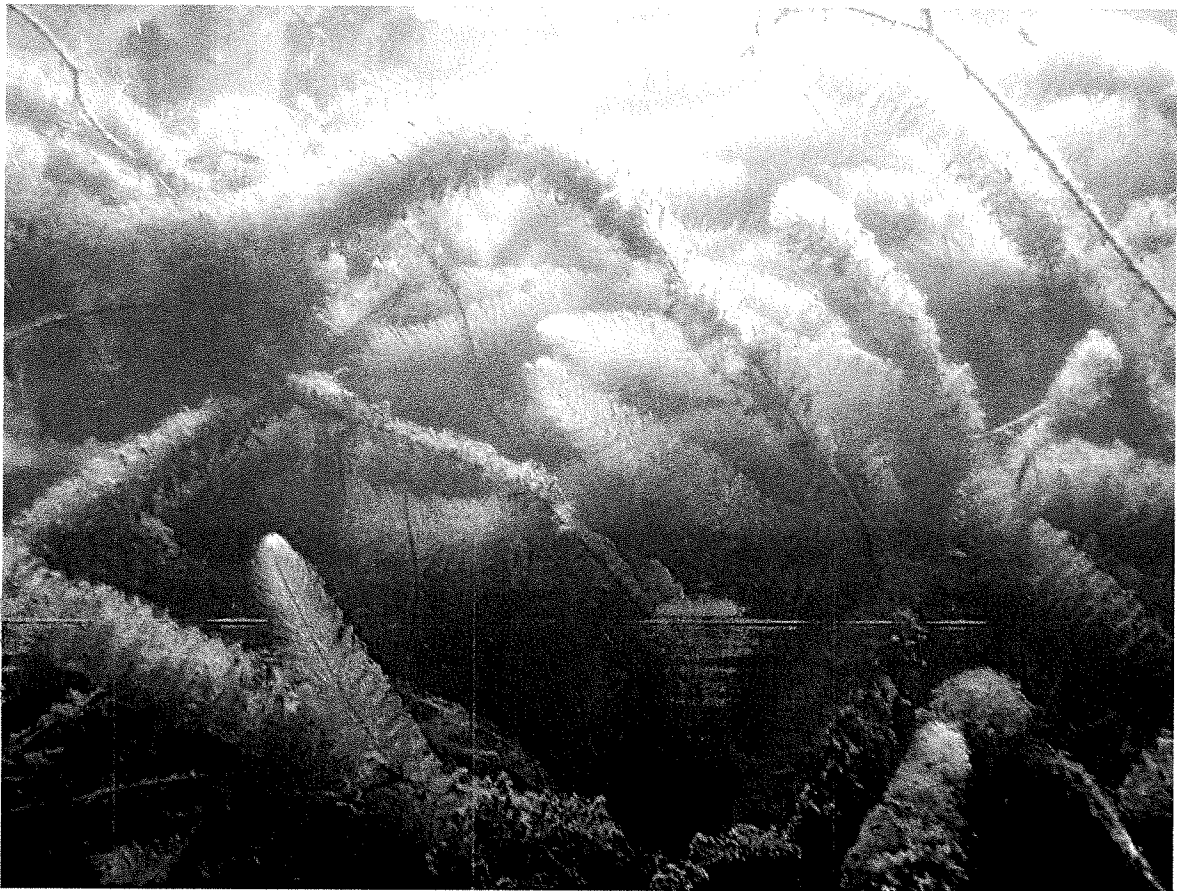


## MILFOIL REMOVAL AT THOMPSON LAKE A GREAT SUCCESS

Invasive plant species are a growing problem with many lakes in Maine. Since the inadvertent introduction of variable leaf milfoil in the lake in the 1980's many of the coves and shallow areas of Thompson Lake were infested with this invasive plant. Milfoil is a densely growing plant that crowds out the native plant species and adversely affects the aesthetic and recreational aspects of a lake. The Thompson Lake Environmental Association (TLEA) reports that after a major fund-raising campaign to support an intensive 5-year program of milfoil extraction and abatement, most of the milfoil in Thompson lake has been removed.



