The Watershed

The Oyster Pond Environmental Trust Newsletter OPET, P.O. Box 496, Woods Hole, MA 02543-0496

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OPET Officers and Directors Elected

Officers	Directors
Robert King <i>President</i>	Carl Breivogel Jonathan Davis John Dowling Susan Gagosian Dana Rodin Arthur Silverstein Peter Valtin
Eric Davidson <i>Vice President</i>	
Bill Kerfoot <i>Clerk</i>	
Barry Norris <i>Treasurer</i>	Lou Turner Martin White
<i>Consultant</i> Wendi Buesseler	<i>Hon. Board Member</i> Robert Livingstone

OPET Board meetings are open to all OPET members. Meetings are usually held on the third Sunday of the month, at 4 pm in the Treetops Clubhouse.

We'd love to have you come! For information call 508-540-7345.

OPET does not have an official phone, but you can leave a message at 508-540-7345. We'll gladly get back to you!

Or e-mail asirasking@aol.com or bisler@adelphia.net. And do visit our website,

Exit to the Sea: Oyster Pond's 2004 Alewives

Alewives, a species of herring, migrate up the Trunk River in the spring to spawn in Oyster Pond. After spawning, the adults return to the sea over a period of several weeks. Their young exit the Pond beginning in June and continue until December. Oyster Pond is the third largest herring run in Falmouth.

The circumstances for leaving the Pond have been similar for the last three years. Exit follows a period of heavy rain with a noticeable increase in water flow at the weir. Exit begins in mid June when the salinity of the Pond water was 0 to 4 parts per thousand (ppt) and +/- 2 ppt at the weir and Lagoon. Water temperatures were warming to the 70's. The juvenile herring appear to be 2 to 3 month old. Most are less than 2 inches in length measured from the tip of the snout to the fork of the tail. For such numbers of herring to sud-*Continued on page 4*



June 21— An estimated 10,000 young herring at the weir.

OPET Profile: Chuck Martinsen, Falmouth's New Herring Warden

"If it's off the pavement we deal with it," says Chuck Martinsen, Falmouth's new Shellfish Constable and Herring Warden as well as Assistant Director of Natural Resources. While Chuck is responsible for overseeing the herring population in Oyster Pond, his job also includes a mind-boggling variety of other tasks, everything from maintaining herring runs to arresting drug smugglers to marine enforcement to overseeing shellfisheries. His job is a combination of protecting and conserving Falmouth's natural resources and law enforcement.

This combination of environmental oversight with law enforcement blends well with his educational back-

ground and interests. He has a degree in criminal justice from Westfield State College. Currently he is pursuing a Master's in Public Administration from Suffolk University and expects to finish next spring

Though Chuck grew up in Pembroke, since the age of nine he has spent summers in Falmouth. He spent a lot of time in the woods, on the water or fishing. One of his first jobs was working for the

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"Before" July 14, 2004



Mats of Cladaphora glomerata overrun the surface of the Trunk River Lagoon.

Here are two pictures worth at least a thousand words.

These are "before" and "after" pictures of the Truck River Lagoon, the body of water just south of Oyster Pond that empties into the Trunk River. The "before" shows the horrendous algae bloom that spread over the lagoon this past summer. The "after" shows a pristine pond at the end of September. How was this problem solved? We can thank many Town officials who recognized the need for immediate action.

What caused the algae bloom?

Unfortunately, it can be traced to a problem seen before in this area. Winter storms deposited clumps of eelgrass far up into the lagoon entrance, piling up to depths of 4 to 6 feet! As a result, neither the pond nor the lagoon could drain properly. The pond was 10 inches above normal and far above the weir boards, meaning that the weir was not functioning as designed.

This backed up lagoon became a stewpot for growing algae. As the weather warmed up, the eelgrass began to decay and mix with the nutrient rich waters creating perfect conditions for algae growth. First noticed in May, by mid July it was 21" thick and covered most of the surface of the lagoon. Aimlee Laderman, PhD, of the Swamp Research Center, identified the mats as mainly tangled filaments of *Cladophora glomerata*, an algae often associated with emerging sewage plumes in freshwater bodies.

