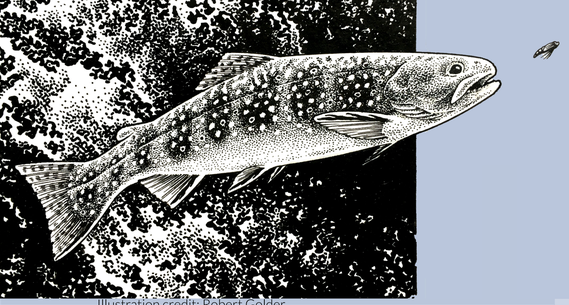


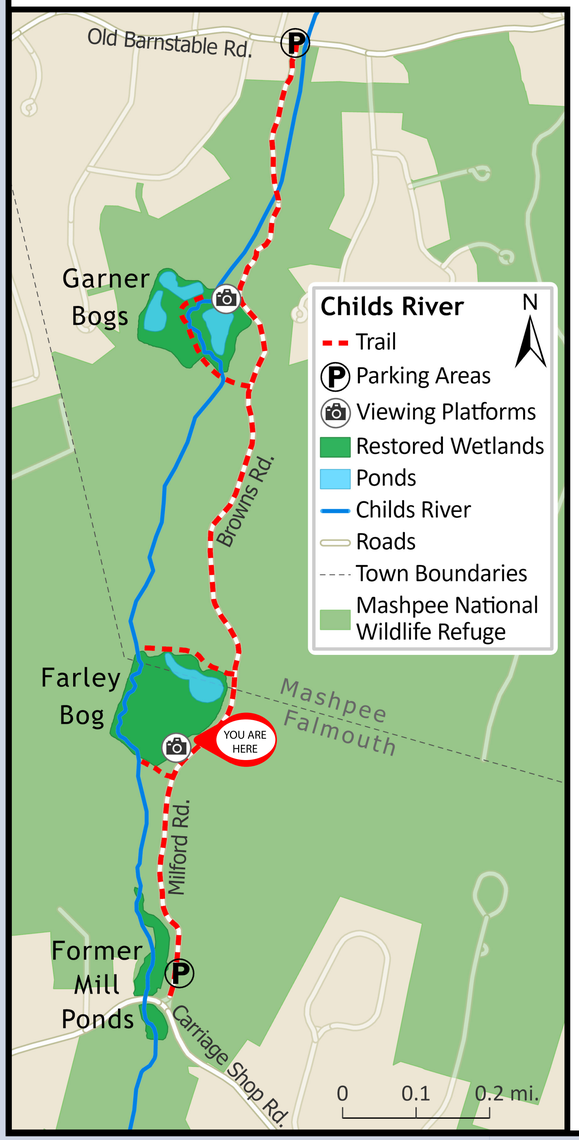
Illustration credit: Robert Golder

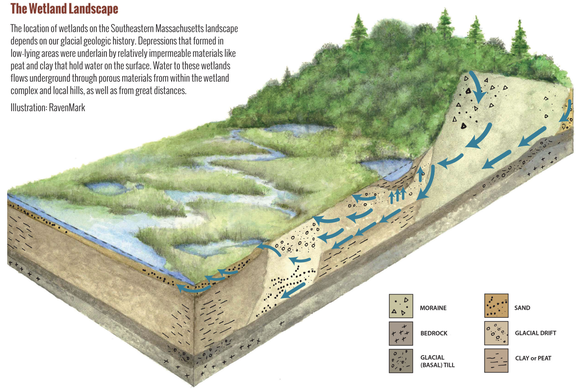
Retired Cranberry Bog to Restored Wetland: Farley Bog and the Childs River

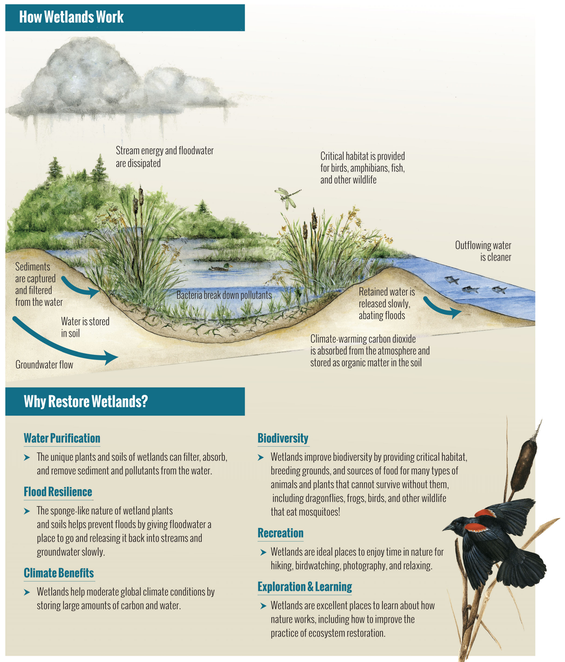
Farley Bog before restoration (2017)

