

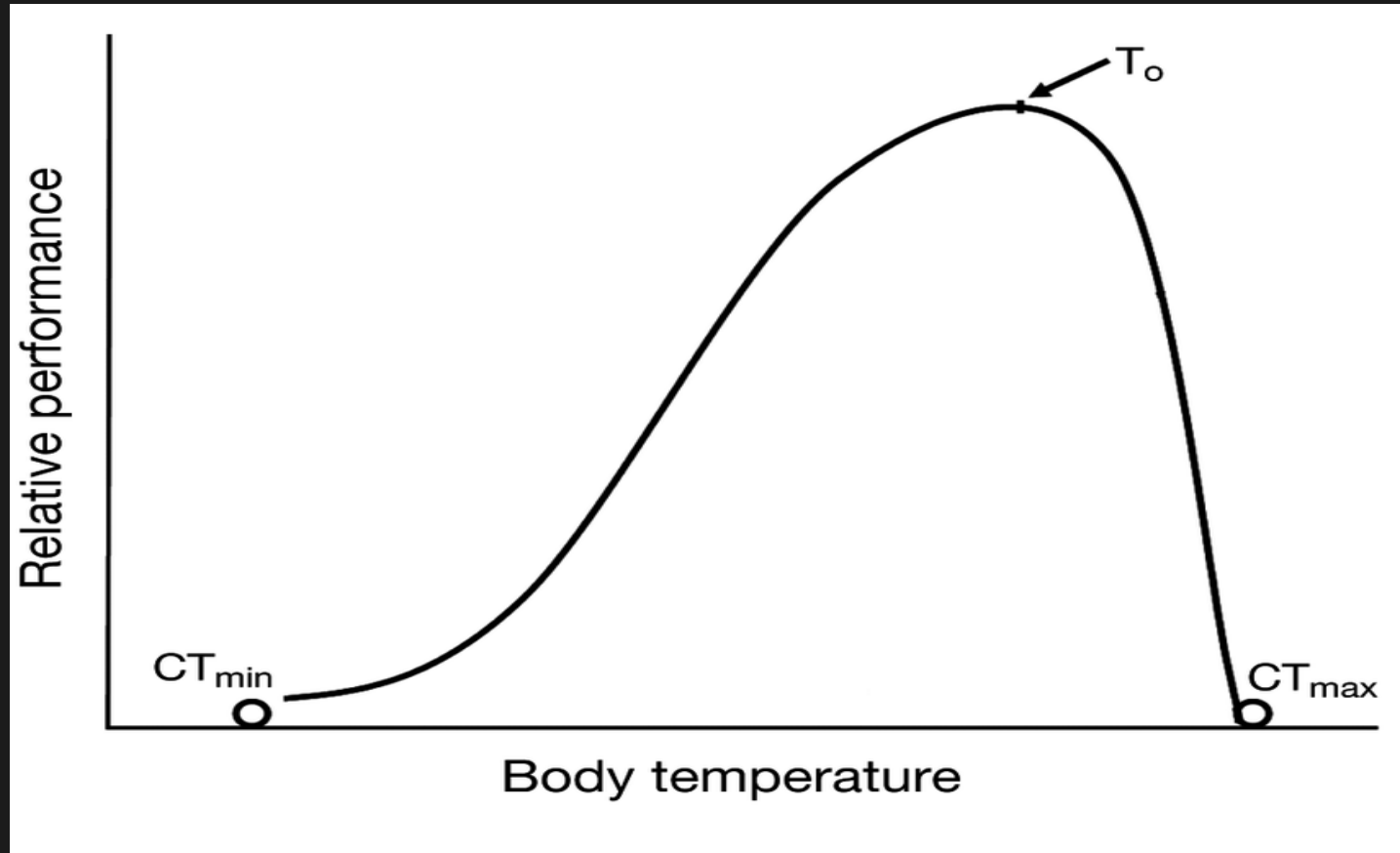
Temperature affects male sexual harassment rates in two populations of Western mosquitofish (*Gambusia affinis*)

