



# THE BOOMER

Quarterly Newsletter of the Friends of Attwater Prairie Chicken Refuge



Volume 2 issue 3

## Message From The President

The Friends of Attwater Prairie Chicken Refuge held an annual membership meeting on September 18, 2013 at the refuge headquarters. The primary order of business was the election of board members for the next two years. The four previous board members were re-elected and the board doubled in size with the election of an additional four members to at-large positions. I want to thank the previous board for their willingness to serve another two years and I want to welcome aboard our new members and look forward to their help and input as we grow our organization and continue to build on our successes. The board now consists of the following dedicated members:

### Ron Jones, President

Ron is a retired wildlife biologist having worked for the U. S. Fish and Wildlife Service as a private lands biologist. He has more than 20 years of experience conducting habitat restoration and enhancement projects. Ron is also a board member of the Texas Urban Forestry Council. He resides in Houston, Texas

### Gary Woods, Vice President

Gary is a conservationist and community activist and has been involved with saving the Prairie chicken for more than 20 years. He has been involved with administering nonprofit and charitable organizations for 30 years. He is an accomplished birder having traveled the world pursuing his passion. Gary lives in Taylor Lake Village, Texas.

### Jane Meldahl, Treasurer

Jane is a resident of Eagle Lake Texas. She is a successful business woman and has been a long-time supporter of the Refuge and the annual Prairie Chicken Festival. Jane is another avid birder and has a special interest in providing environmental and outdoor educational programs to area school children.

### Sumita Prasad, Secretary

Sumita is the Southwest Regional Director for the Wildlife Habitat Council. She works with corporations and other landowners to create tailored voluntary wildlife habitat enhancement and conservation education programs on corporate facilities and in the communities where they operate. She hails from Houston and represents the friends group for the Refuge's annual Christmas Bird Count

*Cont. on page 7*



*Allison and friend. It's never too early to connect children and nature*

## Inside this issue:

<i>President's Message</i>	1
<i>Recovery Partners</i>	2
<i>APC Update</i>	3
<i>RIFA Suppression</i>	4
<i>Christmas Bird Count</i>	5
<i>Chicken or the Egg?</i>	6
<i>Blind Opens</i>	7
<i>Nop Gets Award</i>	8

## Did you know?

- *Prairies once covered about 40% of the lower 48 states.*
- *Some prairie plants put out roots that extend 12 feet below the prairie surface.*
- *One acre of established prairie can have an average of 24,000 lbs. of root biomass.*

Friends of Attwater Prairie Chicken Refuge, P.O. Box 212 Eagle Lake, Texas 77434

# Recovery Partners: Fossil Rim Wildlife Center

*This is the second in our series of articles to highlight the Texas organizations working hand-in-hand to recover the APC.*

Fossil Rim Wildlife Center is a not-for-profit 501(c)3 entity specializing in captive breeding programs for indigenous and exotic endangered and threatened species of animals. Located on approximately 1700 acres Southwest of Glen Rose, Texas they maintain more than 1000 individual animal representing 50 native and non-native species. Their five person, APC team, consisting of two full time staff and three seasonal interns is lead by Avian Curator, Janet Johnson.

Fossil Rim began participating in the captive breeding aspect of the Attwater's Prairie Chicken recovery program in 1992. When the captive breeding program started, there were not any husbandry guidelines for this species. In 1991, Fossil Rim acquired greater prairie chickens to test propagation protocols with a non-endangered species of grouse. The current success of this program was accomplished by focusing on learning from mistakes working with the surrogate species. Since then, Fossil Rim has participated every year in the release of chicks, with increased success.

Fossil Rim has been successful, active participant in the captive breeding aspect of the program and has produced the largest percentage of chicks hatched and released to date. Their percentages, since 2005, are: fertility – 80%, hatchability – 77% and survivability to release – 70%. Since 2005, their annual production averages: 350 total eggs, 271 which are fertile, resulting in 200 hatchlings.

