A Community that Explores, Shares, and Learns

State of the Bay Conference
October 21, 2010
Alexa Dayton

Gulf of Maine
Research Institute

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Science. Education. Community.

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Cultivating a Scientifically-Literate Public

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Vital Signs

A learning community that produces real data for science about a question of regional and global concern.

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Maine's Natural Heritage Assets

- 32,000 miles of rivers and streams
- 6,000 lakes and ponds
- 5,000 miles of coastline
- 17 million acres of forest

Threat: Invasive species


Vital Signs
A COMMUNITY THAT EXPLORES, SHARES, AND LEARNS.
Citizens
VOLUNTEERS
MOTIVATE & TAKE ACTION
PRACTICE SCIENCE INQUIRY
SHARE PASSION
COACH & MENTOR
COLLECT, SHARE & UNDERSTAND DATA
Schools
TEACHERS & STUDENTS
COMMUNICATE & COLLABORATE
COLLECT, SHARE & UNDERSTAND DATA
PRACTICE SCIENCE INQUIRY
BUILD 21ST CENTURY SKILLS
SHARE BEST TEACHING PRACTICE
RESOURCES
CLIMATE CHANGE
POPULATION
WATER
BIODIVERSITY
ENERGY
Question
SET POLICY & LEGISLATION
USE DATA
SHARE EXPERTISE
ASK & ANSWER QUESTIONS
Professionals
SCIENTISTS & POLICY MAKERS

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http://www.vitalsignsme.org/

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Our Research Efforts | Add Your Observations | Explore Data | Share your ideas & projects | VS In Classrooms | About VS

Where are the invasive species in Maine?

A community of learners, researchers, collectors, thinkers, doers, creators, and stewards are looking for answers in freshwater, coastal, and upland habitats across Maine.

Join us in exploring, learning, and making a difference.

Explore

See what species have been looked for

Search, map, and make meaning of species and habitat observation contributed by the community.

Compound sea squirt
Was **FOUND** by SacoHarry
on 2010-03-17 in Ocean Park, ME

Amphipod
Was **FOUND** by Environmental E...
on 2010-03-09 in South Portland

Paper birch
Was **FOUND** by Leaf Peeper
on 2010-03-05 in South Portland

Learn more Learn more

Exchange ideas

Our community voice

Ask questions, discuss ideas, offer encouragement, and share best practices to

Participate

Anyone can share data

Collect, review, analyze, create, and discuss with students, educators, professional scientists, and citizen scientists from across Maine.

Learn more

- Add your observations
- Share your ideas & projects
- Use data to answer your own research question

