



Green Crab Trapping Survey

2013 one-day, coast-wide effort

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Photo courtesy of Beth Bisson

Background

- Conversations between DMR, Maine Clammers Association and industry in the spring of 2013
- Consensus that green crabs are a serious problem
- Uncertainty about extent and degree of problem coast-wide



Photo courtesy of Weston Watts

Concept

- DMR collaborated with Dr. Brian Beal and developed a plan for a one-day coast-wide trapping survey
- DMR requested volunteers and received responses from over 30 municipalities



Photo courtesy of Dana Morse

Goals

- To provide a snap-shot of the locations and relative abundance of green crabs populations statewide
- Raise awareness of municipalities regarding green crabs and their impact on shellfish resources



Photo courtesy of Phil Sandine

Methods

- Volunteers asked to set up to 10 traps on August 27th
- Lobster traps with vents closed or specialized traps
- Select locations with current or historic clam abundance
- Traps to be set on soft bottom in water <20ft at low tide
- Bait with *Uca* spp. preferably



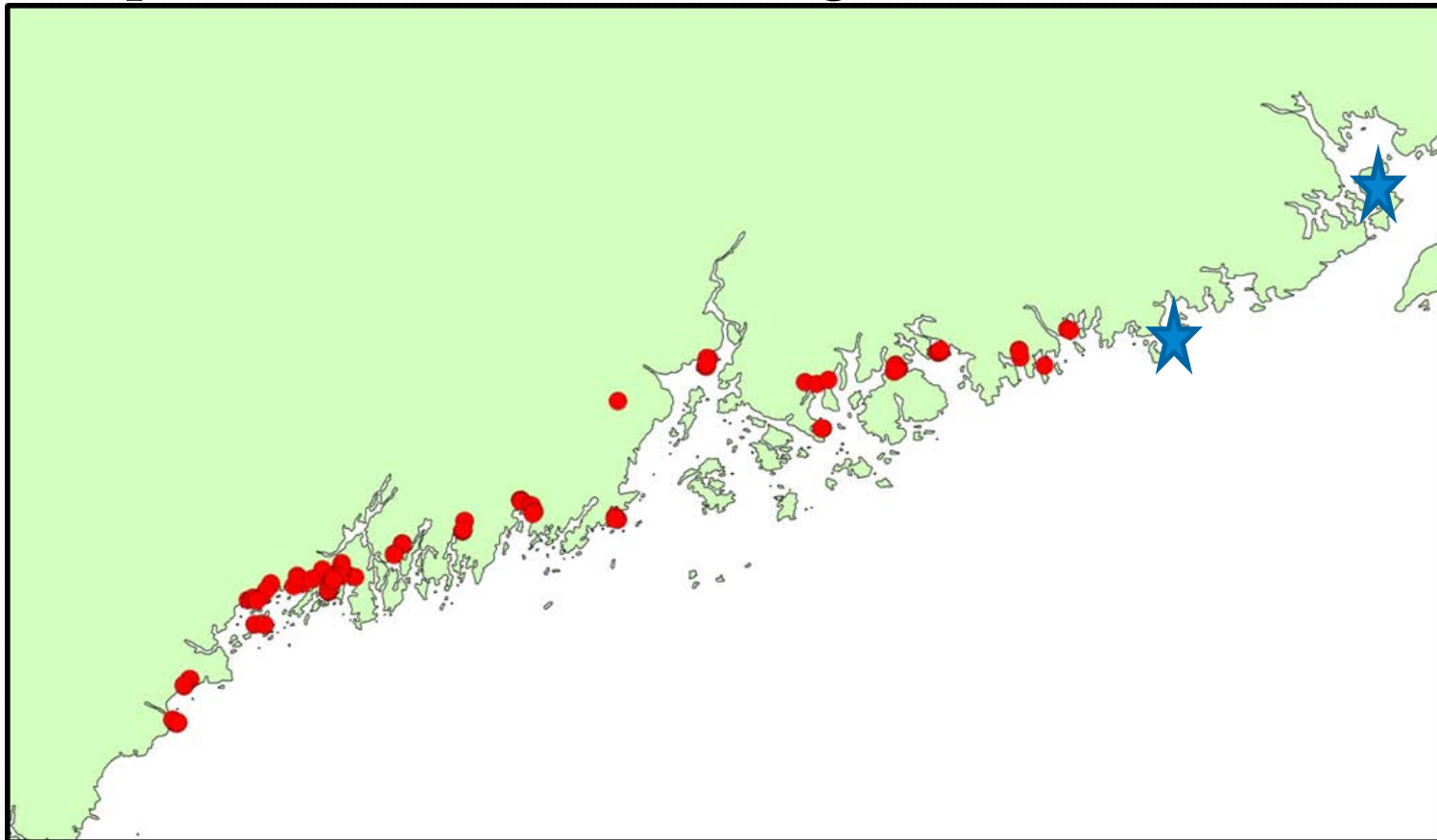
Photo courtesy of Beth Bisson



Photo courtesy of Chuck Jeff Nichols

Results

- Twenty-eight towns participated!
- 38 trips (multiple participants in some towns)
- 208 traps set: 193 collections of green crabs



Catch Per Unit Effort

- Highest CPUEs
 - Stockton Springs (191)*
 - Freeport (181)
 - Scarborough (151)
 - Waldoboro (146)
 - Biddeford, Trenton, Brunswick and Sorrento were all above 100 carbs/trap
 - Chebeague had very high catch but count crabs

