

SAFE HARBOR 2017 VISION RETREAT: RACE POINT FIELD GUIDE, by Gordon Peabody



This Coastal Process at Race Point is Very Unique to Cape Cod



The unique features of Race Point reflect the fact that this is some of the newest land on the planet. Barely 2,000 years old and still growing wider to the north with each storm tide, this curved landform was created by the very same energy eroding the rest of Cape Cod. Safe Harbor is studying this poorly understood area to learn how the energy of the Coastal Process responds to the forces of tide, wind and waves. The Coastal Process seems to get turned on it's head out here. We will have a first hand opportunity to observe this process ourselves. The Lighthouse, where we will be staying, is on very left side of this image.

Species To Look For in the Marsh, on the Dunes or on the Beach:



Bayberry (female plants have berries)



Beach Grass, Dusty Miller, Seaside Goldenrod



New England Aster



Rugosa Rose, Dune Rose, China Rose



Cord Grass, salt hay, *Spartina patens*



Salt Marsh Grass, *Spartina altinaflora*, ECADS



Sargasso, Sargassum, orphan from Gulf Stream



Codium, invasive from south of Cape



Saltwort, Salicornia, edible in salads



Fucus, attached to rock, flotation bladders



Irish Moss, Chondrus crispus



Sea Lettuce, Ulva lactuca



Slipper shells, *Crepidula fornicata*



Quahog



Moon Snail, *Polynices heros*



Steamer, Soft shelled clam



Sand dollar



Whelk, Ridged whelk



Grey Seals, do not approach on beach



Amphipods, beach hoppers in seaweed

A CLOSER LOOK:



Epiphytes are diminutive seaweeds, such as this red one, attached to another seaweed.



Spirorbis worm tubes on fucus seaweed, extend feathery baskets to catch plankton.



This small scrap of seaweed provides homes for 2 species of Bryozoan animal colonies.



An unlucky seal provides food for others.



Herring Gull, mostly a Bayside resident, sometimes seen on Ocean beaches.



Black backed Gull, big, undisputed monarch of our Ocean beaches, year round resident.



Eider Ducks



Great Blue Heron

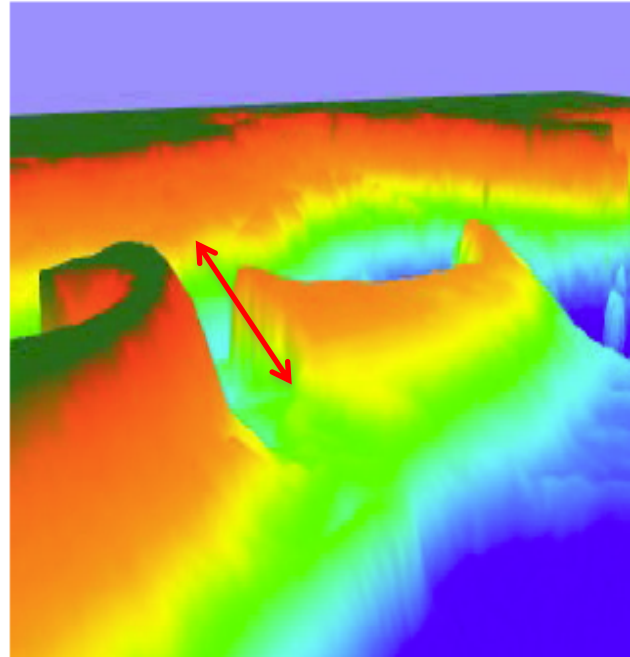
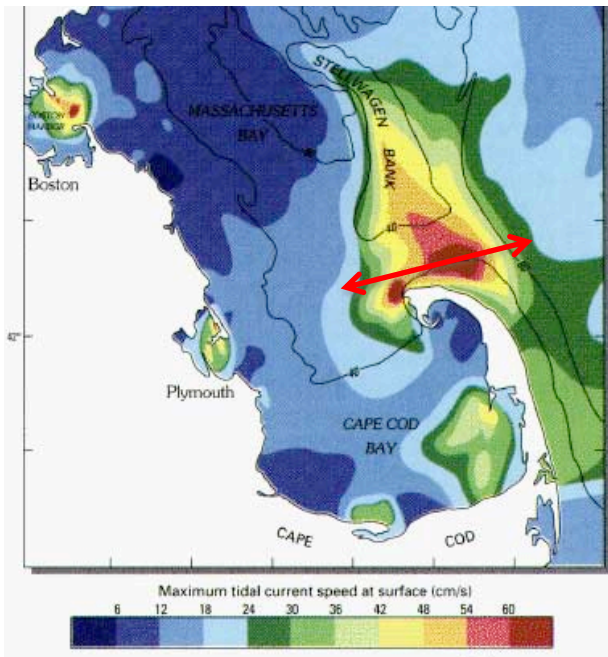


