


Invasive Fauna

KNOWN to Occur in Maine



CMS are born live

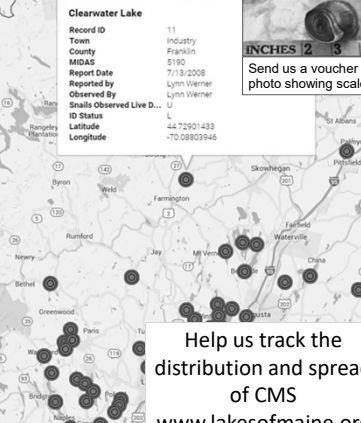
Chinese Mystery Snail

Clearwater Lake

| | |
|---------------------------|--------------|
| Record ID | 11 |
| Town | Industry |
| County | Franklin |
| MIDAS | 5190 |
| Report Date | 7/13/2008 |
| Reported By | Lynn Wiener |
| Observed By | Lynn Wiener |
| Snails Observed Live D... | U |
| ID Status | L |
| Latitude | 44.72901433 |
| Longitude | -70.08803946 |

INCHES 1 2 3 4

Send us a voucher photo showing scale



Help us track the distribution and spread of CMS

www.lakesofmaine.org

Invasive Fauna

NOT Known to Occur in Maine



Zebra & Quagga Mussels



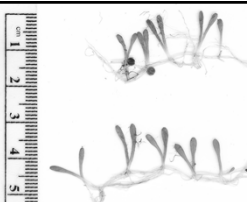
Asian Clam



Chinese Mitten Crab




Spiny Water Flea




Glossostigma

Not Here

Invasive Flora



Purple Loosestrife



Common Reed

Invasive Algae



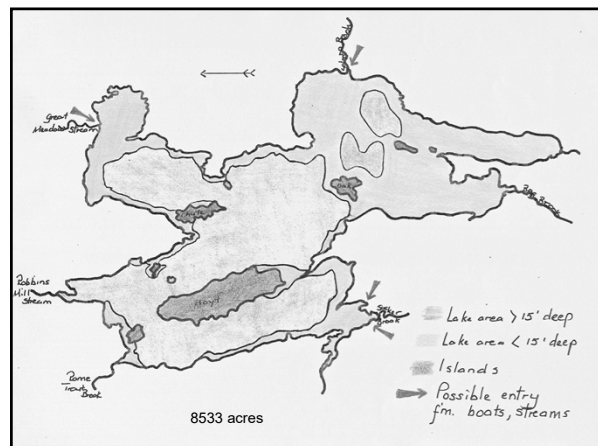
Starry Stonewort



Didymo (Rock Snot)





Destructive Impacts on Aquatic Ecosystems

- Destruction of fish habitat
- Contribute to water quality decline
- Severely impact biodiversity
- A primary cause of freshwater species extinctions

SOME INVASIVE AQUATIC ORGANISMS ARE NOT VISIBLE TO THE NAKED EYE

SOME CAN SURVIVE OUT OF WATER FOR SEVERAL DAYS

Zebra mussel veligers
(~ 100 microns in diameter)
are translucent could fit on the tip of a strand of hair

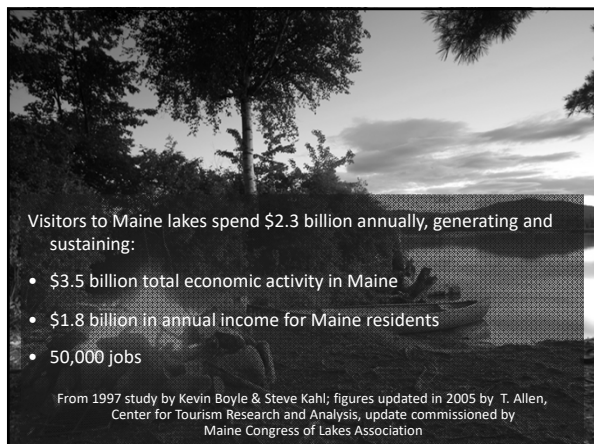
100 μ m

Economic Impacts

Studies have repeatedly shown that invasive plant infestations negatively impact economic activity associated with lakes and ponds

