**ReadMe:**

3 data sets are included:

1. Dataset 1: Raw data on individual Drosophila survival and fertility. These data were processed with dose-response models as per the ‘methods’ section in the main manuscript to generate point estimates of LT and TFL limits. `TFL\_rawdata\_allspecies\_Dryad.xlsx`.
2. Dataset 2: Locations and Climate data. Contains the cleaned and trimmed occurrence record for each species mined form TaxoDros. Also contains the WorldClim variables BIO01 – BIO19 for each of these locations. `TrimmedLocationsAndClimate\_Dryad.xlsx`
3. Dataset 3: Species-level data on physiological tolerances, distributions, culture conditions and mean environmental conditions found across their range. Tolerance measures are derived from the raw data in dataset 1. Geographic and climate summaries are derived from raw data in Dataset 2. This summarised dataset is used in this form in all main analyses comparing thermal tolerance traits and investigation of the correlation between thermal tolerance traits and global distribution of species.

All data files contain two sheets: one with the raw data described, a second with metadata for each variable in the first sheet.

Figures 1 and 2, and supplementary figures are generated from Dataset 3. Analyses of correlations between thermal limits and correlations between thermal limits and environmental variables are generated form Dataset 3 integrated with the Drosophila phylogeny from Röhner et al Ecography 2018 (doi:  [**https://doi.org/10.1111/ecog.03382**](https://doi.org/10.1111/ecog.03382)). Figure 3 is derived from a subset of Dataset 3 integrated with publicly available data described in the manuscript and supplementary material.