



# Mississippi Sandhill Crane Predator Aversion Training

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Freeport-McMoRan Audubon  
Species Survival Center  
*A Facility of Audubon Nature Institute*



Mississippi  
Sandhill  
Crane

National Wildlife Refuge



ALLIANCE FOR SUSTAINABLE  
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# Mississippi Sandhill Crane: Jan 2018 Wild Population

*Grus canadensis pulla*

**ENDANGERED**

Thanks to our partners in conservation



<b>Sex</b>	
Male:	55
Female:	63
Unk:	15

<b>133</b>
101 banded
32 unbanded

<b>Source (hatch)</b>	
Wild:	44
ASSC:	66
WOCC:	20
PWRC:	3



<b>Age</b>	
# breeding pairs:	34
# behavioral pairs:	8
# unpaired:	57
<=3 yrs:	22
Unk (nonbreeding)	13
(Oldest marked crane: 29 years)	

<b>Area</b>	
Gautier:	72
Ocean Springs:	45
Fontainebleau:	16

Source: Scott Hereford  
MS Sandhill Crane NWR

Thanks; Angela Dedrickson, James Stockdale, Valerie Schneider, Jeannie van Vianen, Matt Conrad

photo: USFWS/Scott Hereford

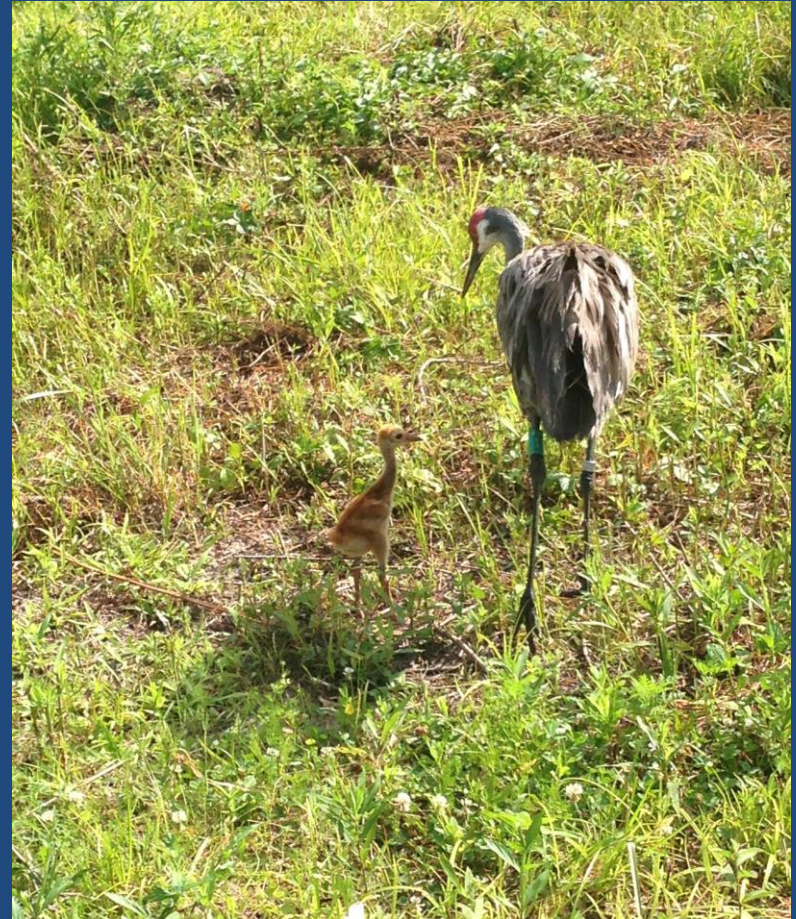


## Costume Reared



- Almost ½ of current refuge population is made up of costume reared birds
- Only 60% of all MSCs survive their first year

## Parent / Foster Reared



# NESTING ACTIVITY BUDGETS AND ANTIPREDATOR BEHAVIORS OF MISSISSIPPISANDHILL CRANES

- Dr. Jerry Howard- University of New Orleans
- Does parental behavior influence nest outcomes?
  - infrared motion-activated cameras to capture behavioral sequences from 33 nests over a two-year period.
- **THE RESULTS**
  - The most successful reproducing pairs on MSCNWR contained 1 wild hatched bird and 1 parent/foster reared bird.
  - These pairs are effectively defending their nests where pairs containing costume reared birds are ineffectively defending or showing no defense at all.
  - Altered social environment and learning opportunities = variety of behavioral problems.
  - “Training in anti-predator behavior during captive rearing may increase behavioral competence and reduce losses to nest predators.” (Howard et al. -1)





**Three identities:**

1. Mama Crane
2. Ghillie Suits
3. Humans - Vet Care







Bushnell  Camera Name 39°F3°C  12-16-2014 08:28:06

## Defense Postures



## Human predator aversion





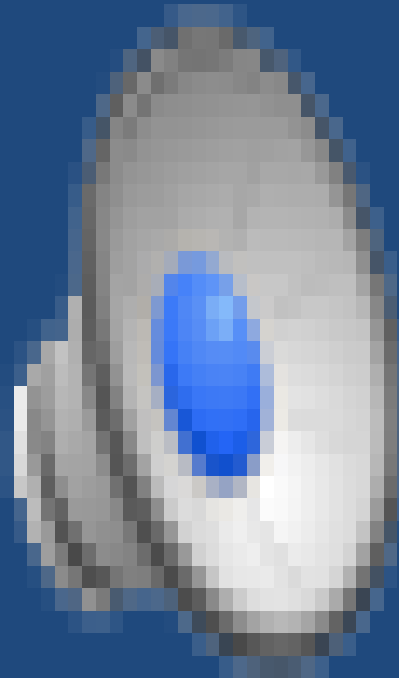
## Animal predator aversion

**Raccoons!**



- Training occurs 3 times while in captivity







# Where do we go from here?

- 100% of chicks trained and released since 2014 survived their 1<sup>st</sup> year... waiting to see how they do once breeding begins.
- Continue planning how to make the predator interaction more realistic.
- Work with different predators- bobcats, coyotes, snakes, crows, and owls.
- Transition into more foster/parent rearing with pairs that have shown good defense behaviors and have strong pair bonds.
- Apply it to other crane species!



# References

Howard, Jerome et al. NESTING ACTIVITY BUDGETS AND ANTIPREDATOR BEHAVIORS OF MISSISSIPPI SANDHILL CRANES. 2016.

Hereford, Scott et al. MISSISSIPPI SANDHILL CRANE RECOVERY REPORT. 2017

