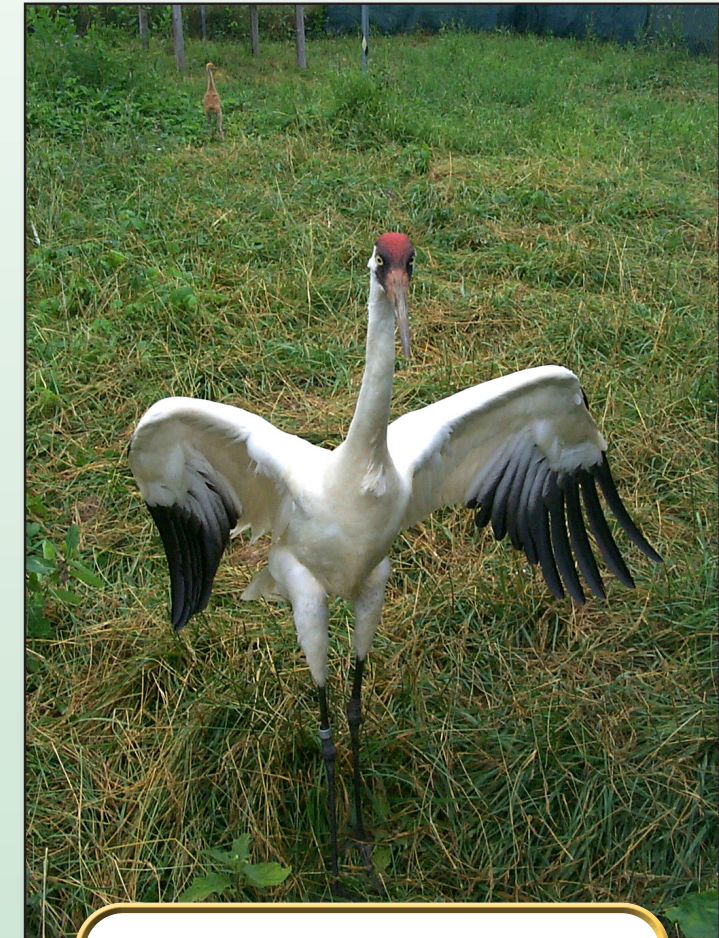


# The Whooping Crane: Return from the Brink of Extinction

At more than five feet tall with brilliant white plumage, black primary feathers, a red cap, and yellow eyes, the highly endangered Whooping crane (*Grus americana*) is one of the most spectacular birds native to North America.

In 1942 there were only 16 birds in the flock that migrates from Wood Buffalo National Park in Canada to Aransas National Wildlife Refuge in Texas. An additional six cranes were alive in Louisiana, bringing the total global population to only 22 individuals. The non-migratory Louisiana flock died out a few years later, hence all whooping cranes now alive derive from a core flock of only 16 birds.

Whooping cranes were likely uncommon even before hunting and habitat loss reduced them to dangerously low numbers. The vanishingly small population of 16 in 1942 represents an extreme genetic and demographic bottleneck that few species survive.



### Wild Whooping Cranes Estimates - October 2010

Wood Buffalo - Aransas Population	263
Eastern Migratory flock	119
Non - Migratory Florida Population	25
<b>Total in the wild</b>	<b>407</b>

### Patuxent Crane Flock 2012 At-A-Glance

- 68 Adult whooping cranes
- 46 cranes are paired
- 13 crane chicks trained behind ultralight aircraft for release to the Eastern Migratory flock
- 11 crane chicks designated for creating a new non-migratory Louisiana Population
- 2 chicks retained at Patuxent to enhance genetic diversity



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# Patuxent's Role in Whooping Crane Recovery

## 1966 . . . Over 45 Years of Research for Restoration . . . 2012



Fifteen breeding pairs produce 40+ eggs each year.



Technicians wear costumes to prevent human imprinting while teaching chicks to eat, drink, and forage.

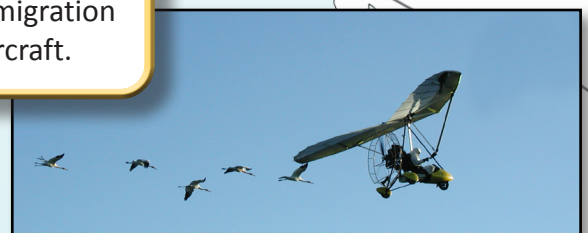
Chicks are trained at Patuxent to follow ultralight aircraft on the ground, and then transported to Wisconsin for their first migration following an ultralight aircraft.



### Studies of Behavior

Patuxent research scientists have studied crane migration for more than 20 years.

Research has improved costume rearing techniques, crane nutrition, and crane exercise regimes.



