

# THREE BAYS PRESERVATION, INC.

## Monitor

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### Invasive Species in the Three Bays

Three Bays Preservation and Nantucket Soundkeepers have joined forces to monitor for marine aquatic invasive species that have moved into our coastal waters. As part of the Marine Aquatic Invasive Species Program, devised by the Office of Coastal Zone Management for the Commonwealth of Massachusetts, Three Bays Preservation and Nantucket Soundkeepers are actively monitoring several areas in the Marstons Mills River watershed and one site in Yarmouth. Pictured right is one of the invaders, '**Hemigrapsus sanguineus**' or



more commonly known as an Asian Shore Crab. These introduced species are called by many names; non-native, non-indigenous, introduced, alien or exotic. When an introduced species has the ability to reproduce in large numbers and to out-compete native species for food and space, they can offset the natural ecological balance. With nothing to keep non-indigenous species in check, such as predators or biological control, these invaders can have damaging effects on their new environments. They can become invasive or nuisance species. Currently, we are monitoring for 13 known invaders and 7 potential invaders (these are species that have been spotted in neighboring coastal areas). Pictured below is 'Codium fragile' or Green Fleece that washed up on the shores of Dead Neck. Anyone walking along the beach this summer has more than likely seen this seaweed in abundance. It has totally invaded our shores. It washes up on the beach and bleaches white in the hot sun. If enough of it gathers in one spot, it starts to smell and attracts many different insects.

#### **The 13 known invaders are:**

**Ascidia aspersa** (Sea Squirt)

**Carcinus maenas** (Green Crab)

**Grateloupia turuturu** (Red Alga)

**Diadumene lineata** (Striped Anemone)

**Botryllus schlosseri** (Golden Star Tunicate)

**Didemnum sp.** ("Mystery" Colonial Tunicate)

**Diplosoma listerianum** (Diplosoma Tunicate)

**Botrylloides violaceus** (Sheath Tunicate)

**Codium fragile** (Green Fleece)

**Ostrea edulis** (European Oyster)

**Styela clava** (Club Tunicate)

**Membranipora sp.** (Lacy Crust Bryozoan)

**Hemigrapsus sanguineus** (Asian Shore Crab)

#### **The 7 potential invaders are:**

**Corella eumyota** (Tunicate)

**Eriocheir sinensis** (Chinese Mitten Crab)

**Rapana venosa** (Veined Rapa Whelk)

**Hemigrapsus takanoi** (Brush-Clawed Shore Crab)

**Undaria pinnatifida** (Undaria Kelp)

**Synidotea laevidorsalis** (Asian Isopod)

**Sargassum muticum** (Japanese Seaweed)

The Office of Coastal Zone Management has furnished us with identification cards to help us to determine which, if any, of the invaders are present at our sampling sites. We, in turn, have put these cards on our website under the "Projects" heading.

#### **So far, we have found 7 of the invasive species:**

Sheath tunicates, Golden star tunicates, Green fleeces, Club tunicates, Lacy crust bryozoans and Asian shore crabs.

If you happen to see any of these species, either known or potential, please feel free to notify us and we will confirm the sightings and report them to the Massachusetts CZM office.



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### Summer 2009 Bird Report

What can we say about the summer of 2009? It was cold, it was rainy, it was the summer that never happened. The same can be said for how we feel about the birds on Dead Neck/Sampson's Island. The season started out to be a very promising one. At the end of June, we had 19 Piping plover chicks running around, the terns had begun to nest on both ends of the island, and we had two American oystercatcher chicks hatch for the first time ever! (Pictured above is one of the American oystercatcher adults.) But our joy and optimism was short-lived. Great Horned owls discovered our beautiful bird sanctuary and found a very bountiful source of food. By the middle of July, all of the Plover chicks and the two Oystercatcher chicks had disappeared. The terns did not fare much better. They nest later in the season and some of those chicks did survive. However, they came at the very end of the season and it was difficult to determine how many actually did survive because we were hit by back-to-back potential hurricanes. If you happened to be out on Sampson's Island during the month of August, I'm sure you realized how eerily quiet it had become. Usually, it would prove to be very difficult to walk around the tip of the island and try to make your way down the beach on the south side. This summer it was open territory. The terns who would've normally dive-bombed and attacked were gone. After the owls decimated their colony, they all left! So, what can we say? We will have another opportunity next summer to try again. It has become abundantly clear to us that we cannot control a lot of the aspects of nature that have been working against us. But it is also just as clear that we need to control some of the aspects within our reach. One of those aspects is people with dogs. Once again, we would like to stress the importance of leaving your pets at home. We seemed to have a lot of trouble this summer with folks who felt that their dogs were exempt from this regulation. They couldn't have been more wrong. **No dogs are allowed on the island!** Not only do the birds have a hard time with these animals, but our rangers shouldn't have to pick up after pets that shouldn't be there in the first place!

### 2009 Annual Members Meeting

On Thursday, September 10, 2009, Three Bays Preservation held its Annual Members Meeting at the Wianno Yacht Club in Osterville. This year we had a good crowd of 80 or more members who came to hear from our featured speakers. These speakers were Dr. Brian Howes, Director of the Massachusetts Estuary Program from the UMASS Dartmouth School of Marine Science and Technology (SMAST), and Cynthia Liebman, staff attorney with the Conservation Law Foundation (CLF). Dr. Howes began by explaining how the total maximum daily loads (TMDL) were determined by his team. This means how much of any nutrient, such as nitrogen, can be present in the water and still be safe for plants and wildlife to survive. These TMDL's help determine what needs to be accomplished to clean up our bays. He also pointed out the major sources of controllable nitrogen that is present in our coastal waters. By far, the largest culprit is septic systems followed by lawn fertilizer, road run-off and deposits from rain. Ms. Liebman then began her talk by explaining that CLF has used these reports that Dr. Howes and his team from SMAST have prepared to urge the various towns and gov-

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ernmental agencies to become compliant with the Clean Water Act. Does the CLF plan to take legal action under the Clean Water Act to force compliance with its regulations? Yes, they do. But they do not have a specific time frame. She just indicated that it would be soon! She stated that CLF is still trying to determine who the major players should be. Once they determine the participants, they plan to bring everyone together to determine the solution.