

SUPPORTING INFORMATION. Huggler, K., J. D. Holbrook, M. M. Hayes, P. W. Burke, M. Zornes, D. J. Thompson, J. G. Clapp, P. Liongerger, M. Valdez, and K. L. Monteith. 2022. Risky business: How an herbivore balances spatiotemporal aspects of risk from competitors and predators. *Ecological Applications*.

APPENDIX S2

Kill site data

Methods

We identified kill site locations of radiocollared mountain lions from GPS data during December 2017 to September 2019 on a bi-weekly basis (data collected during 1 May to 1 September were used in this paper). We first identified clusters of GPS locations following methods from (Clapp, Holbrook, and Thompson 2021). A group of locations was considered a cluster if a minimum of two locations (collected at 3-hr intervals) were within 200 meters of each other within the same 6 day window (Clapp, Holbrook, and Thompson 2021). Once clusters of GPS locations were identified, we used a multi-model approach to identify presumed feeding events on small to large prey species (e.g., porcupine to elk) (KNOPFF et al. 2010; Clark, Davidson, and Johnson 2014; Wilckens et al. 2015). We visited any cluster that was identified as a feeding event by any of the four models.

We visited cluster locations on average within 14 days of a cluster being identified as a kill site. At each kill site, we visited the centroid of the cluster and circled the concentration of GPS locations composing the cluster until a carcass or remains were located. If no remains were located at the cluster, we expanded our search radius to circle other nearby locations. If remains were found, we identified down to species, sex, and age class (i.e., adult, yearling, neonate) when possible. If there were not enough remains to identify species, we recorded it as unknown.

REFERENCES

- Clapp, Justin G., Joseph D. Holbrook, and Daniel J. Thompson. 2021. “GPSeqClus: An R Package for Sequential Clustering of Animal Location Data for Model Building, Model Application and Field Site Investigations.” *Methods in Ecology and Evolution* 12 (5): 787–93. <https://doi.org/10.1111/2041-210X.13572>.

Clark, Darren A., Gregory A. Davidson, and Bruce K. Johnson. 2014. "Cougar Kill Rates and Prey Selection in a Multiple-Prey System in Northeast Oregon." *The Journal of Wildlife Management* 78 (7): 1161–76.
<https://doi.org/10.1002/JWMG.760>.

Knopff, Kyle H., Aliah Adams Knopff, Andrea Kortello, and Mark S. Boyce. 2010. "Cougar Kill Rate and Prey Composition in a Multiprey System." *The Journal of Wildlife Management* 74 (7): 1435–47.
<https://doi.org/10.1111/J.1937-2817.2010.TB01270.X>.

Wilckens, David T, Joshua B Smith, Stephanie A Tucker, Daniel J Thompson, and Jonathan A Jenks. 2015. "Mountain Lion (*Puma Concolor*) Feeding Behavior in the Little Missouri Badlands of North Dakota."
<https://doi.org/10.1093/jmammal/gqv183>.