Hemioniscus balani: Effects of Multiple Infections

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Ecology, Evolution, and Marine Biology


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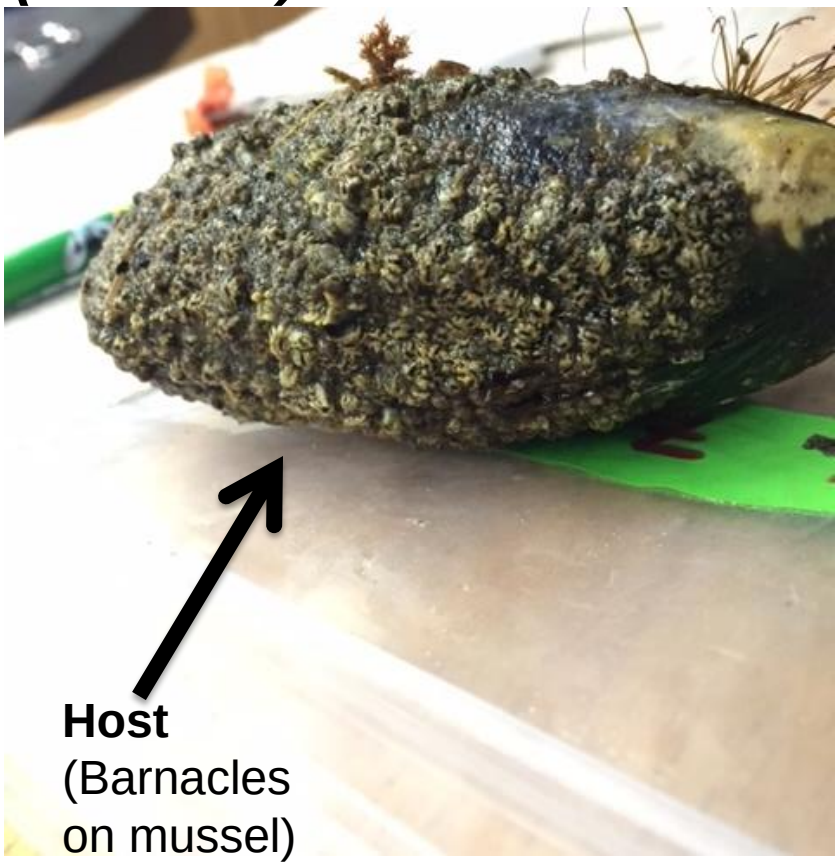
Parasites make up 60% of all Animals