Their facility currently has three adult flights measuring 50 X 100 ft. each containing 12-pens per flight, for a total of 36-breeding pens. In addition, we have one incubation / hatching building with outside pens for domestic hens that assist with the incubation of APC eggs. And, we have one building dedicated to raising Attwater's prairie chickens with 18-attached outdoor pens to help prepare the chicks for release. With the largest onsite-land space available of all the participating facilities, Fossil Rim has the option to provide housing to those that are not suitable for release -- birds with medical issues and the geriatric. They have no current plans to expand the facility.

*Cont. on page 4.*

*At left: Fossil Rim's Dr. Holly Haeefe, Director of Animal Health and Senior Animal Care Specialist, Cara Burch working carefully with an APC chick.*

## *Our Mission*

The mission of the Friends of Attwater Prairie Chicken Refuge is to support the purpose and objectives of Attwater Prairie Chicken NWR and promote the recovery of the Attwater's prairie chicken and the Texas native coastal prairie ecosystem for this and future generations.



*Photographs for this article were provided by Fossil Rim Wildlife Center.*

# Another Attwater's Prairie-Chicken Release in the Books

Dr. Mike Morrow, Wildlife Biologist

The last of this year's APCs have been released from acclimation pens, and another year of releases has been completed. Now the anxious waiting begins to see how well this cohort does at making the transition from captivity to life on the prairie. A number of steps are taken to give these birds the best chance possible. Prior to release, they must pass a rigorous battery of medical tests to ensure that only the healthiest are given the chance of free life on the prairie. However, as we all know, freedom is not without its costs. It is the same for prairie-chickens. The transition from captivity to the wild means that newly released birds must be able to find food and water on their own, and must be able to dodge a host of hungry predators that would like to dine on a tasty prairie-chicken meal.

The release protocol is structured to make the transition from captivity to the wild as easy as possible. For example, birds are released during the summer when food is usually abundant and broods would naturally be becoming more independent from their mother. Also importantly, summer is the time of lowest raptor abundance on the prairie, and we try to have all birds released at least a month in advance of the average arrival of wintering raptors in mid-October. Some have suggested releasing birds just prior to the breeding season as a strategy for maximizing reproduction of released birds. However, data shows that birds released at this time of year do very poorly. Not only do these birds have to deal with the transition to unfamiliar habitat, but they are also faced with high predation pressure from wintering and migrating raptors.

Before birds are transferred to the release site, they are transitioned from the dry pelleted ration that they received as chicks to a vegetable diet. This does two things. First, the diet of prairie-chickens at this age consists primarily of vegetation (forbs), supplemented by insects and seeds. Thus, the vegetables help condition the gut for digesting fresh plant matter. Secondly, and probably most importantly, removing the dry pellets from the diet helps diminish the need for free water which birds receive in captivity. There is not a lot of free water on the prairie during the summer, and birds must obtain most of their water from their food.

The transition from captivity to life on the prairie continues after the birds are transferred to the release site. Upon arrival, they are placed in specially designed 30 X 50 foot acclimation pens where they remain for two weeks to recover from the stress of transfer, and to continue the diet transition. Since the acclimation pens are constructed on the prairie, birds have access to wild vegetation and insects in addition to the vegetables which are provided twice daily. At the end of the two-week acclimation period, the doors to the pens are opened, and the birds are allowed to leave at their leisure. Vegetables and water are provided outside the pen for at least 30 days after release to continue the transition process.

Newly released APC continue to readily consume the provided food for a while, but eventually they drift away to independent life on the prairie. A significant proportion (this year all hens and a few males) of released birds are equipped with radio transmitters so that we can monitor survival and reproduction. These radios also allow us to find nests in the spring and protect them with predator-deterrent fences. It is only through monitoring that radio telemetry enables us to identify and solve problems with rearing and release protocols, as well as habitat issues. For example, without the data made available by telemetry, we would likely have not been able to identify the fire ant – insect – brood survival relationship that I have written about in past issues of *The Boomer*.

*Cont. on page. 5*

### **Recovery Partners Cont. from P.2**

Typical of all program participants, their focus is on the captive-breeding aspect of the program which consists of housing adults for pairing, producing surplus adults to transfer to other facilities, egg collection for incubation, and chick rearing. Operationally Ms. Johnson said "Their goal is consistency throughout the program by utilizing the husbandry manual and routinely conferring with the other participating facilities. We are all striving to produce as many healthy chicks as possible for reintroduction, while maintaining a healthy captive population". When asked about the difficulty of APC husbandry she said, "It's the things we don't have control over that are the stumbling blocks, the ever changing variables including climate (too wet or too dry), incubation complications and the possibility of disease".

