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OBSERVATION OF DYSTOCIA IN WILD ELK

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ABSTRACT.—On the basis of reports in the literature, incidence of dystocia in wild elk (*Cervus elaphus*) across the west is rare. In 2011, one of 34 (3%) pregnant cow elk in our study experienced dystocia during birth. Our visual observations indicated that it took approximately 4 days for a radio-collared cow elk to succumb to dystocia in our study. Little is known about dystocia in wild elk populations, and our observation provides some insight about fetal malpresentations.

RESUMEN.—Con base en los reportes en la literatura, en el occidente no es muy frecuente la incidencia de distocia en el ciervo rojo (*Cervus elaphus*). En 2011, 1 de cada 34 (3%) hembras preñadas en nuestro estudio experimentó distocia al momento de parir. Nuestras observaciones visuales indican que durante nuestro estudio pasaron aproximadamente 4 días para que una hembra preñada con un collar de telemetría sucumbiera a la distocia. Se conoce muy poco sobre la distocia en las poblaciones de ciervos rojos, y nuestra observación proporciona información sobre la mala presentación fetal.

We report on an observation of dystocia in a wild elk (*Cervus elaphus*) which was radio-marked in the Black Hills, South Dakota. Dystocia is defined as a difficult parturition (Sloss and Dufty 1980). Dystocia may cause death in both the mother and offspring, and mortalities from dystocia have been documented for wild caribou (*Rangifer tarandus;* Bergerud 1971), pronghorn (*Antilocapra americana;* Jacques et al. 2007), elk (Larkin et al. 2003), moose (*Alces alces;* Testa 2004), and musk oxen (*Ovibos moschatus;* Norment 1980). On 27 May 2011, we tracked a radio-marked cow elk after the vaginal implant transmitter had been activated following parturition. We visually observed the lone cow elk bedded on her side exhibiting calving behavior typical of second-stage labor—ears held back and mouth open during contractions (Hudson et al. 2002). We watched the female experience many contractions over a 45-min period, but neither the amniotic sac, nor the calf appeared, and we quietly left the site. We observed the radio-marked cow elk again on 28 May 2011 and noted that her vaginal opening was distended and swollen and that she appeared lethargic. We collected daily location coordinates of the cow elk and she was visually confirmed to be alive on 30 May. However, on 31 May, the cow elk was found dead on her side with all 4 legs extended approximately 800 m from the visual location obtained on 28 May. A field necropsy showed a fully developed female calf lodged in the birth canal. The fetus appeared recently dead with no sign of decomposition. Also, the cow elk exhibited little rigamortis of the leg muscles and most likely died in the early morning hours. Postmortem examination revealed the calf had an abnormal presentation and was posterior with the hind legs leading into the birth canal. The calf's hind legs were crossed, and the left tibia and metatarsus were bent around the right leg and stuck in the cervix. The bent-leg position of the left hind leg appeared to prevent passage through the pelvic girdle. Severe dystocia in cows occurs with the posterior presentation if the hind legs are flexed beneath the fetal body (Arthur 1975). The cow was lactating, and the rumen was approximately half full. The cow's estimated age was 6 years based on cementum annuli from an upper canine tooth (Hamlin et al. 2000). It took approximately 4 days for the radio-collared cow elk to succumb to dystocia. We report that 1 of 34 (3%) pregnant cow elk experienced dystocia during birth for one year of data collection in 2011. Dystocia was reported in wild elk once previously (Larkin et

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al. 2003). The authors noted its occurrence but did not provide specific details. Dystocia can occur at a high rate in farmed elk (Freidel and Hudson 1994, Pople et al. 2001) and can be an important cause of mortality and economic loss for producers (Pople et al. 2001). A comprehensive survey of North American elk farm producers indicated dystocia occurred in 5.9% of births (Woodbury et al. 2006). Little is known about dystocia in wild elk populations, and most likely fetal malpresentations do not occur often. Research with objectives specific to elk reproduction would provide additional insight into dystocia in wild elk.

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