

Effect of thermal acclimation and prevailing conditions on the response of adult Mediterranean fruit flies to traps

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INTRODUCTION

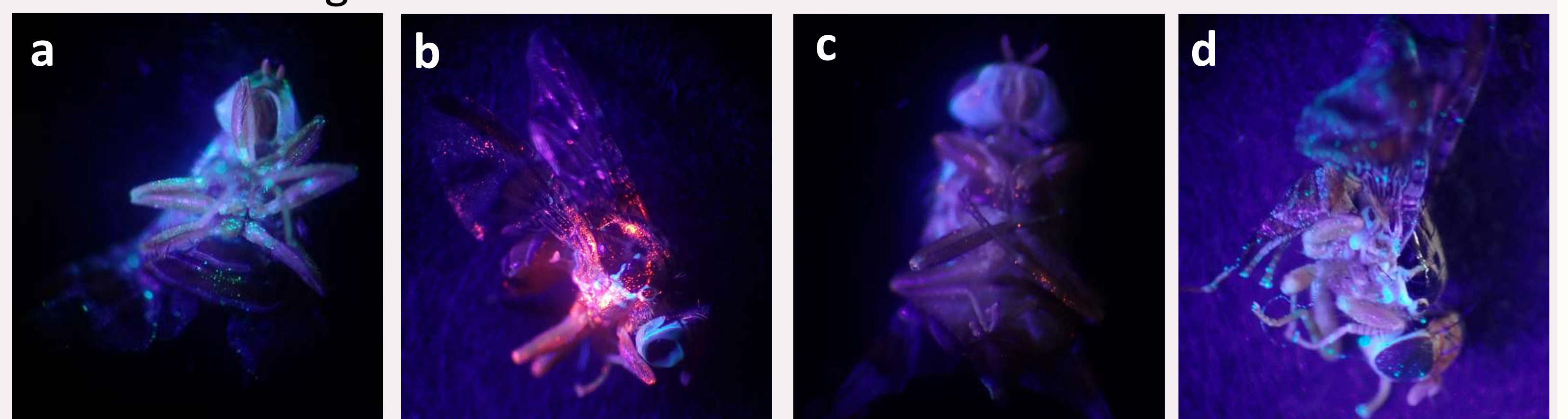
Ceratitis capitata is one of the most aggressive agriculture pests. Trapping is the main tool for early detection and population monitoring. We examined the effect of adults' thermal acclimation and that of the prevailing climatic conditions on trap captures.



Field cage housing a citrus tree.

METHODOLOGY

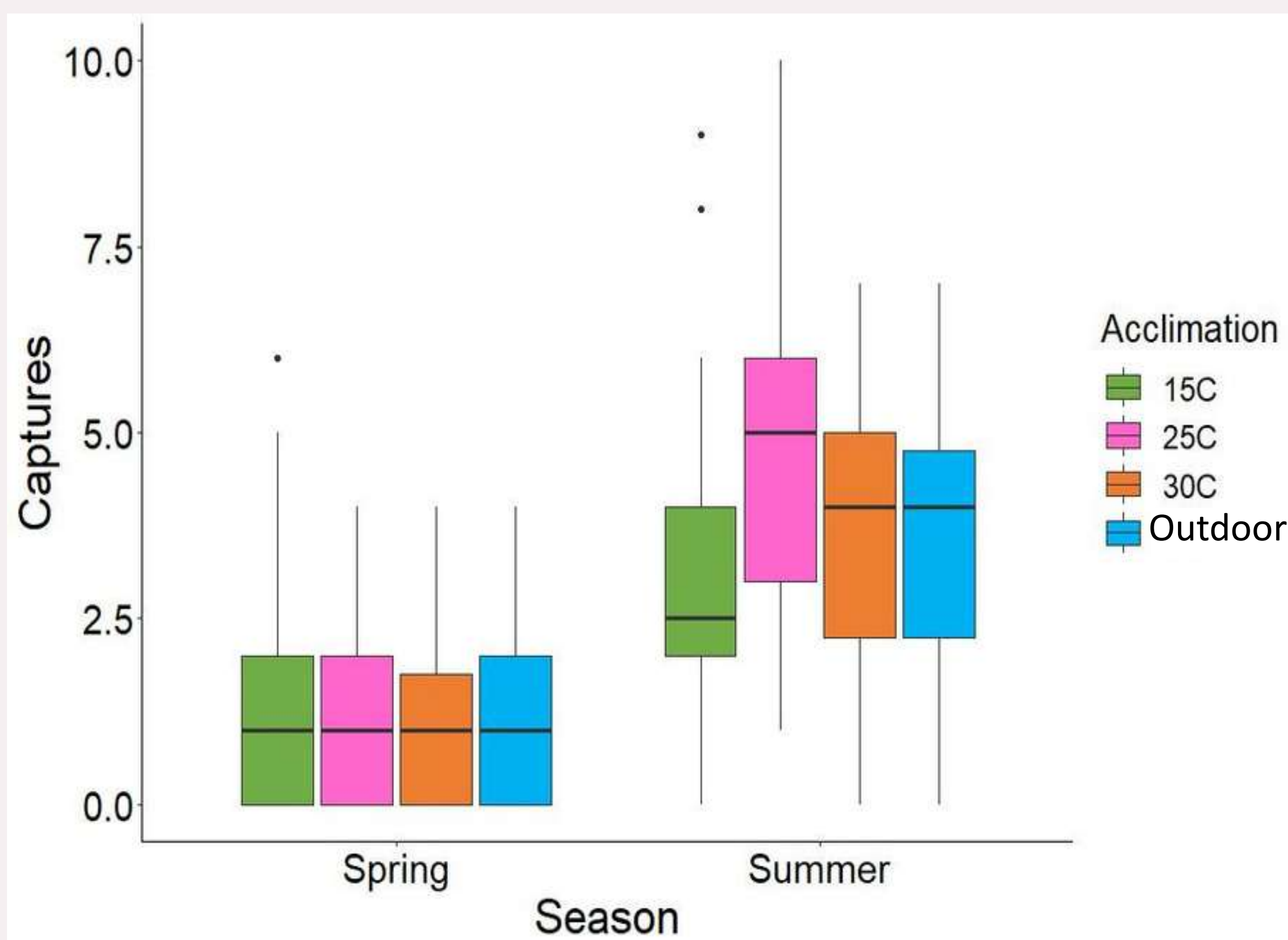
- Five cylindrical field cages housing a potted citrus tree and a Tephri trap baited with Biolure were used.
- Pupae marked with different colors of non-toxic fluorescent powder according to each acclimation regime.
- Adults were acclimated for five days. (15°C, 25°C, 30°C or remained outdoor).
- Ten adults, 10 days old of each sex and treatment were released, in each field cage.
- Captures were recorded at hourly intervals.
- Captured adults were examined under a stereoscope using ultraviolet light to determine the acclimation regime.



