



Figure S1. Experiment design: Rearing and acclimation conditions of adults and 5th instar nymphs of *Riptortus pedestris*.

The insects used in experiments in their adult stage were reared under short-day conditions (SD; 12h light : 12h dark, 12L:12D) and at a temperature of $25 \pm 1^\circ\text{C}$ from egg stage, through all larval instars, until adult emergence, and then subjected to different acclimations. Nymphs were reared under acclimation conditions from the egg stage.

Acclimations:

LD = 16L : 8D, 25°C

SD = 12L : 12D, 25°C

LDC = 16L : 8D, 20°C , 15°C , 10°C , 5°C – each temperature 5 days*

SDC = 12L : 12D, 20°C , 15°C , 10°C , 5°C – each temperature 5 days*

LDS = 16L : 8D, 25°C , 10 days fed, 10 days starved

SDS = 12L : 12D, 25°C , 10 days fed, 10 days starved

*Cold-acclimation temperature in 5th instar nymphs was constant 20°C in both LDC and SDC