

1992

SATELLITE TELEMETRY REVEALS WINTER HOME OF EURASIAN CRANE FROM NORTHWESTERN SIBERIA

David H. Ellis
U.S. Fish and Wildlife Service

Yuri M. Markin
Central Ornithological Station, Oka State Reserve


Charles H. Vermillion
NASA Goddard Space Flight Center

Charles M. Hoisington
Science Systems and Applications, Inc.

Alexander G. Sorokin
All-Union Research Institute of Nature Conservation and Reserves, Ministry of Agriculture

See next page for additional authors

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](#)

Ellis, David H.; Markin, Yuri M.; Vermillion, Charles H.; Hoisington, Charles M.; Sorokin, Alexander G.; and Pendleton, Grey W., "SATELLITE TELEMETRY REVEALS WINTER HOME OF EURASIAN CRANE FROM NORTHWESTERN SIBERIA" (1992). *North American Crane Workshop Proceedings*. 257.
<http://digitalcommons.unl.edu/nacwgproc/257>

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.

Authors

David H. Ellis, Yuri M. Markin, Charles H. Vermillion, Charles M. Hoisington, Alexander G. Sorokin, and Grey W. Pendleton

SATELLITE TELEMETRY REVEALS WINTER HOME OF EURASIAN CRANE FROM NORTHWESTERN SIBERIA

DAVID H. ELLIS, U.S. Fish and Wildlife Service, Patuxent Wildlife Research Center, Laurel, MD 20708

YURI M. MARKIN, Central Ornithological Station, Oka State Reserve, 391072 Po Lakash, Spassk Region, Ryazan District, Russia

CHARLES H. VERMILLION, NASA Goddard Space Flight Center, Earth Science Directorate, Greenbelt, MD 20771

CHARLES M. HOISINGTON, Science Systems and Applications, Inc., 5900 Princess Garden Parkway, Suite 300, Lanham, MD 20706

ALEXANDER G. SOROKIN, All-Union Research Institute of Nature Conservation and Reserves, Ministry of Agriculture, Znamenskoye-Sadki, 142790, P. O. Vilar, Moscow, Russia

GREY W. PENDLETON, U.S. Fish and Wildlife Service, Patuxent Wildlife Research Center, Laurel, MD 20708

Satellite telemetry is a developing technology for the study of crane migration. A greater sandhill crane (*Grus canadensis tabida*) was tracked by satellite from Florida to Michigan in March 1989 (Nagendran 1992). This note reports the second attempt to use satellite telemetry to follow crane migration. In 1989–90, tests of various harness and backpack designs for satellite telemetry transmitters (PTT's) with free-flying and confined sandhill cranes led to a 4-strap design (see Olsen et al. 1992) that was accepted for field testing. Through a cooperative effort between the Patuxent Wildlife Research Center (USFWS), International Crane Foundation, Soviet Nature Conservation and Reserves (USSR), Oka State Reserve (Russia), and the National Aeronautics and Space Administration (USA), 3 battery-powered PTT's (weight 161–163 g plus 15 g for harness) manufactured by Telonics (mention does not constitute U.S. Government endorsement) were placed on 1 adult female and 2 adult male Eurasian cranes (*G. grus*) in the Kunovat Basin in northwestern Siberia in June 1990. The 2 males were captured by using alpha-chloralose-laced sandpiper (*Tringa* sp.) eggs; the female, then in full wing molt, was captured on foot after helicopter pursuit (see Ellis and Markin 1991 for capture details).

Data from System Argos revealed that all 3 birds remained on their territories through the summer. In mid- to late-August, all 3 moved west or southwest to the marshes immediately adjacent to the Ob River. They remained there about 1 month, then proceeded south parallel to the Ob. One of the 2 males was still mobile when his transmitter went off the air in the Tyumen region 1,038 km from his summer home. The second male traveled 778 km, but after 20 September his PTT remained stationary (backpack removed or crane dead) until 25 December when the last signal was received.

During the last half of October, the female continued south-southwest through Kazakhstan, Uzbekistan, and Turkmenistan. Between 11 and 14 November, she arrived at her wintering area along the Hari River on the Afghan-Iranian border, 3,370 km from her summer home. She and her PTT remained active until the last reception on 23 February 1991.

Because the PTT's were programmed to transmit intermittently (to extend battery life), rates of travel are normally known only over periods of days or weeks. However, 1 male, monitored in flight over a 5-hour period, traveled 164 km (33 km/hr). The other male traveled 748 km over a 4-day period. Over a very long stage (1,900 km in 16 days) across Central Asia, the female averaged 116 km/day.

LITERATURE CITED

ELLIS, D. H., and Y. MARKIN. 1991. Satellite monitors cranes migrating from Siberia. ICF Bugle 17(1):1,4-5.

NAGENDRAN, M. 1992. Satellite tracking of a greater sandhill crane. Proc. North Am. Crane Workshop 6:173.

OLSEN, G. H., D. H. ELLIS, S. E. LANDFRIED, L. J. MILLER, S. S. KLUGMAN, M. R. FULLER, and C. H. VERMILLION. 1992. Behavior of sandhill cranes harnessed with different satellite transmitters. Proc. North Am. Crane Workshop 6:50-56.

Key Words: Eurasian crane, *Grus grus*, migration, satellite, Siberia, telemetry