

Putting Mittens on a Crab



Alyson
Eberhardt
NH Sea Grant
UNH Coop
Extension

Beth Bisson
Maine Sea Grant
NEANS meeting
Glen Falls, NY
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Judy Pederson
MIT Sea Grant

Outline

Mitten crab background

Project overview

- Outreach plan
- Rapid response plan

Timeline of activities

Request for input from the panel



Occurrence in the United States



Invasion history

Fisheries



Ballast water

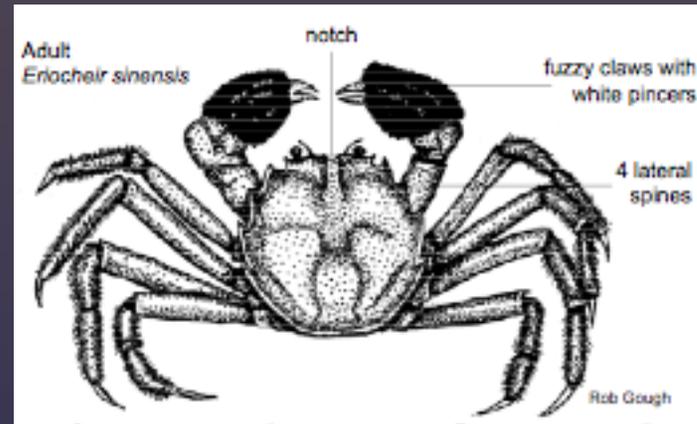


RCN America Network

Identification



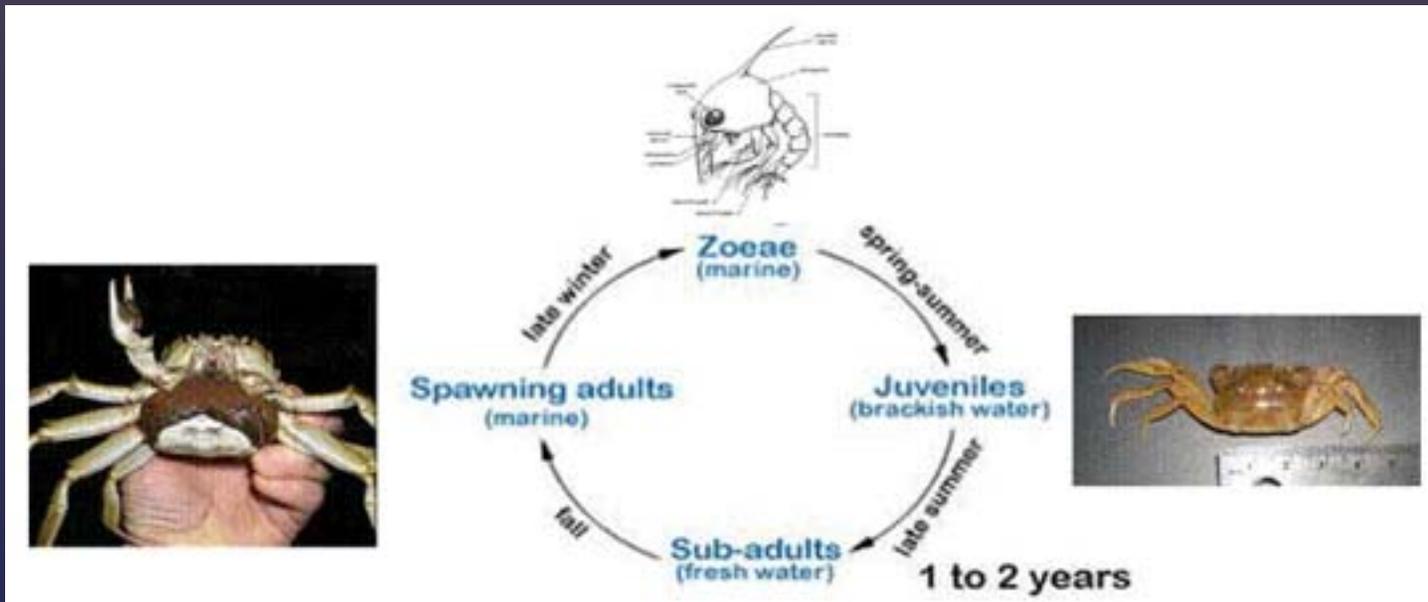
Photo: Dr. Wolfgang Robitsch



- Dense fuzzy patches on claws
- Claws - equal size and white-tips
- Four lateral spines on each side of carapace
- Notch between the eyes
- Carapace light-brown to olive green color; width up to 4 in
- Sharp-tipped walking legs over twice as long as carapace width

