Temperature affects courtship display in male *Gambusia affinis*

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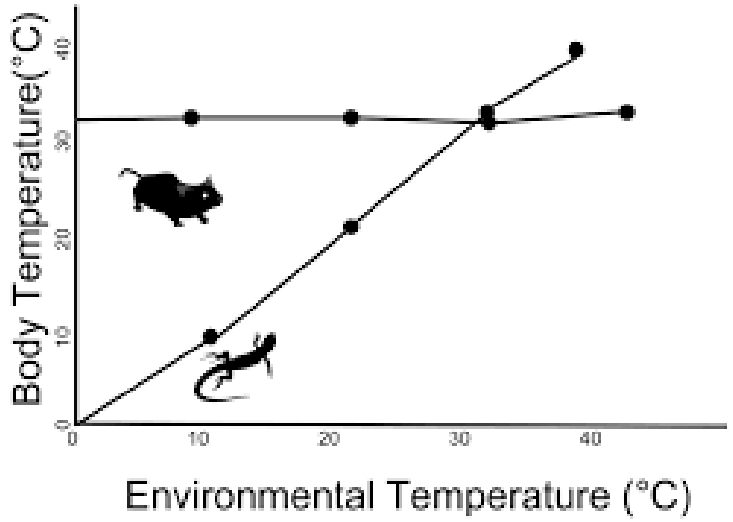
How is climate change affecting the fitness of ectotherms?

- Analyzing changes in reproductive behavior in response to temperature allows us to better understand how climate change may be affecting the fitness of organisms



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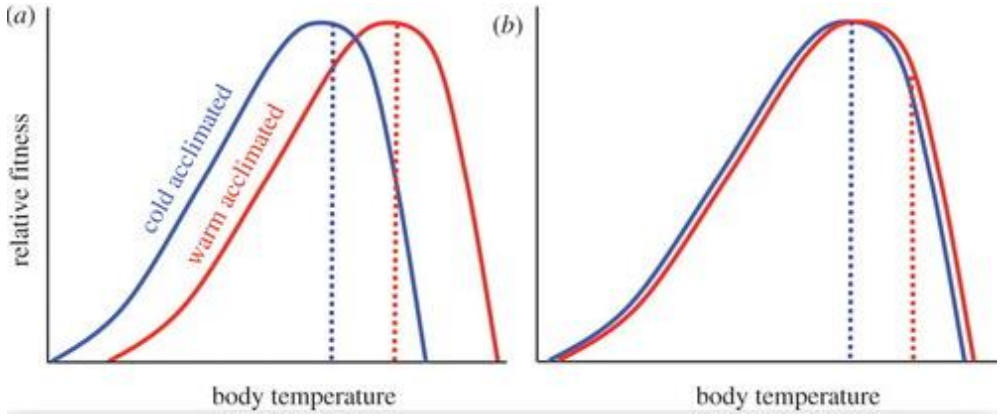
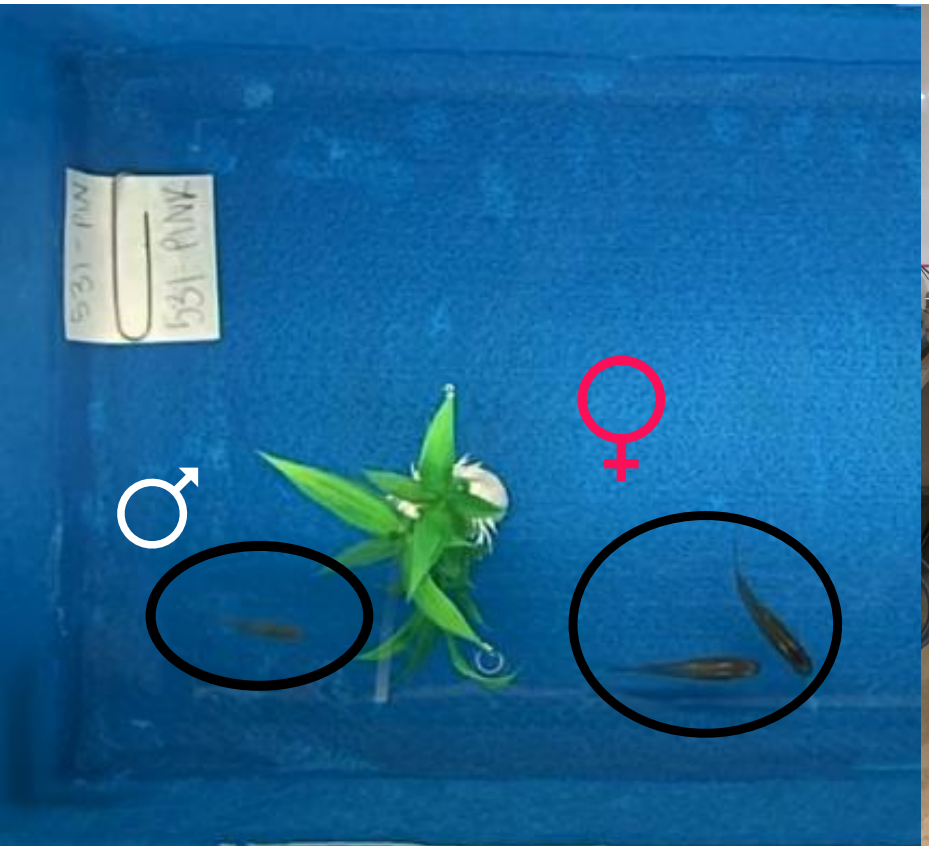


