

# **Annual Recovery Report 2007**



Chiricahua Leopard Frog  
Photo by Jim Rorabaugh USFWS

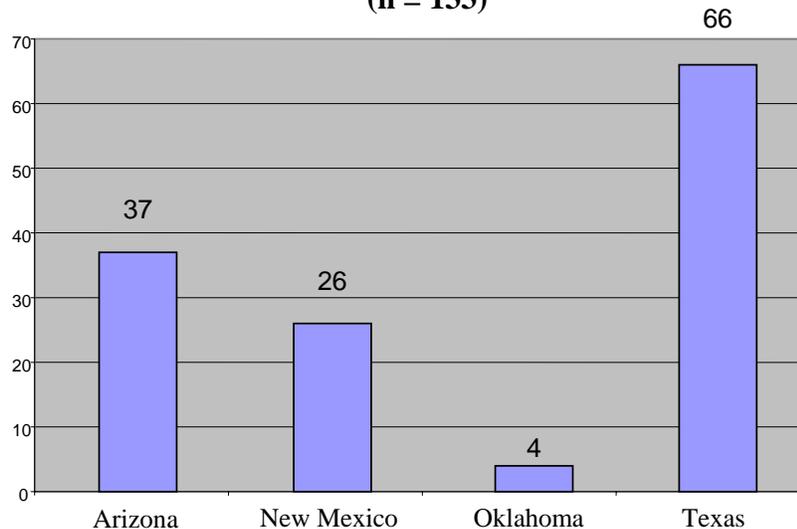
**U.S. Fish and Wildlife Service  
Southwest Regional Office  
Division of Ecological Services  
Albuquerque, New Mexico**

## Annual Recovery Report 2007

The U.S. Fish and Wildlife Service's (Service) Director has delegated responsibility for recovery of listed species to the Service's Regional Directors. During Fiscal Year (FY) 2007, Region 2 had lead responsibility for recovery of 133 listed species. In this report, we provide an overview of listed species status in Region 2 and highlight recovery accomplishments during FY 2007. We also provide comparisons with FY 2006. We compiled information for this report from the Recovery Data Call database and Ecological Services Field Offices.

### Number of Listed Species per State

(n = 133)



## Recovery Planning and Species Status Reviews

### Recovery Plans

The Endangered Species Act (Act) section 4(f)(1) states “The Secretary shall develop...plans... for the conservation and survival of endangered species and threatened species listed pursuant to this section, unless he finds that such a plan will not promote the conservation of the species.” Recovery plans provide the roadmap to recovery for listed species and identify threats, the specific actions and associated costs necessary to address those threats, and objective and measurable criteria for delisting. Region 2 has approved recovery plans for 108 listed species. During FY 2007, we completed the final approved recovery plan for the Chiricahua leopard frog and a final revision of International Whooping Crane Recovery Plan. We also published draft revised plans for the Apache trout and Rio Grande silvery minnow. Revisions are in progress for a total of 28 species.

## **Recovery Teams**

Establishing official recovery teams to address recovery planning and/or implementation is not required by the Act. However, recovery teams can be exceptionally helpful in situations where there is significant controversy or complexity with the species' listing and/or management needs, bringing in scientific expertise and stakeholder involvement. Fifty-one species were covered by formal recovery teams (approved by Regional Director) and an additional 50 species had informal groups working on their recovery during FY 2007. There are several approved multi-species recovery teams within the Region. A total of 15 formal teams and 6 informal teams were actively meeting in FY 2007.

## **5-Year Reviews**

The Act section 4(c)(2) requires Service to conduct, at least once every 5 years, a review of all listed species to recommend whether any species should be delisted or reclassified. In the past, the Service did not regularly conducted formal status reviews due to competing statutory requirements. Recent litigation has triggered a national initiative to implement standardized formal reviews, with a goal of initiating and completing 20 percent of species reviews annually. As a new workload factor, only initiation of reviews is required as Government Performance and Results Act target; however, it is expected that efficiency in completing reviews will improve annually. Region 2 initiated twenty-seven 5-year reviews in FY 2007. We completed seven reviews at an estimated cost of \$164,550. One review (black-capped vireo) recommended downlisting from endangered to threatened, one recommended delisting (brown pelican; Region 2 completed review but Region 4 had species lead) and all others recommended no change in status. Species reviewed are detailed under field office highlights below.