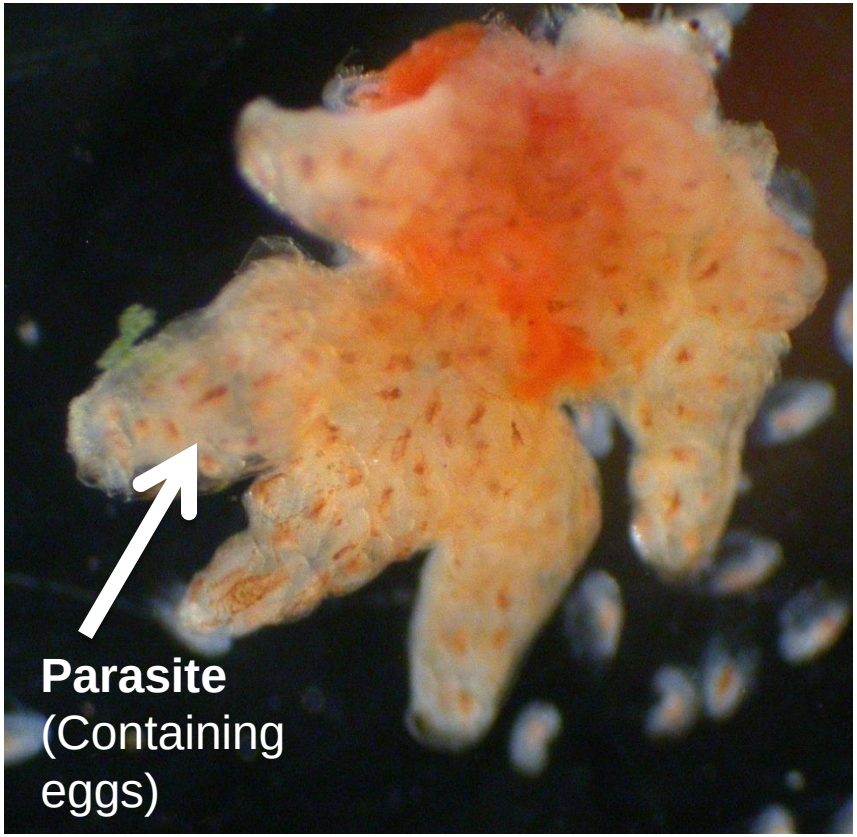
Much to be discovered

Host and Parasite

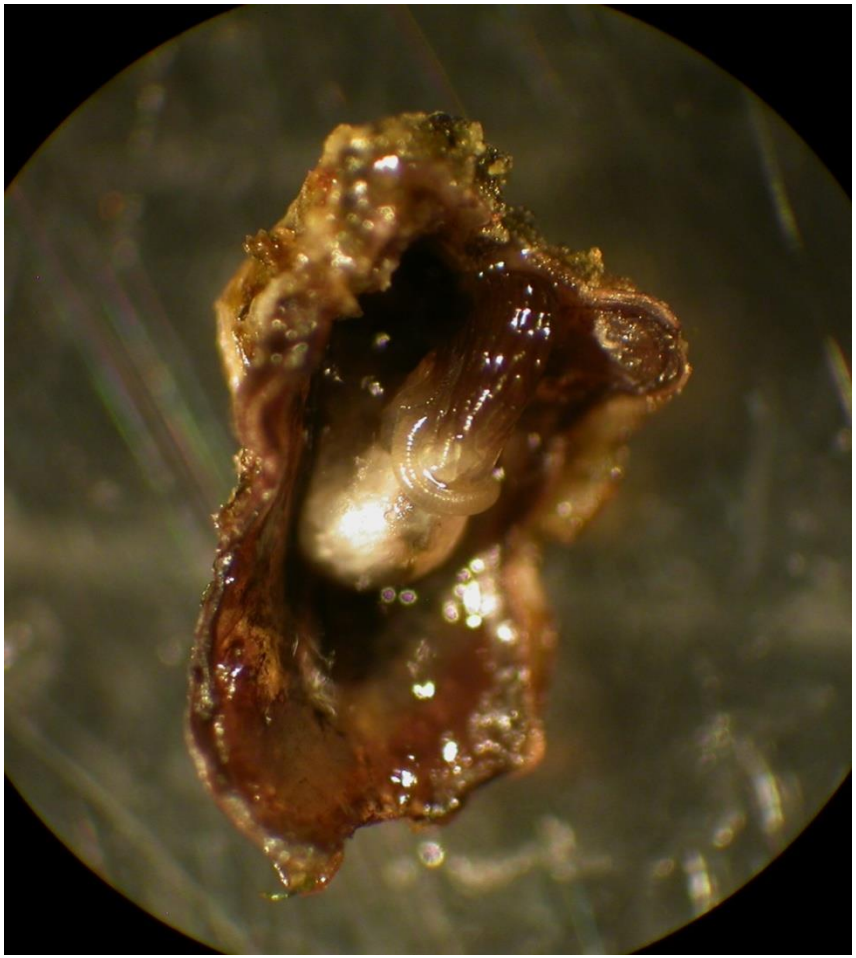
Chthamalus fissus
(C. fissus)

