



Ben-Gurion University of the Negev
Jacob Blaustein Institutes for Desert Research
The Swiss Institute for Dryland Environmental and Energy Research
Mitrani Department of Desert Ecology

Seminar

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Tuesday, November 15, 2016, 12:00

Seminar Room, Old Administration Building

Participants are invited to meet the seminar speaker at the MDDE meeting room immediately after the seminar (~ 13:00). Please bring your lunch; snacks will be provided.

**Thermal preference, tolerance and
acclimation in red flour beetles**

In my talk, I will first introduce the beneficial acclimation hypothesis, defined as "acclimating to a particular environment provides an organism with advantages in that environment". Using flour beetles, I will disentangle between acclimation during the adult stage and acclimation during the larval stage, and show that while adult acclimation is beneficial for thermal tolerance, larval acclimation is not. I will demonstrate the effects of acclimation not only on thermal tolerance but also on reproduction, which is a better fitness currency. Second, I will present the effect of age and starvation on thermal tolerance, and will discuss whether the effect of starvation is reversible. Finally, I will show how repeated, reoccurring stress (mild cold shock) has negative consequences for fitness, expressed in reduced general activity, mating intensity, and reproduction, and has also negative carry-over effects to the offspring. Surprisingly, it has also a positive effect on fat accumulation and survival, so the effect of repeated mild stress is mixed and its contribution is probably context-dependent.