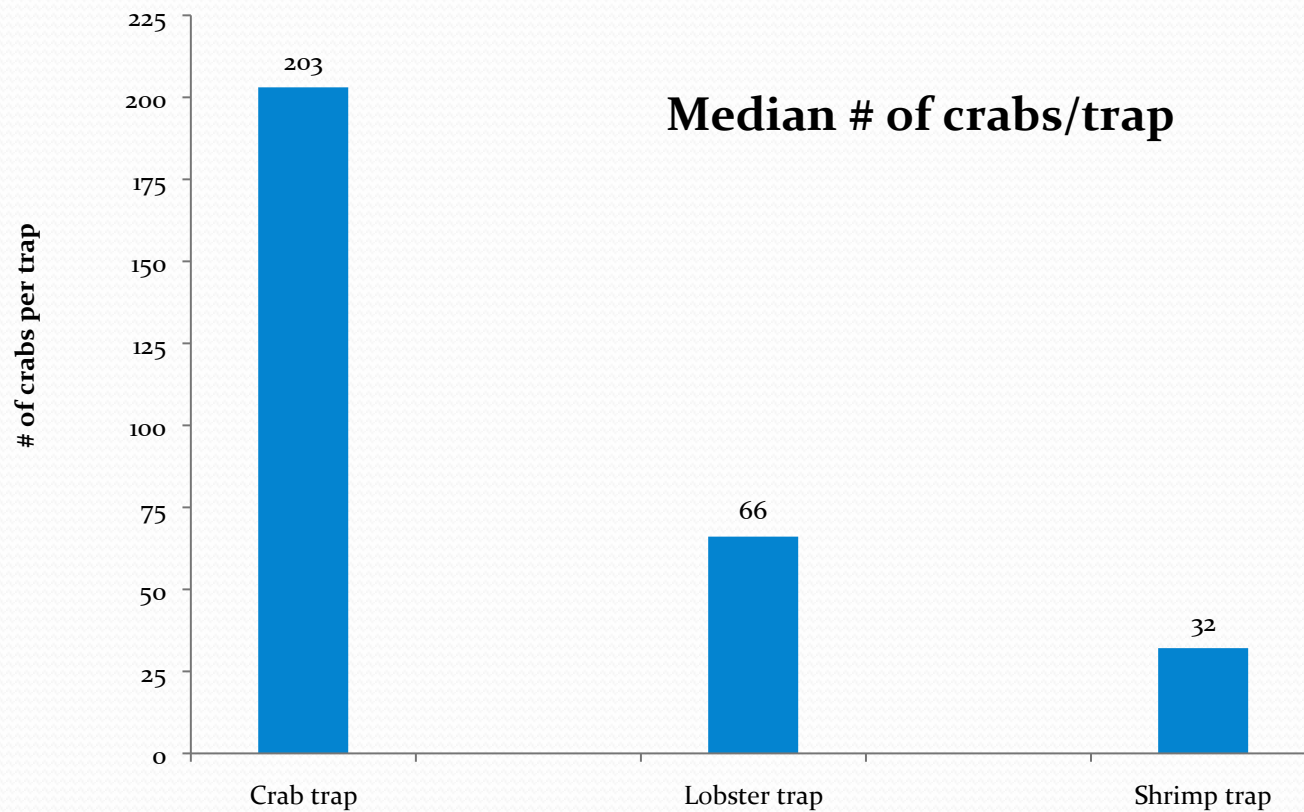
* - Harpswell had CPUE of 305 estimated



