



adapted to growing in wet conditions, such as cinnamon fern, water willow, swamp azalea, and sweet pepperbush.

Vernal pools occur throughout Squam Farm. They are defined as bodies of fresh water that either dry up for a portion of the year, or contain water year-round but are free of adult fish populations. These habitats are extremely important to many species of wildlife, especially amphibians and reptiles such as the spring peeper, painted turtle, green frog, and the rare spotted turtle. Vernal pools provide breeding habitat for amphibians whose eggs and larvae would be preyed upon by fish in freshwater ponds. They also contain diverse populations of invertebrates, which are a rich source of food for the amphibians, reptiles, and birds that are attracted to these sites.



These natural communities at Squam Farm provide a variety of habitats for the many species of wildlife and plants. Under the Foundation's ownership and management, this area will continue to be protected as valuable open space, as well as provide passive recreation, scientific research, and educational opportunities for the public.

We need your support to protect Nantucket's fragile places.



**Nantucket Conservation Foundation**

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A TRAIL GUIDE TO

# Squam Farm



**Nantucket Conservation Foundation**

Nantucket, Massachusetts



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Much of the upland areas in Squam Farm have been mowed by a previous owner. These sites provide excellent examples of the process of vegetative succession: the change in plant species composition over time, where one natural community slowly replaces another until a stable system develops. Mowed meadows on the property currently support an abundance of grasses and perennial wildflowers such as ox-eye daisy, yarrow, hawkweed, and pasture thistle. However, interspersed among the grasses are low shrubs and vines including beaked hazelnut, bayberry, fox grape, and northern arrowwood. If annual mowing were to cease in these areas, they would quickly revert to shrub thickets—the next, intermediate stage of plant succession. In time, seedlings of taller tree species would establish themselves and eventually grow to out-shade the shrubs, thus making way for a hardwood forest community to develop.

The existing hardwood forests on this property contain 40 to 50-foot high stands of black tupelo, red maple, sassafras, red oak, white oak, and American beech trees.

Forests such as this are relatively rare on Nantucket. Settlers that arrived in the early 1600's reported that the island was covered with large trees. However, this quickly changed as they were harvested for home construction, ship building, and firewood. Large areas were also cleared for growing crops and use as pasture land, resulting in the depletion of nutrients from the shallow soils. Since the decline and eventual elimination of livestock grazing in the late 1800's, taller shrubs have gradually become established in many parts of the island. The Foundation has been experimenting with the use of sheep grazing at Squam Farm as a means of preventing shrub encroachment into some of the open fields on the property.

Today, Nantucket's forests are limited to certain areas, including here in the Squam area, the Foundation's Masquetuck Reservation in Quaise, and the borders of the Windswept Cranberry Bog. They tend to occur in small depressions that were formed during the last glacial era. Although they are locally called "hidden forests" because they are often not obvious when viewed from a distance, the trees at these sites can grow to be relatively tall because they are somewhat protected from salt spray and high winds.

Low-lying areas in the swamp provide optimum conditions for *Sphagnum*, a large genus of mosses that can hold up to twenty-five times their weight in water. As the top portions of these plants grow, the underlying layers become deprived of sunlight and die. Thick mats of dead *Sphagnum* gradually build up and become compressed by the weight of the waterlogged plants above them, forming extensive layers of peat. These areas support species