Avery Laing

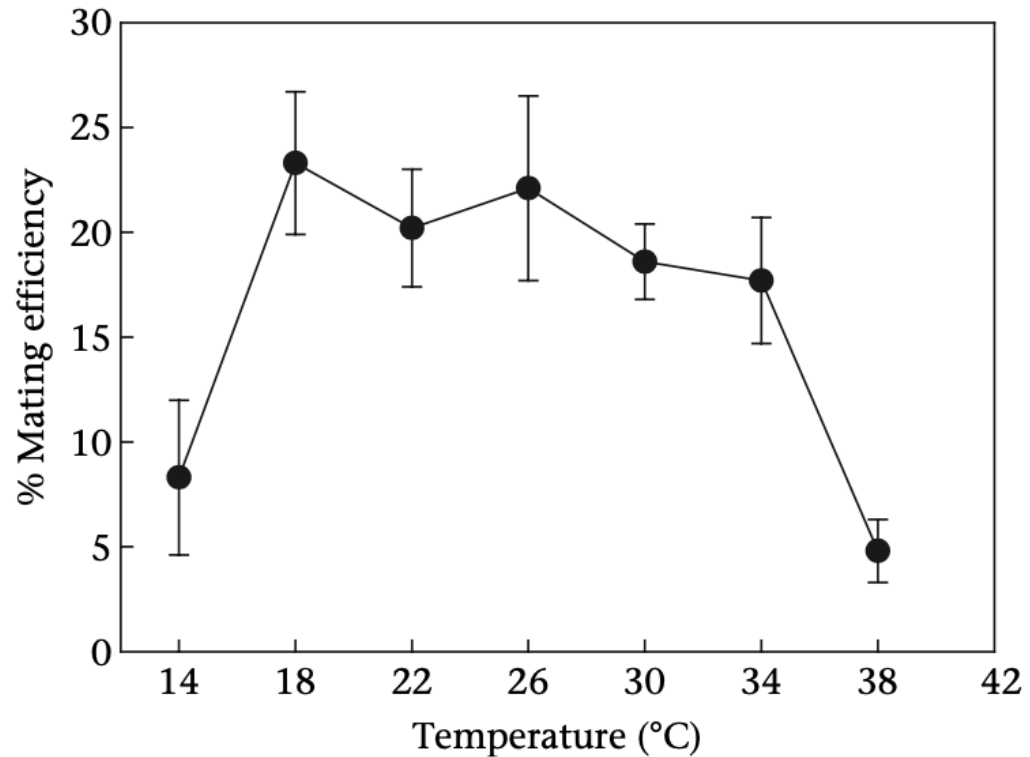
UCSC Ecology and Evolutionary Biology undergraduate research

Background

- Ectotherm behavior and physiology are influenced by daily fluctuations in habitat temperatures.
- Reproductive behavior shifts with thermal fluctuation.



Why Mosquitofish?



Wilson 2005

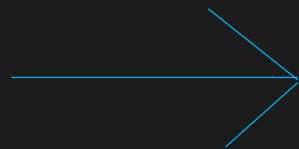
- Capable of reproductive activity in a wide thermal range.
- Behavior is easy to measure.



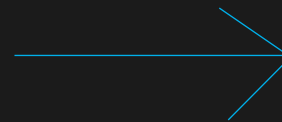
Research Questions

1. How do mosquitofish respond to short term changes in temperature?
2. Do mosquitofish evolve differently at different local temperatures?