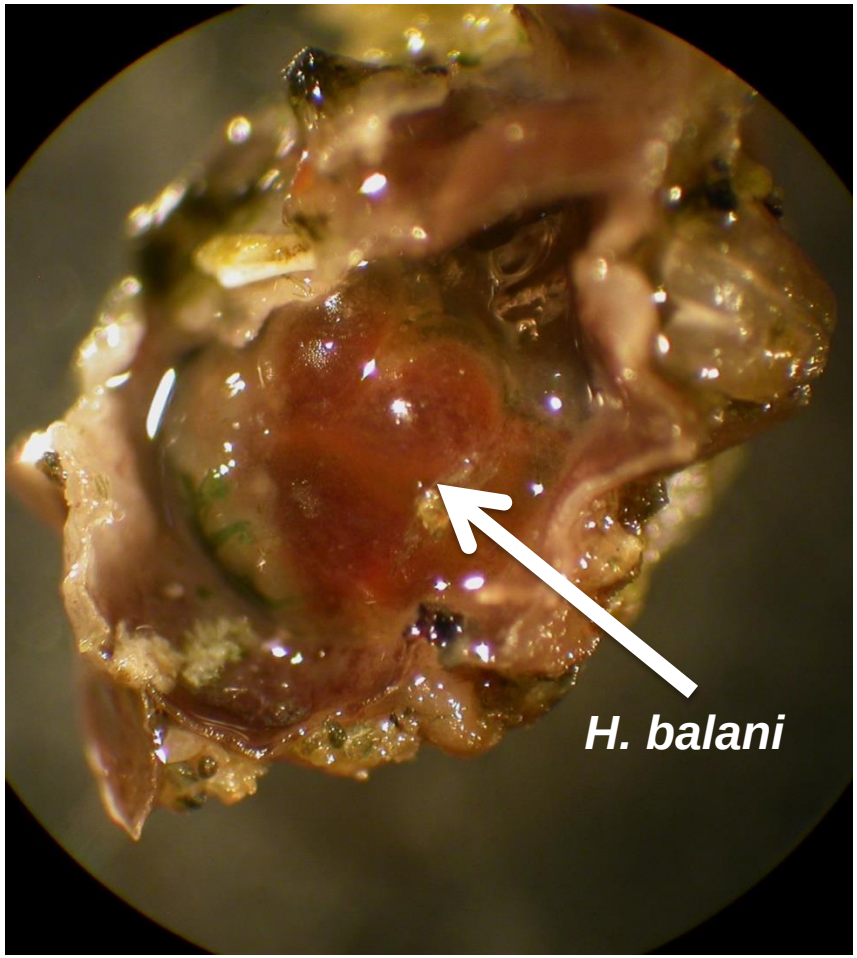


Hemioniscus balani
(*H. balani*)