Latest projects

Invasion Comics (Garlic Mustard)
by slittlefield on 2009-11-18

Invasion Comics (Purple Loosestrife)
by slittlefield on 2009-11-18

Learn

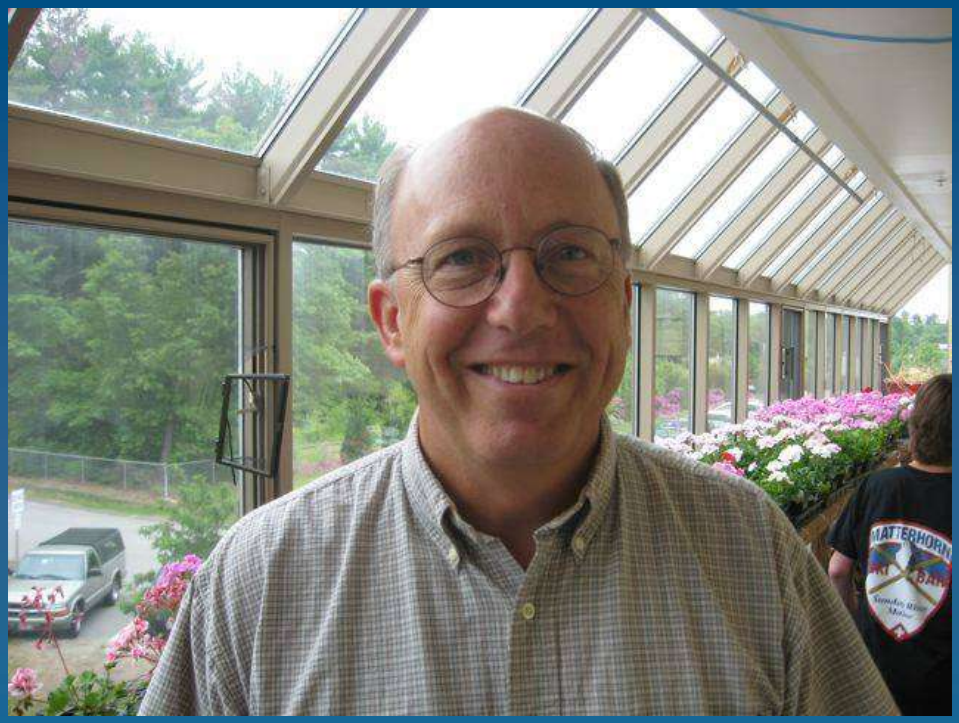
Classroom program for Maine middle schools

Transform science learning in your classroom. Engage, challenge, and mobilize your students to contribute to this

Recent curriculum resources

Teachers: Mike

- Science
- Methodology
- Pedagogy
- Technology



Locations of Participating Schools

46 teachers today

\+ 60 teachers this summer

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106 teachers
~5,000 students
14 counties

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Students: Colby

Learn science by doing science

- Ask a question
- Choose a species to look for
- Make a prediction
- Practice data collection skills
- Investigate!

Learn science by doing real science

- Ask a question
- Choose a species to look for
- Make a prediction
- Practice data collection skills
- Investigate!

Success = Solid Supporting Evidence

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Codium fragile

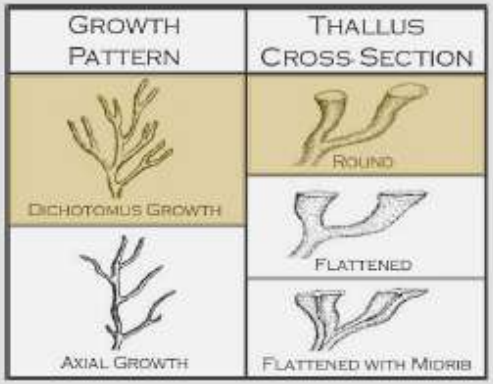
Invasive to Maine

Dead Man's Fingers,
Green Fleece, Oyster Thief

Coastal
Rocky Intertidal

Growth Pattern

Look for an alga that grows dichotomously, meaning each branch divides into two over and over and over. See the diagram below.



Thallus (Body)

Look for pencil-thick growth with
texture. The alga can grow up to 4

Color

Look for an alga that is dark green
spinach.

Other Information

Your Photo here!
We need another picture of Dead Man's Fingers. Please take a clear photo and send it to vitalsigns@gmri.org

When Dead Man's Fingers dies, its thallus (body) fades to a pale grey-tan color. It can grow on shells or rocks or any other hard surface.

www.vitalsignsme.org

Similar Species

Dead Man's Fingers is unlike any o
in Maine.

Fun Fact

Each individual Dead Man's Fingers is a single (multinucleate) cell! When you cut it, it oozes because it has no cell walls to hold in its cytoplasm (cell fluid). A cut off branch can grow into a new individual.