Depress Tourism & Recreational Activity

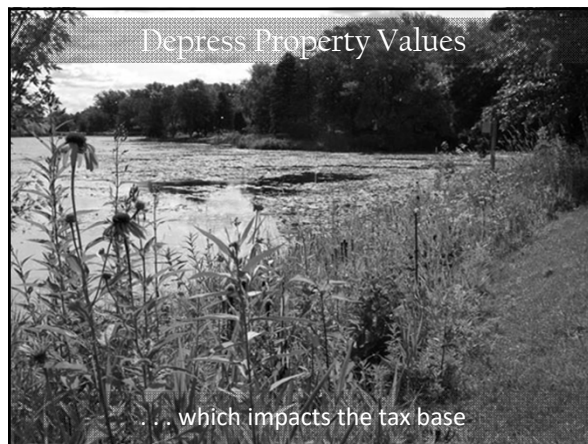
640,000 Maine residents recreate on Maine lakes every year



Visitors to Maine lakes spend \$2.3 billion annually, generating and sustaining:

- \$3.5 billion total economic activity in Maine
- \$1.8 billion in annual income for Maine residents
- 50,000 jobs

From 1997 study by Kevin Boyle & Steve Kahl; figures updated in 2005 by T. Allen, Center for Tourism Research and Analysis, update commissioned by Maine Congress of Lakes Association



Depress Property Values

... which impacts the tax base



Control Costs



Infestations Can Result in Complex Social Issues



Funding Challenges



Potential Health Impacts

50% of the people of Maine get their drinking water from surface water sources



PORTLAND WATER DISTRICT
IMAGES OF YEAR 2000-2001

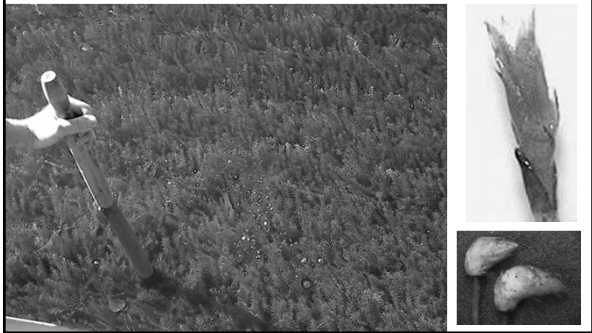
Access Issues: Should Infested Water Bodies be Quarantined?



Should Access Be Restricted to Protect Uninfested Waterbodies?

HOW DO AQUATIC INVADERS SPREAD??

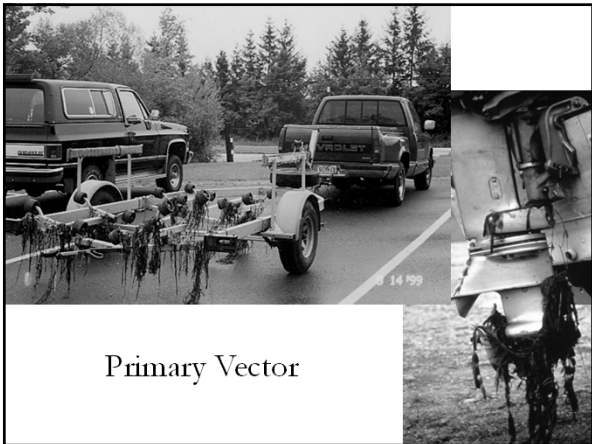
All it takes is a tiny fragment or seed!



