



The Dunes of the Cape

According to the famous 1950s song, *If you're fond of sand dunes and salty air... You're sure to fall in love with old Cape Cod.*

The vistas from the Province Lands Bicycle Trail offer a chance to appreciate these dunes. Yet, if you stood here 400 years ago, you would be looking at a forest. The tip of Cape Cod, from High Head Road near the Truro town line, to Long Point in Provincetown, formed about 4000 years after the rest of the Cape had already been shaped by glaciers and sea level rise. Long-shore currents carried sand from Eastham, Wellfleet, and Truro beaches and deposited it in the Province Lands. Over time, soil formed and pioneer vegetation grew into mature forests.

The *Mayflower* passengers who arrived in 1620 wrote of oaks, sassafras, and juniper, growing in a “spit’s” (the length of a garden spade, about six inches) depth of soil. Though the colonists settled in Plymouth, they returned to the Province Lands with patents to fish, trade, and collect resources. The lands were set aside for common use, and colonists cut trees for building homes and ships, and to fuel saltworks. Without tree roots to stabilize the topsoil, winds stripped it away. When author Henry David Thoreau visited the area in 1849, he described a “perfect desert of yellow sand.” It blocked the doors of houses and filled in harbors. A very early conservation effort to plant beach grass and other vegetation to stabilize the sand began in 1739, and similar projects have continued into modern time. Some forest has come back, but consists of different species. In time, the oaks, sassafras, and juniper may regain dominance.



Dunes are formed when wind whips sand into hills. Beaches have dunes at their backs, where sand is added or eroded, depending on the location and season. Farther inland, larger dunes can form, such as the parabolic dunes that span from the Province Lands into Truro. These dunes are named for the geometric curves formed by the prevailing northwest winds. Before beach grass planting and other revegetation efforts added stability to the dunes, they moved quite a bit, as much as four meters a year, earning them the nickname “walking dunes.” The process is typically slower now, but dunes can still grow, erode, and move laterally. Stand here long enough and you’ll see.