

University of Nebraska - Lincoln
DigitalCommons@University of Nebraska - Lincoln

North American Crane Workshop Proceedings

North American Crane Working Group

2008

Mate Fidelity in a Dense Breeding Population of Sandhill Cranes

Matthew A. Hayes

International Crane Foundation


Jeb A. Barzen

International Crane Foundation

Hugh B. Britten

University of South Dakota

Follow this and additional works at: <http://digitalcommons.unl.edu/nacwgproc>

 Part of the [Behavior and Ethology Commons](#), [Biodiversity Commons](#), [Ornithology Commons](#), [Population Biology Commons](#), and the [Terrestrial and Aquatic Ecology Commons](#)

Hayes, Matthew A.; Barzen, Jeb A.; and Britten, Hugh B., "Mate Fidelity in a Dense Breeding Population of Sandhill Cranes" (2008).
North American Crane Workshop Proceedings. 171.
<http://digitalcommons.unl.edu/nacwgproc/171>

This Article is brought to you for free and open access by the North American Crane Working Group at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in North American Crane Workshop Proceedings by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

MATE FIDELITY IN A DENSE BREEDING POPULATION OF SANDHILL CRANES

MATTHEW A. HAYES, International Crane Foundation, E-11376 Shady Lane Road, Baraboo, WI 53913-0447, USA

JEB A. BARZEN, International Crane Foundation, E-11376 Shady Lane Road, Baraboo, WI 53913-0447, USA

HUGH B. BRITTEN, University of South Dakota, 414 E. Clark Street, Vermillion, SD 57069, USA

Abstract: The objective of this study was to investigate mate switches observed in a dense breeding population of banded Sandhill Cranes (*Grus canadensis*). Over a 14-year period, 50 of 70 breeding pairs switched mates (71%), with 45 pairs switching permanently (64%). Mean mate retention between years was 83%, with an average pair bond lasting 5.7 years (range 1-13 years). Most permanent switches occurred following the death or disappearance of a mate, and overall permanent divorce (19%; 13 of 70 pairs) and annual divorce rates (6%) were low. Territory retention following mate switches was high. Males and females did not differ in their ability to retain their original territory. Retaining their original territory after a mate switch, however, did not increase reproductive fitness for either sex. Previous reproductive success was not a significant cause of divorce, nor did an individual crane's reproductive success significantly increase following divorce. Five of the 13 divorced pairs (38%) fledged at least one chick to fall migration prior to divorcing. Also, 10 of 57 pairs that did not divorce went 5-8 years without fledging chicks without observation of divorce. There was evidence to suggest that sandhill cranes may choose to divorce in response to an opening on a nearby territory. Having a breeding territory may take precedence over reproductive success experienced by a pair. If a nearby territory becomes available, a breeding adult sandhill crane in this population may have to choose between staying with a current mate (possibly weighing reproductive history) and changing mates and perhaps territories to increase reproductive success.

PROCEEDINGS OF THE NORTH AMERICAN CRANE WORKSHOP 10:168

Key words: divorce, *Grus canadensis*, mate fidelity, mortality, reproductive success, sandhill crane.