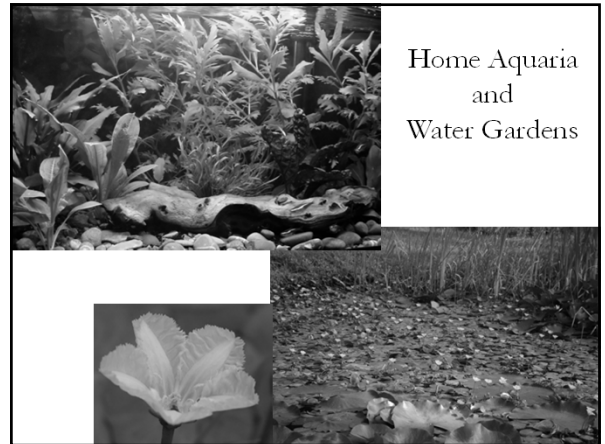
Wildlife Vectors



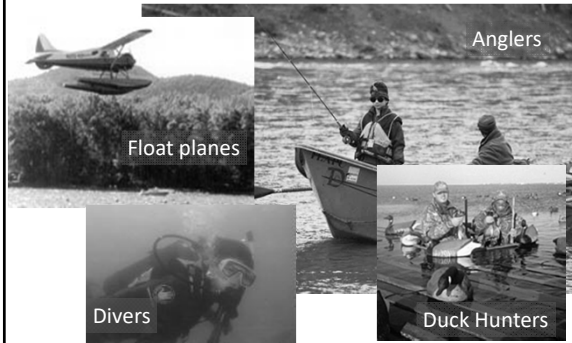
Primary Vector



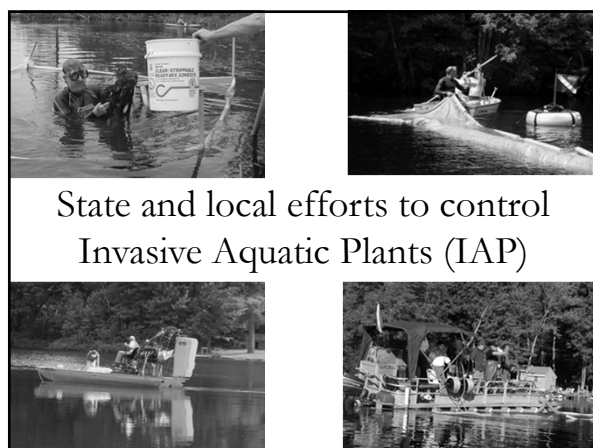
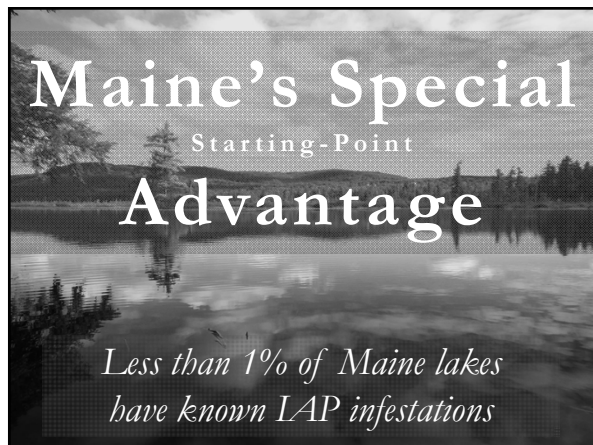
Home Aquaria and Water Gardens



Other Vectors

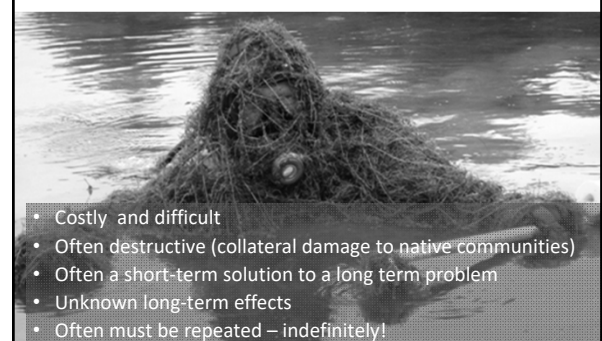


WHAT IS BEING DONE?



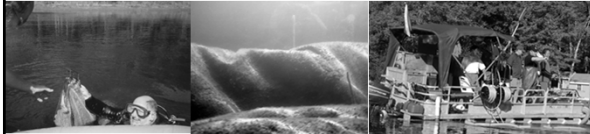
Control Challenges

no silver bullets!



Manual Control Methods Are Most Commonly Used in Maine

- Manual Removal
- Benthic Barriers
- Diver Assisted Suction Harvesting



Chemical control is seen by the State of Maine as a "method of last resort" to be used in "extraordinary circumstances"

Invasive Aquatic Plant Control Methods Training



Good News!