In 2005, Fossil Rim Wildlife Center, in conjunction with the Fort Worth Zoo Nutritional Department, conducted a nutritional study to determine the values needed to produce a healthy APC egg / chick / adult. Using the compiled data that we generated, the Fort Worth Zoo's Nutritional Department, with help from Mazuri Feed, was able to recommend a diet revision to the Recovery Team. The revised diet meets the needs of this species, and directly impacts the number of chicks available for release. They also spearheaded a web site based data base for compiling information to aid in the continued success of the program. That data is available to all of the participating facilities.

As we continue this series it will become obvious, as is the case at Fossil Rim, every facility is staffed with dedicated individual working as a team to recover the APC

Like all nonprofit organizations, Fossil Rim Wildlife Center welcomes any and all financial support. You can learn more about Fossil Rim Wildlife center by visiting their web site at : [www.fossilrim.org](http://www.fossilrim.org)



*Photo above: With hard work, it is hoped that 2 in the hand will become 2 in the bush...or rather prairie.*

## **FIRE ANT SUPPRESSION CONTINUES**

On October 23, 2013 a crew from Farm and Ranch Aerial Services aerial applied 5,000 pounds of Extinguish® Plus brand fire ant bait to 3,672 acres of Refuge lands as part of the ongoing effort to suppress the Red Imported Fire Ant population. Refuge Manager, Terry Rossignol reported seeing ants carrying bait back to their mounds while application was still underway. This important RIFA suppression activity is funded, in part, by a grant the Friends secured two years ago. Additional funds, available to the Refuge, allowed us to expand the total acreage originally scheduled for treatment. The new area is nearly five times larger than what we had hoped to treat. We currently have funds for the 2014 treatment after which time it will be necessary to secure additional funds if we are to continue this valuable work which results in increased brood survival.



**Flying low over the prairie, a pilot applies RIFA bait to Refuge land.** Photo by Terry Rossignol

**You can help with this vital RIFA suppression by supporting the *Brood Fund***

**APC Update cont. from page. 3** This year, we released a total of 228 birds, bringing the total released from captivity since 1995 to 2,413. While it is too early to know how this release cohort will do, through the years annual survival following release has averaged 17%. While this may not sound that great, especially compared to the approximately 50% annual survival of wild prairie-chickens, one has to remember that wild prairie-chicken populations have already undergone substantial losses by the time they reach the age of most APCs released from captivity. An analysis done by Dr. John Toepfer, Society of Tympanuchus Cupido Pinnatus (STCP) and APC Recovery Team member, showed that at the observed average post-release survival, slightly more released pen-reared APC survive to the breeding season out of 100 eggs hatched than wild prairie-chickens. While it is hard to observe, the relatively high mortality post-release is not necessarily a bad thing. It is nature's way of selecting the individuals most fit for life on the prairie. And the 17% average post-release survival we have observed for APCs is at least 2X higher than the best survival we have seen in the literature for other pen-reared galliform species (e.g., greater prairie-chickens, pheasants, quail, and grey partridges).

While there is no shortage of nay-sayers who like to point out that restoration projects involving captive-reared animals have traditionally not been very successful, one has to remember that the need for involving these animals in the first place is because the wild animals have disappeared. Unless the factors causing the decline of wild populations have been removed, how can naïve captive-reared animals be expected to thrive? This brings us back to the need for monitoring and the possibility that our understanding of factors limiting populations may be **WRONG!** We originally thought the reason that APC became functionally extirpated in wild habitats was because of habitat fragmentation coupled with extreme weather events. However, with data collected through radio telemetry it became apparent that it was more than that, which led us to the brood survival APC recovery was not possible even if an unfeasible >9,600 were released each year and 100% of those individuals survived to the breeding season **UNLESS** brood survival problems caused by fire ants. Data from an M.S. project by STCP fellow Aaron Pratt showed that was increased substantially. While we are a long way from where we want to be from an APC population perspective, we are a lot closer to getting there than we were 10 years ago. I for one am not yet willing to give up and relegate this iconic prairie species to the catacombs of extinction. Thankfully, we have many partners which share that determination as well.