## *Variable leaf milfoil*

According to the Lake Environmental Association, variable leaf milfoil is one of two non-native, invasive milfoil species that has been introduced to Maine lakes. The other species is Eurasian water milfoil which is even more aggressive in colonizing lakes. Invasive plants are typically spread from one lake to other as they cling to motorboat propellers, trailers, fishing gear or anchors. Variable leaf milfoil was first detected in Sebago Lake in 1970 and is now present in 27 Maine lakes. Once milfoil is introduced into a water way it is spread by fragmentation, typically through motorboat traffic. Even small pieces of the plant can migrate and form new colonies. The plants quickly crowd out the native plant species, which adversely affects the ecology of the lake and the available food sources for fish and wildlife. The plant growth is thick and slimy, making wading and swimming undesirable.

Variable leaf milfoil was first recognized in Thompson Lake in the 1980's and was undoubtedly transported here by watercraft carrying fragments of the plant. These relatively few fragments of plants took root and within 30 years spread to 9 locations throughout the lake. At one point there was a 10-acre infestation at the Pine Point area of the lake and thick infestations at 4 of the lake's major coves.

In 2005, concerned residents of the Otisfield and Edwards Cove areas recognized the threat of milfoil to their section of the lake. They started a process of fabricating and deploying several 30' x 30' benthic barriers or tarps to smother the plants. They initially had good success, although confined to their small area. They realized the magnitude of the problem and sought the assistance of the Thompson Lake Environmental Association.

TLEA took over and expanded the program in 2007. They acquired a secondhand pontoon boat (coined the "Hippobottomus") and suction harvesting equipment to advance the program and began networking with other lake associations to learn the best techniques for milfoil management. To fund this effort TLEA applied for environmental grants and made direct appeals to lakefront property owners. Contract divers were hired annually to do the work of hand pulling or suctioning milfoil from the waters, and to place the benthic barriers. A survey of the entire lake was performed, and a management plan was put in place to reduce, if not eliminate milfoil throughout the lake.

By 2016 most of the milfoil had been removed from the coves around the lake. However, a 10-acre area of infestation at the Pine Point remained that was too large for their removal methods. To avoid the fragmentation and spread of the milfoil a boat channel was created at Pine Point. However, this area of infestation remained the primary source for migration of milfoil to the rest of the lake. TLEA recognized that unless this area of infestation was removed much of the progress of the milfoil removal would eventually be undone.

In 2017 TLEA began a concerted effort to remove the remaining milfoil in the lake and prevent infestations in the future. The association started a capital campaign to finance a 5-year program of laying down benthic barriers throughout Pine point; hand pulling, or suctioning plants as needed. They also surveyed problem areas of the lake to develop a long-term plan to mitigate the future threat of invasive species. The plan was to construct new benthic barriers with rebar reinforcement to cover 1.5-2 acres of the plants at a time. These would be rotated to adjacent areas every year to eventual cover the 10-acre area of Pine Point. The "Hippobottomus" was revamped with new equipment so the crew could suction the plants, which were then packed into sacks and transported to outlying farms, where it was used

for fertilizer. In addition, there was much hand pulling of plants in the shallow coves, especially at the Pismo beach area and around the Oxford dam, which is the outlet of the lake. An underwater survey of the high-risk areas of the entire lake and boat ramps was also done to identify and remove any invasive plants. TLEA also has set up Courtesy Boat Inspection stations at the public launches to assist boaters in preventing the introduction or transfer of invasive plant species.

The milfoil removal crew was led by Alex Bernardy, age 27, from Otisfield. Alex and his 3-man crew spent many days on the lake, shortly after ice out and continuing through Labor Day. Much of their time was spent constructing the benthic barriers, transporting them, and anchoring them to lake bottom. Some days were filled with the laborious task of hand pulling the plants from the murky water in frigid temperatures. On good days, the crew was on the boat suctioning and packaging milfoil. Diving with surface supplied air was required to reach some of the plants and do the shoreland surveys.