SEVERAL WATERBODIES HAVE BEEN DELISTED!

Great East Lake (VWM)
Middle Range Pond (VWM)
Salmon Lake (EWM)
Pleasant Lake (VWM)
Lily Brook (VWM)
Pickerel Pond (HYDRILLA)

SEVERAL MORE ARE GETTING THERE . . .

Cushman Pond (VWM)
Damariscotta Lake (HYDRILLA)



In almost every case . . .



. . . early detection and dedicated volunteer effort have been the keys to success

Lew Wetzel & Pixie Williams, PLPPA

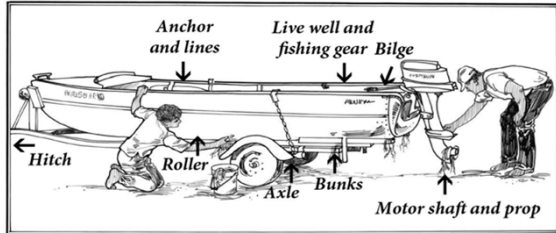
WHAT CAN YOU DO?



The importance of public involvement in this effort cannot be overstated

Prevention!

BEFORE LEAVING LAUNCH



REMOVE all plants, mud and foreign debris from your boat, trailer and all equipment

AFTER LEAVING LAUNCH



CLEAN your boat, tackle, trailer, and other equipment to kill any invasive species not visible at the boat launch; use hot tap water and dish soap, or a high-pressure sprayer with soap

DRAIN water from boat, motor, bilge, livewells, and other equipment *well away from water*.

DRY everything for five days or more before boating in a different waterbody.



IF 5-DAY DRY TIME IS NOT POSSIBLE, PLEASE FOLLOW ADVANCED PROTOCOLS (IN HANDBOOK)

Avoid Boating in Infested Areas



Post Warning Signs at Public Boat Launch Sites

Plant Disposal Container



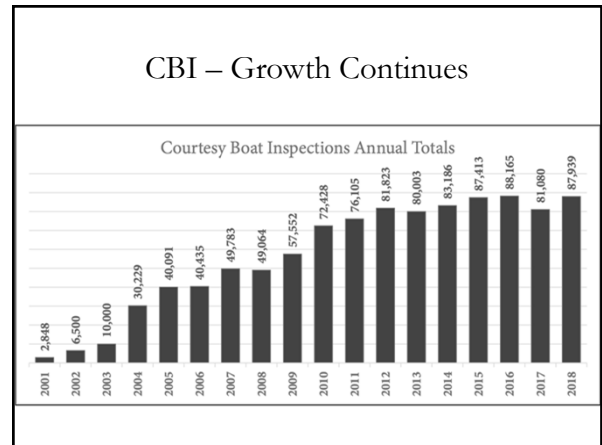
Brochure Holder

Help Inform Your Community



Speak, or distribute materials to:

- Lake Associations
- Town Offices
- Public Boat Landings
- Marinas
- Realtors
- Fishing Clubs
- Schools



Confirmed Saves in 2018

3532 plants removed during inspections

95 were invasive plants

| CBI statistics | 2017 | 2018 |
|--|--------|--------|
| Infested lakes with inspections | 15 | 16 |
| Water bodies with inspections | 122 | 123 |
| Total plants found | 3622 | 3532 |
| Total invasive plants found | 77 | 95 |
| Invasive plants on entering boats | 6 | 18 |
| Invasive plants on leaving boats | 71 | 77 |
| Total inspectors | 653 | 592 |
| Inspection hours | 44,415 | 43,406 |
| Boats with sticker | 56,222 | 61,484 |
| Participating lake association organizations | 50 | 53 |
| Participating Bass Clubs | 48 | 41 |

