The Life History of Gammarus pseudolimnaeus in the Chesapeake Bay Watershed:

New Perspectives

A presentation by:
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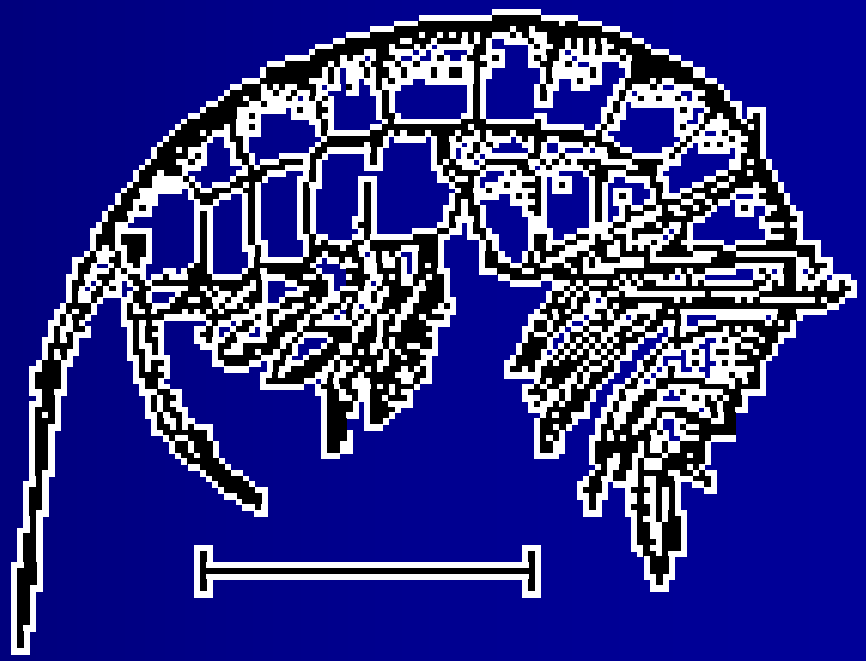
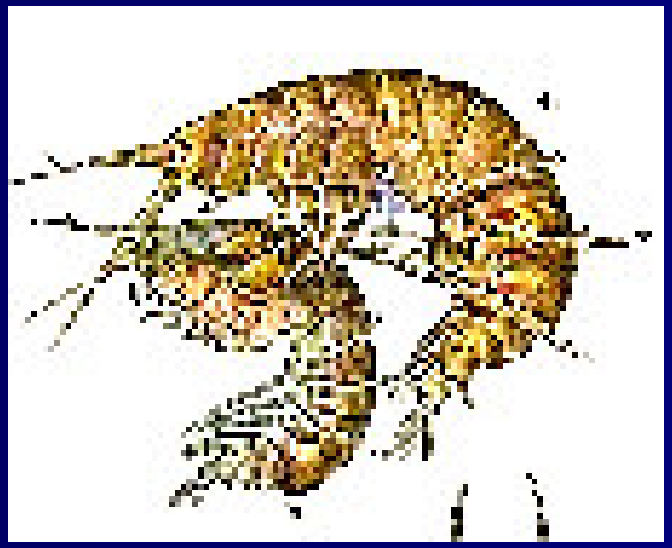


Purpose

- *To discover more of the life history of Gammarus pseudolimnaeus in the Chesapeake Bay Drainage in general and Southeastern Virginia in particular, with emphasis on the reproductive timing and its causes, and the fecundity of individuals in the populations.*

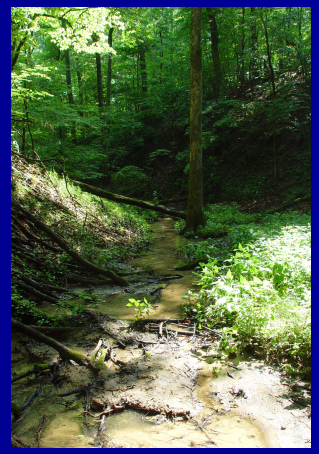
Procedure:
Experiment I: Population Data