## **Recovery Implementation**

### **Section 6 Grants**

State resource agencies are major partners in recovery of listed species. In FY 2007, Region 2 provided a total of \$9,396,572 in traditional and non-traditional section 6 grants to Arizona, New Mexico, Oklahoma, and Texas through a competitive ranking process. The grants have a 25 percent matching requirement. A total of \$1,629,505 in traditional section 6 grants was awarded to benefit 29 listed and 5 candidate species, fund monitoring and management, habitat restoration, species status surveys, public education, and research. A total of \$7,767,067 was awarded in non-traditional grants for Habitat Conservation Planning (HCP) assistance, land acquisition associated with approved HCP's, and to acquire habitats for recovery of listed species with approved recovery plans. Highlights include:

HCP Planning Assistance - continued planning assistance for a Multi-Species Habitat Conservation Plan in Pima County, covering 36 species of concern;

HCP Land Acquisition - protection of nearly 18 acres of habitat within the Balcones Canyonlands critical for endangered karst species, completion of the Storm Ranch conservation

easement to protect aquifer recharge and springflow for the Barton Springs salamander, and permanent protection of golden-cheeked warbler habitat on the Whitney Preserve;

Recovery Land Acquisition - acquisition of 2,160 acres of coastal marsh for whooping cranes, pelicans, and piping plover, and protection of the Morton Tract in Comal county for golden-cheeked warbler and numerous Comal species.

### **Recovery Budget Initiative**

The Recovery Budget Initiative awards recovery dollars through a competitive process for the implementation of urgently needed actions for critically endangered species (i.e., to prevent extinction) and implementation of final recovery actions for species near delisting or downlisting. Region 2 was awarded \$412,146 out of approximately \$1.6 million nationally to benefit the Houston toad, masked bobwhite quail (preventing extinction), and the Apache Trout (showing success).

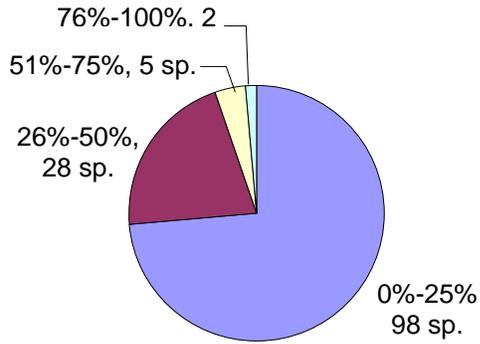
### **Science Support Program**

Each year U.S. Geological Survey provides the Service with an opportunity to submit proposals for science support in endangered species recovery and other resource issues. In FY 2007, recovery funding was obtained for a critical study of gastrointestinal structure and immune function in endangered Attwater's prairie chickens, and reproductive and ecological studies of the fountain darter.

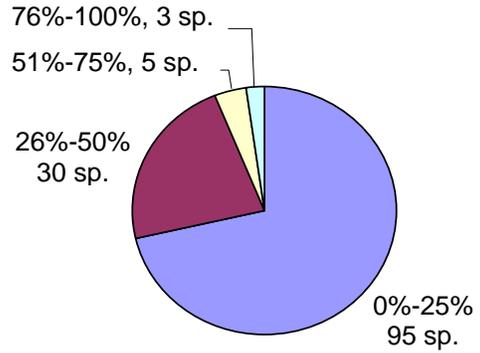
### **Recovery Achieved**

Recovery achieved is a metric from the Recovery Data Call that illustrates to what extent recovery objectives have been achieved for each species. This percentage, expressed in quartiles, is not necessarily directly tied to the exact number of discrete actions in the recovery plan that have been completed, but rather it reflects the overall progress towards the recovery goal of down or delisting. The following describes recovery achieved by the end of FY 2007 for 133 listed species throughout Region 2: 95 species = 0 percent-25 percent achieved; 30 species = 26 percent-50 percent achieved; 5 species = 51 percent-75 percent achieved; 3 species = 76 percent-100 percent; achieved. Johnston's Frankenia, Socorro Isopod, and Apache Trout had recovery objectives that were 76 percent-100 percent achieved. Apache trout increased in recovery achieved from 2006 and Johnston's Frankenia has been proposed for delisting.