Geologic Context and the Legacy of the Last Ice Age

Cape Cod is a large moraine that was created by the Laurentide Ice Sheet depositing sediments into an elongate ridge. When the last Ice Age ended, approximately 16,000 years ago, and the ice sheet began to retreat from Cape Cod, torrents of meltwater transported and sorted these sediments into deposits of sand and gravel. At the same time, large chunks of ice were left behind and buried under this sediment. When these ice chunks melted, they left depressions called kettle holes. The kettle holes became kettle ponds that, over time, filled up with clay and organic materials. Wetlands formed on these filled-in kettles, accumulating decaying plant matter, which ultimately became peat deposits.







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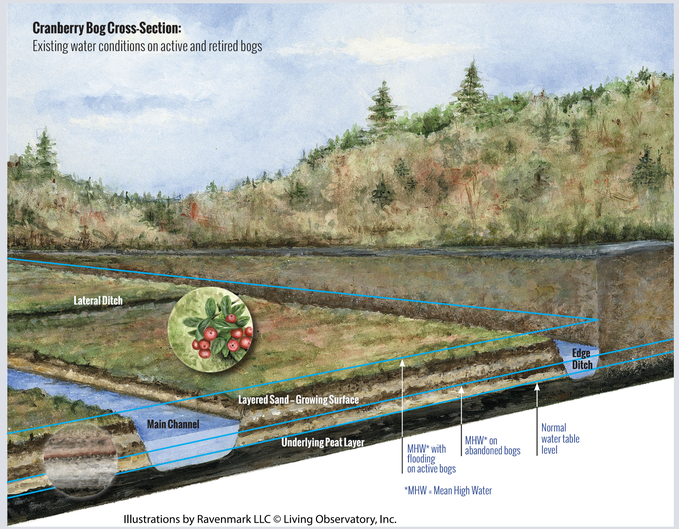
Cranberry Cultivation and its Impacts

The American cranberry (*Vaccinium macrocarpon*) is a native wetland plant that was harvested for thousands of years by the Wampanoag people and European colonists alike. In the early to mid 1800s, the commercial cultivation of cranberries became an important economic and cultural part of southeastern Massachusetts and Cape Cod. This came at an ecological cost. Creating cranberry bogs involved deforesting, ditching, draining, leveling, and damming wetlands to control water levels and establish a cranberry monoculture. Farmers also discovered that sand could enhance cranberry growth and depress weeds, and they began applying sand to the bogs every year. This practice resulted in thick layers of sand topping many present-day cranberry bogs, which further separate the bog surface from the groundwater.



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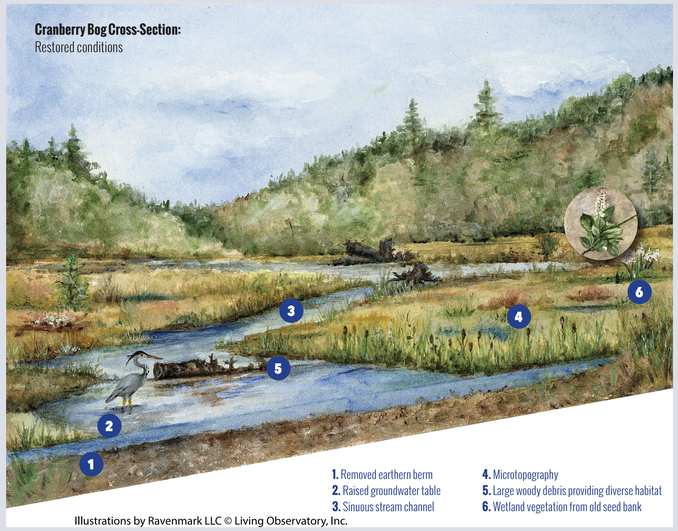

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Restoration Goals and Methods

The restoration of a cranberry bog aims to undo the impacts of cranberry farming and return the system to a diverse ecosystem. This involves:

- removing water control structures to allow free-flowing surface water and fish passage
- reestablishing a meandering channel with large wood to slow flow and create habitat for fish and riparian species
- filling ditches and removing sand to raise the groundwater and create a wet bog surface
- microtopography (roughening) of the bog surface to create a range of surface conditions and promote diverse plant communities

These efforts are designed to jumpstart the restoration of the ecosystem and set it on a trajectory for a sustainable recovery. While some impacts are immediate, like a free-flowing channel, others take years to be fully realized, like the reestablishment of a wetland forest.

Pre-Restoration Video

Childs River Restoration Video

Sea Run Brook Trout Podcast

Healthy Wetlands Video

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