Source: Maine Department of Environmental Protection

| Confirmed 'saves' 2018 | Boat location | Invasive plant |
|-----------------------------|---------------|--|
| Panther Pond, Raymond | 1 entering | Variable milfoil |
| Schago Cove, Naples | 7 leaving | Variable milfoil |
| Lake Arrowhead, Waterboro | 3 entering | Variable milfoil |
| Messalonuskee Lake, Oakland | 54 leaving | Variable milfoil |
| Messalonuskee Lake, Oakland | 1 entering | Variable milfoil |
| Messalonuskee Lake, Oakland | 6 leaving | Variable milfoil |
| Messalonuskee Lake, Sidney | 1 entering | Eurasian milfoil |
| Messalonuskee Lake, Sidney | 1 leaving | Variable milfoil |
| Pleasant Pond, Litchfield | 1 leaving | Variable milfoil |
| Pennesseewassee Lake | 3 entering | Eurasian milfoil, Zebra Mussel, and Variable milfoil |
| Trickey Pond, Naples | 1 entering | Eurasian milfoil |
| Thompson Lake, Oxford | 1 entering | Variable milfoil |
| Songo River, Naples | 4 entering | Variable milfoil |
| Schago Lake, State Park | 3 leaving | Variable milfoil |
| Toddy Pond, | 3 leaving | Variable milfoil |
| Great East Lake, Acton | 1 entering | Eurasian milfoil |
| Long Lake, Harrison | 1 entering | Variable milfoil |
| | 1 entering | Eurasian milfoil |



2nd Line of Defense Early Detection



Be on Alert for Suspicious Plants



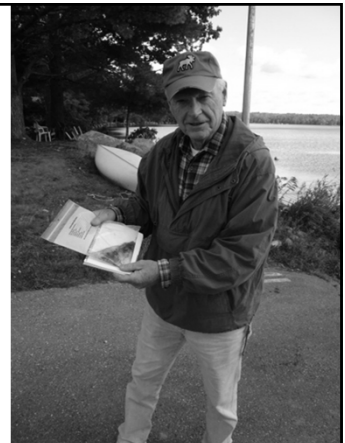
Alert and informed citizens have been the
“Early Detectors” for almost every documented infestation



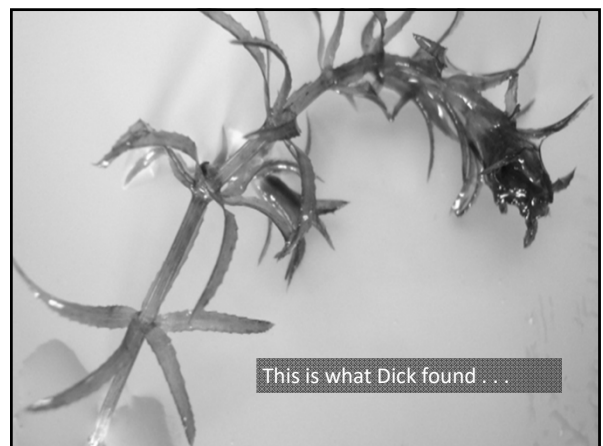
OVER 4700 plant
patrollers trained
to date !

The Importance of Early Detection!