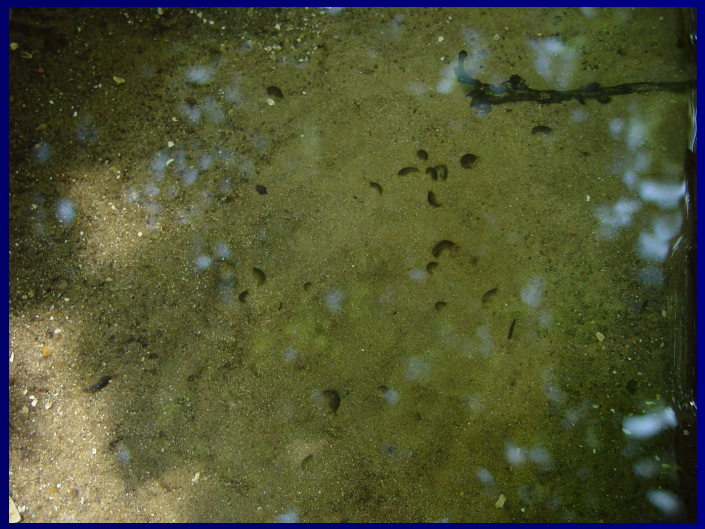
- *Test Sites were visited every week, and random samples taken of the population and checked for percentage in precopula (Bottom Left).*

Test Sites: James River

- *Berkeley (Top Left) and Strawberry (Bottom Left), both in the College woods, are also small tributaries to the James river drainage.*

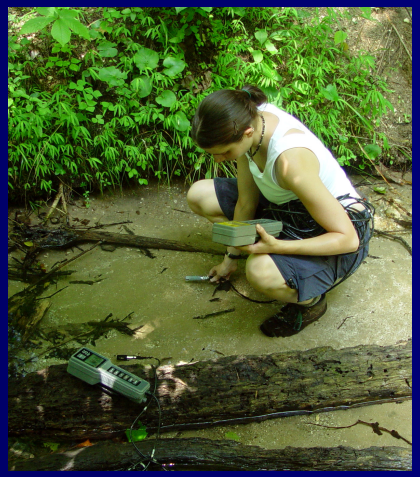


Test Sites: York River



- *South West Wormeley (Top) and Washington Springs (Bottom), are our two test sites in the York River Drainage.*