## Don't Miss the Christmas Bird Count

The Attwater's Christmas Bird Count, in Eagle Lake, Texas will be held on Wednesday, December 18, 2013. Join us for a wonderful opportunity to bird the Refuge. This event is open to all birders and is one of the highest inland Christmas Bird Counts, for diversity, in the Country. If you are interested in participating, please contact :

Sumita Prasad at

[sumita@alumni.utexas.net](mailto:sumita@alumni.utexas.net)



***“Unless someone like you cares a whole awful lot, Nothing is going to get better. It's not.” .....***

***Dr.Seuss, “The Lorax”***

# What Comes First, the Chicken or the Egg?

## The art of producing an APC

While gathering information for the Recover Partners article on the Houston Zoo for the summer *BOOMER*, I naively asked Hannah Bailey to briefly describe the rearing process from mating to release-ready birds. I decided that her response justified a separate article. This should give everyone more insight into all the hard work, with little recognition, provided by the APC rearing facilities that will be showcased in *THE BOOMER*.

For the Houston Zoo, the breeding season starts in mid-September with the breeding-pairs planning session with the APC teams. At this meeting, available birds are assigned to the rearing facilities based on the best genetic pairing. After the meeting, pre-shipment exams are performed on all the birds to be transferred. All transfers are coordinated between Institutions that will be sending or receiving birds. Any bird received at the Houston Zoo is quarantined for thirty days prior to being introduced to the breeding flock.

In January/ February, the males establish territories and start booming in the pens. They are monitored to determine their territory boundaries. Around late February to early March, keepers pair hens with genetically compatible males (based on the September planning-meeting recommendations). Birds are paired in the males' territories. Bird separation is maintained with one pair to a pen to track parentage and maintain genetic histories. Team personnel monitor hen behavior for nest building and pacing. Inordinate pacing may indicate the hen is uninterested in the male with which she has been paired. If the hen continues to pace and does not engage in nest building, personnel may move her to the pen of another genetically compatible male.

As nesting begins, keepers look for eggs daily. The goal is to collect eggs, as they are laid. Typically, keepers collect the real egg and replace it with a fake egg. The fake egg encourages the hen to return to her nest. Some hens are more sensitive than others and don't like their nests disturbed. The nests of those birds are closely monitored. As soon as the hen lays a full clutch of eggs (usually around 11-14 eggs) the eggs will be removed and placed in an incubator.

Information is maintained on every APC in the captive breeding population from the time the egg is collected until the chick is released and/or dies. Each egg is separately recorded so that the staff can monitor development during the incubation process. They candle the eggs twice a week to check for development issues and adjust incubation parameters as necessary. Candling is the process of using a bright light source behind an egg to show details within the shell.

When the chicks hatch, they are given discrete bands to track of parentage and genetics. All chicks are currently hand-raised in small groups. Chick rearing is perhaps the most difficult and time-consuming part of the APC program.

The chicks are monitored closely for food consumption, weight gain, development, etc. Any issues are brought to the vet's attention immediately. The chicks' life is most vulnerable during the first ten days after hatching. As the chicks grow, they are placed in different housing facilities and still closely monitored.

The chicks are fed a specially prepared pelleted diet (Mazuri APC chick starter diet), as well as some insects and a salad mix. At about six weeks of age, they are transitioned to mainly a plant-matter diet (usually lettuce with a mixture of veggies and legumes). This prepares them for potential release, and helps them adjust to the wild diet.

In June the captive-breeding groups meet to determine how many birds will be released. At that time, veterinarians examine all to-be-released birds to make sure they are healthy. Birds are released from June through August.

Once all releases are complete, there is generally about a two-weeks pause, before the process starts again.

*President's Message Cont. from page 1.*

**Brian Cain, At-large Member** Brian is another retired wildlife biologist having served as the environmental contaminants specialist for the U.S. Fish and Wildlife Service. He is an expert in wildlife rescue and decontamination and has trained many individual in proper procedures. Brian is currently chief consultant and responder for Wildlife response Services, LLC. and sits on the board of the nonprofit, Bay area Wildlife Rehabilitation. He has been an avid hunter and fisherman all his life and since retirement has spent many hours honing his birding skills.