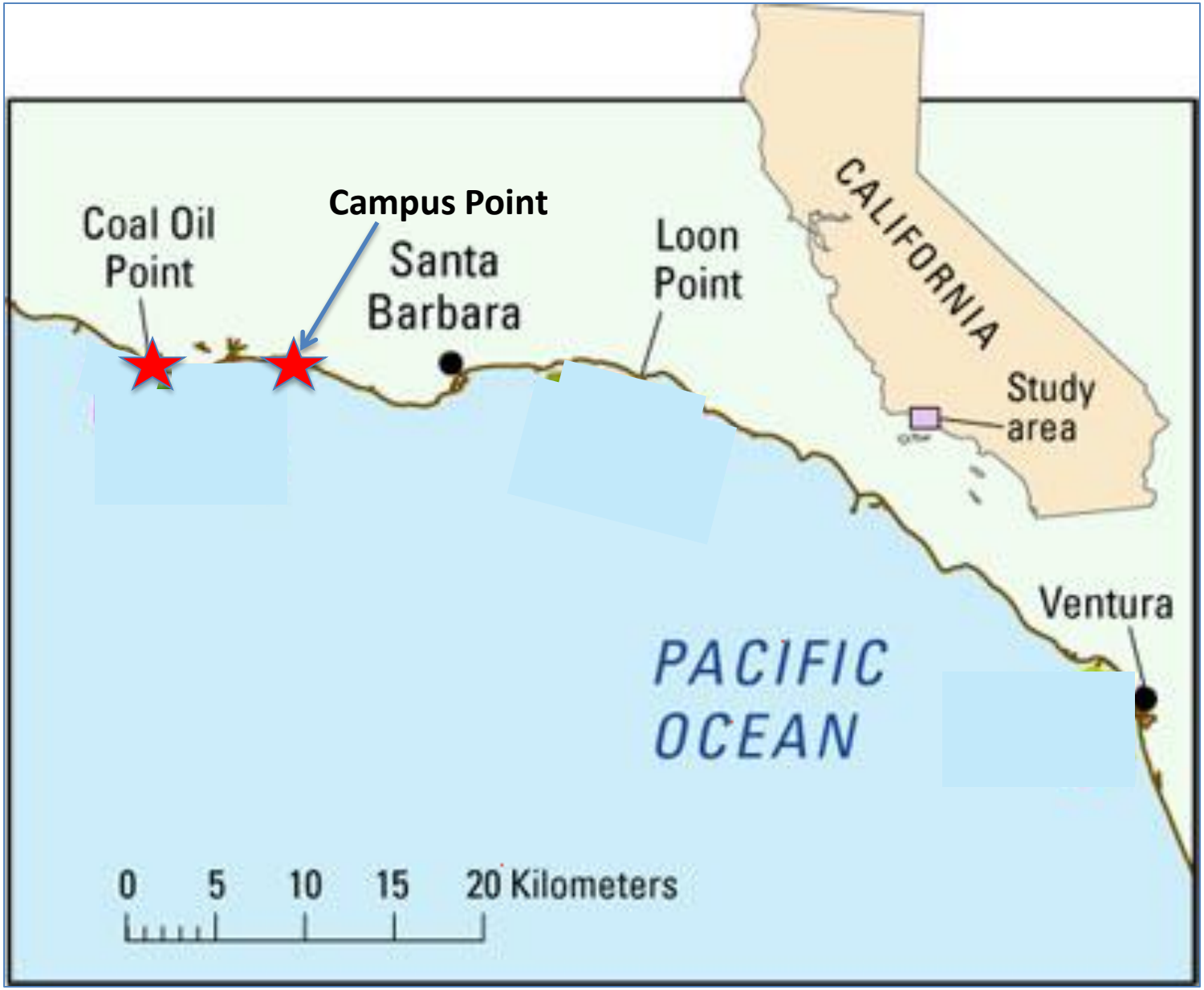
Uninfected Host vs. Infected Host





Hypotheses

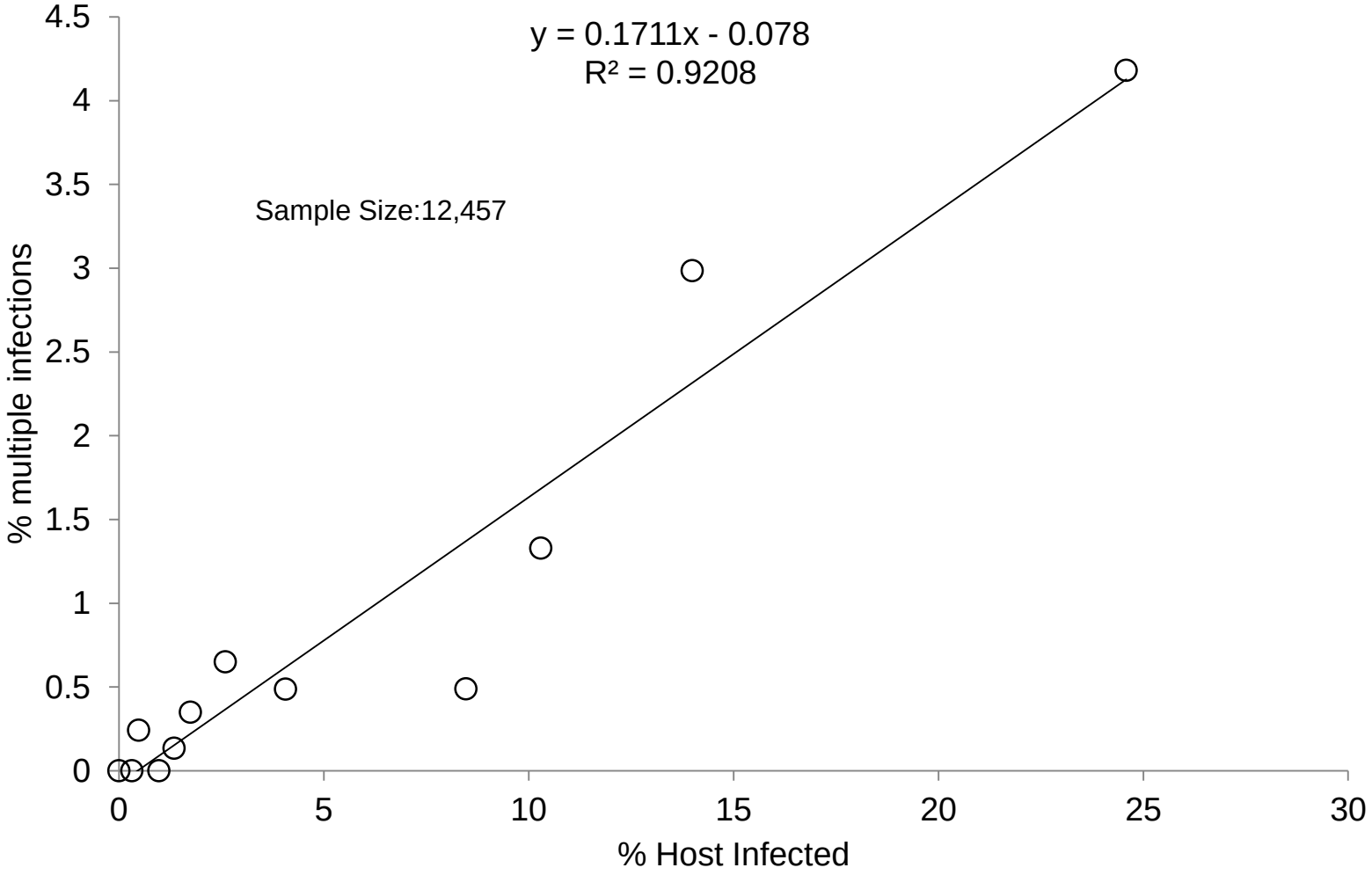
- As % host infected increases multiple infection will increase
- Larger barnacles make optimal hosts
- There will be competition
  - In multiple infections one parasite will be the dominant egg producer



