Interactions between the European Green Crab and the Asian Shore Crab

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Invasion Timeline – C. maenas Replacement



Replacement of Carcinus by Hemigrapsus



Invasion Timeline – C. maenas Replacement



Spatial Overlap



Field Survey



Distribution and Replacement



Research Questions

Does exclusion of adult *H. sanguineus* affect densities of *C. maenas* and *H. sanguineus* recruits?

Are effects of adult *H. sanguineus* on densities of *C. maenas* and *H. sanguineus* recruits density dependent?

Exclusion Experiment



Predator Community

Full Cages



Effectively Excluded Predators

Open Cages



27 *H. sanguineus:* 1 *C.maenas* (>10mm CW)

>100 H. sanguineus: 1



Effect of Caging on Newly Recruited Crabs



Summary: Exclusion Experiment



Research Questions

Does exclusion of adult *H. sanguineus* affect densities of *C. maenas* and *H. sanguineus* recruits?

Are effects of adult *H. sanguineus* on densities of *C. maenas* and *H. sanguineus* recruits density dependent?

Inclusion Experiment



Recruit Densities: Control Treatments



H. sanguineus Recruits



	Effect on <i>H. sanguineus</i>
	< 10 mm CW
<i>H. sanguineus</i> adults	\checkmark
<i>C. maenas</i> adult	ns
<i>C. maenas</i> <10 mm CW	ns

Intercohort Conspecific Predation/Displacement

C. maenas Recruits



	Effect on <i>C. maenas</i> <
	10 mm CW
H. sanguineus adults	ns
C. maenas adult	ns
H.sanguineus <10 mm CW	\checkmark

Intracohort Heterospecific Predation/Displacement

Summary: Inclusion Experiment

H. sanguineus Dominated Prey Community



C. maenas

H. sanguineus

Conclusions: Juxtaposing Results



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