**Jim Hluchan, At-large Member** Born and raised in Brazoria County Texas, Jim went to work for the SCS, now Natural Resources Conservation Service after graduating from college. Jim retired from the agency after having served as District Conservationist for Austin and Washington Counties. He now resides in New Ulm. He and his wife are members of the Cat Spring Ag Society, they assist 5 local SWCD Boards with their annual West of the Brazos Land, Wildlife, and Range Contest. Jim has a long history of working with local landowners and has a strong interest in prairies and wildlife issues.

**Mark Sleeper, At-large Member** Mark and his wife have owned a horse training business near Cat Spring, Texas since 2006. Prior to that he developed and managed ranches from Big Bend to Bellville, always with wildlife in mind and utilizing his wildlife management degree. He has also been an outdoorsman all his life and has worked diligently to protect Austin Counties rural habitats. Mark is an active leader in his church's youth program.

**Eliot Tucker, At-large Member** A Houston attorney, Eliot and his wife also own a home in the Eagle Lake area where the spend a lot of time, hoping to spend more. He and his wife are actively restoring native prairie on family ranchland and a piece of his wife's family land was incorporated into the Refuge. Eliot has been interested in birds since he was eight years old, when his parents gave him his first bird book and has birded widely. He is also on the board of the Wildlife Habitat Federation and the Chinquapin Preparatory School for disadvantaged youth in Houston.

## Observation Blind on Horseshoe Lake Now Open

The Refuge recently opened a new observation blind on Horseshoe Lake. Visitors will also be able to cross the bridge on Coushatta Creek. The blind is the result of many long, hot hours of hard work by Refuge staff members Ferris Calderon and Darrell Peterson. They were assisted by The YCC crew.

Assistant Refuge Manager, John Magera is looking forward to introducing visitors to the new feature. The covered blind includes benches that provide visitors a great spot to watch such birds as gallinules, blue-winged teal, scaup, great egrets and even non-bird species such as alligators. A new parking area has also been added near the blind.



*New parking area for observation blind.*



*View from inside the new observation blind.*



*New observation blind on Horseshoe Lake.*

*Photos by John Magera*

## Wildlife Photographer Wins Award

Wildlife photographer, Nappoadol Paothong's book, *Save the Last Dance*, won a "Gold Medal" in the 2013 Independent Book Publishers Awards. A winner in the Best Regional Non-fiction Category, Nop said he couldn't be more proud and happier since the book is a showcase of his decade-long labor and passion. Nop was guest speaker at the 2013 Booming-N-Blooming Festival at the Refuge. When purchasing a copy of his book, you may select to have part of the proceeds donated to our Friends group. To learn more about the book visit:

<http://www.savethelastdancebook.com>



## Membership

Interested in becoming a member or want to renew your annual membership ? It is now easy to do ,on-line at

[www.attwater.org](http://www.attwater.org)

We are happy to remind everyone that we are now a 501(c)3 nonprofit organization.

Any donations you may make are tax deductible to the extent allowed by law and tax code.

Donors should consult with their tax advisor.

Please consider Friends of Attwater Prairie Chicken Refuge in your charitable giving.



## Subscribe to our Electronic Newsletter

Is this the first time you have read *THE BOOMER* ? Was it forwarded to you by a third party? Would you like it sent directly to your email address so you never miss an upcoming issue. Just send an email to :

[oldpartnersguy@gmail.com](mailto:oldpartnersguy@gmail.com) with I want the Boomer in the subject line and we will add you to the mailing list.

Interested in reading back issues? Visit [www.attwater.org](http://www.attwater.org) and you will find them archived on the publications page.

*THE BOOMER* wishes to thank Friends Vice-president, Gary Woods for his very able assistance in reviewing and editing articles for this issue of the newsletter and to all contributors that help to make this publication a success..



**At Left:** Refuge prairie along the Pipit Trail was prescribe burned earlier in the year. Learn more about the use of fire in future *BOOMERS*