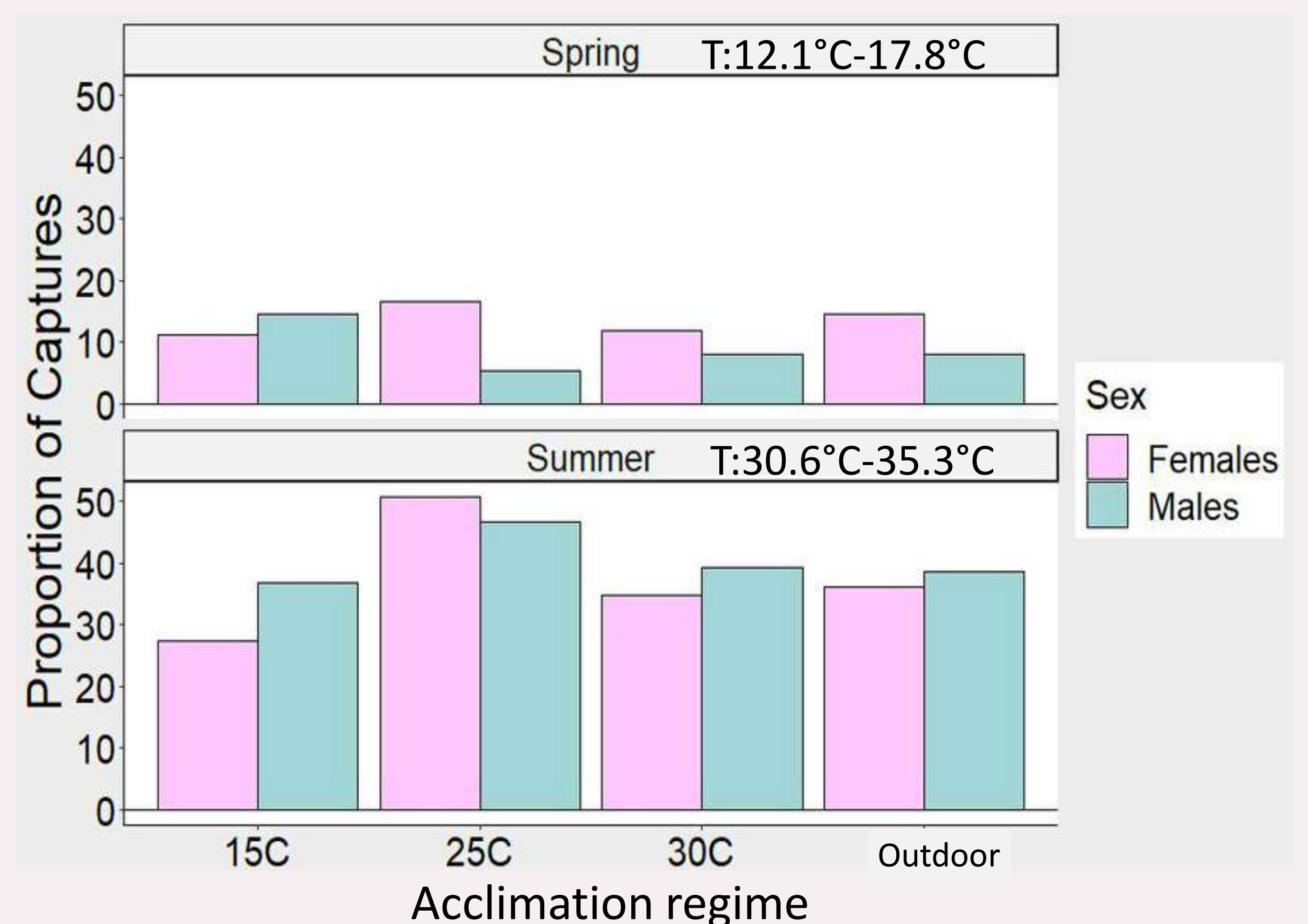
Collected dyed adults with the different colors of fluorescent powder. a) Green (15°C), b) Pink (25°C), c) Orange (30°C) and d) Blue (outdoor conditions).

RESULTS

Boxplots of adult captures per acclimation and season



Captures of males and females per acclimation and season (%)



CONCLUSIONS

- Prevailing climatic conditions affect adult captures.
- The sex ratio of captured adults was in favor of females in spring but not in summer.
- Acclimation at 15°C reduced captures during summer.

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