Photo courtesy of Phil Sandine

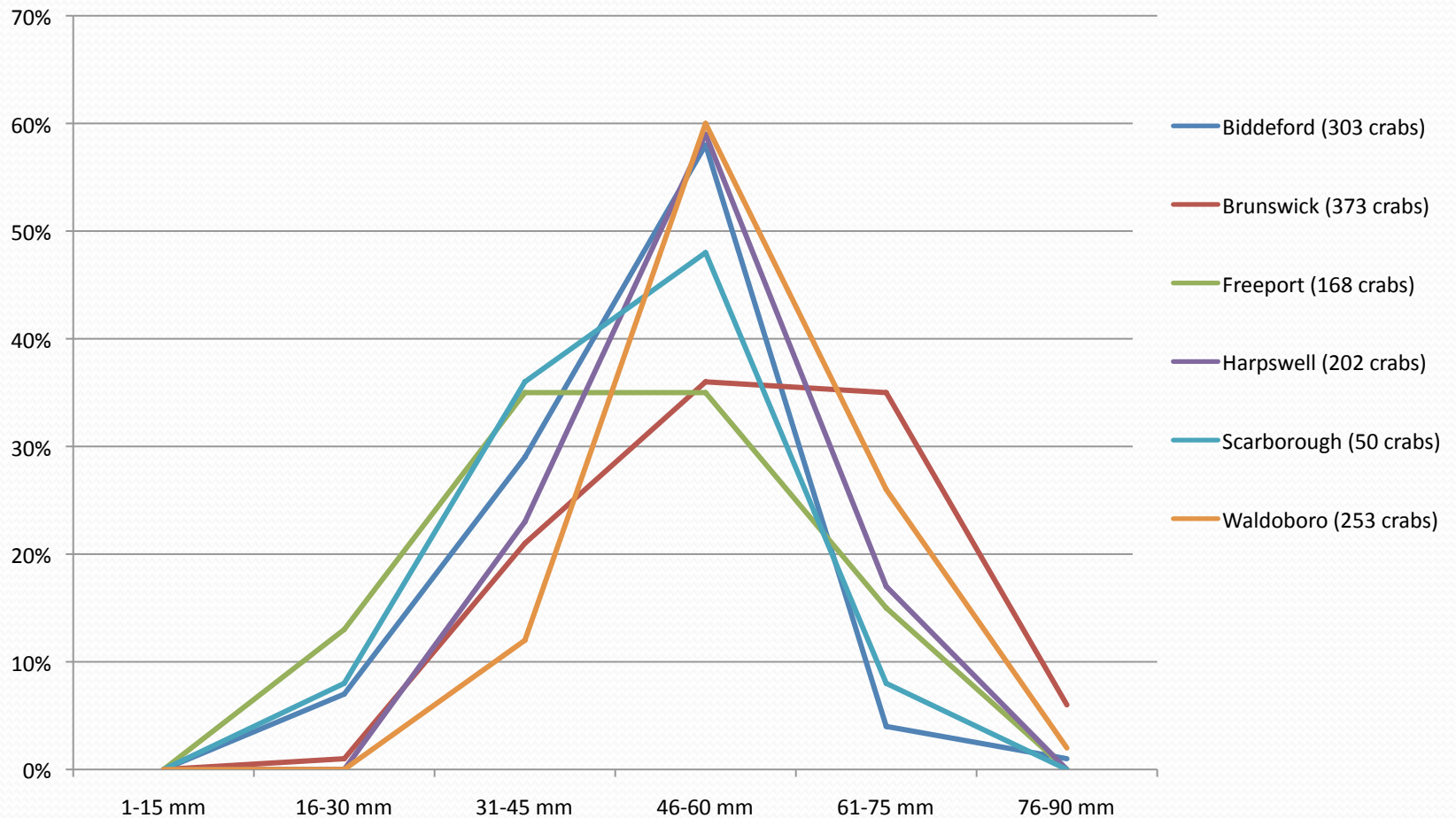
Results Continued.....

