

Reintroduction of the Whooping Crane in Florida

Stephen Nesbitt

Florida Fish and Wildlife Conservation Commission
4005 South Main Street
Gainesville, Florida 32601

Martin J. Folk

Florida Fish and Wildlife Conservation Commission
1475 Regal Court
Kissimmee, Florida 34744

Whooping Cranes (*Grus americana*) occurred in Florida historically, and a few individuals persisted into the 1920s. Whether these cranes nested in the state is unknown, but there was a permanent, breeding population of Whooping Cranes in Louisiana, which became extirpated in the 1940s. The Florida Fish and Wildlife Conservation Commission (FWC) is the lead agency participating in a large-scale project to restore the Whooping Crane into former range in the southeastern United States. Other agencies involved in this cooperative effort are the U.S. Fish and Wildlife Service, U.S. Geological Survey, Canadian Wildlife Service, International Crane Foundation, Calgary Zoo, and San Antonio Zoo.

The project began in December 1980. Our first objective was to determine if a population of non-migratory Whooping Cranes, similar to the former Louisiana population, could be developed from genetically migratory stock. (All remaining Whooping Cranes were migratory). Migratory and non-migratory subspecies of Sandhill Cranes were used in place of Whooping Cranes to answer the question of whether migration in cranes is an acquired (learned) or innate (genetically encoded) characteristic. Our initial studies proved that non-migratory cranes could be produced from migratory stock. Also, work on Sandhill Cranes in Florida and elsewhere identified the most appropriate technique to reintroduce cranes in former range. In 1988 the FWC presented the results of our study to the Whooping Crane Recovery Team. In addition to Florida, the team was considering proposals for a population in the Okefenokee Swamp in Georgia, and in Michigan. In 1990, Florida's Kissimmee Prairie was selected by the U.S. Fish and Wildlife Service as the most promising place to attempt the inaugural reintroduction of Whooping Cranes into eastern North America.

The first release of 14 Whooping Cranes occurred in February 1993. Between 19 and 48 cranes have been released annually, with a total to date of 208 individuals. There are currently just over 80 Whooping Cranes alive in Florida. The technique we are using to release the birds is called soft- or gentle-release. This involves a protracted period of acclimation in specially constructed release pens. This is followed by a gradual transition to life on their own. The majority of the birds we have released were 8 to 10 months old. They have been hatched and reared from eggs laid in captivity.

Results from other cranes reintroduction projects led us to expect that initial mortality would be high (perhaps 40 to 60%), and that predation would be the major source of mortality. During the first two release years, annual mortality averaged 66%, mostly due to predation

by Bobcats (*Felis rufus*). In the third year, we began using smaller, temporary release pens that allowed us to release cranes into the best available habitat. A major component of this new approach was the cooperation of the private landowners. Since 1995 we have released Whooping Cranes on five privately-owned ranches, and annual mortality has dropped to 44%. Without the cooperation of these landowners, this improved survival rate would not have been possible.

Last year (1999) marked the first that reintroduced Whooping Cranes laid eggs in Florida, but one clutch was flooded out and the other was depredated. In spring 2000 another milestone occurred, despite severe drought conditions. A pair of Whooping Cranes produced the first chicks in the wild in the United States in 60 years! The eggs hatched on 16 and 18 March. Within two weeks one chick was lost to unknown causes. A Bobcat killed the surviving chick shortly before fledging. By that time, the marshes used by the cranes had literally dried up under their feet. The chick was not yet flight-capable so it suffered the fate of many Florida Sandhill Crane chicks during drought years. We were well aware that with the drought the odds were not in favor of the chicks' long-term survival.

In spite of this loss the season was a resounding success. A pair of Whooping Cranes raised in captivity and released into the wild nested successfully and produced chicks. Sixteen other pairs of cranes were identified this year in Florida and two of these also produced eggs. We were impressed by the successful pair's nest attendance and that they hatched both eggs. The male and female were each less than 5 years of age. The parents seemed to have no problem finding sufficient food for the chicks. For several weeks post-hatching the parents fed the chicks many small prey items, including crayfish, small frogs, and aquatic insects. As the surviving chick grew, the size of prey items that the parents offered it grew. Snakes and aquatic salamanders became important in the chick's diet.

During this year's breeding season it was fascinating to watch the changes in behavior in the parents of the first successful nesting. After years of watching Whooping Cranes in Florida, we saw "new" behaviors that were brought out by their parental urges. While raising the chick the adult cranes displayed a level of awareness that we had not seen previously. Likewise, this project moved to a level where we now know that reintroduced Whooping Cranes can reproduce successfully. In the not-too-distant future, it seems likely that we can have a self-sustaining population of Whooping Cranes in Florida

—Received 17 July 2000; Accepted 2 August 2000

