

The Hunt for Aquatic Invaders

<https://www.youtube.com/watch?v=yNkOCE91hVA>

- The Maine Volunteer Lake Monitoring Program (VLMP) is the oldest, and one of the largest statewide citizen lake monitoring programs in the nation. The mission of the Maine Volunteer Lake Monitoring Program is to help protect Maine lakes through widespread citizen participation in the gathering and dissemination of credible scientific information pertaining to lake health.
- This lake is a gemstone. It's like the hope diamonds of lakes here in Maine, and when I come over Indian Hill, it takes my breath away. Anybody who's ever camped anyplace, you know how special that is to your family and Moosehead lake has so many sensory delights.
- Aquatic invaders are seen as one of the most eminent threats to Maine's waters. We have 6,000 lakes and ponds in Maine that are over an acre in size, tens of thousands that are under an acre in size. Thousands of miles of stream habitat, and all of that is susceptible to these aquatic invaders. They're all around us, they're South of us, to the West of us, and they're to the North of us here in Maine.
- These plants and animals are not native to our lakes and they are often inadvertently carried from afar, hitchhiking on boats and boating gear and once they're established they have the potential to disrupt everything that makes our lakes special.
- Less than 1% of our lakes are known to be affected by this threat. That provides us with this extraordinary opportunity to prevent the spread of invasives to our lake.
- I have been here 43 years, I came here in 1969. I've owned and operated this resort since the late 60's and acquired the 10,000 acres of land that's connected to it in the 90's. The lake is the most important thing here, I mean there's no other reason that anybody would drive 6 or 7 or 8 hours or fly from Germany, Switzerland, Australia, there's development but most of it is undeveloped and there's wildlife and lots of scenery unspoiled.
- I've filmed in by now more than 60 lakes, ponds, rivers and streams throughout the state and 3 years ago I was lucky enough to find the VLMP's lake data online and it's become kind of my treasure map to these beautiful places. So with all that time spent in the water, I've been seeing the value of what we have here but I really hadn't given any thought to invasives and how they might move from one place to another and mess the whole thing up.
- Last year, courtesy boat inspections pulled off of boats almost 500 invasive plants.
- The first thing that really made me believe that this was an important thing was when a gentlemen brought a boat here and they were going through a horrible zebra mussel infestation. That really brought it home to me that this stuff travels and it doesn't take much at all. The East Outlet has really truly been discovered now and if something horrible like rock snot were to end up here, that would be devastating to the area. It's an amazing salmon and trout fishery and it's those things that make me worried.

- The first line of defense is prevention. Inspecting and cleaning your boat and trailer and gear every time you enter or leave a new body of water.
- If something does slip through the cracks we need a second line of defense. We need somebody ready and trained and able to recognize a suspicious plant when they see it and to know what to do if they do find something suspicious.
- I've always been interested in Moosehead lakes since it's my home and I was born and raised beside the lake and have used it for recreation all of my life. This group took on a massive project when they identified Moosehead lake as their first big survey because it's the largest lake in Maine. It's fun to see them working together to identify the plants and the wonder that we have when we find something that no one's ever seen before but we knew they existed because we look in the books.
- People maybe surprised to learn that Maine has some of the clearest, cleanest lakes in the world. They're a global treasure and a powerful economic engine for the state. Studies have shown that Maine lakes generate 3.5 billion dollars in economic activity annually and support about 50,000 jobs. They're also a major source of drinking water for many Mainers.
- The value of the lake to the local economy is significant. This boat goes out everyday to show people the beauty of this lake and one of the most outstanding things about Moosehead lake is the clarity of the water. They want us to get a definitive line between water and shore and not invasive water plants or an encroaching shore line that makes it look as though we are living in a swamp instead of a glacial lake.
- There are really three primary goals to this project. The first one is basically to screen the lake for the presence of aquatic invaders and because there was no monitoring effort on Moosehead lake, we assembled this team of trained, committed volunteers to come up and do this work. The second goal really is to activate a locally sustainable effort that can carry this work on moving forward. The third goal is really kind of a bonus. If you have people scouring the shoreline areas, the shallow areas where plants grow, they're seeing everything that's there and there's never been a full lakewide survey of the native aquatic. So for the first time to our knowledge all of the lake plants of Moosehead lake are being documented and so far, I think, we're up to about 108 species and counting. That's an extraordinary diversity and it's because we're on this extraordinary lake.
- Our lake is surrounded by lakes that have invasives coming in, so we got involved with the VLMP who teaches people how to identify the bad things, also identify the good plants, the native plants that are in there and once they know the natives they might spot an invasive plant before it has the chance to spread.
- I started monitoring my own lake and would come to workshops and I met all these people from other lakes that are so committed and they've been doing it for years. A whole bunch of us gathered to do these plants and everybody wants to learn.
- Well I guess the main reason I do what I do is because I come from a lake in New York that which had four invasive aquatic plants on it. One day I'm out snorkeling and I'm like