- Crab traps out fished lobster traps coast-wide (11 towns)

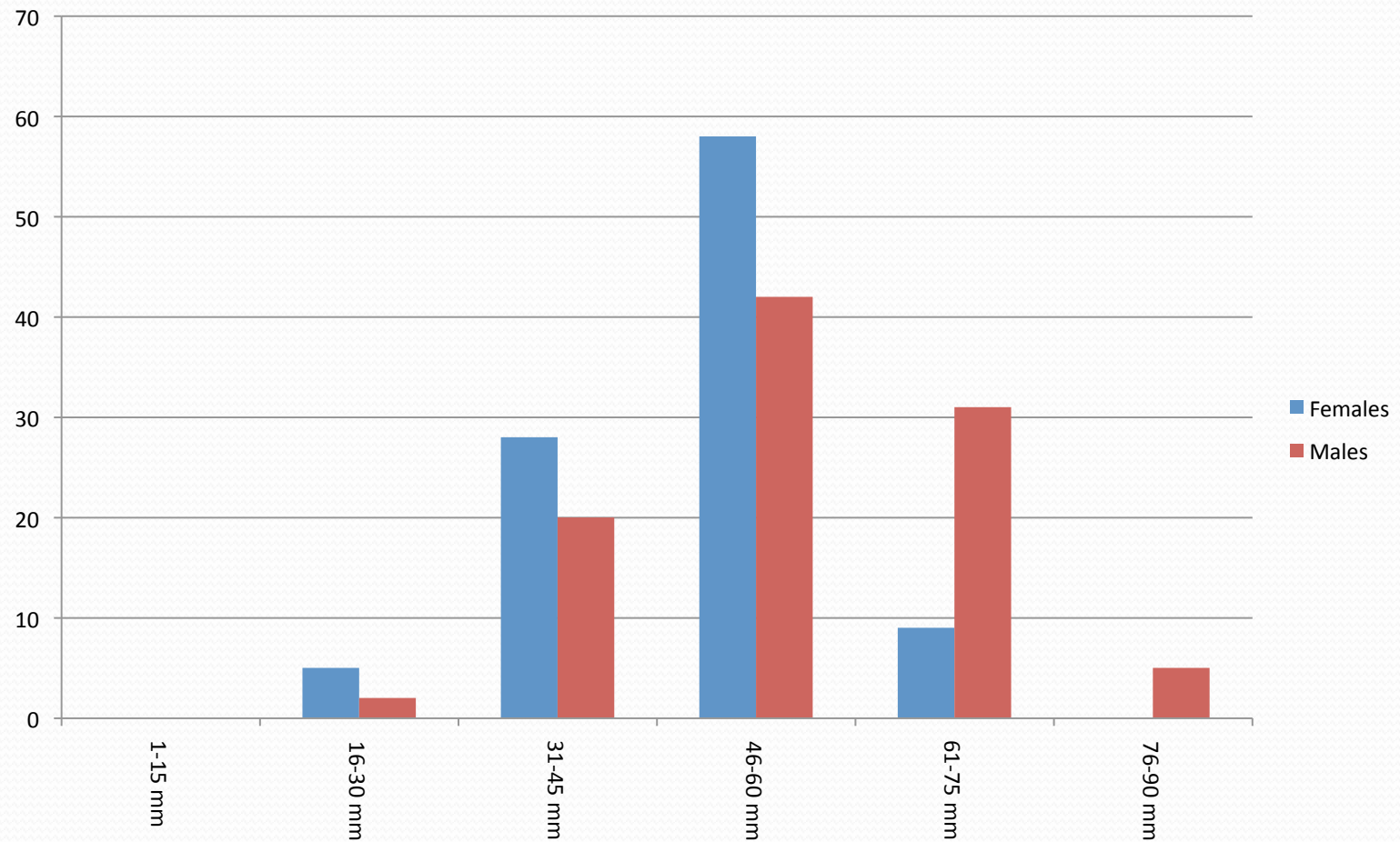


Size Ranges (crab traps)