### 2006 Recovery Achieved



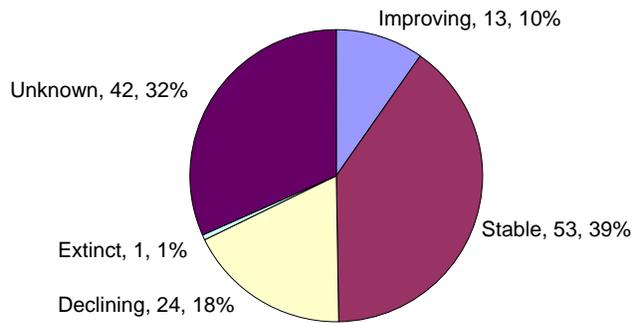
### 2007 Recovery Achieved



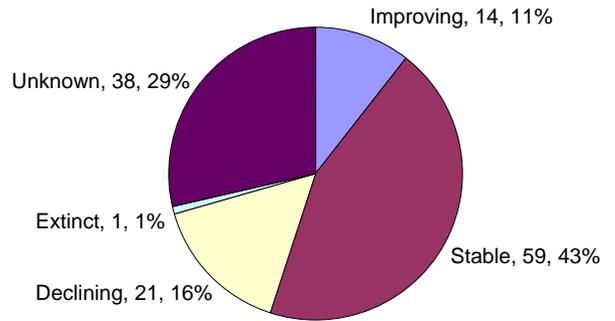
## Species Status

During FY 2007, overall species status for Region 2 was 73 stable or improving, 21 declining, 38 unknown, and 1 presumed extinct (San Marcos Gambusia). Flowering plants (n = 6) and fish (n = 5) made up the majority of declining species. Mount Graham red squirrel showed improvement from 2006 (went from declining to stable).

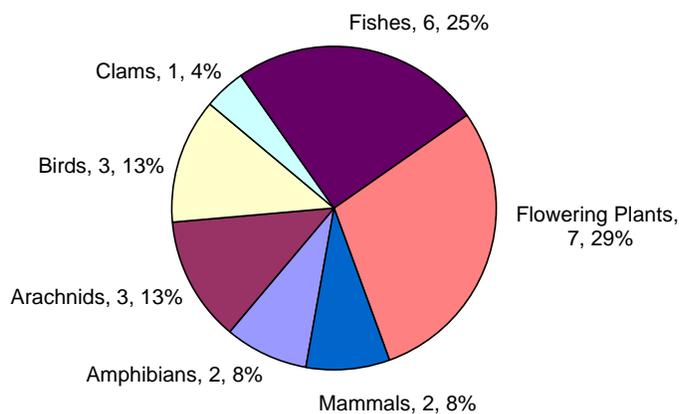
### 2006 Overall Species Status for Region 2 (n = 133)



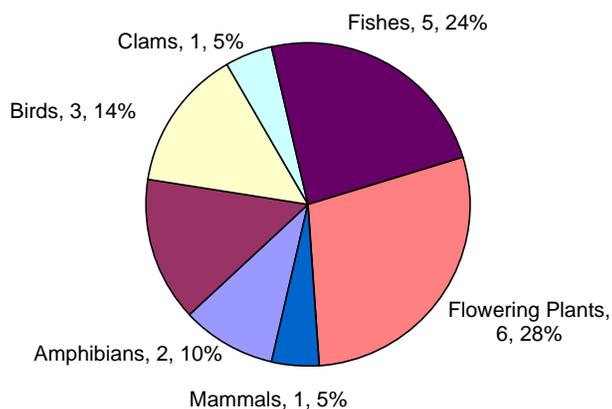
### 2007 Overall Species Status for Region 2 (n = 133)



**Declining Species for Region 2 in 2006**  
(n = 24)



**Declining Species for Region 2 in 2007**  
(n = 21)



## Field Office Highlights

### Arizona Ecological Services Field Office

Staff completed the following 5-year reviews: Cochise pincushion cactus, Pima pineapple cactus, and lesser long-nosed bat. A program review was completed for the nonessential northern Arizona experimental population of California condor. Draft 5-year reviews that were submitted to the Regional office included Sonora tiger salamander and Mount Graham red squirrel. The Chiricahua leopard frog recovery plan was finalized and signed on June 4, 2007.

*Plants:* Staff participated with Region 6 on recovery planning and prioritization of recovery actions for Welsh's milkweed, Holmgren milkvetch, and Siler pincushion cactus. These are species that occur in Arizona and southern Utah. Work was initiated with the Grand Canyon Park Foundation and Grand Canyon National Park on the establishment of a new population of Sentry milkvetch on the south rim of the Grand Canyon. The Arizona plant ecologist, in conjunction with the National Park Service and the Forest Service, organized and held a three-day meeting to discuss recovery strategies and actions for declining populations of rare cacti in Arizona, Utah, and New Mexico; over 30 botanists/plant ecologists attended. Work was started on analyzing the conservation efforts associated with the Arizona willow conservation agreement; populations in New Mexico were assessed. Utah and



Sentry Milk Vetch in Propagation  
Photo by Shelia Murray, Research Botanist, The Arboretum at Flagstaff

Arizona populations will be assessed in FY 2008; the decision on revising the now-expired conservation agreement will be determined after the assessments are complete. Work continued with the Forest Service on implementation of the Kaibab plains cactus conservation agreement, especially after habitat and populations were negatively affected from the Warm fire and post-fire erosion.