what is this plant brushing against me? So lo and behold it turned out to be curly leaf pondweed. I moved to Maine and now it's time for me to get back. I started going out snorkeling, I want to learn all the plants and I do that because I care and I do not want to see Maine's water bodies go the way of the ones in New York and when you see a lake die, when you see all the native plants being pushed out, it just breaks my heart it really does.

- One of the things we hear a lot is as we work our way around the shoreline area from people is could invasive aquatic plants become established in a lake this large. Moosehead lake is 120 square miles in size but lake Champlain, to our West, is almost 500 square miles in size and since the 1990s there have been dozens of aquatic invaders introduced into that lake and have become well established. Water Chestnut has now established itself around almost the entire shoreline. What they can do is basically try to allow for normal navigation from shore out into the lake. They use a harvester, they mow the water chestnut and that could happen here in Moosehead, there's no question about it. Other people have said to us "it's just too far North, Moosehead lake is just too cold for these things to become established" and again, aquatic invaders are to our North in Quebec, they come through the Hudson River Valley into the Great Lakes. There are 200 species that have come in through that channel, so cold isn't going to protect Moosehead Lake either.
- It's amazing the dedication that we get from volunteers. You're out there paddling for 8 hours a day all around the lake, looking for plants and this isn't even their lake they're just concerned about this lake because of what a treasure it is and how beautiful it is.
- Many of the people on our team are actually from out of state where they have seen what can happen to lakes, ponds and rivers once they're infested.
- We're very divergent personalities in a lot of ways and we all have that one thing in common is that the state of Maine does not need invasive aquatic plants and we do what we need to do to get rid of them. Most importantly, prevent them from occurring in the first place.
- The logistical challenges of doing a lake the size of Moosehead are really the size of the lake, the distances you have to travel to be able to get to survey areas. One of the other logistic challenges is the weather, we can't afford a circumstance in which people are caught out in the lake when a thunder storm arises. If there's a lengthy transit time to be able to get to shelter, communications is a problem distances are great, radios work and they don't work so all of the methods that you have available are challenging in that regard.
- The total number of species that we have seen so far over the 4 years adds up to about 100 different distinct species and this is the first time that there has been a complete survey of Moosehead.
- The first day of our survey was amazing because we hit this tiny little cove and there were flower and plants everywhere and you just don't see them very often. They put up

their flowers and they're there and then they're gone just like that and there were tons of plants and so many different kinds of plants and we found like 25 different species in this one little cove and it was amazing.

- There are a lot of rivers and streams that connect Moosehead to other lakes and ponds and there's so much to appreciate about how it all flows with this beautiful balance but also seeing things in a different light now. The reality is these invasives are totally free to flow from one place to another and unfortunately from what we've seen in other states, they do.
- So the challenge in Maine with all the water that we have is really enormous but one thing that this project has really taught me is that the people of Maine and the people who love Maine, once these people come together to protect what they love, the energy and the passion, the ability is limitless.
- It is a good day to get on a lake in Maine.
- When we were kids, you know how children usually have dreams where they can fly, my dreams were always that I can breathe underwater and every now and then I still have those dreams so it's such a good fit all the way around. I love what I'm doing and love where I'm doing it.
- On the twelfth day of summer my true love gave to me, twelve plant patrollers, eleven elatine minima, ten potamogetons, nine nature's calling, eight odoratae, seven sium suaves, six sterile sectors, five kayak scopes, four benthic tarps, three face masks, two mystery snails and a typha angustifolia.