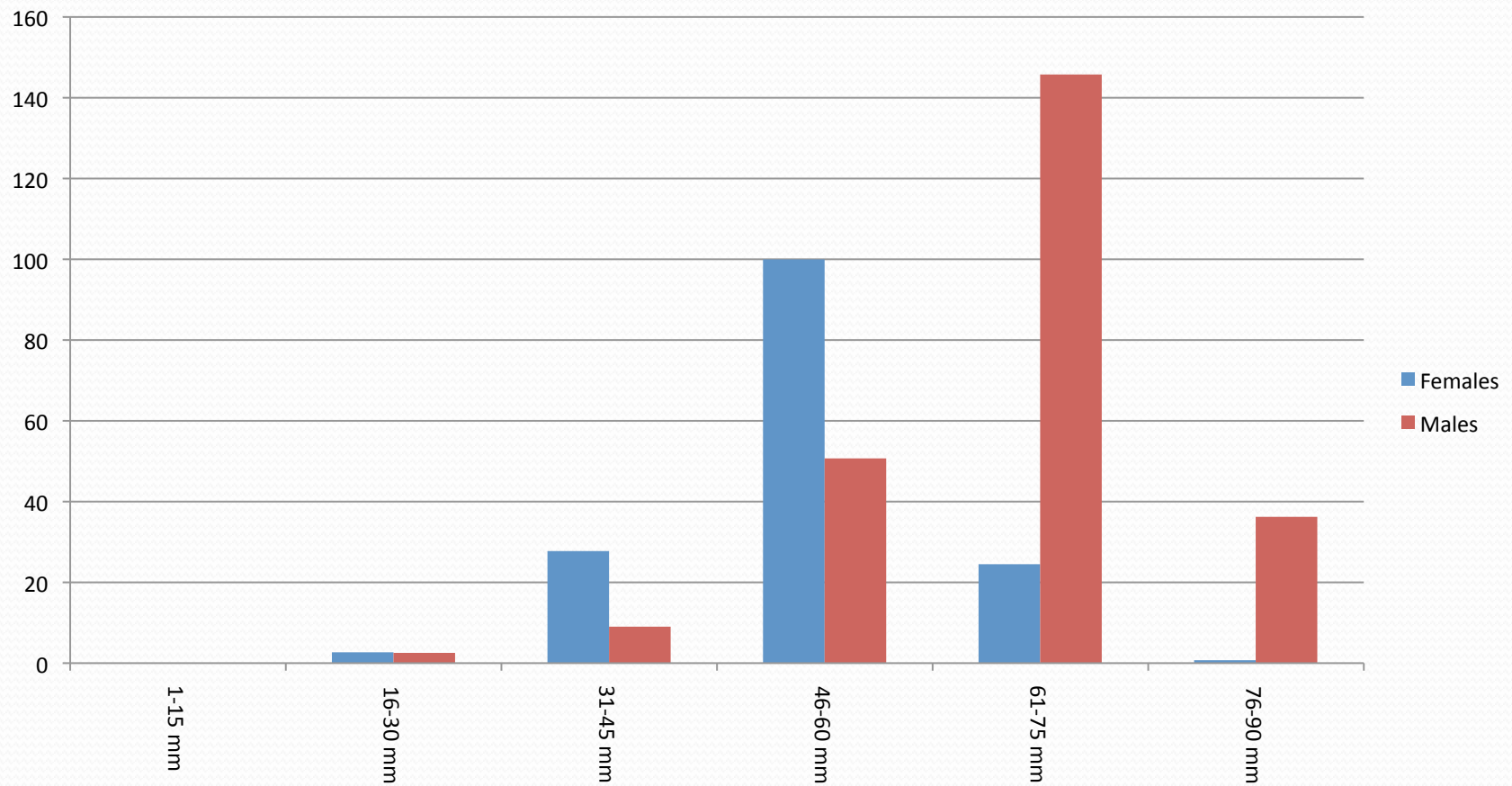
- 6 towns measured crabs



Size Ranges by sex (crab traps)



Size Ranges by sex (lobster traps)



Side by Side Trap Comparison