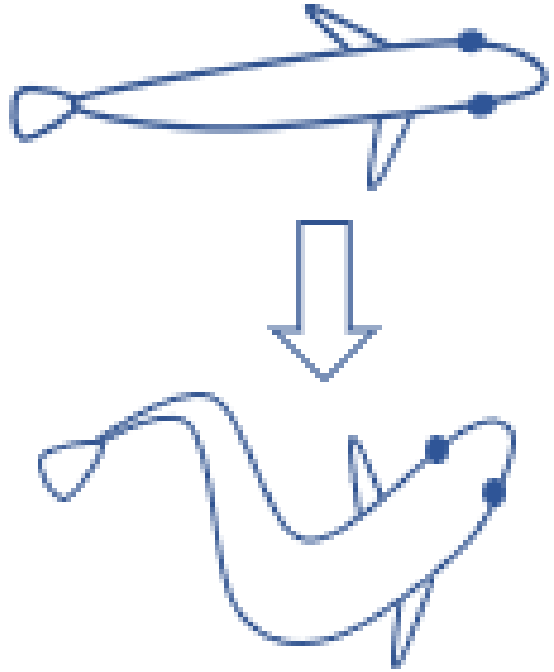
Huey et al 2012

Study Species

Methods

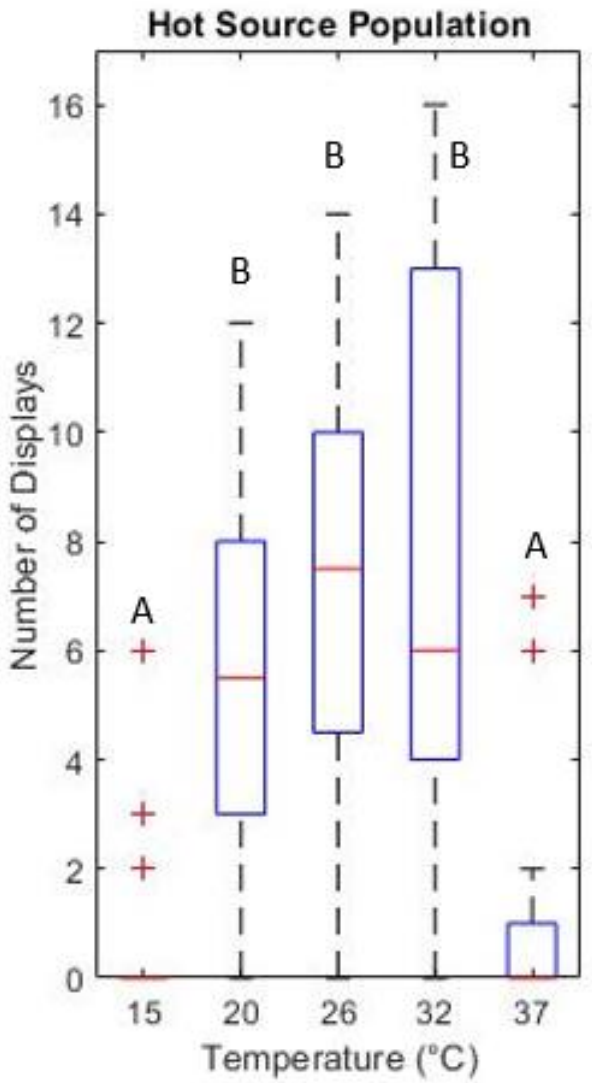
- Temperature trials were conducted along a thermal gradient at 15°C, 20 °C , 26 °C, 32 °C, 37 °C
- Each male was tested at each treatment temperature
- N = 90 cold source population, N = 125 hot source population