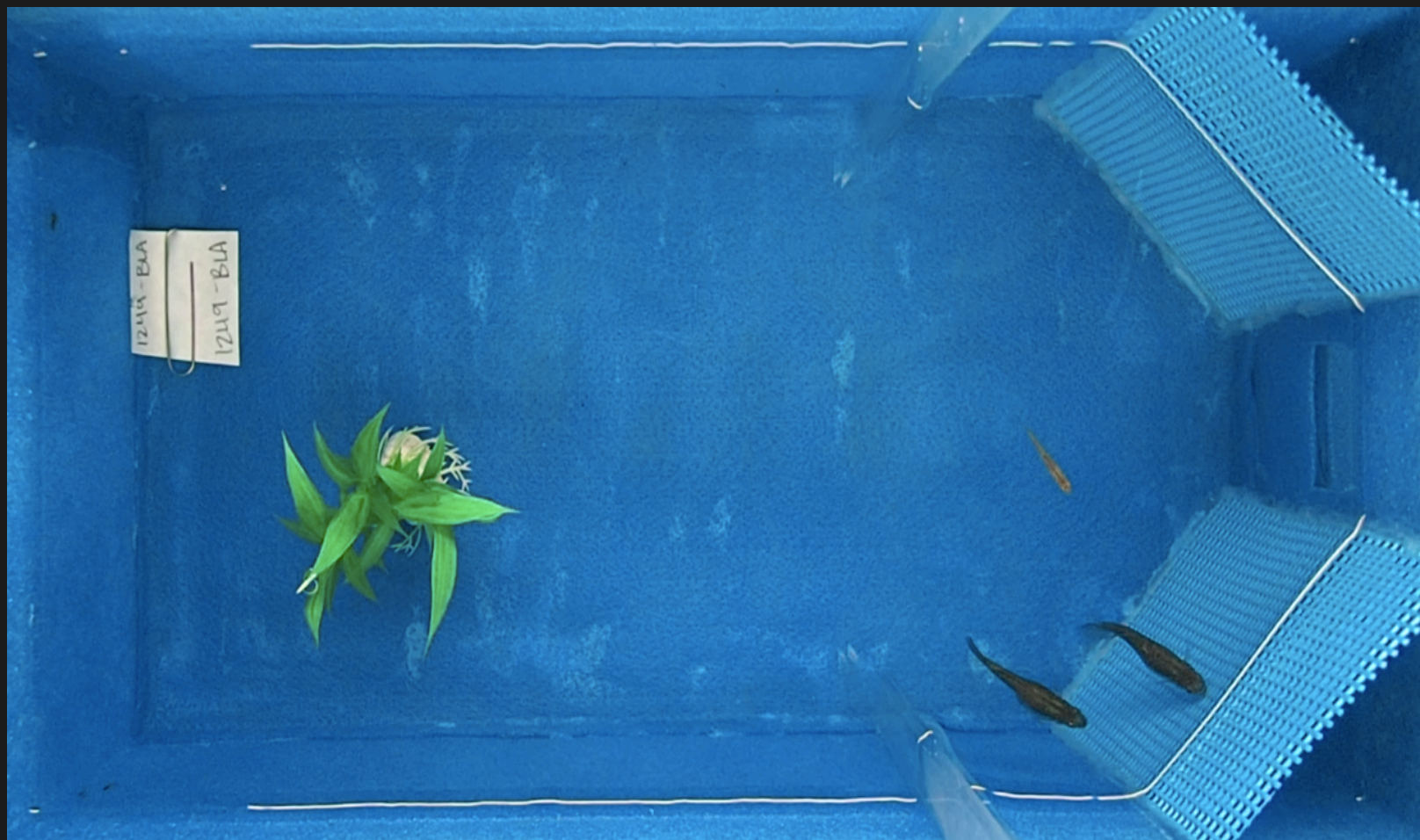
Rearing



Behavioral
assays



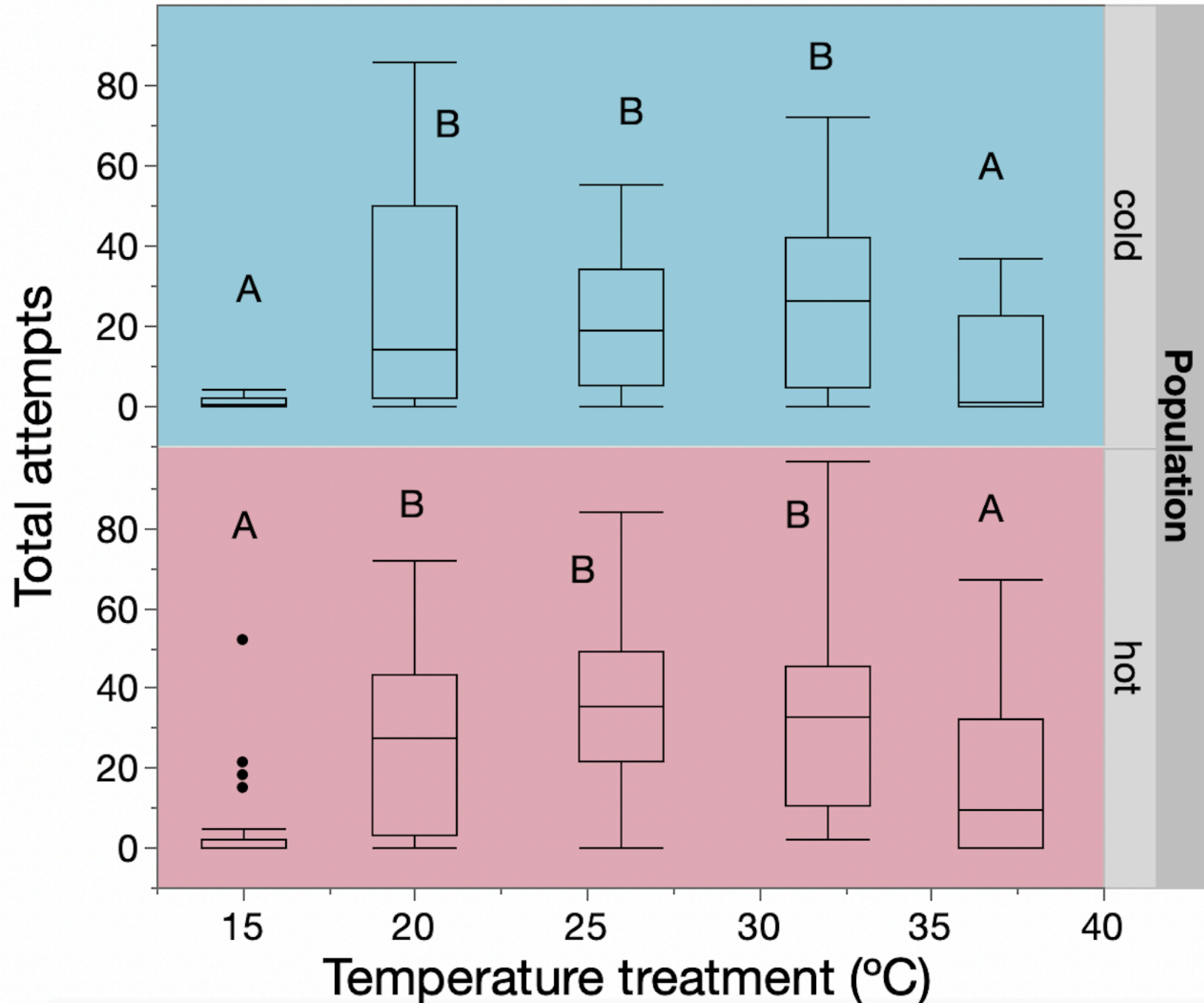
Videos and
analysis



How do mosquitofish respond to short term changes in temperature?