- Waldoboro set “Acer” crab traps next to lobster traps

Waldoboro Trap Results

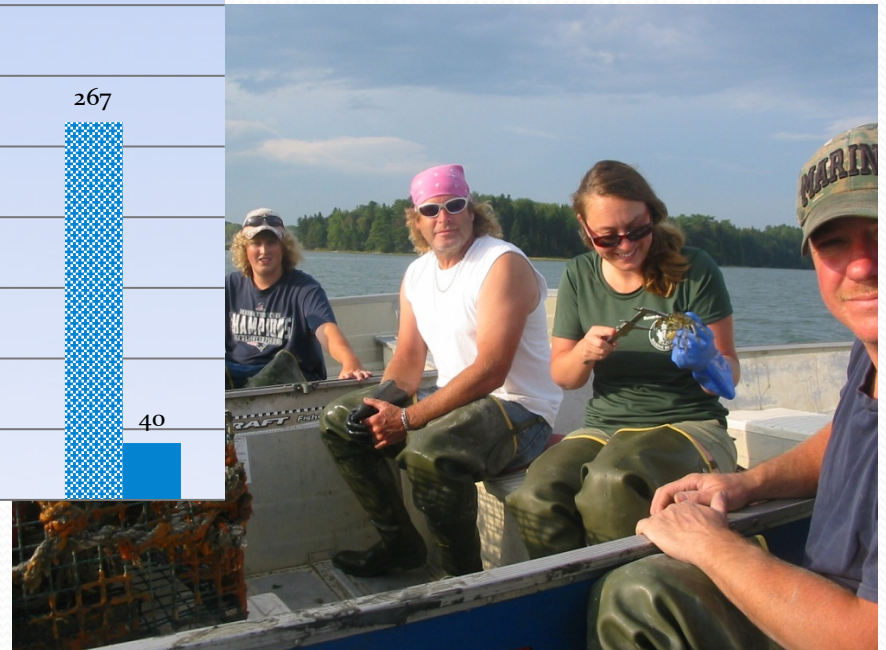
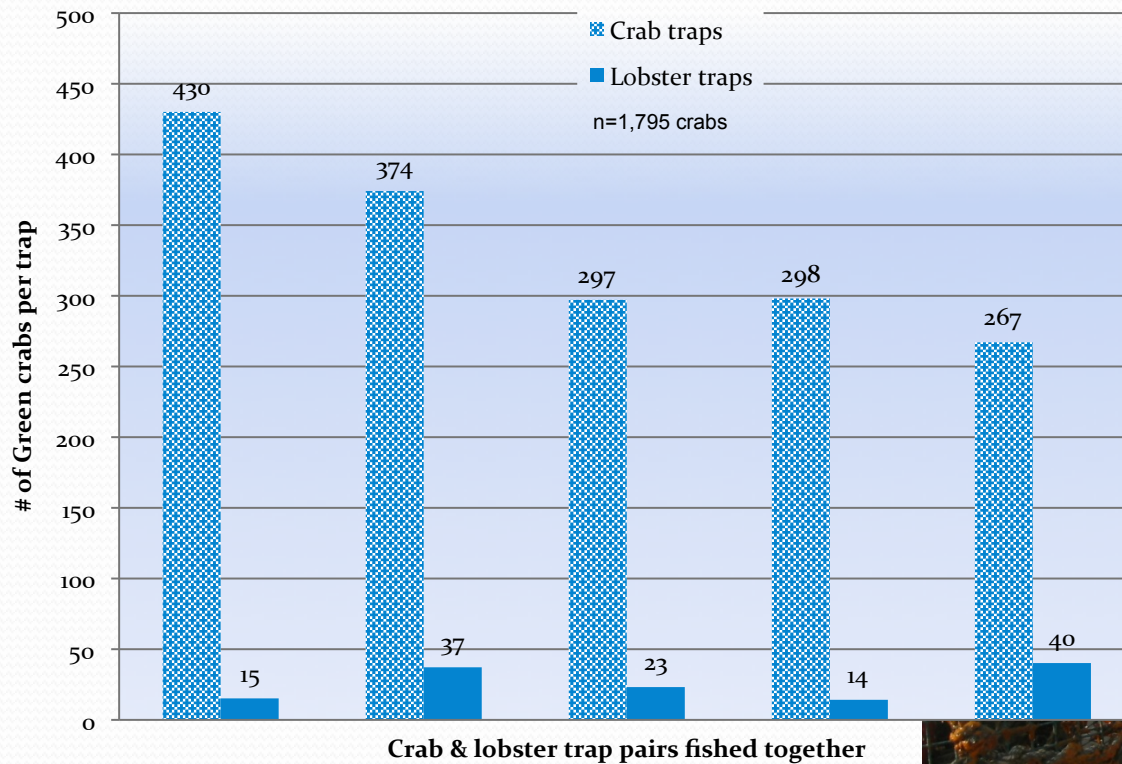