A Problem for Oyster Pond's Herring

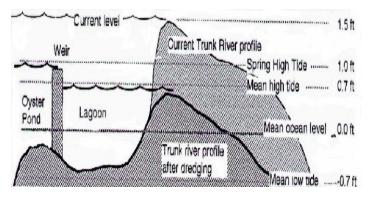
Not only was the algal mat unattractive, it was a threat to Oyster Pond's resident herring population. Young spring spawned herring and some adults, were blocked from migrating out to sea. By mid July, thousands of young herring were schooling near the weir as they were unable to pass through the lagoon. It was too dangerous for them. They risked suffocation from the anoxic conditions and hydrogen sulfide. Any adult her-

ring straying off the shallow main channel to Trunk River quickly perished. Fearing a repeat of the herring deaths from 2002, a meeting with Town Hall officials was organized. In 2002, several dead herring were found washed ashore after moving through low oxygen waters and hydrogen sulfide in Trunk River. The OPET board knew that Trunk River had to be dredged to release the blockage and allow the Lagoon and the Pond to drain properly.

Finding a Solution

On July 22 a meeting was held at Town Hall to address the problem of the algae growth in the lagoon. It was a remarkable meeting in that all the people in-

Below is a sketch of Trunk River from 1996 showing how a high profile at the lagoon exit and Trunk River can constrict the outflow from Oyster Pond.



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"After" September 30, 2004



A Beautiful Fall view. What a difference!

volved in management decisions for Trunk River were able to attend. Attendees included: Dr. Brian Howes, of the Coastal Systems Group of the University of Massachusetts at Dartmouth who is an integral part of the Pond watcher Program and the Estuaries Project: John Ramsey of Applied Coastal Research and Engineering, designer of the weir; George Calise and Ray Young from the Town of Falmouth Engineering Department. who are responsible for dredging projects in town; Chuck Martinsen, the herring warden; Margaret Emslie and Mark Kasprzyk from the Conservation Commission who are involved with any decisions impacting wetlands; Ahmed Mustapha, Chair of the Board of Selectmen; Katharine Taylor of Salt Ponds Areas Bird Sanctuaries as Salt Ponds own land on the lagoon; and members of OPET, Bill Kerfoot, Carl Breivogel, Barry Norris, John Dowling and myself.

Bill Kerfoot explained the problem of the eelgrass from winter storms blocking the lagoon. Everyone recognized that the area needed to be dredged, but there was a problem –permitting. The Town Engineering Department had a permit from the Town Conservation Department for maintenance dredging of Trunk River from the outlet at the sea to the bend in the river and they had a permit from the Massachusetts Department of Environmental Protection to dredge from the foot bridge to the edge of the lagoon. But they did not have a permit under the local bylaws to go beyond the bend in the river. We could pursue a permit from the Conservation Commission, but the process would take several weeks.

After much discussion, all the parties agreed to a short-term solution. Chuck Martinsen, the herring war-

den, would apply to the Conservation Commission for dredging under an emergency permit. Protecting herring and allowing their free passage is one of the oldest laws in Massachusetts.

Chuck Martinsen & Americorps to the Rescue

Within a week, Chuck had secured help from the Barnstable County branch of Americorps, the national service program of young people that assist communities in a variety of tasks. For two days, during some of the hottest days of the summer, these young volunteers carted away buckets and buckets full of sand from the river.

Almost immediately a difference could be seen in the lagoon. The *Cladophera* began to break up and drain out to sea and within a few days the schools of herring near the weir safely migrated down the river. By the end of September, we could see the beautiful view we see in the second photograph.

We can thank all the Town of Falmouth officials and other interested parties for solving this problem. This solution worked in the short term, but we still must pursue long term solutions. Either a method must be found to prevent the eelgrass from entering the lagoon in the first place or we must plan on annual maintenance dredging of Trunk River. This is something to consider for the future. *Wendi Buesseler*

Contribute to the Effort!