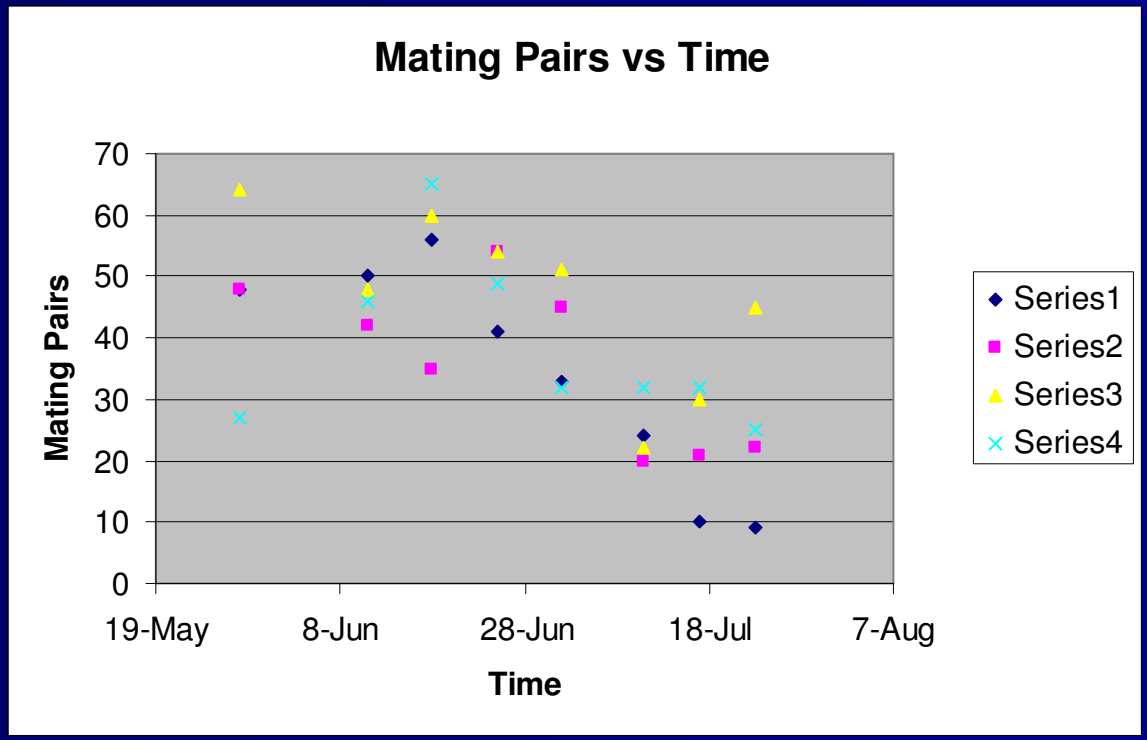
Materials and Methods



- *Temperature, DO, and Conductivity were taken at each site (top left)*
- *Sieve collecting (top right)*

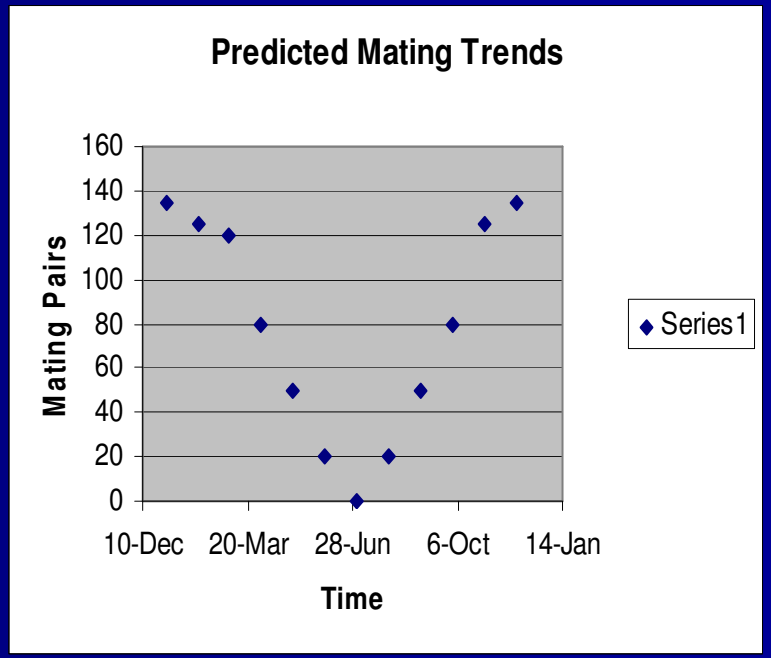
Data: Experiment I

(note that sizes in Strawberry and Berkeley were declining as well)



Conclusion: Experiment I

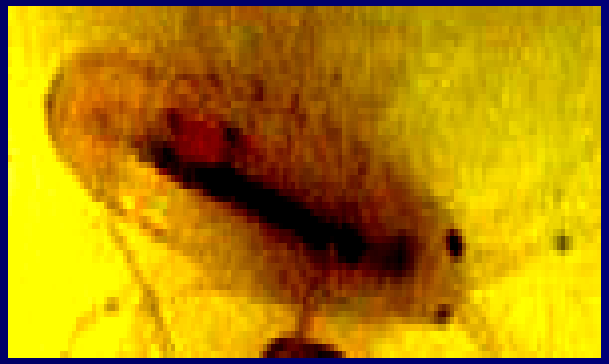
- *Data will be taken continually through the fall and spring to obtain a yearly pattern.*
- *The pattern that we predict (right).*