*TLEA Milfoil Removal Crew Members on the "Hippobottamus"*

As of the end of 2020, the 10-acre area of milfoil growth at the Pine Point area has been removed. Most of the milfoil at the Pismo beach and Oxford dam area had also been removed, including colonies around the Robinson Marina. Native plants are beginning to take root to restore the ecology of this part of the lake. These plants should thrive, helping to prevent further infestations. They will also provide oxygen to the water which will help sustain the fisheries.

The coves of the lake; including Otisfield, Edwards, Hancock and Serenity, have been surveyed and all detectable milfoil has been removed. The TLEA crew will continue to monitor these areas to ensure

that there is no significant regrowth. All the benthic barriers at Pine point have been removed, so this area is clear for safe boating.



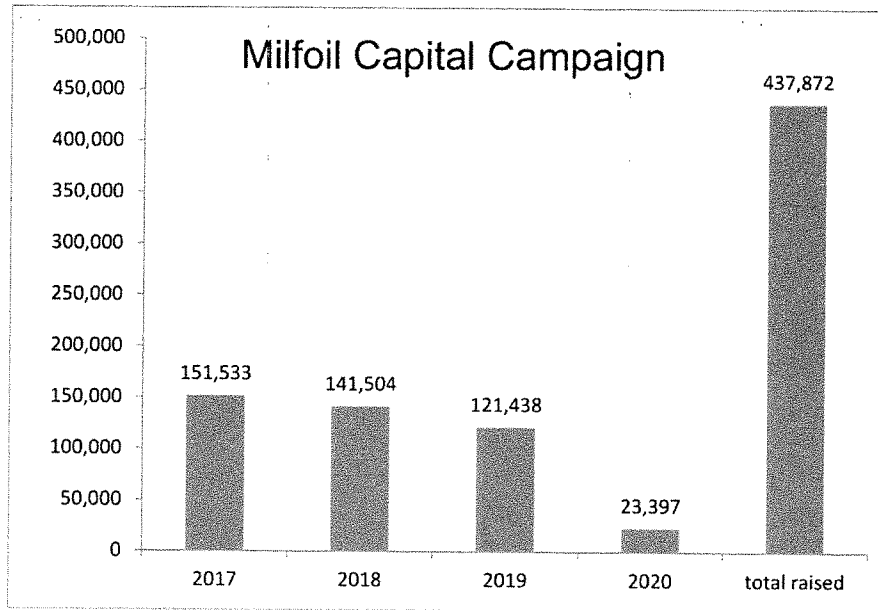
*Benthic barriers in place, smothering milfoil plants.*

In August of 2020, the Maine Department of Environmental Protection performed an inspection of the crew's work. Karen Hahnel, from the Invasive Aquatic Species Program noted that there were no longer significant plant colonies in the Pine Point area she recommended that the focus should now be to survey and manage the affected areas of the lake to prevent regrowth. Our plan for 2021 is to continue to monitor the previously remediated areas throughout the lake and manage some anticipated regrowth areas.

To appreciate the extent of this project, since 2008 over 200 tons of milfoil has been either hand pulled or suctioned from the lake. Since the construction of the benthic barriers starting in 2017, seven acres in the Pine Point area were covered, resulting in a further removal of 350 tons of milfoil. In a span of 12 years 550 tons of milfoil has been removed or smothered.

To finance this new program TLEA launched the Capital Campaign Fund in 2017. This effort was led by co-presidents Marcia Matuska and Kathy Cain. Our contributions have been diverse, with the majority coming from lakefront property owners and local businesses. We have received support from the towns of Oxford, Poland, Otisfield and Casco. There was also grant revenue from the Maine Department of Environmental Protection. Most notably, TLEA received a grant of \$25,000 from the Stephen and Tabitha King Foundation early in this campaign.

As the graph below shows, the campaign raised over \$400,000 dollars for this effort over 4 years. In addition, some TLEA members collectively donated \$104,641 to our milfoil fund with their annual dues, putting us well over our goal of \$500,000 for this program.



TLEA is committed to protecting the aesthetic and recreational value of Thompson Lake for all to enjoy. This includes a comprehensive program of surveying and removing invasive plants from Thompson Lake, as well as the Courtesy Boat Inspection program.