by Charlie Scott

Currently, wood stork nesting colonies are found in South Carolina, Georgia and Florida. In the early 1930's, the species' population totaled 75,000 birds. By the early 1980's, however, the population had declined to 5,000 nesting pairs. The likely explanation for the decline was the reduction in the food base caused by the modification or loss of wetland habitats. In the 1990's, the stork's total population increased to 6,000 nesting pairs in 59 active colonies in Florida, Georgia, and South Carolina.

Photo by Barron Crawford

Endangered Species Recovery Program

he Endangered Species Act has as its primary purpose the conservation of endangered and threatened species and the ecosystems upon which they depend. It focuses on a single, ultimate goal: to recover listed species to a point where they have become secure, selfsustaining components of their ecosystems and no longer need protection by the Act. A cornerstone of the recovery process is understanding and removing the threats to listed species.

Restoring threatened and endangered species presents a tremendous challenge. At the time of listing, many species face multiple threats and have a very limited habitat base. Most listed species have their own unique sets of recovery problems and solutions. In some cases, no effective measures to arrest the causes for a species' decline may be available or even known. An example is the threat posed by the rapidly increasing number of nonnative, invasive species such as the zebra mussel.

Reversing long-term declines and conserving the habitat of listed species, while also accommodating society's goals, requires innovative solutions. Successful recovery often takes many years of research, restoration, protection, and active management. The growing number of recovery successes, such as the peregrine falcon, bald eagle, and Aleutian Canada goose, illustrate what is needed to achieve recovery of threatened and endangered species. For example, in 1999, the Fish and Wildlife Service delisted the American peregrine falcon after the 1972 Environmental Protection Agency ban on the pesticide DDT and more than 25 years of recovery actions and protection under

the Act. This recovery milestone was the result of a coordinated and dedicated effort by academia, falconry experts, the states, conservation organizations, the Service, and other federal agencies.

Implementing the Service's Endangered Species Recovery Program for more than 1,200 listed species involves staff in offices from all the key Service programs, including Ecological Services, Refuges, Fisheries, Law Enforcement, and Partners for Fish and Wildlife. In addition, the Service has many public and private partners in the recovery effort: other federal, state, and local agencies; tribes; conservation organizations; businesses; and private landowners.

The first step in the recovery process is the preparation of a plan that provides a comprehensive recovery strategy and a prioritized list of conservation measures needed to address threats. reverse declines, and achieve recovery. The Service's policy is to develop draft recovery plans within one-and-a-half years of the date of species listing, complete the development of final recovery plans within two and half years of listing, and seek multi-stakeholder participation on all draft recovery plans. Over the past 5 years, the Service has significantly increased the number of listed species covered by approved recovery plans, from 54 percent in 1995 to 79 percent in 1999. Recovery plans currently are under development for most of the remaining listed species.

Some recovery plans are developed by recovery teams, which are appointed by the appropriate Regional Director with lead authority for those species. Team members usually have expertise on the biology of the listed species, the threats to its survival, or other disciplines

needed to address recovery. The Service also emphasizes participation by landowners and other effected stakeholders on recovery teams. An essential part of the recovery planning process involves identifying these parties and developing partnerships so that creative ways of implementing recovery actions can be accomplished.

Listed species may share similar habitats and face similar threats, so addressing their recovery needs in a "multi-species" or "ecosystem" recovery plan is often more efficient and effective than implementing an individual plan for each species. As of December 31, 1999, there were 1,205 U.S. (Servicelisted) species, of which 924 were covered in 512 approved recovery plans, an indication of the trend toward more multi-species plans. For example, the Recovery Plan for the Upland Species of the San Joaquin Valley, California, addresses 34 species of plants and animals. The recently completed South Florida Multi-Species Recovery Plan applies an ecosystem approach to the recovery of 68 listed species in 23 ecological communities.

Where recovery planning identifies the strategy and actions necessary to recover species, recovery implementation "puts the plan to work" through a multitude of conservation activities. Restoring species to self-sustaining, functioning components of their ecosystems is normally a highly interactive, methodical, and expensive process. Flexibility in changing the course of recovery tasks based on new information or set-backs, also know as adaptive management, is essential to successful species recovery.

The highest priority recovery actions involve efforts to prevent the extinction of species. Another frequent first step in moving a threatened or endangered species towards recovery is gaining an understanding of the threats and the effects those threats have on population status. The ecological requirements for feeding, breeding, sheltering, and nurturing may not be fully understood

at the time a species is listed. Recovery implementation covers a myriad of other important actions, such as managing threats through habitat protection and restoration or augmenting a severely depleted population with captive breeding. All recovery activities require time for a threatened or endangered species to respond biologically

There is no "silver bullet" or "quick fix" to endangered species recovery.

The Service engages many different stakeholders in the recovery implementation process to conserve endangered and threatened species. We place special emphasis on establishing programs and opportunities for flexibility and assurances to private property owners to increase their participation in conserving and recovering listed species. In July 1999,

the Service completed its Safe Harbor policy. Safe Harbor agreements promote recovery through voluntary conservation actions by non-federal property owners for listed species; in turn, the Service provides assurances that no additional future regulatory restrictions will be imposed for their efforts. There are currently 44 Safe Harbor agreements covering more than 1.3 million acres. In 1999 and 2000, Congress funded the ESA Landowner Incentive Program, which allows the Service to increase technical and financial assistance for private property owners that implement voluntary conservation actions for listed, proposed, and candidate species.

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The Fish and Wildlife Service is working with The Peregrine Fund and the agricultural community in southeastern Texas to restore the endangered northern aplomado falcon to this part of its former range. Private land owners have entered into Safe Harbor agreements covering more than one million acres in this area.

Photo by Steve Bentsen