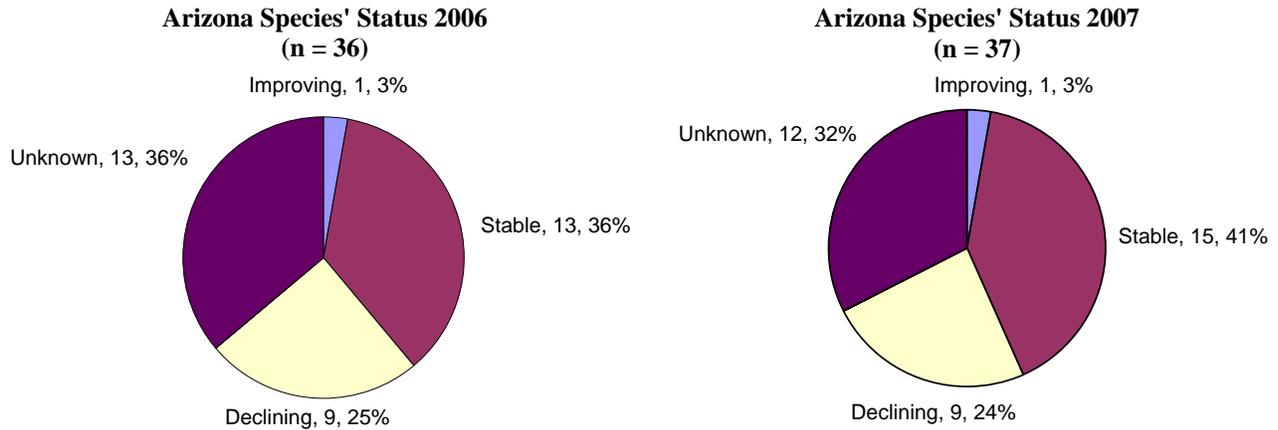
*Birds:* The Southwest Condor Working Group, consisting of all partners involved in the reintroduction effort, met twice during the year. The Arizona Game and Fish Department (AGFD) continued their voluntary non-lead ammunition program to benefit condors. Approximately 50 percent of hunters in Arizona, in hunt units within the condor nonessential population area, participated. Staff from our office participated on the bald eagle post delisting monitoring team and contributed to the Conservation Assessment and Strategy for the bald eagle in Arizona. Staff participated with Buenos Aires National Wildlife Refuge, Sonoran Joint Venture, and other partners to develop and implement survival measures for the critically imperiled Masked Bobwhite. Sonoran Joint Venture successfully applied for a Preventing Extinction grant to fund recovery actions in Mexico for this species.

*Mammals:* Staff participated in the organization and implementation of the annual simultaneous lesser long nosed bat (LLNB) roost counts. We also assisted with LLNB gating projects on Organ Pipe Cactus NM and Coronado National Monument. We assisted with Sonoran pronghorn capture on Cabeza Prieta National Wildlife Refuge. We continue to assist AGFD and the Coronado National Forest (CNF) with the biannual Mount Graham red squirrel surveys and assist the CNF with development of habitat restoration plans on Mount Graham. A second reintroduction site for black-footed ferrets was accomplished with the release of 6 ferrets on the Espee Ranch by AGFD.

*Fish:* The Bubbling Ponds facility was completed near Page, Arizona, with funding from the Bureau of Reclamation (Reclamation). The facility consists of 24 separate circular tanks, which will be used to house and replicate populations of spikedace and loach minnow. Native fish (2,800 Gila topminnow, desert pupfish, spikedace, and loach minnow) were reintroduced into streams and springs on the Muleshoe CMA, managed by The Nature Conservancy (TNC), the Forest Service, and BLM. This project resulted from 3 years of planning with AGFD, Arizona State Land Department, Arizona State University, BLM, Reclamation, Forest Service, TNC, and Service staff.

