



Natural Heritage & Endangered Species Program

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Natural Community Fact Sheet **Ridgetop Pitch Pine - Scrub Oak Community**

Description

Ridgetop Pitch Pine - Scrub Oak Communities are a shrub dominated type of community that occurs on acidic ridges and rock outcrops. Emergent Pitch Pine trees tend to be dwarfed and scattered in these acidic exposed locations that usually have a history of fire. Within the community, among thickets of Scrub Oak, are patches of Huckleberry and Lowbush Blueberry, openings with Bearberry, lichen on rock, and grassy patches. Bigger open patches of bedrock support Rocky Summit / Rock Outcrop Communities. Below the ridges are usually forests typical of the region. The communities tend to occur as patches in a mosaic of open summits with outcrops of bedrock near rocky woodlands.



Ridgetop Pitch Pine – Scrub Oak Community with bare rock patches.
Photo: P. Swain, NHESP.



Ridgetop Pitch Pine – Scrub Oak showing patch of bearberry. Photo: B. Sorrie, NHESP.

Environment

Ridgetop Pitch Pine - Scrub Oak Communities occur on acidic bedrock. These are dry, nutrient poor, harsh environments with thin soils. Like Pitch Pine-Scrub Oak Communities on sand, they are drought prone. The thin soil on bedrock doesn't hold moisture. Cracks in the bedrock support denser vegetation than other areas.

Pitch Pine - Scrub Oak Communities on bedrock or sand are fire maintained and fire dependent: species of the community tend to be adapted to occasional light fires. After a fire, Scrub Oaks and Huckleberries sprout readily from their root crowns and Pitch Pine has thick bark that resists fire damage. Pitch Pine can grow new branches from the stem, and it produces some cones that release their seeds only when heated by fire. Such species can sprout back vigorously once the fire has passed; other species of invading trees don't

survive the fire. Some of the herbaceous species have long lived seeds that stay in the duff for years and germinate after light fire if the duff isn't burned up.

Characteristic species of Ridgetop Pitch Pine - Scrub Oak Communities in Massachusetts

Although the community is clearly similar to Pitch Pine – Scrub Oak on sand, some of the occurrences seem to be more like the interior variant of the sand community than the coastal version. Short, dwarfed Pitch Pine (*Pinus rigida*) is most usual, with occasional Red Oak (*Quercus rubra*), Gray Birch (*Betula populifolia*), Black Cherry (*Prunus serotina*), and Red Maple (*Acer rubrum*). In the shrub layer, Scrub Oak (*Quercus ilicifolia*) is the most characteristic species of the community with dense patches of Black Huckleberry (*Gaylussacia baccata*), and Lowbush Blueberry (*Vaccinium angustifolium*) being usual. Other shrubs, found in lower abundance, may include Mountain Laurel (*Kalmia latifolia*), Wild Raisin (*Viburnum cassinoides*), Chokeberry (*Aronia arbutifolia*), and serviceberries (*Amelanchier* spp.). The herbaceous layer is extremely sparse and tends to occur in rock crevices and at tree bases. Herbaceous plants include Canada Mayflower (*Maianthemum canadensis*), Starflower (*Trientalis borealis*), Hairgrass (*Deschampsia flexuosa*), goldenrods (*Solidago* spp.), Wintergreen (*Gaultheria procumbens*) and sedges (*Carex* spp.).

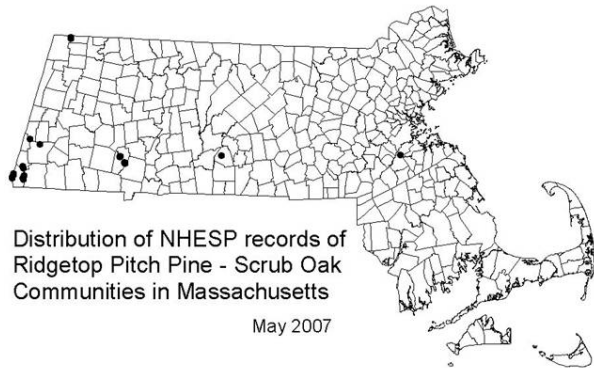
Invasive exotic species are usually absent.

Vertebrate species are usually those of the surrounding forests and rocky outcrops: no vertebrates depend on the specific community type for their existence. Larger mammals seem to prefer woodlands where they can move more easily, but birds find shelter in the dense shrubs during migration.

Pitch Pine - Scrub Oak Communities have a rich lepidopteran fauna. Some of the rare moths of the Pitch Pine Scrub Oak Communities on outwash have been found on the Ridgetop community.



This spring view of a Ridgetop Pitch Pine – Scrub Oak Community shows an occurrence rich in shrubs. Photo: P. Swain. NHESP.



Distribution of NHESP records of Ridgetop Pitch Pine - Scrub Oak Communities in Massachusetts

May 2007

Range

Ridgetop Pitch Pine – Scrub Oak Communities are found on acidic bedrock ridges throughout Massachusetts, such as the Blue Hills and Middlesex Fells near Boston, Cape Ann, the ridge top openings in the Connecticut Valley, and southern and northern Berkshires.

Status in Massachusetts

Good examples of the community type are known in small acreages in fewer than 20 locations statewide.

Threats and Management Recommendations:

The occurrences are threatened by exclusion of fire. Although many occurrences are on conservation lands, few are managed to maintain

the specific natural community type. It would best be maintained by careful reintroduction of fire through prescribed burning or other fire management plans. Trails tend to run on ridge tops and when the open areas supporting these communities are encountered, they invite human use, which can easily degrade the vegetation, destroy the lichen and moss cover on the rocks, and lead to soil loss. Balancing protection with use is possible with careful planning, such as adroit trail placement, education of users, and probably some triage of sites.

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