Photo courtesy of Chuck from Waldoboro



Photo courtesy of Jeff Nichols

Data Limitations

- Collected with many variables not controlled
 - Trap type
 - Bait type
 - Set location
- Some variables were controlled
 - Set time
 - Date hauled
 - Depth range

Conclusions

- Green crabs are distributed throughout the coast
- Population levels in many areas are detrimental to bivalve shellfish resources
- 21 of 28 towns sampled appear to be over the “control” population level ($<20/\text{trap}/24 \text{ hour set}$)*



Photos courtesy of Weston Watts and Jeff Nichols

Conclusions Continued.....

- Crab traps out-fish lobster traps even with closed vents



Photo courtesy of Jeff Nichols

Success of the Project

- *To provide a snap-shot of the locations and relative abundance of green crabs populations statewide*
- Verified reports from harvesters state-wide that green crabs are present in most areas and in numbers detrimental to bivalve shellfish resources



Photo courtesy of Dana Morse

Success of the Project Ctd....



Photo courtesy of Glen Melvin

- *Raise awareness of municipalities regarding green crabs and their impact on shellfish resources*
- “We were all shocked as we didn’t expect to see any crabs. We have not seen any on the mud lately and lobsterman have not had many in their traps.”

Acknowledgements

The Volunteers!

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DMR staff

- Denis Nault, Peter Thayer, Hannah Annis
- Michelle Mason, Kay Evans
- Jeff Nichols
- Volunteer scientists

SeaGrant staff

Brain Beal



Photo courtesy of Jeff Nichols