*Herps:* In conjunction with AGFD, a Cooperative Conservation pilot project was completed in the San Rafael Valley to remove introduced predators from five livestock tanks to benefit Sonora tiger salamander. Staff assisted the Phoenix Zoo in obtaining a Partners for Fish and Wildlife grant to build a captive propagation facility for Sonora tiger salamanders. We assisted AGFD in reestablishing populations of Chiricahua leopard frogs in the Tonto National Forest and the Dragoon Mountains. There were 1,374 larval/metamorphosed Chiricahua leopard frogs released into 6 sites and 4 sites benefited from either habitat improvement or nonnative species removal within Recovery Unit 5. We worked with the CNF, TNC, AGFD, and Sky Island Alliance on the Scotia Canyon restoration project, which would benefit Huachuca water umbel, Chiricahua

leopard frog, Sonora tiger salamander, Huachuca spring snail, and Mexican garter snake. We organized the gartersnake conservation working group to address declines in the abundance and distribution of 2 native gartersnakes. The group initiated a captive propagation and head-starting program for Narrow-headed and Mexican gartersnakes.



## Texas Ecological Services' Field Offices

### Austin Ecological Services Field Office

We finalized two safe harbor agreements for the benefit of the Houston toad in 2007. These included the Jim Small Safe Harbor Agreement on the Small Ranch that covered 836 acres of ranchland in Bastrop County, Texas and the Boy Scouts of America/Capital Area Council Safe Harbor Agreement on the Lost Pines Scout Reservation covering a 541 acres adventure camp also located in Bastrop County, Texas. We also partnered with Texas Parks and Wildlife, Bastrop County, and the National Fish and Wildlife Foundation to set aside 265 acres of land located directly adjacent to Bastrop State Park. This parcel was partially funded through the use of section 6 funds and will be managed specifically for Houston toad conservation.

Two recovery actions for which the Service was designated as lead were initiated for the Houston toad in FY 2007. These include action 2.1 – design search for additional populations and action 2.2 – monitor and evaluate study progress. Researchers at Texas State University began range wide surveys for Houston toad breeding choruses this spring. These surveys are funded by a section 6 grant and will continue over the next 2 years.

Recovery action 4.2, introduce Houston toads, was also initiated. A head-starting program for the Houston toad began with egg collections in the wild during the Houston toad breeding season this past spring. The eggs were taken to the Houston Zoo, and the tadpoles were raised to the juvenile life stage in captivity. Over 1,000 head-started toads

were released back at their source ponds during the summer and early fall months. This program involves a partnership between the Service, the Houston Zoo, and Texas State University.



Tobusch Fishhook Cactus by Chris Best USFWS

### **Arlington Ecological Services Field Office**

We completed a 5-year status review for the endangered black-capped vireo. Initiated in February 2005, the review involved an eight-member panel to guide the compilation of the best available information on the species, which ultimately resulted in the Service recommending the species be downlisted.

Staff worked with the Corps of Engineers (Corps) to further the recovery of the endangered golden-cheeked warbler (GCWA) at Federal land on Lake Whitney. The Corps property is located within GCWA Recovery Unit 2, for which less than 50 birds have been documented. In addition to assisting the Corps in enforcement activities for illegal encroachment on Federal property, the Arlington Ecological Services Field Office has entered into an agreement to assess the GCWA population at Lake Whitney and evaluate its contribution to recovery of Unit 2 beginning in the spring of 2008.

We provided recommendations for the assessment of impacts to endangered black-capped vireos (BCVI) at a wind farm that resulted in a 2 to 5 years research project. This is the first study that would evaluate productivity of an endangered species prior to and following the construction and operation of a wind farm. The results of the study are anticipated to understand the impacts to the BCVI and better inform management recommendations, as well as avoidance measures and identify the level of take in the form of harassment.

As part of the 2004 Natural Resource Conservation Service Farm Bill Consultation, staff participated in three certification training events for private landowners and contractors in

Texas. The training sessions certify contractors and private landowners using Farm Bill EQIP funds in the restoration and avoidance of habitats for the endangered black-capped vireo and golden-cheeked warbler.

Staff assisted FLP Energy in developing a Regional HCP for wind facilities in Texas. The proposed HCP will cover 36 counties that overlap the ranges of the endangered black-capped vireo and golden-cheeked warbler. This fiscal year, coordination with FPL Energy has evolved into a larger partnership effort for wind resource development for Texas, with the intent of being a model for cooperative conservation.

Continuing work with the Department of the Army at Fort Hood on the development of a Recovery Crediting System. A Recovery Credit System is a new conservation/section 7 tool proposed in Texas. The Army is enrolling private landowners for the temporary preservation and enhancement of habitat for the endangered golden-cheeked warbler, which will be banked as "credits." In the future, the Army will expend the banked credits for impacts to habitat on Fort Hood. This fiscal year, the first stage of consultation on the Fort Hood pilot project was completed. The Arlington Field Office also coordinated the development of national guidance on Recovery Crediting based on the pilot in Texas.

