

# ADOPT-A-

Fall 2005

TEXAS  
PARKS &  
WILDLIFE

# Prairie Chicken

## NEWSLETTER

## Year Brings Mixed News

The Attwater's Prairie Chicken population this year is a good news-bad news story. The bad news is that the population numbers fell this year, although this was somewhat expected given the very small release we were able to make last summer. Spring census showed approximately 40 birds on the two prairie sites this year.

So what is the good news? First, the population was able to survive a low recruitment (introduction) year at both sites. This is good news since the ecology of these birds is built on high recruitment numbers each year and high losses due to predation. The birds also survived some very inclement weather at sensitive times this year. Flooding probably destroyed the broods that were hatched on the prairie, but a population remained.

Good news is also coming from the captive breeding sites, where this year we anticipate one of the highest release totals to date. This is due in part to persistence by the staff at Fossil Rim, Caldwell Zoo and San Antonio Zoo in their efforts to defeat reticuloendotheliosis virus (REV).

This year they were able to successfully breed birds that tested positive for the virus and secure chicks that tested negative, meaning the positive birds can remain part of the breeding population. Efforts continue at Texas A&M University to produce an immunization for the REV virus. While these efforts are showing promising results, an effective vaccination may still be a long way off.

### Nesting on the Range

Again this year we had birds nest on both the Attwater Prairie Chicken National Wildlife Refuge and the Texas City Prairie Preserve. At the Attwater Prairie Chicken refuge, 12 hens were known to have nested, and all 12 nests were protected by caging to keep the female close and to protect the young. All 12 nests raised young to the point where they could be released and 82 chicks were released. Shortly after the birds were released, though, the prairie received some very heavy rain incidents. This resulted in a number of efforts to locate the young, but none appear to be active at this time.

### Developments in Animal Husbandry

This year a new diet was tested on the birds at all facilities with mixed reactions from the animal keepers. There have been some positive results but, as with all developments in this program, there remains some opportunity to improve. The greatest advantage seems to be improved feather conditions and consistent growth rates. The zoos will continue to work with the vendor on improving the new chick diet.

### Does the Adopt Program Make a Difference?

This year, your contribution combined with other efforts to fund part of the research into REV vaccines (\$8,000 at Texas A&M University), assisted in the completion of pens at Fossil Rim Wildlife Center (\$12,000) allowing larger facilities, spreading out the birds and possibly contributing to controlling the REV infection at that facility and \$500 each to the other facilities to assist in general animal husbandry at these facilities. If you have not contributed this year, please consider joining the effort to restore this beautiful bird. Visit [www.tpwd.state.tx.us](http://www.tpwd.state.tx.us) or call the Wildlife Science, Research and Diversity Program at (800) 792-1112.



# Attwater's Prairie-Chicken Update

By Terry Rossignol and Mike Morrow

The Attwater's prairie-chicken (APC) (*Tympanuchus cupido attwateri*) is endemic to Gulf Coast prairies of Texas and Louisiana. Historically, APC populations may have approached one million on some six million acres of prairie habitat. By 1937, populations had declined to an estimated 8,700 individuals, and have continued to decline. As of spring 2005, fewer than 50 remained in free-ranging populations at the Attwater Prairie Chicken National Wildlife Refuge (APC NWR) and The Nature Conservancy's Texas City Prairie Preserve (TCPP).

Over time, loss and fragmentation of its coastal prairie ecosystem due to agricultural conversion, urban and industrial expansion, overgrazing and invasion of prairies by woody species have been the primary factors driving APC declines. In the last 15-20 years, adverse weather, reduced genetic variability, parasites, disease, and red imported fire ants (*Solenopsis wagneri*) have all likely contributed to the APC's downward spiral toward extinction. Although the APC Recovery Plan is currently in revision, to date conservation efforts aimed at reversing this extinction spiral have been centered on four major thrusts: habitat management/restoration, captive breeding, population supplementation and research. Research provides answers needed to accomplish the other three thrusts, and will be discussed under those headings.

**Habitat management/restoration:** Currently, APC habitat management is focused on the 10,528-acre APC NWR, the 2,395-acre TCPP, and private grasslands within the APC's historic range. Work on private lands has primarily been conducted on areas in close proximity to the refuge, and in Refugio and Goliad counties, Texas. Private lands work has been conducted through the Coastal Prairie Conservation Initiative (CPCI), a partnership involving private landowners, local soil and water conservation districts, the U.S. Fish and Wildlife Service, the Sam Houston Resource Conservation and Development Board,



*Brush control on APC NWR*



the U.S. Natural Resources Conservation Service, The Nature Conservancy of Texas, and the Grazing Lands Conservation Initiative. Integral to the CPCI has been incorporation of Safe Harbor Agreements into management plans where desired by landowners. Safe Harbor Agreements promote voluntary management for listed species on private property while giving assurances to landowners that no additional future regulatory restrictions will be imposed if listed species increase in numbers as a result of management activities. To date, more than 76,000 acres have been enrolled under Safe Harbor agreements for APC management, with cost-share assistance provided on approximately 60,000 acres.



