



The Bagaduce River

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What is BHHT

BHHT stands for Blue Hill Heritage Trust, a local east-coast nonprofit land conservation organization dedicated to saving the natural beauty of Maine and all of its animal residents. Founded in 1985 by a large group of Blue Hill Peninsula civilians, they have taken immense strides. BHHT has now protected nearly 10,000 acres of land, almost all with public access for recreational, ecological and historical practice. Educational opportunities are also available to people of all ages. From a group of school children to some curious tourists, every one has access to the lands and their beauty. Located at **157 Hinkley Ridge Rd Blue Hill, Hancock County, Maine** and a website at www.bluehillheritagetrust.org, information is available to the public at any time. The BHHT's goal or mission stated in the Blue Hill Heritage Trust's brochure titled, **From Bucksport to Stonington Hiking Trails and Public Access Points of the Greater Blue Hill Peninsula** on page three:

"To conserve in perpetuity land and water resources that support the long-term health and well-being of the natural and human communities on the Blue Hill Peninsula."

What is a Watershed

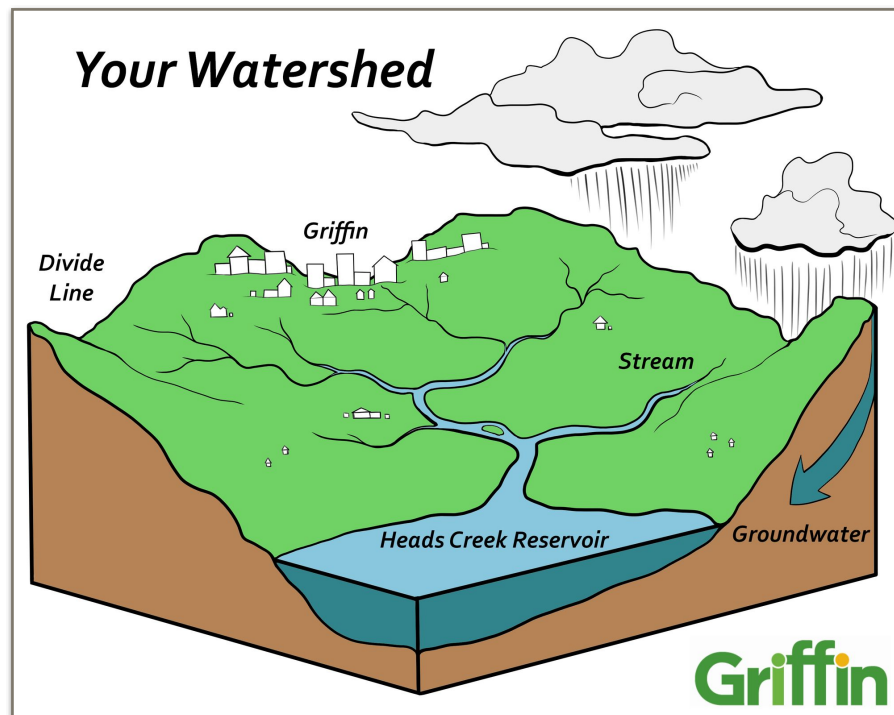
The definition of a watershed, also known as a drainage basin, is:

1 :Any area of land where precipitation (rain fall) collects and drains off into a common outlet, such as into a river, bay, or other body of water. Watersheds include all nearby streams that run down slopes, towards the shared outlet, as well as the groundwater underneath the earth's surface.

2 : An area or ridge of land that separates waters flowing to different rivers, basins, or seas.

Forestation and vegetation also play a big part in a watershed's health, therefore, so does deforestation. Roots of all the plants take up a significant amount of water, so when removed flooding is often a big problem.

Watersheds play a big part in our ecosystems. All the water from way inland run into rivers, bays, and oceans, so how we treat them makes a big impact on everyone's life. Too little vegetation can lead to flooding while over compensating with replanting can lead to small droughts. Regulating our deforestation is a huge part in this. In the past deforestation was never really regulated and this lead to many problems including flooding of rivers and loss of animal habitation.



Watershed diagram

Weinland Nature Study Area

During the week of October 15-21, the 8th grade of Blue Hill Consolidated School partnered with Blue Hill Heritage Trust, went on four nature hikes collecting information on the land, including it's history and importance to the Bagaduce watershed.

These first hike took place at the Weinland Nature Study Area on October 15. Located on the south side of Grey Ridge Road in South Penobscot, Maine, and heavily forested, this place makes for a wonderful hike. The land has a one mile easy hike through the Condon Forest surrounded by vernal pools, young trees, various ferns and many kinds of beautiful trees. This place is home to various wildlife including deer, moose, coyote, and ruffed grouse that are all thriving in this plentiful forest.