Finalized a Programmatic Candidate Conservation Agreement with Assurances for the lesser prairie-chicken (LPC) in Texas. The agreement allows Texas Parks and Wildlife Department to issue Certificates of Inclusion for private landowners who voluntarily implement conservation measures for the LPC. The agreement covers 50 counties and is effective for 20 years.

The Service's West Texas Sub-office continued to work with multiple states, local and Federal partners to implement the Arkansas River Shiner Management Plan for the Canadian River in Texas. The plan was initiated in 2005 in order to exclude critical habitat designation in Texas for the threatened fish. The Service provided technical assistance on specific actions in the plan and is currently working to expand the range of the plan for conservation purposes. The Sub-office also implemented several projects through the Partners for Fish and Wildlife Program to benefit the LPC in Texas. Over 26,000 acres were enrolled in FY 2007 for the conservation of the LPC.

The Service's East Texas Sub-office served on the East Texas Black Bear Task Force to implement the Conservation Plan developed for Texas. The Plan addresses the conservation and restoration of the bear within its historic range in Texas to the year 2015. The Sub-office also worked with federal, state and private red-cockaded woodpecker (RCW) translocation cooperatives to relocate RCW's on public and private lands. In FY 2007, excess juvenile male RCW's were exchanged between Cooks Branch Conservancy in Montgomery County and Brushy Creek in Trinity County. Additionally, several pairs were relocated to managed habitat and all single birds were augmented on the National Forests in East Texas.

## **Clear Lake Ecological Services Field Office**

With the aid of Texas A&M University, Stephen F. Austin State University, The Nature Conservancy of Texas, Texas Parks and Wildlife Department, Mercer Arboretum, and the Alabama-Coushatta Tribe, the National Park Service reintroduced about 800 plants of the Texas trailing phlox, a federally listed species, onto lands of the Big Thicket National Preserve in order to restore this important element to the longleaf pine savannah of east Texas.

## **Corpus Christi Ecological Services Field Office**

*Five-year reviews:* The Kemp's Ridley sea turtle 5-year review was completed in 2007 in time to meet a court-ordered deadline. National Oceanic and Atmospheric Administration (NOAA) Fisheries contracted the drafting of this review and the Service's Region 2 reviewed and commented on the draft and signed the final. No changes in status were recommended for this species.

*Kemp's Ridley Sea Turtles:* A staff biologist serves as the Service's liaison to the Kemp's Ridley Bi-National Sea Turtle Recovery Team and as such carried out all logistics for this team in 2007. As of the end of FY 2007, the team was finishing up the revision of the 1992 recovery plan. In addition to recovery planning efforts, a number of team members also served on the Bi-national Working Group for Kemp's that provided a conduit for organizing international recovery efforts including research, permitting, funding, and logistical support. Recovery efforts for this highly endangered sea turtle continued to progress in a positive direction, as evidenced by the increasing numbers of nests found each year (e.g., the number of nests found in 1985 was 702, and in 2007 was approximately 13,500). Partners in this bi-national recovery effort included NOAA Fisheries, Comisión Nacional de Áreas Naturales Protegidas, Secretaría de Medio Ambiente y Recursos Naturales, National Park Service, Procuraduría Federal de Protección al Ambiente, Texas Parks and Wildlife Department, Gobierno del Estado de Tamaulipas, Gladys Porter Zoo, and the National Fisheries Institute. Nesting by Kemp's ridentles on Texas beaches was also on the increase, with a record number of 128 nests located during the 2007 nesting season. In 2007, a separate Texas working group for Kemp's ridentles was established, with members that included Service representatives from Clear Lake and Corpus Christi Ecological Services Field Offices, refuges, Padre Island National Seashore, Sea Turtle Inc., and Texas Parks and Wildlife Department.

*Recovery Champion:* Biologist Tom Shearer, nominated Dr. Patrick Burchfield, Director of the Gladys Porter Zoo in Brownsville, Texas for a Service Recovery Champion award. Dr. Burchfield has made significant contributions to the recovery of the Kemp's ridentle sea turtle for more than 25 years. Dr. Burchfield received the award from Assistant Director Bryan Arroyo on April 20, 2007. Numerous contributors and cooperators in the recovery efforts for the Kemp's ridentle sponsored an award celebration, including Chase Bank, Long Chilton LLP, Marco Sales, Inc., Ocean Trust, Sea Turtle, Inc., Southern

Shrimp Alliance, Texas Parks and Wildlife, Texas Shrimp Association, The University of Texas at Brownsville, Texas Southmost College, Wild American Shrimp, Inc., and the Valley Zoological Society.

