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Growth Dynamics for *Pomacea maculata*

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Abstract

Pomacea maculata is a relatively new invasive species to the Gulf Coast region and potentially threatens local agriculture (rice) and ecosystems (aquatic vegetation). The population dynamics of *Pomacea maculata* have largely been unquantified. We directly measured the growth rates of individually marked snails grown in a common tank to quantify their growth patterns. But due to large intra- and inter- individual variability and sample size, we were not able to get statistically supported estimates (i.e., tight confidence intervals) on overall growth dynamics. However, we were able to use a model comparison statistic to determine that there are distinct growth stages. Further, these data strongly suggest that male and female growth dynamics are notably different. We designed additional lab experiments and field studies; currently we are doing simulation studies and parameter estimations based on observed variability from the data we are collecting.