OPET is developing a storm water runoff control plan and will be preparing engineering plans for improving Mosquito Creek (off Ransom Rd.) outflow to Oyster Pond. We also plan on enlarging the monthly Pond study to include nutrient sampling in 2005. Your contributions can help with the cost of these measures. **Continued from Page 1** denly show bucket. (shown on the left))



up at the weir is a mystery. We (OPET) simply do not have good information

about the distribution and abundance of the young herring in the Pond during this Spring period.

My observations at the weir began the morning of June 21. The herring were crossing the weir boards en mass. Bill Kerfoot, OPET, estimated there were perhaps 10,000 individuals at the weir. Many would cross and then turn upstream as though feeding. I did not detect movement into the culvert. To get an idea of size I photographed a sample in the

My friend Al Allenby stopped by to see what I was up to. He was as amazed as I was at the dense concentrations of herring. But he also mentioned his concern about the herring getting through the culvert and into the Lagoon. He wondered how the herring would get through the extensive algae bloom that covered much of the Lagoon.

I returned to the weir that evening. The herring were still crossing over the weir boards, but in less dense concentrations. At Trunk River. I noticed many bronze grackles feeding on herring all along the edge of the out flowing stream. From the bike trail bridge, I could see small schools of herring working their way to Vinevard Sound. As it got darker, about

8:30 pm, the size of the schools increased. A good many herring made it to the Sound . Hopefully they will return in three years. Bob Livingstone **OPET, Honorary Board Member**

PS. I would personally like to thank AI Allenby for his presence and helping me with the photographs.



Sept. 30th - Young herring spill over the weir.

Harbor **Continued from Page 1** Master in

Falmouth, a job he held for eight summers, first as a dock mate then as assistant Harbor Master. Chuck stills works as an Assistant Harbor Master in marine law enforcement.

In addition to Oyster Pond's herring run, Chuck oversees the other 10 herring runs in Falmouth. Keeping the runs open for the passage of fish is just one aspect of managing this fishery. He also has to deal with He trains new officers in both law poachers, not just for herring, but also for American eels. "When the Asian markets hit \$600 to \$700 a pound for elvers we know we have to ing laws on Crane Wildlife, fresh wastart watching for poachers on our runs, " says Chuck. Recently a wellorganized poaching operation from Canada was caught trapping grass eels from the Quashnet River in E. Falmouth to export to Canada and Asia.

As shellfish constable, Chuck supervises all aspects of the shellfishery in Falmouth from overseeing the licensing of 100 commercial and 1,000 recreational shellfish licenses to administering and enforcing state

and local shellfish regulations. With the help of Senior Americorps volunteers, he is overseeing a nursery of 1.5 million quahogs. When these specks of sand sized clams grow to the size of a quarter they will be moved to open shellfish beds around Town.

As Assistant Director of Natural Resources he trains and supervises other Natural Resource officers as well as the Animal Control officer. enforcement and environmental work. The law enforcement includes enforcing the Massachusetts huntter fishing laws and monitoring the use of All Terrine Vehicles or ATVs on the trials and back roads of Falmouth. Since working for the Natural Resources division four years ago he has made 65 arrests either for stolen ATVs, fisheries violations, drugs or outstanding warrants.

Chuck also assisted in trying to free the great white shark on Nashon Island. He helped Greg Skomal, the shark biologist from Martha's Vineyard, who headed up the

efforts with the great white. Chuck worked on designing a rig to tail rope and tow the shark out to sea if necessary. During the shark episode, Greg stayed at Chuck's house, where reporters swarmed all over the place. There were television interviews in his front yard. News vans were parked everywhere. They got calls at all hours. "One morning we even got a call at 5:00 am from the BBC," says Chuck.

OPET looks forward to working with Chuck in maintaining a robust herring population on Oyster Pond. Wendi Buesseler