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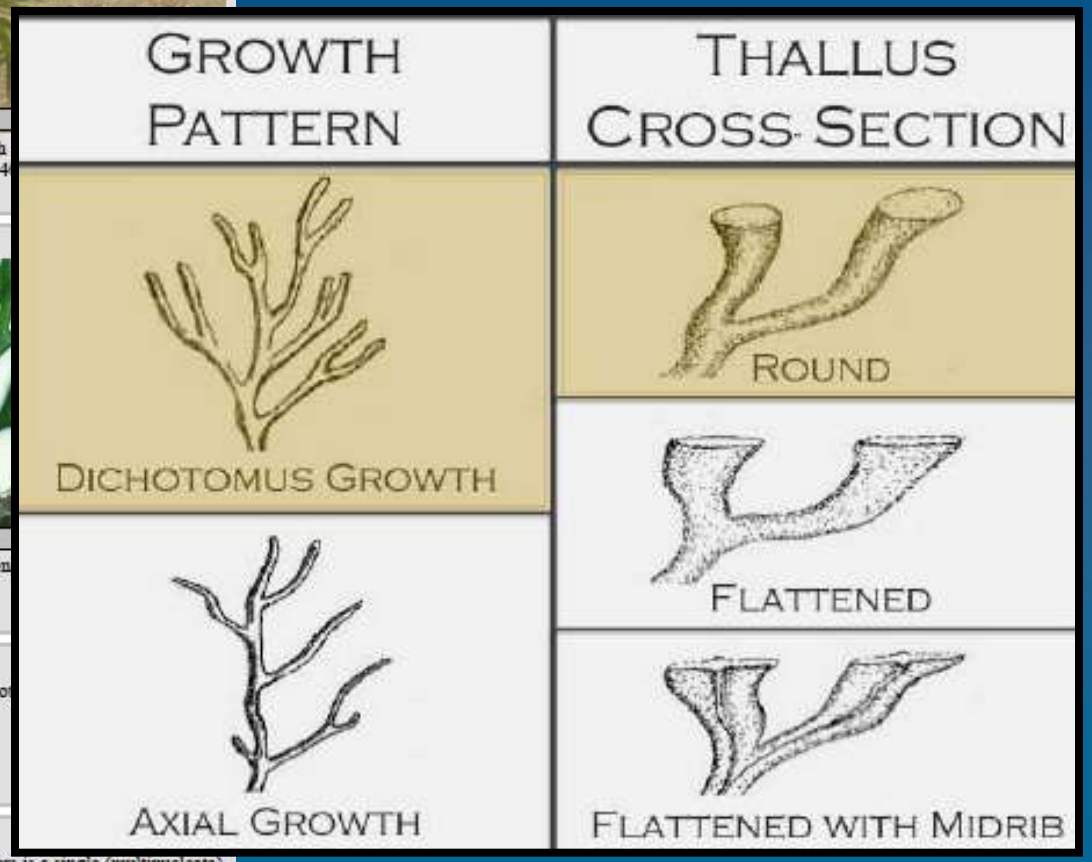

Collect data in the field

- Study site images & GPS location
- Written & photo evidence to prove species is or is not there
- Habitat observations & measurements




Publish data to www.vitalsignsme.org

- Interactive web application with error checking
- Quality check
- Peer review

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Species Phragmites australis was found by BACA on 2009-10-19 | Vital Signs

http://www.vitalsignsme.org/observation/species-phrag

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Home > Explore Data > Species Phragmites australis was found by BACA on 2009-10-19 > Species Phragmites australis was found by BACA on 2009-10-19

Phragmites australis was FOUND

on 2009-10-19 in York
Submitted by BACA on Fri, 2009-10-30 at 11:31 am
ID was not yet reviewed by a Vital Signs Expert Reviewer
This observation was Quality Checked by
This observation was Peer Reviewed by

Field Notes

This was a really amazing experience, because we all were able to observe plants and their natural habitats that we've been by for years, but never noticed, or knew the importance of.

Supporting evidence

This was verified by both the field guide, and the science teacher.

The grass was broken and there was a picture of what the stem should look like and we matched it with the broken piece of stem.

Is we also matched the leaves of the Phragmites (Phragmites australis) in the pictures to the actual leaves in front of us.