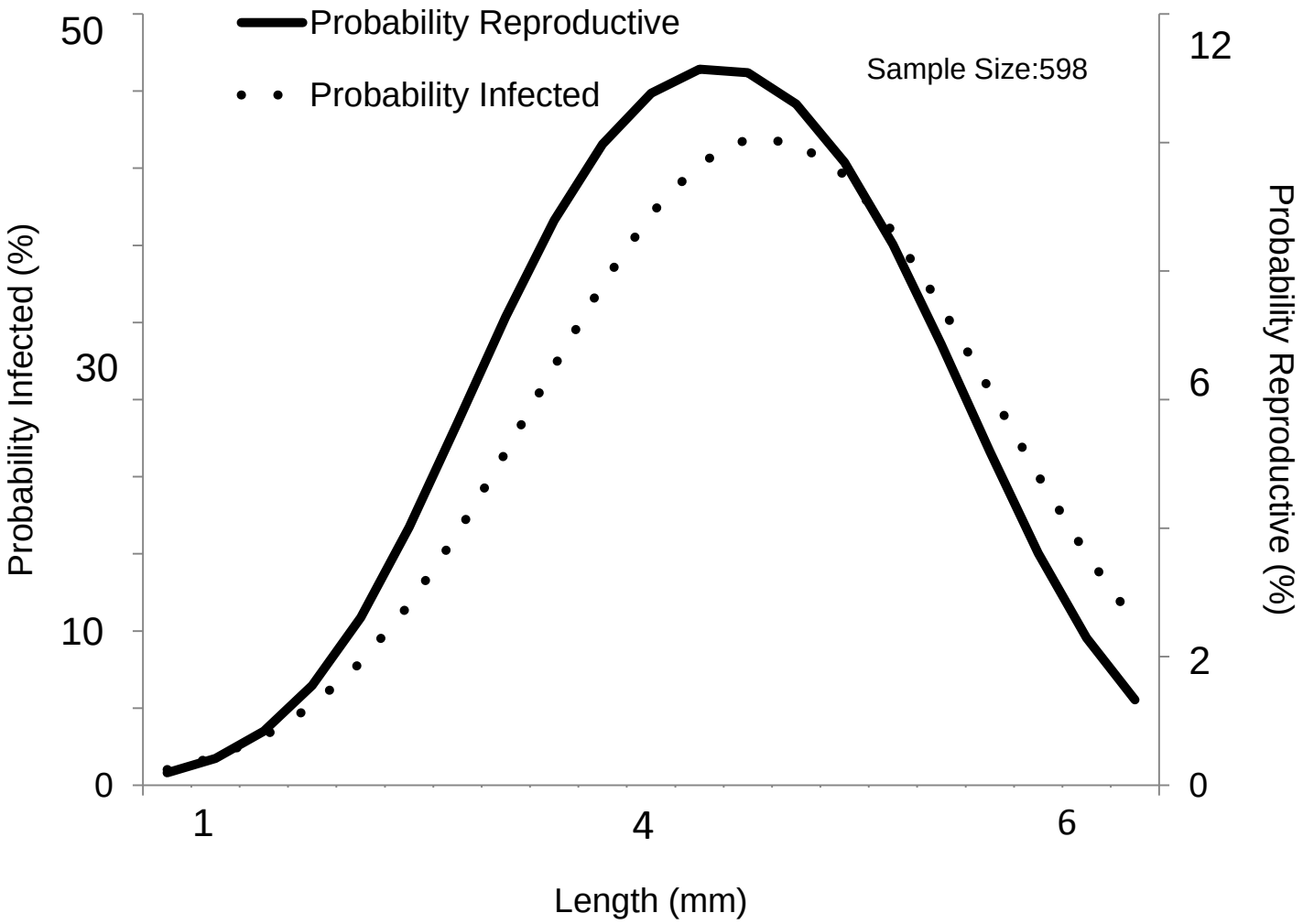
http://soundwaves.usgs.gov/2006/09/LandSea.jpg

