

Pitch pines and the plants associated with them make up a complex ecosystem. Through evolution, all plants and animals are somehow dependent upon each other for survival. This conservation project will help to conserve the ecosystem of the pitch pines.

Pitch pines usually grow in association with scrub oaks (*Quercus ilicifolia*) (see photo), lowbush blueberries (*Vaccinium angustifolium* and *V. pallidum*) and black huckleberry (*Gaylussacia baccata*). With stubby, gnarled branches scrub oaks appear as more of a shrub than a tree. It is one of the oldest tree species in North America. Some living specimens date back thousands of years. It is sometimes called bear oak because of reports that only bears consume its bitter acorns.



Scrub oak photos: Greg Decker



Right: Scrub oak
Near right: Leaf detail

Below: Yellow-bellied sapsucker



Photograph: macaulaylibrary@cornell.edu

Animal Uses

Pitch pines also serve as an important food source for wildlife. Its seeds, when dropped, provide sustenance for ground feeding animals and birds such as towhees, juncos, pine warblers, chickadees, rabbits, red squirrels and mice. The yellow-bellied sapsucker is quite fond of foraging on the sap of the tree. Holes left by the sapsucker appear in a horizontal line on some of the trees along the ridge lines in the preserve. The excessive population of white-tail deer in Connecticut impacts other

conservation efforts. The deer browse on the saplings and needles, destroying host sites for the larvae of butterflies and moths.

Lepidoptera – Moths and Butterflies

“The sand plains barrens, along with ridge top pitch pine–scrub oak barrens and heath- land, are the most important shrubland habitat for rare moths and butterflies (Order Lepidoptera) such as the buck moth (*Hemileuca maia maia*) and Gerhard’s underwing (*Catocala herodias*). Scrub oak is the primary host for many of these rare Lepidoptera. Unfortunately, the small remaining habitat probably does not support many of more specialized species.” – Emery Gluck, “Pitch Pine–Scrub Oak Barrens,” *Connecticut Woodlands*, Spring 2015



Photograph: Tom Murry



Buck moth photos: Loren Padelford



Top: Buck moth
Above and left: Gerhard's Underwing moth

Unique Fact

Large and healthy pitch pine barrens on Martha's Vineyard contain frost pockets - kettle holes and valleys in glacial outwash plains into which cold night air drains and is trapped. These frost pockets are an important habitat for many regionally rare and endangered Lepidoptera. Lepidoptera that feed on oaks in spring benefit from the delayed leaf phenology due to colder temperatures. Young, tender leaves are more nutritious than older leaves because of their greater nitrogen and water content (Feeney, 1970; Slansky, 1993).

