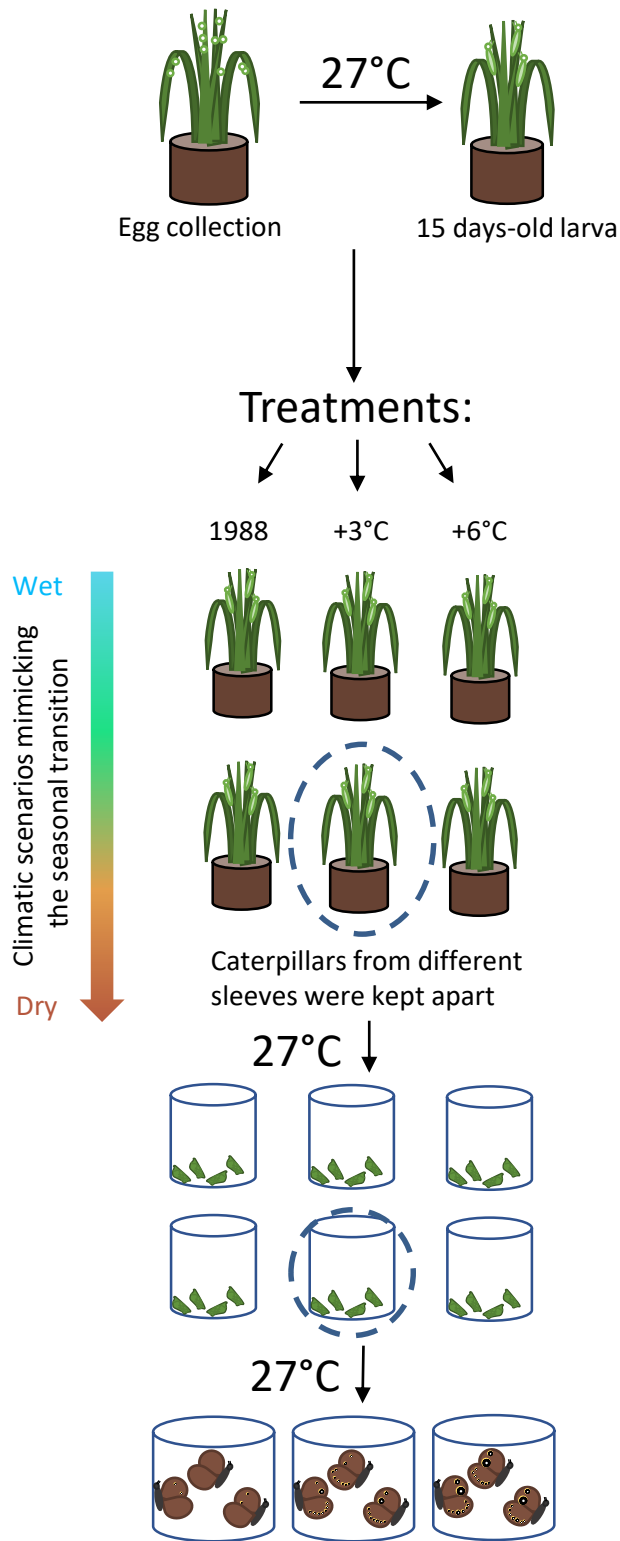


### a) Climate warming experiment



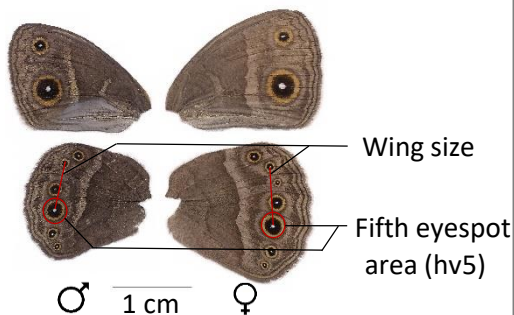
Traits:

