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# SATELLITE TRACKING OF A GREATER SANDHILL CRANE

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## SATELLITE TRACKING OF A GREATER SANDHILL CRANE

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*Abstract:* The first satellite transmitter (PTT) to be used on a wild crane was deployed on an isolation-reared greater sandhill crane (*Grus canadensis tabida*) colt in south Texas on 6 November 1988. The 160-g transmitter required more than 8 hours of direct sunlight for the solar cells to recharge the NiCad battery power supply. Signal repetition rate was once every 60 seconds. National Oceanic and Atmospheric Agency satellites in polar orbits, equipped with Argos instruments, received PTT signals via a doppler shift mechanism. Information included location of PTT (bird), long-term activity, short-term activity, and ambient temperature. The crane colt died on 10 December 1988. The PTT was subsequently deployed on a second year subadult male greater sandhill crane at Paynes Prairie, Florida, on 5 March 1989. This crane was also equipped with a 20-g standard radio transmitter. The crane migrated approximately 1,642 km before PTT transmission failure occurred. The last location was transmitted from near Reed City, Michigan, on 4 April 1989. The last signal was on 7 April, but location had not changed since 4 April. Overcast conditions could have prevented the PTT from recharging, the antenna could have broken and thus cut off transmission, or the bird could have died. Subsequently, we also failed to locate the bird by standard radio telemetry. This study helped identify shortcomings in the design of the PTT; however, based on the encouraging results, PTT's were deployed on common cranes (*G. grus*) in Siberia in 1990 and may be deployed on Siberian cranes (*G. leucogeranus*), whose migration routes are as yet unknown.

*Key Words:* *Grus canadensis*, migration, PTT, sandhill crane, satellite telemetry

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