Procedure: Experiment II Fecundity

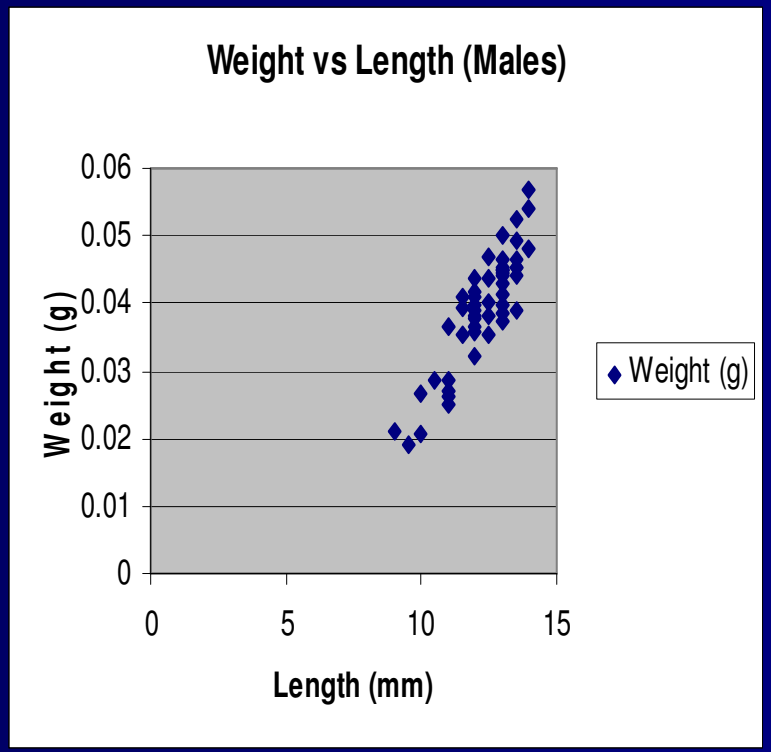
- *Mating Pairs collected and preserved at monthly intervals to assess size and female fecundity (reproductive success and potential). This data will be used to determine average fecundity of the population and changes over time.*

