

# Highlights of RAS

NEANS Panel Meeting

May 6, 2020

Judith Pederson and RAS Participants

# Native, Cryptogenic, Non-native



Native anemone  
*Edwardsia lineata*



Cryptogenic sea slug  
*Cuthona gymnota*



Little club tunicate  
*Clavelina lepidatus*

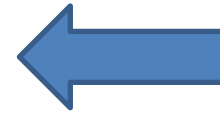
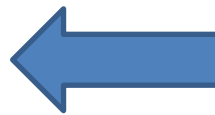
And Changes in Status Thanks to DNA Analysis



Native Tunicate, *Molgula manhattensis*



Vase Tunicate, *Ciona intestinalis*

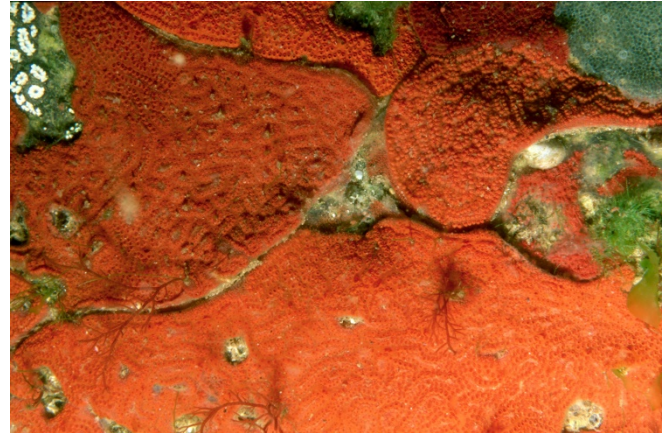


# Old Faithful Species

## Found at 80-90% of all sites visited



Star Tunicate – *Botryllus schlosseri*  
is both native and non-native



Purple/orange/tan/yellow sheath  
tunicate, *Botrylloides violaceus*



Asian Shore Crab, *Hemigrapsus sanguineus*



European Green Crab, *Carcinus maenas*



# Other Old Faithfuls over the Years

Larry Harris and  
Kevin Cute in  
foreground



Jan Smith



Gretchen Lambert



National Geographic filming  
Jim Carlton for a video

# Old, New and Expanding, and Ephemeral



1. *Botrylloides violaceus*, wide spread tunicate that appears at nearly all locations
2. Newly introduced bryozoan, *Tricellaria inopinata* that is found from New York to New Hampshire
3. Calcareous worm, *Dianthus elegans*, appeared for only a summer and is called ephemeral

# The difficult “smalls”



Megan  
McCuller  
identifies  
bryozoans



Isopod



Niels Hobbes identifies crustaceans,  
including amphipods, isopods



Bryozoan

**Smaller Species are underrepresented in all categories, and few are classified as introduced or cryptogenic**



# Adaptations of organism from South to North

- Warm water species adapted to northern climes



*Codium* now found in  
Nova Scotia, adapted to  
colder climes

*Grateloupia* is considered  
a warm water species and  
is now found in New  
Hampshire

