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2008

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Matthew A. Hayes

International Crane Foundation


Hugh B. Britten

University of South Dakota

Jeb A. Barzen

International Crane Foundation

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Hayes, Matthew A.; Britten, Hugh B.; and Barzen, Jeb A., "Extra-pair Paternity in Sandhill Cranes" (2008). *North American Crane Workshop Proceedings*. 170.

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EXTRA-PAIR PATERNITY IN SANDHILL CRANES

MATTHEW A. HAYES, 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

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

Abstract: Although cranes are known for “life-long” pair bonds, exceptions to this rule have been observed (i.e. divorcing pairs and individuals re-pairing following the death of a mate). With advancements in genetic techniques, another form of infidelity has been observed: extra-pair paternity (EPP; producing young with a bird while being socially paired to another mate) has been documented in many avian species. Is this true for cranes as well? Sandhill cranes (*Grus canadensis*) from a dense breeding population in south-central Wisconsin were tested for EPP using 6 microsatellite DNA markers. The frequency of EPP ranged between 4.4% (2 of 45 chicks) and 11% (5 of 45 chicks). The 2 confirmed extra-pair chicks were from different broods of one pair that has been socially bonded for a minimum 12-year period. The social male was rejected as the genetic father in both cases. The 3 other cases of EPP (twice the social male was rejected as the genetic parent, once the social female was rejected) may be authentic infidelity or mate replacement prior to sampling. The range of EPP for this population of sandhill cranes is similar to other species with similar mating systems. For the confirmed cases of EPP, the female was able to increase her individual reproductive success without losing her territory.

PROCEEDINGS OF THE NORTH AMERICAN CRANE WORKSHOP 10:167

Key words: extra-pair fertilization, *Grus canadensis*, microsatellites, monogamy, sandhill crane.
