

**Supporting Information.** Aikens, E.O., S.P.H. Dwinell, T.N. LaSharr, R.P. Jakopak, G.L. Fralick, J. Randall, R. Kaiser, M. Thonhoff, M.J. Kauffman, and K.L. Monteith. 2021. Migration distance and maternal resource allocation determine timing of birth in a large herbivore. *Ecology*.

## **Appendix S2 – Quantifying fetal development using ultrasonography**

During March captures, we shaved the left caudal abdomen behind the last rib and applied lubricant to facilitate transabdominal scanning with a curvilinear, 3-MHz transducer (Monteith et al. 2014). To measure fetal development, we measured orbital diameter of the fetus, which has become a valuable tool in veterinary obstetrics (Karadaev et al. 2018). We worked to manipulate the scanning angle of the fetus to establish a lateral, cross-section of the head of the fetus and obtain a clear visual representation of the eye orbit (Lee et al. 2005), which we then measured using a digital caliper. When more than one fetus was present, we confirmed that the fetuses were of similar size and if not, we measured orbital diameter from each fetus and used the average in subsequent analyses.

## **Literature Cited**

- Karadaev, M., I. Fasulkov, S. Yotov, S. Atanasova, and N. Vasilev. 2018. Determination of the gestational age through ultrasound measurements of some uterine and foetal parameters in Bulgarian local goats. *Reproduction in domestic animals* **53**:1456-1465.
- Lee, Y., O. Lee, J. Cho, H. Shin, Y. Choi, Y. Shim, W. Choi, H. Shin, D. Lee, G. Lee, and S. Shin. 2005. Ultrasonic Measurement of Fetal Parameters for Estimation of Gestational Age in Korean Black Goats. *Journal of Veterinary Medical Science* **67**:497-502.
- Monteith, K. L., V. C. Bleich, T. R. Stephenson, B. M. Pierce, M. M. Conner, J. G. Kie, and R. T. Bowyer. 2014. Life-history characteristics of mule deer: Effects of nutrition in a variable environment. *Wildlife Monographs* **186**:1-62.