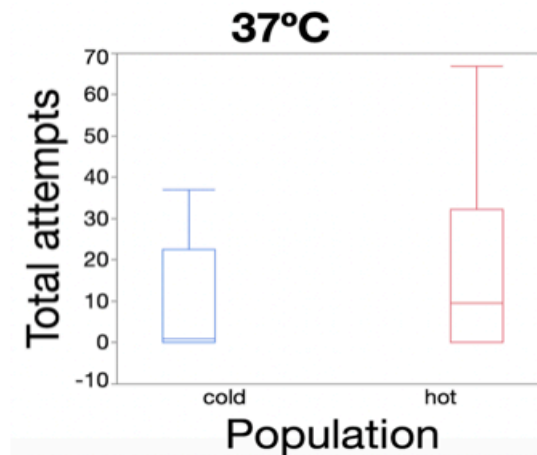
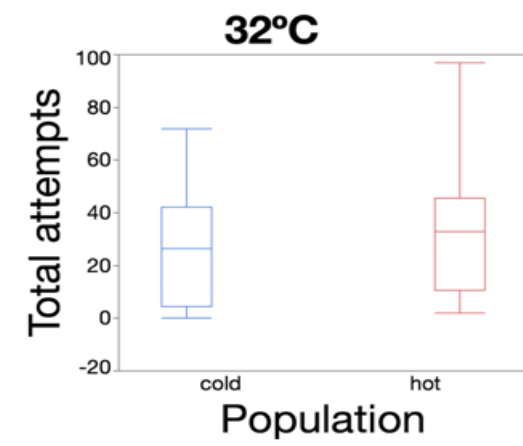
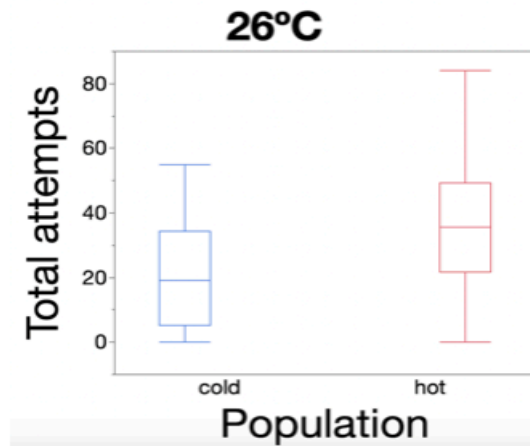
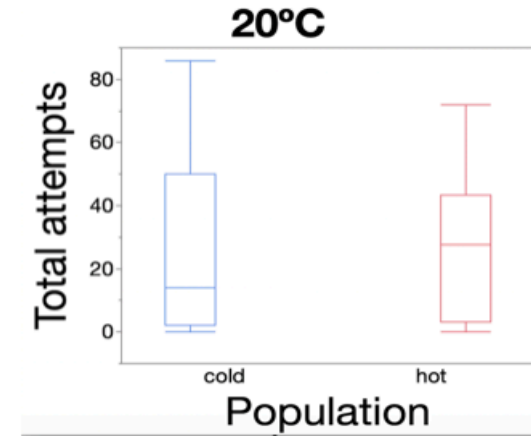
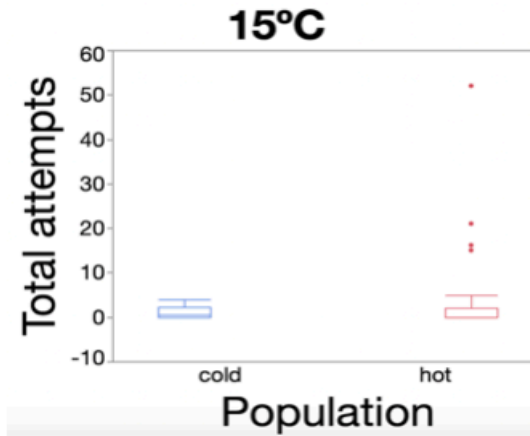
Male copulation attempts depend on temperature.

There are fewer attempts at the extreme temperatures for both populations.



Do mosquitofish evolve differently at different local temperatures?

Number of copulation attempts *did not differ* between populations across all test temperatures.



Conclusions

- Mosquitofish are thermal generalists so it's possible they didn't need to locally adapt.
- Important to also test wild populations because they experience different conditions in the wild than in our experimental design.



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