Survival rate

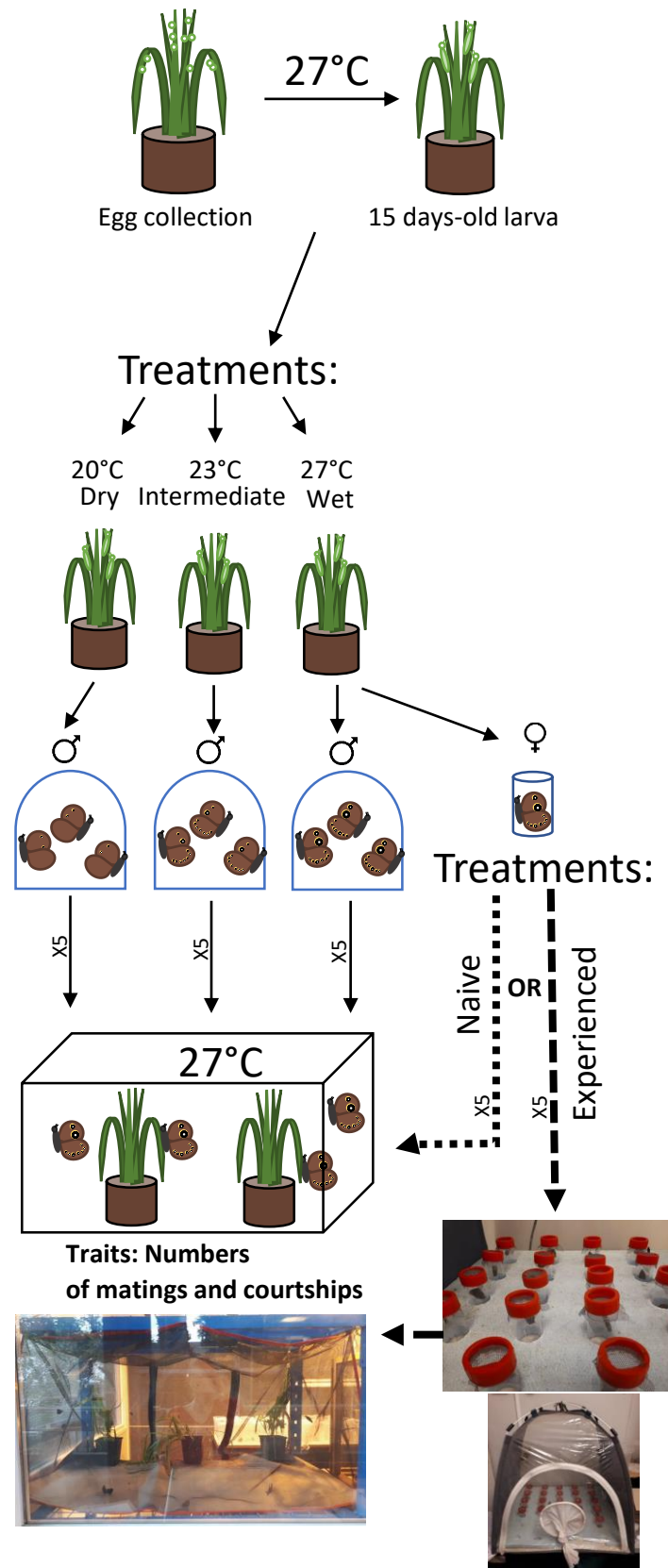
Development time

Polyphenism index =

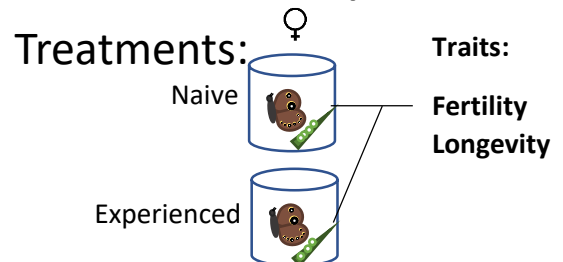
$$\frac{hv5}{Wing\ size}$$



### b) Learning experiment



### c) Fitness experiment



Supplementary figure 1: Experimental design for the climate warming experiment (a), the learning experiment (b), and the fitness experiment (c), including the traits that were measured for each experiment.