Weinland was logged immensely in the 1970's and was owned by the Weinland family. Between 1997 and 1999 TCT (The Conservation Trust) received 40 acres of land from the family who wanted to restore the lands natural beauty. In 2014 the Blue Hill Heritage Trust merged with The TCT OF Brooksville, Castine, and Penobscot receiving access to Weinland.

The trail that leads through these woods is amazingly beautiful. In the early fall the sun shines through the canopy of golden leaves; the forest lights up like the disco, and its very easy terrain makes it the perfect place to go for a slow-paced walk so you can enjoy every part of the mind blowing

nature.

This land is important to the Bagaduce watershed because of its trees. In the 1900's it was logged immensely, and this created problems. You see the vegetation sucked up a decent percentage of the water going into the Bagaduce River, and without any trees or ferns the land and River began to flood destroying many wildlife habitats. Weinland has since regrown, but there are still some cool signs of the deforestation including a rock wall marking a farms border.

Ferry Landing

The second hike, taking place on October 15, was very different. This hike was not a loop but had a destination to the water's shore of the Bagaduce River, a one mile hike that ranges

from easy to moderate terrain. The trail mostly goes through the woods with occasional fields and ends up at the Bagaduce River's shore for a beautiful view of Castine Harbor. Acquired in 1990 by the TCT, the land goes for 23 acres including an old ferry landing, hence the name. This place is of very historic importance because of an island nearby called Negro Island.

Negro Island was used as a safe house to hide slaves that were secretly being shipped off to Canada to freedom during the American Civil War.

Snows Cove

The third hike took place at Snows Cove in Sedgwick, Maine. Spanning 102 acres, 59 of which are shore front, and 2 miles of trails this land has amazing views of the Bagaduce River. Consisting of forested wetlands this place is an essential breeding ground for horseshoe crabs. There are two trails, the Fern Rock Trail, 1.5 miles of easy gentle downhill walking, and the Shore Trail, a slightly more aggressive outer loop for 0.25 miles. The land was a gift from the Brown and Trowbridge families in 2007 and is cared for by the BHHT. William Brown, the original owner, planned on turning the land into house lots but donated it instead.

Hatch Cove / Schumaker Preserve

The third and final expedition took place at Hatch Cove and Schumaker Preserve located in Castine, Maine. The Schumaker Preserve was donated to the TCT in 1978, and Hatch Cove was purchased in 1996. Almost all fields, the preservation also has farm ponds, a small patch of woods, and in the spring the most beautiful wildflowers you'll ever see. These fields are also home to a species threatened grassland birds, the Bobolinks. The Hatch Cove Walking Trail is a walking path mowed through the woods. The Schumaker Preserve however is a historic site now grown over with apple trees.

This land has a historic background because it is just north of the British Canal where the British would watch for Americans coming up in the American Revolution. We spent far less time at these preservations than we did at others because of the harsh weather.



Invasive Crabs

Our other goal on these expeditions was to collect data on invasive crabs, more specifically, the *Carcinus maenads* or green crabs. How did they get here in the first place? In the past, before setting off for the new land people would put gallons of ballast water in the bottom of ships to balance them. Once arriving in America, they would release the water. Little did they know they had also carried over animals such as crabs.

These animals are a serious hazard to our native environment. Green crabs are very aggressive hunters that constantly eat but because they are not from here they don't have any native predators for population control or natural food supply, destroying the native eel grass and preying on essential animals such as muscles and soft shell crabs. They are so aggressive that in some places in Maine mussels have gone extinct.

We did an experiment and collected invasive crabs at Ferrylanding and Snows Cove. Here are the results.

Ferrylanding	Snows Cove
Group 1: 7 green crabs	Total: 0 green crabs
Group 2: 8 green crabs	
Group 3: 7 green crabs	
Group 4: 10 green crabs	
Group 5: 7 green crabs	
Group 6: 3 green crabs	
Group 7: 7 green crabs	
Total: 49 green crabs	

This prompted us to ask the question why are there so many at Ferrylanding and none at Snows Cove. Well Snows Cove is farther up the Bagaduce River than Ferrylanding. Down past Ferrylanding the current picks up and becomes too difficult for the crabs to pass through while horseshoe crabs are tough enough to get through the waters, hence why there are so many horseshoe crabs at Snow Cove. This spawned the idea that altering our currents could help us control the invasive crabs, but I'll leave that for another day.

Some green crab characteristics are they have a pentagon shaped body and slim legs and claws. Despite the name, however, not all of them are green. They vary from green, brown, and even red. The best way to identify a green crab is that they have five spines on the shell on either side of the eyes or ten in total.

