Effect of warming sea temperatures on postlarval lobster (*Homarus americanus*) swimming performance and energy reserves

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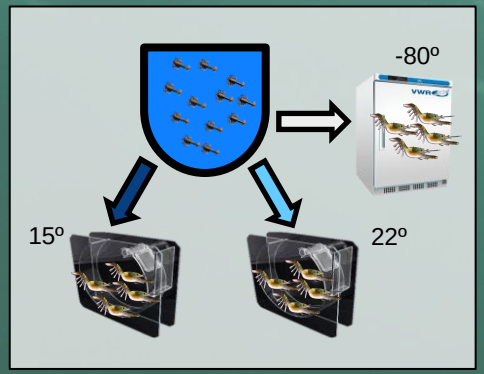
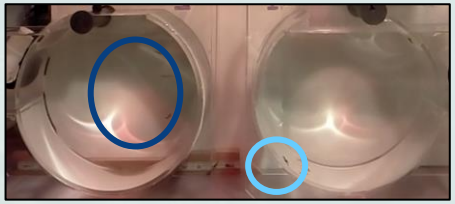
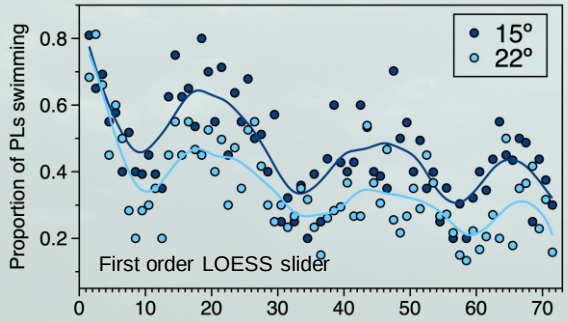
The Gulf of Maine is warming and lobster recruitment patterns are shifting.

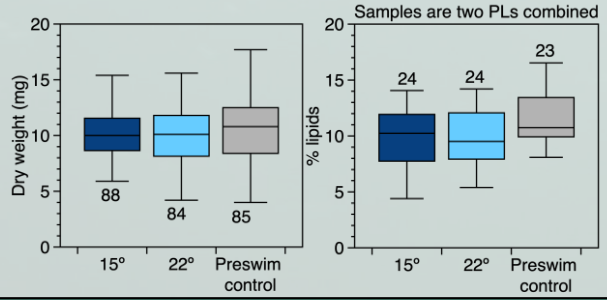
Does increased temperature have an impact on postlarval (PL) American lobster swimming performance, activity, or energy reserves?

- 72-hour swimming trials with hatchery-reared PLs
- Behavior monitored via video
- PLs frozen for nutritional analysis









Preliminary Results

- No change in PL dry weight or lipid content
- Fewer postlarvae swimming at 22°C than at 15°C
  - Hour 1:16% less swimming at 22°C
  - Hour 72: 48% less swimming at 22°C
- Visible changes in behavior
  - Drifting or sitting instead of swimming
- Diel patterns in swimming activity

Potential Implications

- Decrease in swimming activity in warmer waters may be a contributing factor to shifting recruitment patterns in the GoM
- Behavioral mechanisms may mediate physiological condition

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