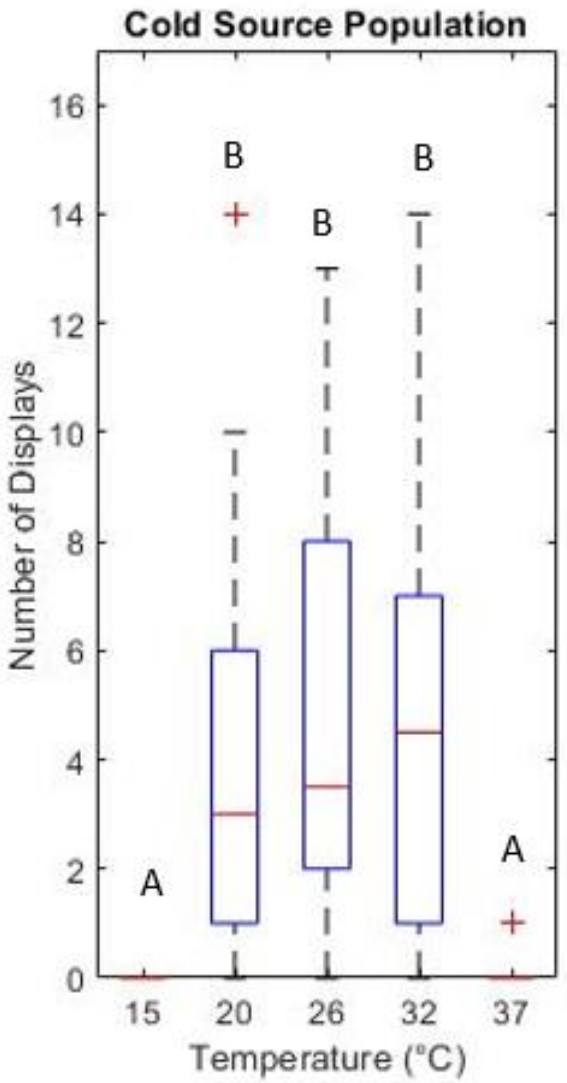




Results: How do mosquitofish courtship rates change with temperature?

- In both populations, number of displays is lowest at extreme temperatures and highest at intermediate temperatures
- Courtship rates are plastic in response to temperature change
- Extreme temperatures limit reproductive performance regardless of a population's thermal history

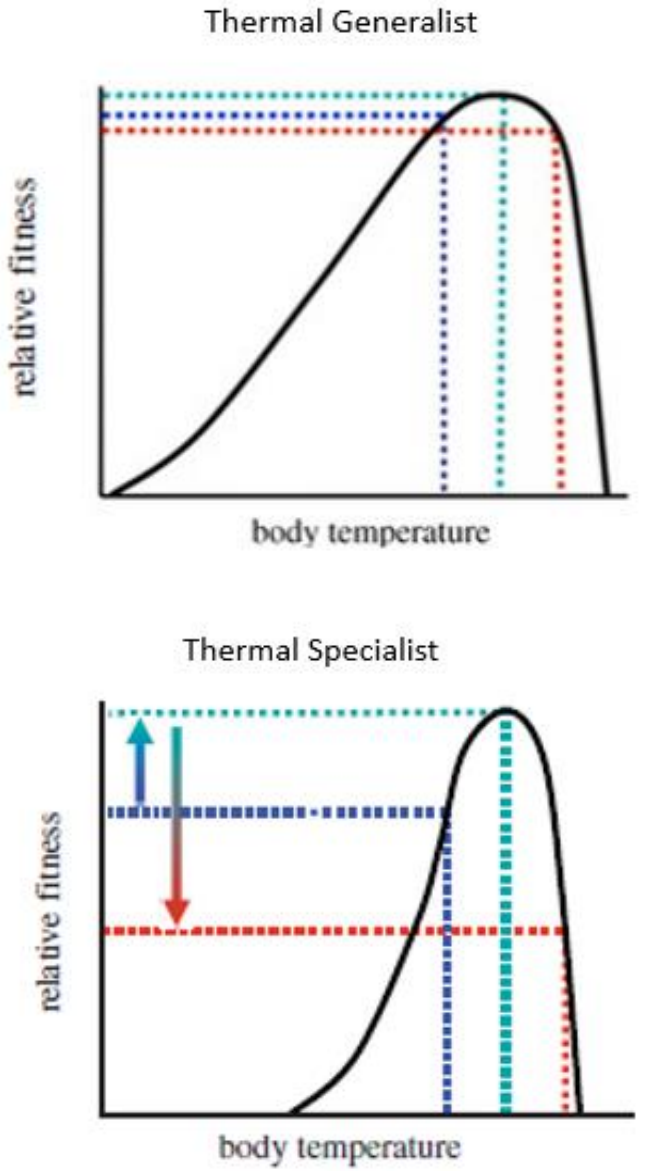




Conclusions

- Although thermal generalists should be better equipped to handle temperature change, courtship in mosquitofish is still curbed at the extremes

- Important to study a wide range of species' thermal responses to temperature to test whether theory matches prediction.



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