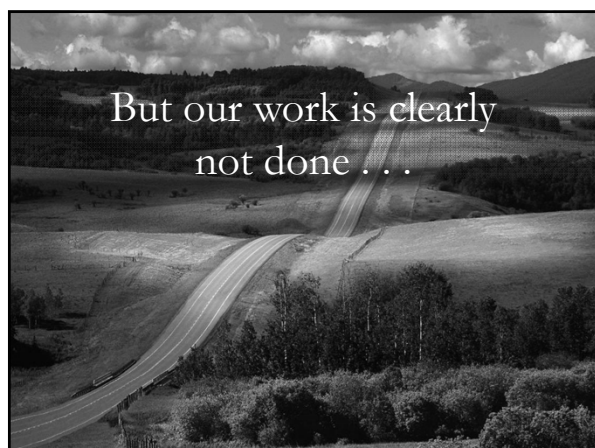
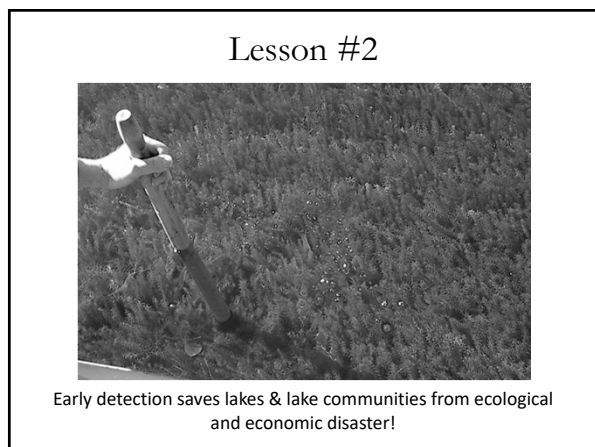
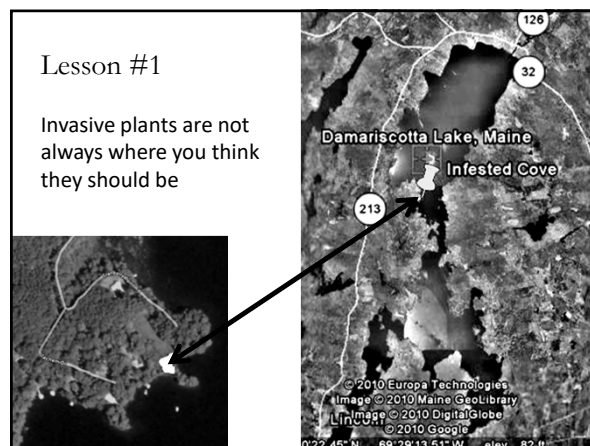
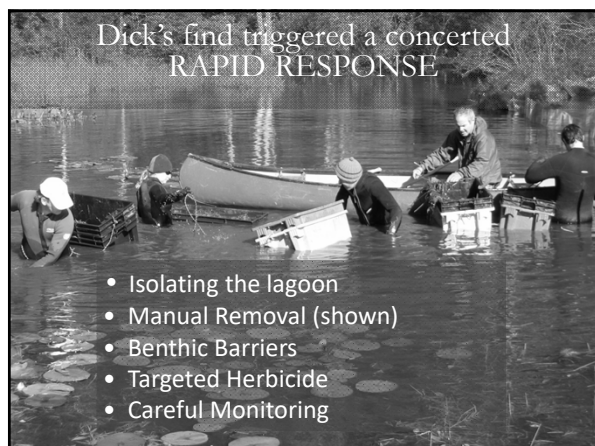
Meet Dick Butterfield



This is what Dick saw . . .



This is what Dick found . . .





VOLUNTEER LEADERSHIP AT EVERY LEVEL

INDIVIDUAL LEVEL

Invasive Plant Patrollers
Trained Invasive Plant Patrollers, generally working in tandem, are taking action on the front-lines to protect Maine waters from the threat of aquatic invaders

LAKE LEVEL

Volunteer Lake Team Leaders
Team leaders help to organize teams, manage data, and provide technical assistance to team members

REGIONAL LEVEL

Volunteer IPP Regional Coordinators
Often working in concert with paid regional lake & watershed association staff, volunteer regional coordinators help to organize and support IPP team efforts on the lakes in their region

STATEWIDE LEVEL

Volunteer IPP Leaders
IPP Leaders work directly with VLMP and State Agency Partners to support statewide early detection and rapid response efforts



Let us help you form and/or grow an IPP team!

- The more eyes on the water the better
- Better quality assurance
- Long term sustainability
- More fun!!

How to Lead a Plant Paddle

View Scope Clinic



Invasive Plant Patrol Leaders

Welcome to our webpage just for YOU!

When the Lake Stewards of Maine (LSM) achieves its ultimate goal as an organization, virtually every lake in the State of Maine will have one or more water quality monitors and an active team of trained Invasive Plant Patrolers routinely monitoring the health of the waterbody. This statewide cadre of dedicated volunteers, trained and certified by the LSM, will be supported and maintained by a well-organized, integrated, collaborative system involving the LSM, local, county and State agencies, trained volunteer coordinators, local lake associations, and regional lake conservation groups.

A good place to start is on LSMs IPP Leaders Page . . . leadership training & networking opportunities, resources, an IPP leader exchange & MORE!