*Planting native grass seed on refuge*

## ADOPT-A-PRAIRIE CHICKEN NEWSLETTER



Brood enclosure at APC NWR

**Captive Breeding:** Currently, seven institutions (Fossil Rim Wildlife Center, Houston Zoo, San Antonio Zoo, Abilene Zoo, Caldwell Zoo, Sea World of Texas and Texas A&M University) are collectively holding roughly 200 adults. Production in 2005 has netted one of the largest numbers of chicks to be released since the program started – 135. Management of reticuloendotheliosis virus (REV), a retrovirus, remains a major problem for APCs in the captive setting. Research on several fronts has or is being conducted to address the REV issue. Texas A&M University continues to study the etiology and testing protocol for this disease. Researchers there are also developing a vaccine that hopefully will provide immunity against REV as well as remedial treatment for individuals that have already contracted the virus. Research coordinated by the Fort Worth Zoo is also underway to refine the diet for APC breeders and chicks.

**Population Supplementation:** Since 1995, a total of 753 captive-reared APCs have been released at the two remaining wild populations. Most of these birds have been fitted with radio transmitters to facilitate evaluation of post-release survival. This evaluation is essential to refining release methodologies in order to improve post-release survival.

Estimates of first year post-release survival for APC released during 1996-2004 have ranged from 9% to 41% in 1999 and 2004, respectively. Increased survival for birds released in 2004 is thought to be due, at least in

part, to prophylactic treatment for chewing lice on APC at the refuge, which resulted in a reduction in breeding season mortality. Heavy louse loads observed on birds at the refuge during 2002-2003 were associated with substantial increases in breeding season mortality. It is hypothesized that better hen condition resulting from louse reduction resulted in an observed increase in average clutch size in 2005.

Currently, extremely poor reproduction from pen-reared hens is the factor most limiting recovery of wild APC populations. Nesting success has been substantially enhanced by installation of predator deterrent fences around most nests since 2000. However, no surviving chicks produced by released pen-reared hens had been documented prior to 2004. Intensive observations on eight broods at the Attwater Prairie Chicken NWR in 2003 found that no chicks survived past 11 days post-hatch. Several chicks were found dead or dying at night roosts, suggesting that predation was not the sole cause of chick mortality. Research is currently underway to determine the cause(s) for this poor chick survival. During 2003-2005, placement of broods at the APC NWR in 4' x 8' pens for two weeks post-hatch and providing food and water (drip) ad libitum showed promise for "jump-starting" chicks. Seven of 18 (38%) chicks released using this technique in 2004 survived to at least six weeks. In 2005, 82 chicks were released by this method; however, survival to date has been very dismal.

Although results of recovery efforts for this imperiled bird have mimicked a roller-coaster ride for the last decade with many ups and downs, there is hope for the Attwater's. One of the keys is to produce enough birds in the captive setting to greatly increase the number of birds released each year. Advancements in REV and nutrition management in the captive flock will hopefully translate into more wild APCs in the near future so that Texans may once again hear the "booming" sounds of the Attwater's resonate across the Texas coastal prairies.

## HURRICANE RITA NOTE

**From what we know at present, all prairie chickens known on the two preserves pre-hurricane Rita seem to have survived the storms.**

## Notes on Other Endangered Species

The amazing news of the apparent rediscovery of the Ivory-billed Woodpecker in Arkansas has certainly brought excitement to the bird community. The Ivory-billed Woodpecker is a forest-dwelling bird that historically ranged to the north of the historical Attwater's range. The last confirmed record of this bird in Texas was more than 50 years ago, although there are sound recordings at Cornell that were taken in the Big Thicket since that date. See [www.fws.gov/ivorybill](http://www.fws.gov/ivorybill) for more information.

The Whooping Crane recovery effort also got a big boost this year, shattering the 200 bird barrier with an amazing 217 birds recorded at Aransas National Wildlife Refuge (which has some marginal Attwater's habitat) this winter. The news could have been even better – two Whooping Cranes were injured by hunters and subsequently died during migration. Texas Parks and Wildlife Department produced a DVD and poster set to help hunters and others identify this beautiful, endangered bird in the wild.



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