**ReadMe Biological data**

The following ReadMe gives a brief overview of the columns in “Census data Benin.csv”, “Census data China.csv”, and “Temperature response data.csv”.

**“Census data Benin.csv”:** Census data for the tropical species, *Clavigralla shadabi*, from Benin

* Day: day of year in which a census was taken
* Adults: adult density (number of adults per 50 host plants)
* A\_SE: standard error of adult density
* A\_SE\_L: lower estimate of adult density (Adults – A\_SE)
* A\_SE\_H: higher estimate of adult density (Adults + A\_SE)

**“Census data China.csv”:** Census data for the temperate species, *Apolygus lucorum*, from Dafeng, China

* Day: day of year in which a census was taken
* Adults: adult density (number of adults per 50 host plants)
* A\_SE: standard error of adult density
* A\_SE\_L: lower estimate of adult density (Adults – A\_SE)
* A\_SE\_H: higher estimate of adult density (Adults + A\_SE)

**“Temperature response data.csv”:** Laboratory data on fitness metrics and fitness components for the 21 insect populations analyzed in the manuscript.

* Reference: Literature reference from which the temperature response data was obtained
* Population: Species name and geographical location (to distinguish between populations with

the same species name)

* Location: Geographic location, typically the country name followed by a name of the region

in which the population was collected

* Lat: latitude of the population, reported in the manuscript or based on description in manuscript
* Lon: longitude of the population, reported in the manuscript or based on description in manuscript
* Habitat: Climate types based on the Köppen Climate Classification (Table S1 in the manuscript)
* Subfamily: subfamily of population (either Heteroptera or Sternorrhyncha)
* T\_C: Temperature of climate chamber in ℃
* T\_K: Temperature of climate chamber in K
* Birth\_Rate: Estimate of the per capita birth rate at temperature T\_K
* Birth\_Source: Where the per capita birth rate estimates were obtained or calculated
* Dev\_Rate: Estimate of the juvenile development rate at temperature T\_K
* Dev\_Source: Where the development rate estimates were obtained or calculated
* Juv\_Mortality: Estimate of the juvenile per capita mortality rate at temperature T\_K
* Jmort\_Source: Where the juvenile per capita mortality rate estimates were obtained or calculated
* Survival: Estimate of the survival at temperature T\_K
* Surv\_Source: Where the survival estimates were obtained or calculated
* Adult\_Mortality: Estimate of the adult per capita mortality rate at temperature T\_K
* Amort\_Source: Where the adult per capita mortality rate estimates were obtained or calculated
* Adult\_Longevity: Estimate of the adult longevity at temperature T\_K
* Long\_Source: Where the adult longevity estimates were obtained or calculated
* R0: Estimate of the net reproductive rate at temperature T\_K
* R0\_Source: Where the net reproductive rate estimate was obtained or calculated
* r\_m: Estimate of the intrinsic population growth rate at temperature T\_K
* r\_m\_Source: Where the intrinsic population growth rate estimates were obtained or calculated