Focusing on the Parasite Within the Barnacle

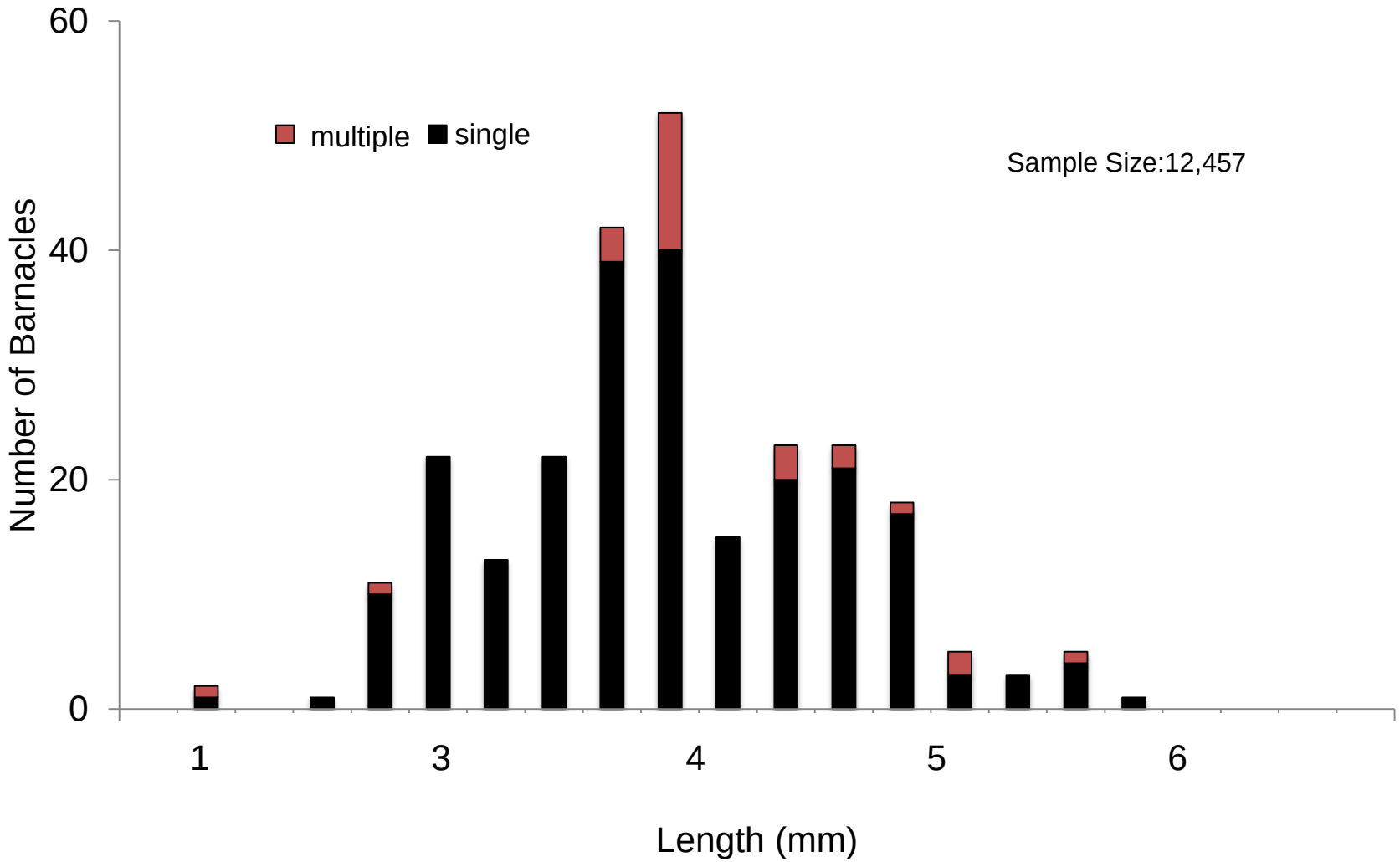
When Prevalence Increases Multiple Infection Increases



