

1 **Supplementary Information: Do we need detailed demo-**
2 **graphic data to forecast population responses to climate**
3 **change?**

4 **Andrew T. Tredennick and Peter B. Adler**

5 *Andrew T. Tredennick (atredenn@gmail.com), Department of Wildland Resources and the*
6 *Ecology Center, Utah State University, Logan, UT*

7 *Peter B. Adler, Department of Wildland Resources and the Ecology Center, Utah State*
8 *University, Logan, UT*

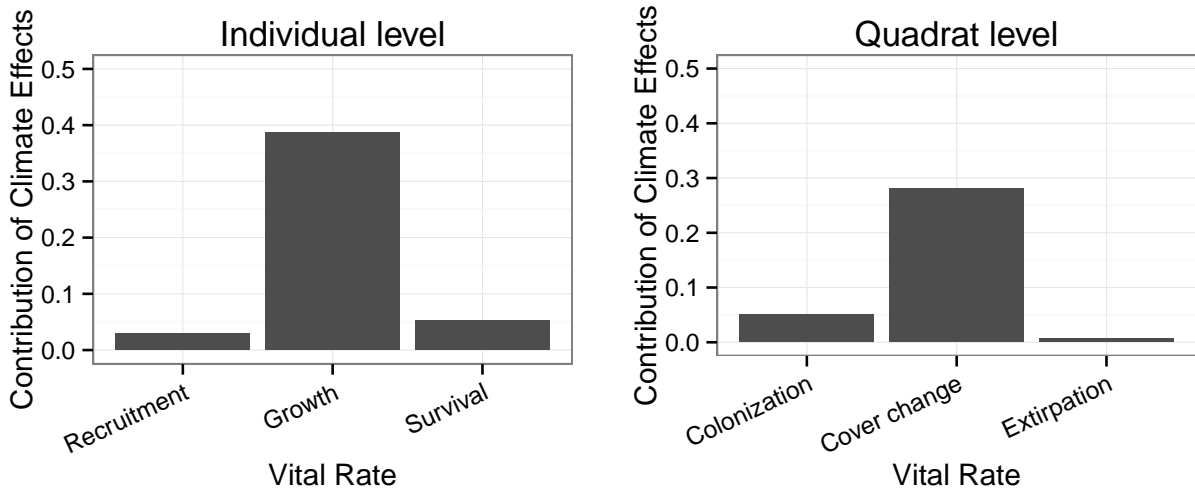


Figure 1: The proportion of interannual variability in vital rates explained by the climate covariates. The contribution for growth is defined as: $(\text{Climate model} - \text{Constant Model}) / (\text{Full model} - \text{Constant model})$. The contribution for survival and colonization, where we could not estimate a full model with year random effects at the quadrat level, is defined as: $(\text{Constant Model} - \text{Climate Model}) / \text{Constant Model}$.

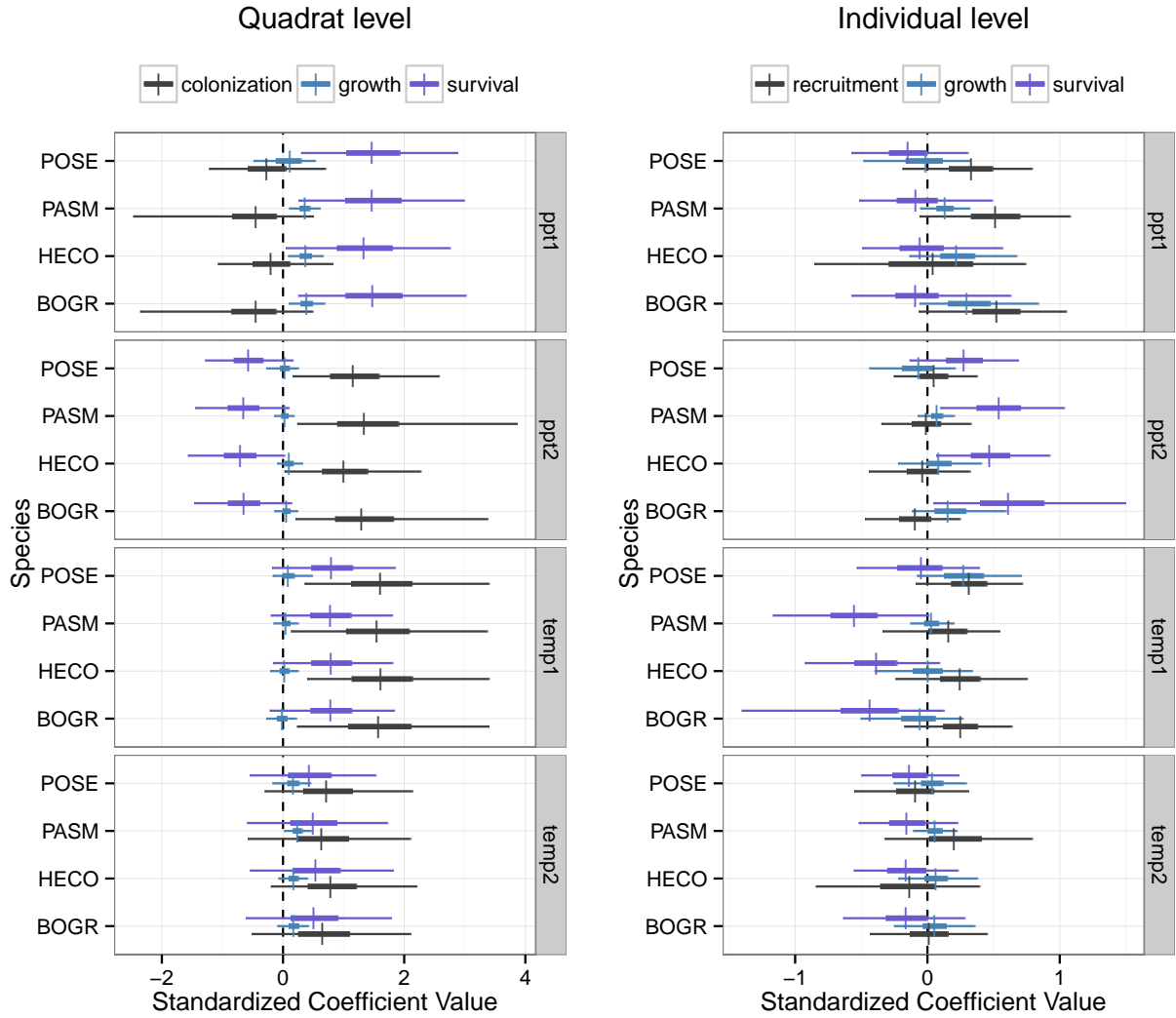


Figure 2: Posterior means (vertical ticks), 75% credible intervals (heavy lines), and 95% credible intervals (light lines) of climate effects on growth at both levels of inferences. The dashed vertical line is at 0, indicating no effect.