**Supporting Information**. Drees, T.H. and K. Shea, 2023. “Climate warming increases insect-driven seed removal of two elaiosome-bearing invasive thistle species”. *Ecology*.

**Appendix S2.** Supporting figures for model results and observed seed removal patterns, as well as photographs of frequently observed insect seed removers.

A picture containing map

Description automatically generated

**Figure S1.** Ant visiting seed depot 34 and removing a *C. acanthoides* seed with an elaiosome during the day. Photo credit: Trevor H. Drees.



**Figure S2.** Cricket visiting seed depot 21 and removing a *C. acanthoides* seed without an elaiosome during the evening. Photo credit: Trevor H. Drees.



**Figure S3.** Observed rates of seed removal for the four combinations of elaiosome treatment (E+ elaiosome present, E- absent) and warming treatment (NW unwarmed, W warmed) for each species (CN *Carduus nutans*, CA *Carduus acanthoides*). Error bars represent ±1 standard error on the mean.



**Figure S4.** Observed number of seeds remaining between species (CN *Carduus nutans*, CA *Carduus acanthoides*), conditioned on warming treatment applied to the maternal plant and elaiosome presence (E+ present, E- absent). Error bars represent standard error on the mean; -values are obtained from Kolmogorov-Smirnov tests, with low -values indicating significant differences between the two survival curves.

Graphical user interface, chart, line chart

Description automatically generated

**Figure S5.** Marginal effect plots for seed removal models at the three model timesteps for each species (CN *Carduus nutans*, CA *Carduus acanthoides*) for seeds with (E+) and without (E-) elaiosomes. Note that the warmed (W) and unwarmed (NW) treatments are discrete factors; lines connecting them are just to help facilitate interpretation of interactions.