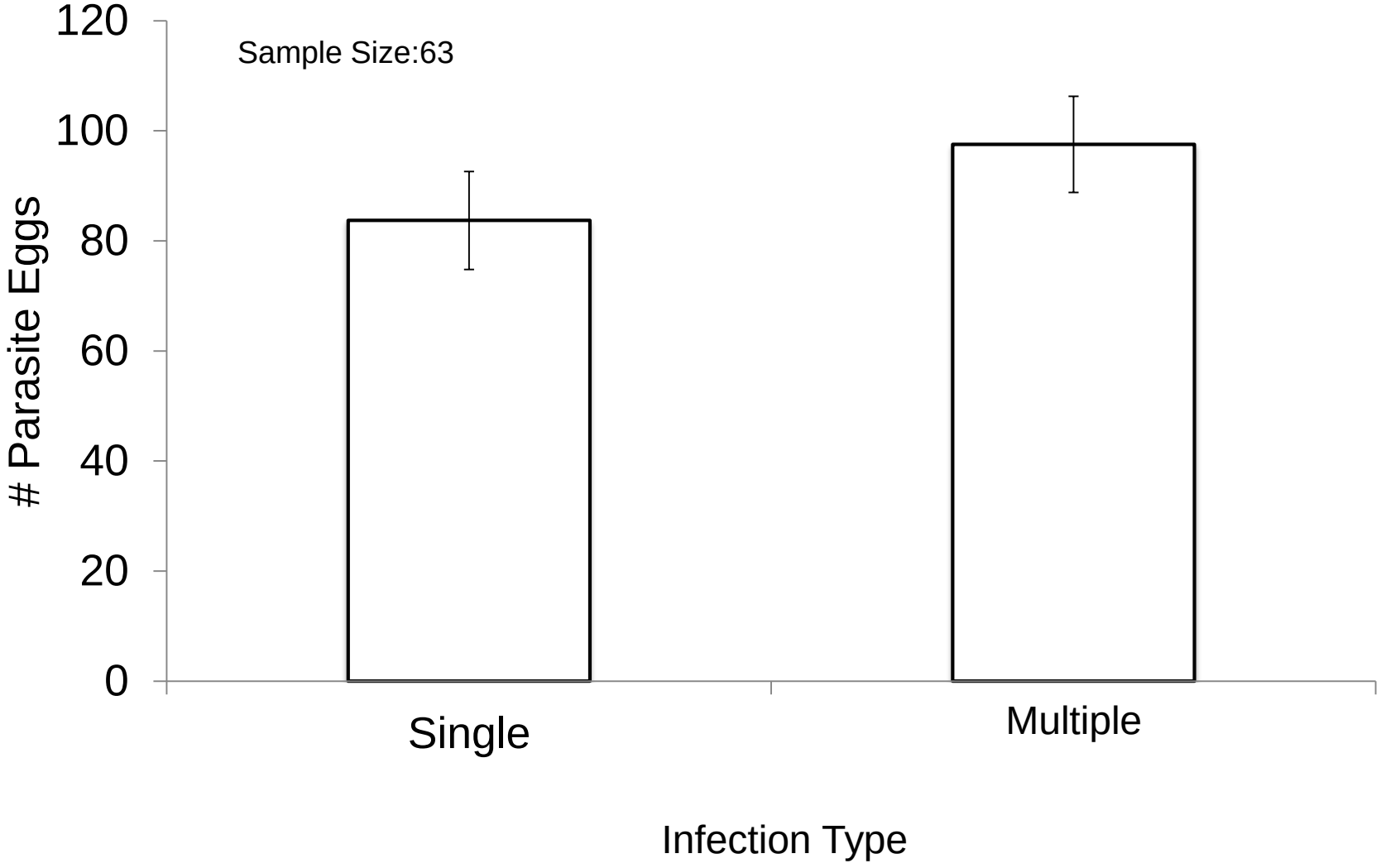
Infection Correlation to Host Size



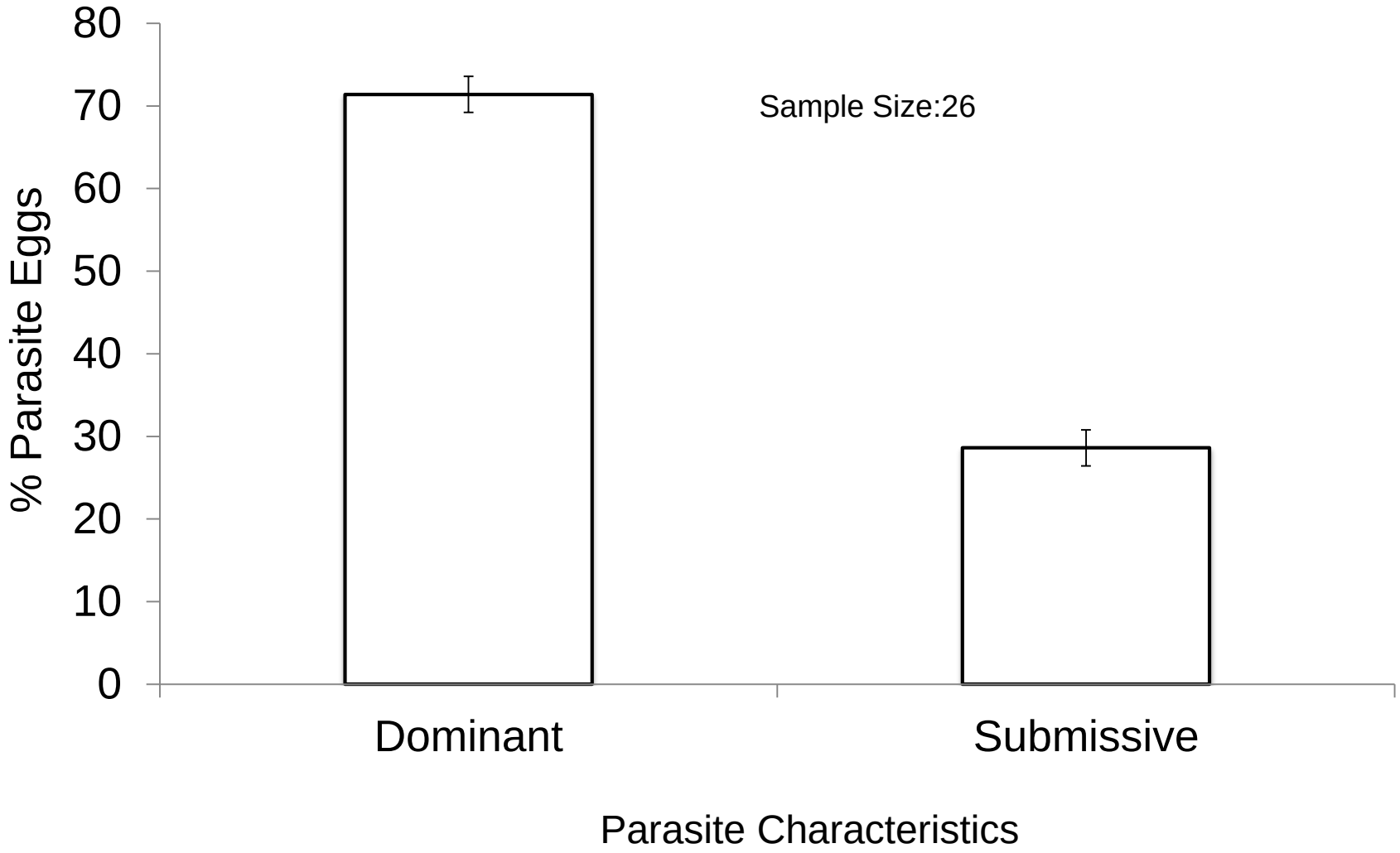
Single vs. Multiple Infections



Egg Production Related to Number of Infections



Competition Occurs when Multiple Infections Exist



Conclusions

- More hosts infected, multiple infections more likely
- Intermediate host size (≈4mm) optimal
- Number of infections does not affect net egg production
- Data suggests strong evidence for competition

Further Research

- Host location correlated to infection rate
- Other species infected by the parasite