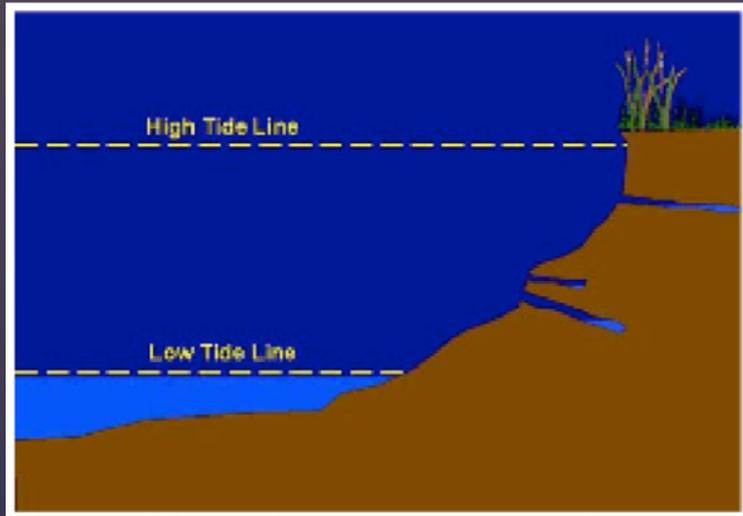
Life History

- Catadromous
- Tolerate a wide range of temperatures
- Able to survive in highly altered and polluted aquatic habitats
- Adept at walking on land and around barriers
- Omnivorous



http://www.serc.si.edu/labs/marine_invasions/news/mitten_crab.aspx

Habitat impacts



CA Dept Fish and Game



Jim Johnson, San Francisquito Watershed Council

Other Potential Impacts

- Ecological
- Fisheries
- Power plants
- Agriculture
- Human health



Mitten Crab Project Overview

Funded by National Sea Grant office

Project area:

- Gulf of Maine (citizen monitoring)
- Northeast region (rapid response plan)



Mitten Crab Project Overview

Project goals

1. Identify GOM habitat most vulnerable to invasions

1. Create an early detection network of citizens and professionals to help observe and report early sightings

1. Develop a rapid response plan



Risk Assessment

- ME, NH, MA
- Criteria developed from the literature
 - e.g., size, flushing time, tidal influence
- Areas ranked on habitat suitability
- Rank data used to guide citizen monitoring activities

