**ReadMe Model predictions**

The following ReadMe gives a brief overview of the columns in the files containing model predictions of climate change effects on fitness metrics, fitness components, and population dynamics in the “Model predictions” folder. Model predictions produced by “TPC and model analyses.R” are made for the intrinsic growth rate, *rm* (“Predictions rm.csv”), net reproductive rate, *R0* (“Predictions R0.csv”), survival to reproduction (“Predictions survival.csv”), per capita birth rate (“Predictions birth.csv”), development rate (“Predictions development.csv”), and adult longevity (“Predictions longevity.csv”). Model predictions produced by “Population analyses.R” are made for the mean adult density, population variability, and length of the active period (“Predictions population dynamics.csv”).

**Fitness metrics/components:** Model predictions for the effects of climate change on fitness metrics and fitness components

* Population: Species name and geographical location (to distinguish between populations with

the same species name)

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

in which the insect was collected

* Latitude: Absolute latitude of insect population
* Habitat: Climate types based on the Köppen Climate Classification (Table S1 in the manuscript)
* TPC.r: Prediction from directly integrating the TPC in the recent climate
* TPC.f: Prediction from directly integrating the TPC in the future climate
* model.r: Prediction from the population model in the recent climate
* model.r: Prediction from the population model in the future climate
* delta.TPC: change in value from TPC due to climate change (TPC.f – TPC.r)
* delta.model: change in value from population model due to climate change (model.f – model.r)

**Population dynamics:** Model predictions for the effects of climate change on population dynamics

* Population: Species name and geographical location (to distinguish between populations with

the same species name)

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

in which the insect was collected

* Latitude: Absolute latitude of insect population
* Habitat: Climate types based on the Köppen Climate Classification (Table S1 in the manuscript)
* mean.r: Prediction of mean adult density in the recent climate
* mean.f: Prediction of mean adult density in the future climate
* CV.r: Prediction of population variability (coefficient of variation; “CV”) in the recent climate
* CV.f: Prediction of population variability (coefficient of variation; “CV”) in the future climate
* active.r: Prediction of length of active season in the recent climate
* active.f: Prediction of length of active season in the future climate
* delta.mean: change in predicted mean adult density due to climate change (mean.f – mean.r)
* delta.CV: change in predicted population variability due to climate change (CV.f – CV.r)
* delta.active: change in predicted length of active season due to climate change (active.f – active.r)