

White, E.R. and A.T. Smith. 2018. The role of spatial structure in the collapse of regional metapopulations. *Ecology*.

Corresponding author: eastonrwhite@gmail.com

Corresponding R scripts and data can be found at <https://github.com/erwhite1/BodiePikaMetapop>

Appendix S6 Degraded patches

Smith and Nagy (2015) suggested that several patches with old pika sign in 1972 may no longer be habitable. Although these patches had sign of previous occupancy by pikas in 1972, no pikas have been observed on these patches since. These include patches numbers 8, 13, 14, 15, 18, 21, 22, 24, 26, 30, 31, 33, 34, all of which are in the southern constellation. We ran the simulation with and without these patches to understand their effect on overall population dynamics. We found that including these degraded patches delayed the extinction of the southern area and the Bodie site as a whole (Fig. S1). The qualitative results are the same whether or not we include these 13 patches. Therefore, we left these patches in the model for the results in the main manuscript.

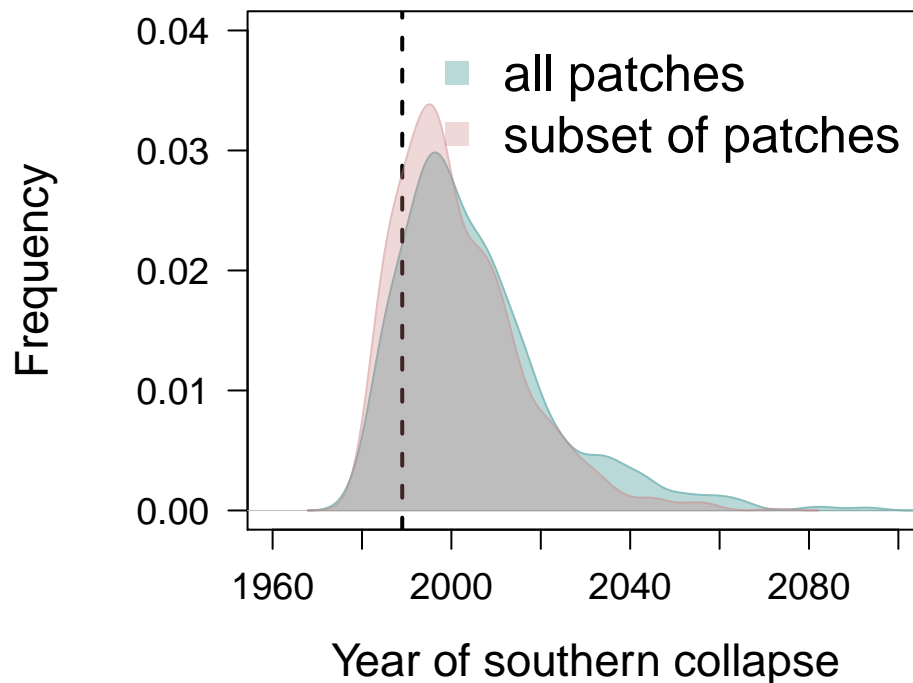


Figure S1: The distribution of southern extinction times for the model with all patches included (presented in the main manuscript), or a subset of patches with the potentially “degraded” patches removed.

References

Smith, A. T., and J. D. Nagy. 2015. Population resilience in an American pika (*Ochotona princeps*). *Journal of Mammalogy* 96:393–404.