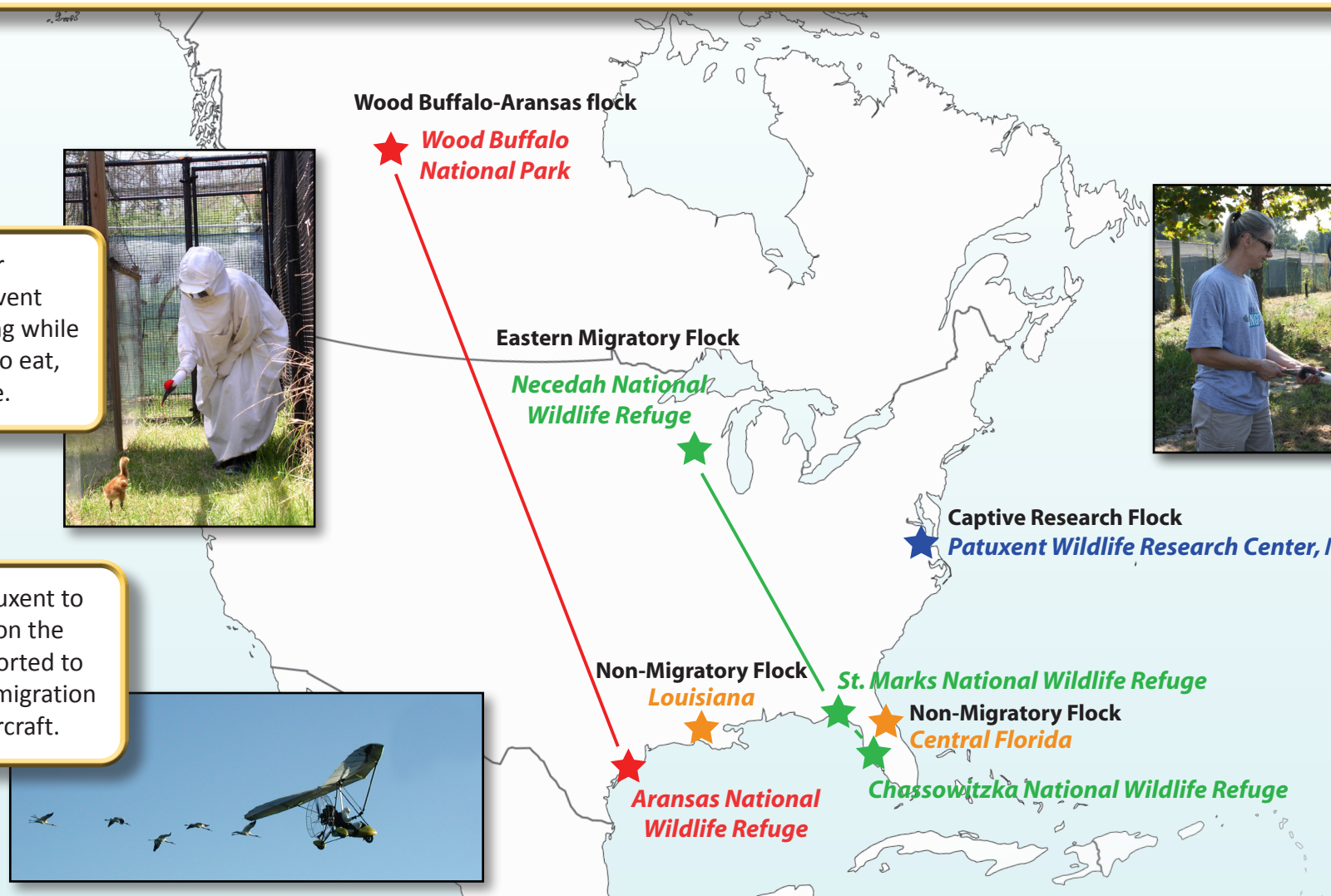
**International Recovery Efforts:** The Whooping Crane was listed as endangered in 1967. Today, a joint U.S./Canada Recovery Team oversees the efforts to protect habitats and increase Whooping Crane numbers.

Recovery goals include conserving the Wood Buffalo-Aransas flock and establishing two reintroduced flocks of Whooping Cranes. A captive propagation program was started at Patuxent Wildlife Research Center in 1966 with the arrival of 'Canus', a young male crane captured with a broken wing from Wood Buffalo National Park in Canada. Captive flocks provide a repository of Whooping Crane genetic diversity, facilitate research, and produce chicks for restoration of birds to the wild. Patuxent has led the way in research on crane husbandry techniques, breeding biology, training chicks for reintroduction, and assessment of population viability.

**Reintroductions:** Patuxent is a founding member of the Whooping Crane Eastern Partnership (WCEP), a consortium of state and Federal agencies and private conservation groups that has reintroduced a Whooping Crane population to Eastern N. America.

In 2001, this new migratory population was established by taking young, pre-fledging birds hatched at Patuxent and transporting them to the Necedah National Wildlife Refuge in Wisconsin where they fledge and train for migration. After birds learn to fly behind an aircraft, that aircraft leads them on their first migration south to Florida in the fall. WCEP was the recipient of the DOI Secretary's Four C's Award in 2003 ("Consultation, Cooperation, Communication in the service of Conservation").

The latest reintroduction project has created a non-migratory flock of Whooping Cranes in the extensive wetlands of Southwestern Louisiana, part of their original range. Two groups of chicks from Patuxent were sent in 2011 (February and November). There are now 18 cranes in the Louisiana marshes and more will be released in 2012.



Patuxent Scientists are developing vaccines against diseases of Whooping Cranes including West Nile Virus, disseminated visceral coccidiosis, and eastern encephalitis virus.



### Research to Prevent Disease



### Population Ecology Research

Patuxent scientists are developing a model of the Eastern Migratory Population to evaluate the impact of management actions and progress toward recovery goals.

**Crane Reproduction at Patuxent**

- Both natural breeding and artificial insemination.
- Each year 10-15 Whooping Crane pairs produce eggs.
- A pair of cranes can replace up to seven eggs as we remove them; natural clutch size is two eggs.
- Removed eggs develop under surrogate Sandhill Cranes, and in laboratory incubators.
- About 40 eggs are produced each year of which 90% are fertile and about 78% survive to fledging.