe that populations of wild quail need somewhere around 5,000 acre blocks containing accessible habitat to ensure their long-term viability. This size requirement may sound like “pie in the sky” but these blocks of habitat do

not have to be unbroken. Since quail thrive on the edge, patches of useable habitat within the block can meet their needs. The good news is that quail, unlike some other species, do not require large tracts of land to be set aside or taken from production. Quail can thrive on working agriculture and forestland if we accommodate their needs. This is a huge effort that is just getting started and has attracted numerous partners. Some partners are specifically interested in the future of quail hunting, some have little interest in quail specifically, but are focused on the decline of other grassland wildlife or the ecological value of the grassland habitat itself.



A series of public workshops to discuss these concepts began in 2007 and are continuing throughout this year. These quail and grassland bird workshops are sponsored by the Louisiana Department of Wildlife and Fisheries, Natural Resources Conservation Service, the Agricultural Wildlife Conservation Center, local Resource Conservation and Development Councils,

Southern University, Quail Unlimited, and Quail Forever. Last year the workshops were held in Shreveport, Rayville, and Ferriday. In 2008, a workshop was held in Carencro in February, and two more are scheduled for later in the year.

The workshops present information on the history of quail in Louisiana and their current status, including reasons cited for their dramatic decline. Topics then turn to specific enhancements for the major landuses; cropland,

grazingland/hayland, and forestland. Specific practices and existing sources of funding (conservation programs) are discussed. These workshops are a must for those concerned about quail and grassland habitat, interested in learning more, and also those who consider fee for hunting operations or growing native plant species. There are significant financial incentives to assist landowners in establishing native plant species, yet very little Louisiana seed is commercially available. This demand and low supply may present an economic opportunity for landowners, including small or limited resource landowners to investigate a potential alternative crop for conservation and profit. Please watch local media sources for notice of a workshop in your area.

Feral Hog Surveillance and Control in Louisiana.
Nan Huff, Wildlife Disease Coordinator, LDWF

The feral hog (*Sus scrofa*) is an exotic species which has expanded its range throughout most of Louisiana. Feral swine cause extensive damage to natural wildlife habitat, privately-managed food plots for deer and turkey, and farm ponds and watering holes for livestock. In Louisiana, the frequency of wild pigs has led to conflicts with sugarcane, rice and corn farmers through the destruction of crops from excessive digging. In addition, the wild omnivores compete with native wildlife for food resources, prey on young domestic animals and wildlife, and carry diseases that can affect pets, livestock, wildlife and people. Recent research conducted by Mike Kaller at Louisiana State University suggests that the increasing hog population of western Louisiana is not only

causing detriment to terrestrial flora and fauna, but is negatively impacting native freshwater mussels and insects by contributing *E. coli* to water systems.

The wild pig is the most prolific large mammal in North America and given adequate nutrition, its populations in an area can double in just four months. Sexual maturity is reached as early as six months, with sows producing two litters per year. Litter size varies with age and nutritional intake, but five to six young are produced on average.

The total damage caused by feral swine in the United States is estimated to be approximately \$800 million annually. This estimate is approximate, and probably conservative, because environmental damage costs attributable to feral swine are not easily quantified nor are the costs of potential disease outbreaks. Texas, the state with the largest feral hog population, reports the annual damage to agriculture at \$51.8 million. When talking to hunters, landowners, farmers and land managers throughout Louisiana, there is probably no greater concern in the area of wildlife damage management than that of the seemingly unstoppable invasion of wild pigs across our state.

Feral swine are highly mobile disease reservoirs and can carry at least 30 important viral and bacterial diseases in addition to a minimum of 37 parasites that can affect people, pets, livestock or wildlife. Diseases that can infect humans include brucellosis, balantidiasis, leptospirosis, salmonellosis, toxoplasmosis, trichinosis, trichostrongylosis, sarcoptic mange, tuberculosis, tularemia, anthrax, rabies and plague. Although human infection directly from feral swine may be rare, secondary infections through a third host can occur.

Feral swine may transmit many diseases to other wild mammals, birds, and reptiles, which in turn may transmit them to domestic livestock, pets, or humans. The U.S. livestock industry is currently most concerned with pseudorabies, leptospirosis, swine brucellosis, bovine tuberculosis, and vesicular stomatitis that could be spread by feral pigs. Equally important, native wildlife can be affected by brucellosis, pseudorabies, leptospirosis, plague, anthrax, tuberculosis, vesicular stomatitis, and tularemia. The above mentioned research and data, along with House Concurrent Resolution No. 192, provides the justification and motivation for a more aggressive feral hog management program in Louisiana.

House Concurrent Resolution No. 192 requests the Louisiana Department of Wildlife and Fisheries to study all possible methods to reduce the number of feral hogs on private land adjacent to wildlife management areas. In response to this request we have joined with the Louisiana Department of Agriculture and Forestry and the USDA/APHIS Wildlife Services to prepare "The Feral Hog Disease Surveillance and Population Control Plan". The overall goals of this surveillance program are to: 1) identify diseases carried by feral swine; 2) minimize the effects of the diseases on wildlife; and 3) control the population of feral hogs in Louisiana. Blood samples for the detection of diseases will be taken from feral hogs on Jackson-Bienville and Sandy Hollow WMAs. The different geographical locations of these two management areas will provide a relatively unbiased estimate about the presence (or absence) of swine brucellosis, classical swine fever, and pseudorabies in the feral hog population in Louisiana.

Experienced personnel from the Louisiana Department of Wildlife & Fisheries will capture and identify 4 young sows. After capture, one radio-transmitting ear tag will be secured to each of the four young sows. Blood samples will be collected from each sow before release. After the young sows relocate their sounder, personnel will track the feral hogs and eliminate all but the 'squealer' pig. Blood samples will be obtained from each terminated pig and analyzed for swine brucellosis, pseudorabies, and classical swine fever. Additional information will include collection date, precise GPS location, sex, age, and number of pigs in sounder. The 'squealer' will be allowed to escape and find a neighboring sounder; at that time the process will be repeated. The radio tracking devices will allow personnel to study the movement and behavior patterns of free-ranging feral hogs.

The primary purpose of this surveillance program is to study ways to reduce the number of feral hogs on private land adjacent to wildlife management areas, while documenting the status of swine brucellosis, pseudorabies, and classical swine fever in the feral hog population. Implementation of this surveillance plan will provide invaluable information to the LDWF, the LDAF, and the USDA/APHIS/WS. Knowledge gathered concerning the movement and behavior patterns of free-ranging feral hogs will be beneficial for more appropriate control methods. Early detection of disease will provide biologists an opportunity to take measures to reduce disease transmission by reducing the number of infected animals as early as possible.

The estimated feral hog population in the United States is over 4 million, and growing. We do not anticipate complete eradication of the state's wild hog population, or for the problems to be solved immediately. The damage by feral hogs did not happen suddenly and the damage will not be resolved quickly. For that reason, this cooperative effort is the most logical and advantageous approach to this challenging problem.