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Abstract: The Mississippi sandhill crane (MSC, *Grus canadensis pulla*), 1 of 6 subspecies of sandhill cranes, is classified as critically endangered and was placed on the United States' List of Endangered Fish and Wildlife in 1973. For 13 years starting in 1996, the Audubon Center for Research of Endangered Species (ACRES) and Freeport-McMoran Species Survival Center (SSC) in New Orleans have been contributing to the MSC Recovery Program. Through successful captive propagation of MSCs by use of natural breeding and artificial insemination, more than 150 chicks raised at SSC have been released into the wild population at the MSC National Wildlife Refuge.

Starting in March of 2006 and continuing through 2008, ACRES established a long-term project to collect and cryopreserve semen from sandhill cranes in the captive flock housed at SSC. A total of 268 semen samples from 11 MSC males were collected and cryopreserved. Using semen from Florida sandhill cranes (*G. c. pratensis*) as a model, we have attempted to determine improved methods to freeze and thaw crane spermatozoa. In 2007 and 2008, we inseminated 2 females with frozen-thawed MSC semen and produced 4 fertile eggs, of which 2 hatched. Two chicks survived to fledge, 1 each from 2007 and 2008. The fledged chick produced from frozen-thawed MSC sperm in 2007 was released into the wild at the MSC National Wildlife Refuge in January 2008 and continues to thrive.

Key words: captive breeding, cryopreservation, *Grus canadensis pulla*, Mississippi sandhill crane, semen.