*Safe Harbor Agreements:* Two Safe Harbor Agreements (SHA) were approved and permits signed by the Service in 2007. On October 17, 2006, a SHA was approved and a section 10 permit was issued for Environmental Defense, Inc. to provide assurances to landowners in south Texas who voluntarily agree to enhance habitat for the endangered ocelot. The SHA will allow Environmental Defense to issue Certificates of Inclusion to landowners who are willing to perform habitat restoration activities for the endangered ocelot in all or portions of Cameron, Hidalgo, Kenedy, Starr, and Willacy Counties, Texas. Highest priority will be given to those landowners with land adjacent to or near public land parcels which include, but are not limited to, Laguna Atascosa National Wildlife Refuge and Lower Rio Grande Valley National Wildlife Refuge.

The Service finalized the Coastal Prairie Coalition's Grazing Lands Conservation Initiative Safe Harbor Agreement and issued a 99-year permit authorizing incidental take of Attwater's prairie chickens (APC), northern aplomado falcons, and whooping cranes which may occur during the course of normal ranching and conservation activity. The SHA also covers black lace cactus. The SHA covers coastal prairie in Aransas, Austin, Calhoun, Colorado, Galveston, Goliad, and Refugio counties along the mid- and lower Texas coast.

*Attwater's Prairie Chicken Repatriation:* Staff participated in a historic step forward for endangered APC recovery efforts. Twenty-two APC's were transported from captive breeding facilities to acclimation pens located on a private ranch in Goliad County for release into the wild. The APC was extirpated from Goliad County about 15 years ago. This was the first APC reintroduction into an area from which they have been extirpated, and the first APC release outside of the APC National Wildlife Refuge and Nature Conservancy's Preserve at Texas City. A number of partners (Papalote Cattle Company, the Coastal Prairies Coalition of the Grazing Lands Conservation Initiative, the Nature Conservancy, the Victoria Soil and Water Conservation District, Texas Parks and Wildlife Department, and the Natural Resources Conservation Service) played significant roles in achieving this goal. The birds will stay in acclimation pens at the release site for 10 days before being released into the wild. Following the release of these 22 birds, an estimated 28 additional birds will be released on the site later this year, with additional releases planned over the next 2 years. Each bird will be monitored electronically to determine survival.

*Whooping Cranes:* Corpus Christi staff biologists from the Coastal and Recovery Programs assisted TNC of Texas with

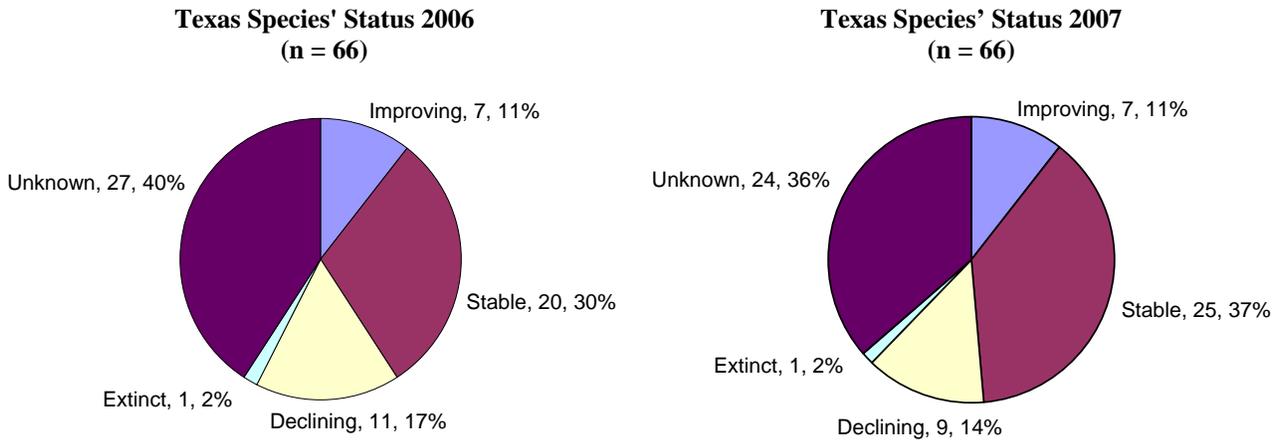


Attwater's Prairie Chicken  
Photo by Gary Montoya USFWS



Whooping Crane  
Photo by Steve Sykes, The Wild Pixel

grant proposals intended to raise funds that TNC could match and use to acquire conservation easements on important marsh acreage along the coast of the San Antonio Bay system. Whooping cranes already use wetland and adjacent upland habitats outside of the Aransas National Wildlife Refuge system and parts of these areas were included in the Critical Habitat designation for the species. However, real estate development pressures are rapidly increasing along these formerly isolated bay shores, and permanent protection of the crane's habitat is essential in the near term in order for the species to reach long-term recovery goals.