Place studied

Latitude: 43.144080 ° N
Longitude: -70.862010 ° W

Observation Site Information

Name: BACA's visit to York Middle School upland/wetland edge
Habitat: Upland - Developed areas

Trip Information

Trip name: York Middle School upland/wetland edge
Trip date: 2009-10-19
Nearest town: York
Type of investigation: Species Survey
Ecosystem: Upland
Watershed: Other
Nearest waterbody: York River

Log in to comment or suggest an ID

Username: Password:

Log in Create new account Request new password

Suggest an ID

Please log in in order to review this observation.

Nobody has suggested an ID yet. Be the first!

Leave a comment to tell us why you agree with this ID, or think it's something else.

Recent Comments

Balloonia
1 day 1 hour ago

Appreciate the info
6 days 16 hours ago

Feathers are not just for birds
6 days 17 min ago

Crystal clear
6 days 24 min ago

Lucky field partner
6 days 27 min ago

Too skinny!
6 days 1 hour ago

Nice Find.
2 weeks 11 hours ago

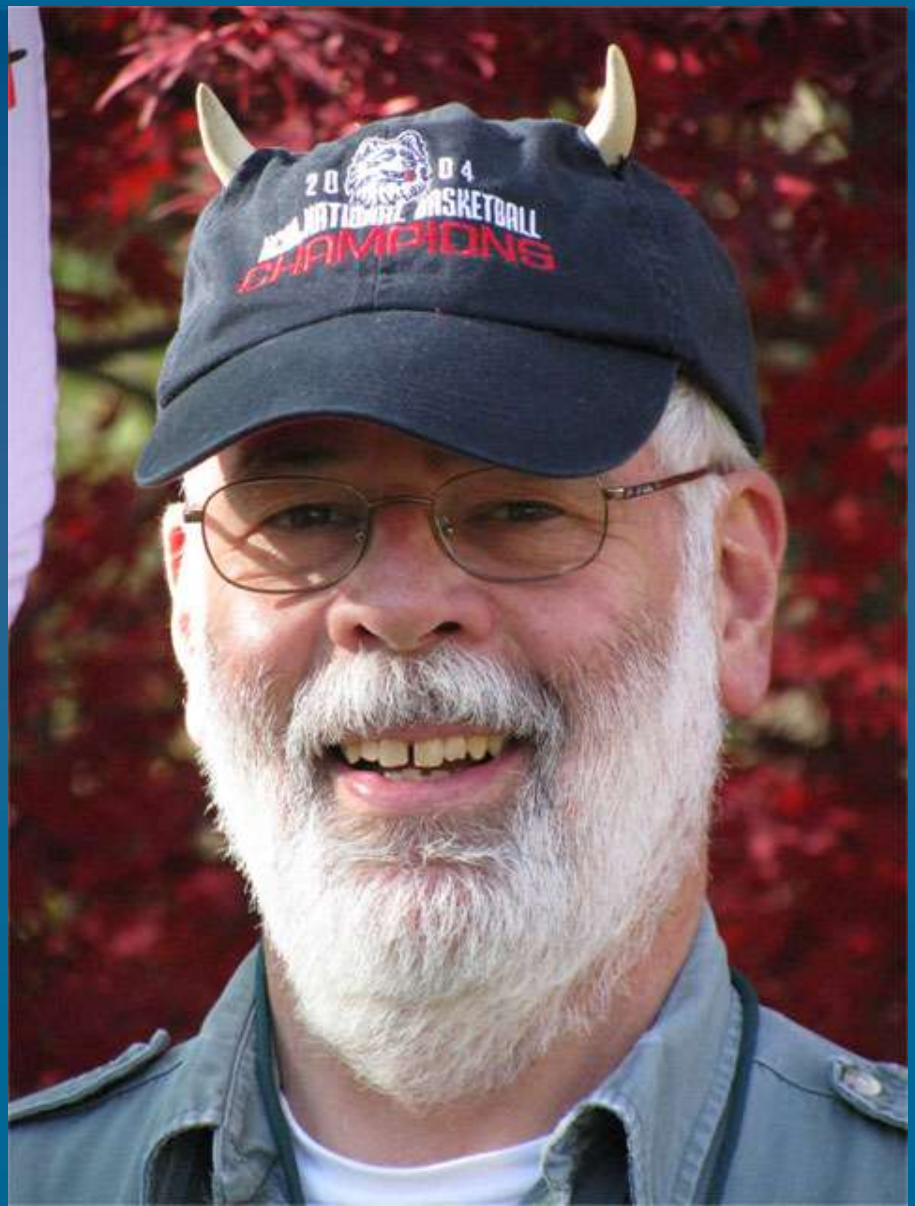