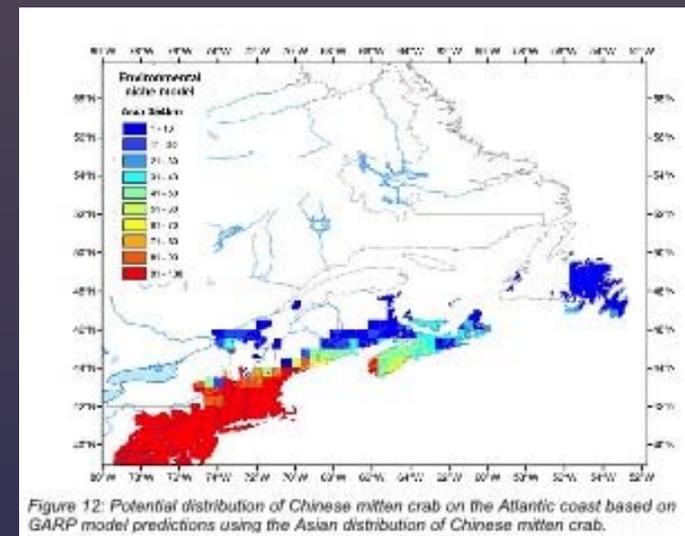


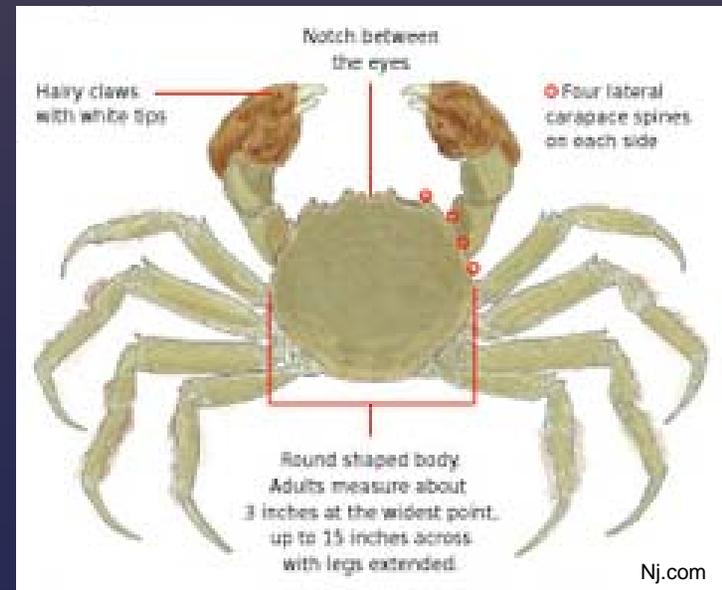
Figure 12: Potential distribution of Chinese mitten crab on the Atlantic coast based on GARP model predictions using the Asian distribution of Chinese mitten crab.

Therriault et al. 2008

Early Detection Network

Target audiences

- Citizen monitoring groups
- Recreational boating associations
- Commercial fisherman
- Aquaculturists
- Harbormasters



Early Detection Network

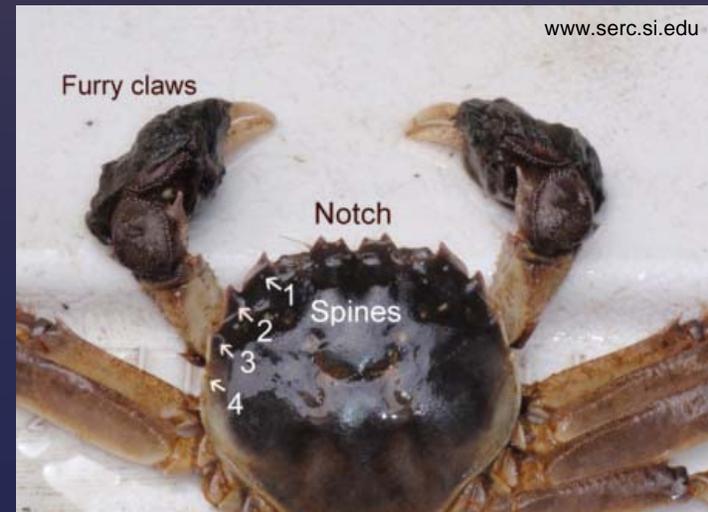
Workshops

- Identification
- Monitoring protocols
- Documenting observations
- Communicating with natural resource managers

Watch card

Boat launch signs?

Permit mailings?



Monitoring for mitten crabs

- Can be difficult to find
- Look below the first barrier (dam, weir) in the system
- Burrows in soft sediments in tidally influenced areas
- Check quiet pools at the creek edge
- Look for leg movement in areas with leaf litter
- Best time is late summer or early fall
(when the adults are migrating down from freshwater)
- Most often exoskeletons (rather than live crabs) are found



Rapid Response Plan

Identify point people in each state

Funding resources

Document and verify sightings
(SERC)

Surveys and mapping

Quarantine procedures

Control methods review

Eradication

Monitoring

Assessment

Outreach

Regulatory compliance



Project timeline

Now

- Develop outreach materials
- Draft rapid response plan

Spring 2014

- Outreach workshops
- *Draft rapid response plan**

Fall 2014

- Final rapid response plan
- Outreach and RRP workshops

Spring 2015

- Outreach and RRP workshops
- RRP meetings



Request for NEANS assistance

- *Identify contacts

- *Funding resources

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(SERC)

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- *Regulatory compliance

- *Rapid response plan reviewers



Questions?