Foxes have made homes close to beaches



Sandpipers feed on creatures in the sand grains

BACKGROUND INFORMATION ON THE RACE POINT AREA



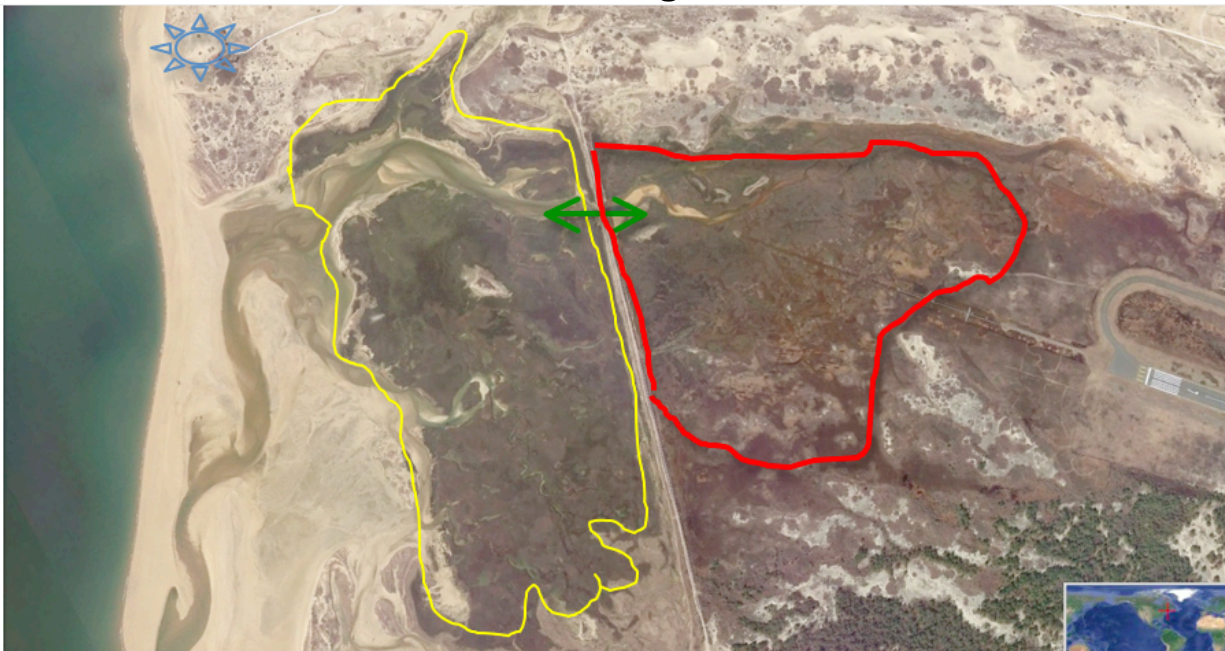
A closer look at why incoming and outgoing tides accelerate around the tip of Race Point. Cape Cod is a twenty mile wide basin. Each day the incoming tide rises 10 feet, falls 10 feet, rises and falls again. This huge volume of water is pushed through and drawn back out, between the underwater landforms of Race Point and Stallwagon Bank.

HATCHES HARBOR, HISTORIC SETTLEMENT AND SALTMARSH RESTORATION



By the early 1800's a few shacks and whale oil works had been established at Hatches Harbor, near where Race Point Lighthouse is now. This was an intuitive destination for fishing boats under sail because it saved time. The eight additional miles to Provincetown (16 mile round trip) could be complicated by tide. The sailboats would careen or lay over at low tide, which was a common practice at the time and boats were built for that. The catch was transported over sand to Provincetown by ox cart and in 1839, a dike was constructed to shorten the journey. This dike effectively isolated and starved half of the salt marsh. We still had a lot to learn back then.

Hatches Harbor Salt Marsh Restoration Began in 2009



In collaboration with Provincetown and the National Seashore, restoration of Hatches Harbor began with the controlled opening of new culverts in 2009. As Chair of the ConsCom in Provincetown some years earlier, I had written the Order of Conditions controlling the project. This was a small test model for the huge Herring River Estuary Restoration. I later became Chair of that interagency planning group some years later.