I'm not sure
3 weeks 4 days ago

You're right
3 weeks 4 days ago

You're right
3 weeks 4 days ago

Citizen Scientists: Morgan

Scientists: Dr. Les Mehrhoff



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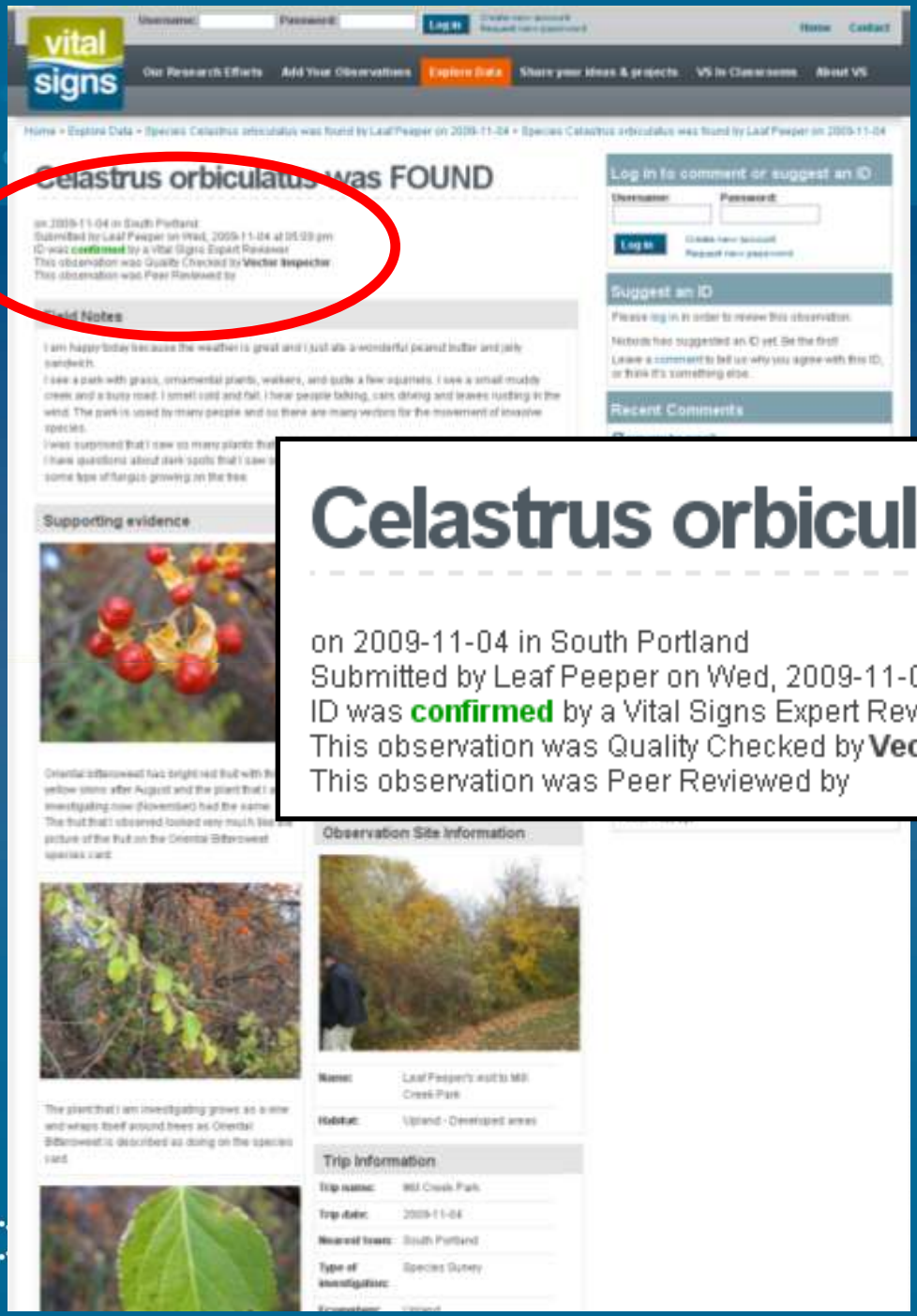
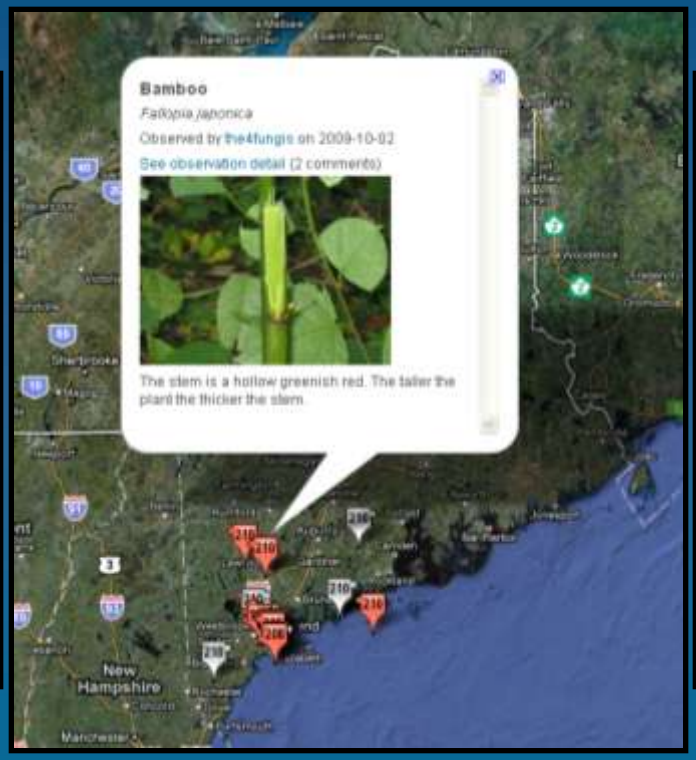


Celastrus orbiculatus was FOUND

on 2009-11-04 in South Portland
Submitted by Leaf Peeper on Wed, 2009-11-04 at 05:09 pm
ID was **confirmed** by a Vital Signs Expert Reviewer
This observation was Quality Checked by **Vector Inspector**
This observation was Peer Reviewed by

Searchable Map & Exportable Data



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A next generation of scientists

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Let’s Look more closely at Casco Bay

What are they looking for?

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What are they finding?

Carcinus maenas

Hemigrapsus sangineus

Cancer irroratus

Cancer borealis

Cancer irroratus

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What are they finding?

Littorina littorea

Nucella lapillus

Littorin obtusata

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What are they finding?

Mytilus edulus

Balanus spp.

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What are they finding?

Botrylloides violaceus

Codium fragile

Ascophullum nodosum

Fucus vesiculosus

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What are they finding?

Membranipora membranacea

Chondrus crispus

Botryllus Schlosseri

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What are they finding?

Caprellid Spp.

Asterias vulgaris

Isopoda spp

Homarus americanus

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Didemnum Vexillum monitoring

- Spring Point
- Macworth island
- Vinalhaven

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Documenting native species









THANK YOU!

www.vitalsignsme.org

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alexa@gmri.org

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