### New Mexico Ecological Services Field Office

In May 2007, we conducted an experimental project in the Gila River southwest of Silver City designed to reduce or eliminate gravel/cobble embedded within spikedace and loach minnow occupied habitat. While small in scale, the project provided a number of insights that have relevance for planning and implementing similar and potentially larger scale conservation efforts for these highly imperiled fish.

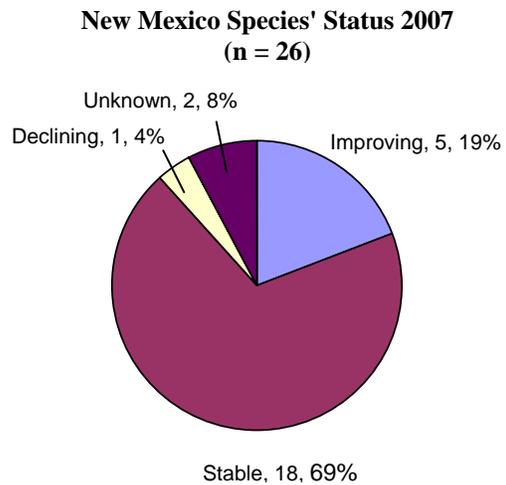
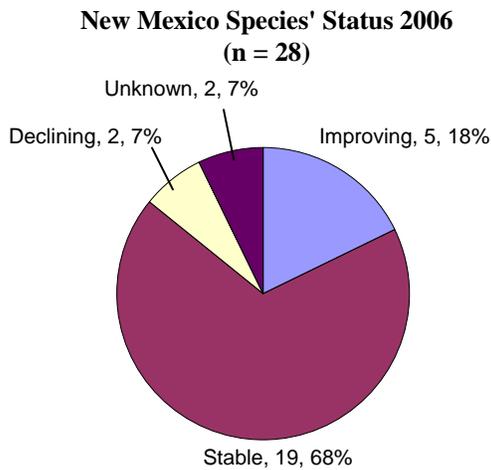
In October 2006, staff from the New Mexico Ecological Services Field Office, New Mexico Department of Forestry, the Heritage Program, and Forest Service conducted surveys that revealed Sacramento prickly poppy seedlings and adult plants in areas where previous surveys had shown large declines. The record monsoonal moisture pattern of 2006 precipitated a rebound by this plant from record low numbers in 2005.

Staff from the Regional Office and Field Office completed a 5-year review for Zuni fleabane in 2007, and published the draft revised recovery plan for the Rio Grande silvery minnow. We are working with New Mexico Department of Game and Fish to adapt and revise the State of New Mexico's recovery plan for the recently listed four invertebrates whose current range includes spring systems in southeastern New Mexico and west

Texas. A proposed rule to establish a non-essential experimental population of Rio Grande silvery minnow in the Big Bend reach of the river was published on September 5, 2007.



SCEP-Student, Maceo Martinet, collects global positioning and water quality data from the Rio Grande near Los Lunas, New Mexico, as part of the Rio Grande Silvery Minnow Health Study. Photo by Joel Lusk USFWS.



### Oklahoma Ecological Services

Five-year reviews for three species are nearing completion and we expect to finalize them in FY 2008, including the Ozark big-eared bat, the leopard darter; and the Ouachita rock pocketbook mussel.

Annual monitoring and survey efforts continued for the leopard darter, Ozark big-eared bat, and Arkansas River shiner. Staff attempted to complete monitoring efforts for the Ouachita rock pocketbook but high amounts of rainfall during the summer hampered meaningful outcomes. Surveys for other species (Neosho madtoms, gray bats, American burying beetles, and interior least terns) were also conducted in order to determine their status within Oklahoma's portion of their range.

Staff worked in cooperation with Northeastern State University to host a conference (May 16, 2007) on the American burying beetle (ABB). Species experts, State of Oklahoma biologists, and species experts from across the species' range attended and participated in this conference. While much new information on the status and life history of the species was presented during the technical sessions, the main outcome was the networking and collaboration between the various stakeholders involved in ABB recovery.

