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IS MAGNITUDE OF FAT STORAGE BY SPRING-STAGING SANDHILL CRANES DECLINING IN THE CENTRAL PLATTE RIVER VALLEY, NEBRASKA?

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Abstract: Proximate analyses of carcasses of sandhill cranes (*Grus canadensis*) collected in the Central Platte River Valley (CPRV), Nebraska, during spring 1999 indicated a marked decline in fat levels from springs 1978 and 1979. Concern that amounts of fat cranes stored by their spring departures from the CPRV may have further declined prompted this evaluation. For our assessment, we made use of morphological measurements (culmen post nares, tarsus, flattened wing chord) along with body mass on each of 810 sandhill cranes that were collected for proximate analysis or captured with rocket nets at widely distributed sites in the CPRV during 1978-1979 and 1998-2005. For these birds, we conducted a principal components analysis to develop a body size variable when testing the relationship between mass and date. We next evaluated whether masses at arrival and departure and rates of mass gain in sandhill cranes differed from previous (1978 and 1979) and current (1998-2005) studies and addressed the implications of our findings.

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Key words: fat storage, *Grus canadensis*, Nebraska, Platte River, sandhill crane.