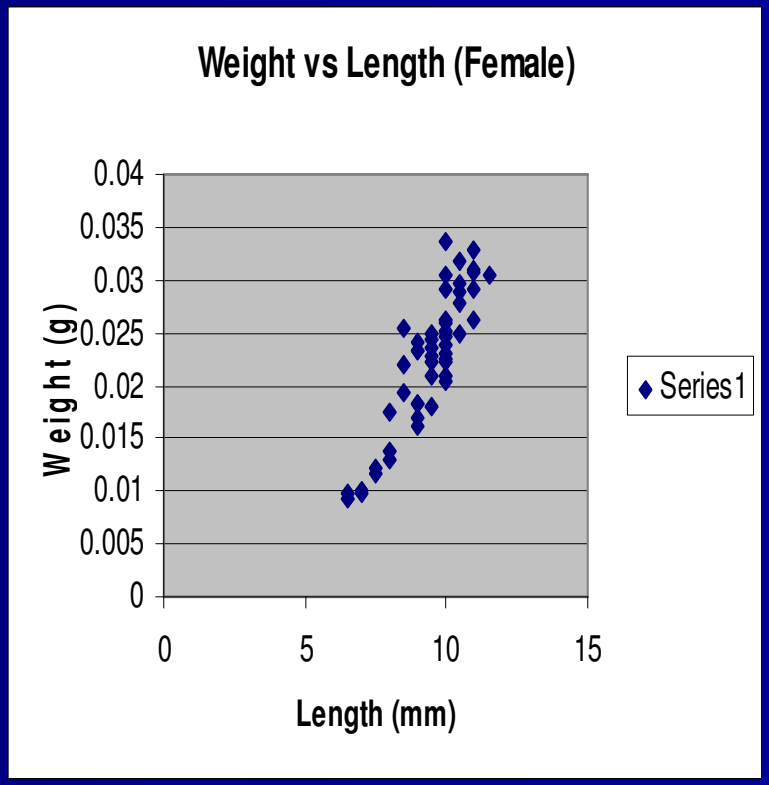
Materials and Methods



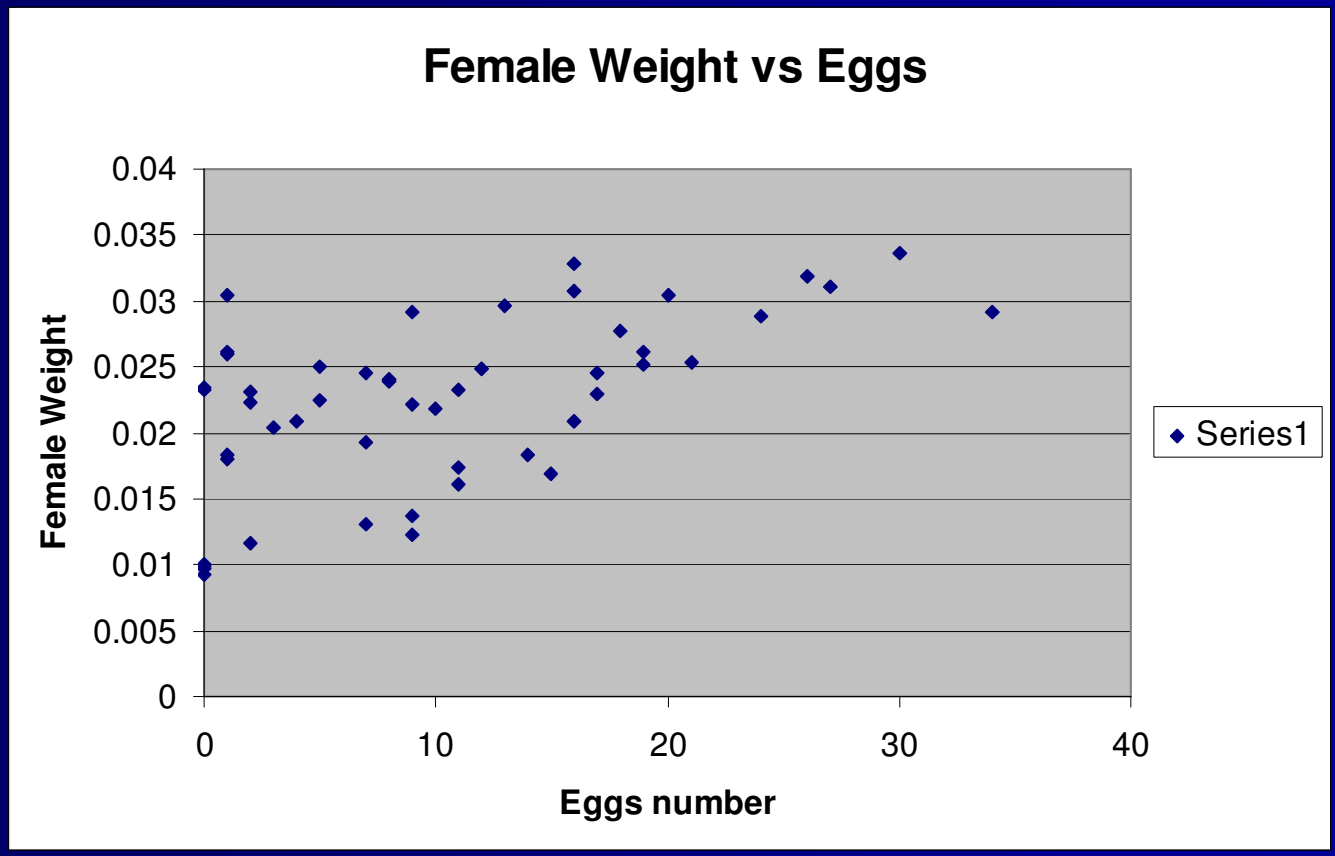
- *Using the same methods as in population data, we collected mating pairs on a monthly basis, measuring males and females, and assessing the number of eggs in the female's brood pouch.*

Data: Experiment II





Data: Experiment II Female Fecundity



Conclusion: Experiment II

- *Though more data must be obtained, we are fairly sure that there are significant differences between our populations and others in different areas. More data must be obtained in order to gain a yearly pattern in fecundity and size changes.*

Further Questions and Explorations

- *What is the reproductive timing of Gammarus pseudolimnaeus in the Chesapeake Bay Watershed?*
- *How far does the species extend?*
- *How does fecundity vary among and between populations?*
- *How similar is our population, physiologically and genetically, to better studied populations in the north and west?*

Acknowledgments

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