White Pine - Oak Forest

State Rank: S5 – Secure

White Pine - Oak Forest with scattered shrubs. Photo: Beverly Vucson, DFG.

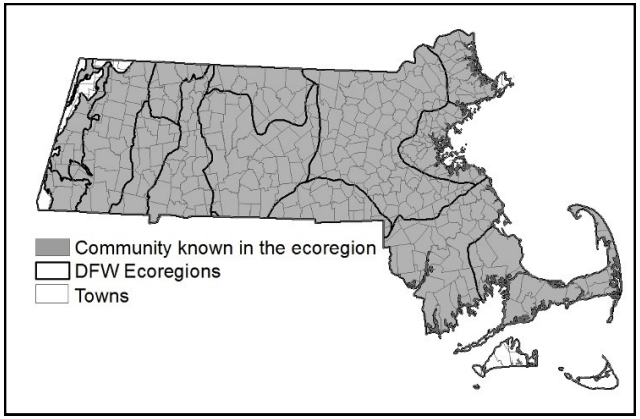
White Pine - Oak Forest is a common, extremely variable forest community of mixed dominance with oaks and white pine in the canopy. It is a common stage of forest succession, indicating widespread past disturbances.

Description: White Pine - Oak Forest (WPOF) is a widespread successional community that occurs below 915m (3000 ft.) on slopes or flat to gently rolling moraines, till, or outwash plains. Sites are dry (but not very dry) to moist (mesic). The forest canopy is closed with mixed dominance of pines and deciduous trees in the canopy, often with a super-canopy of white pine. Indicators of past land use such as stone walls, old wood roads, and stumps often appear throughout.

Characteristic Species: In White Pine - Oak Forests white pine (25-75% cover) and oak species (25-75% cover) (primarily red or black with white, scarlet, and chestnut oaks) dominate the canopy layer in a variety of proportions. Associated canopy trees regularly occur in low numbers: hickories, pitch pine and sassafras are more likely in southern or coastal areas while white and black birches are more northerly. American beech and red maple occur throughout. American chestnut is a frequent shrubby tree. The shrub layer is variable in abundance and species. Heaths may form a prominent shrub layer with lowbush blueberries, black huckleberry, mountain laurel, and/or sheep laurel. Maple-leaved viburnum and witch-hazel may occur in less dry conditions. Typical sparse herb layer plants include bracken fern, wild sarsaparilla, Canada mayflower, partridge -berry, and pink lady's slipper. Evergreen patches of club mosses such as ground-pine, southern ground-cedar, and staghorn clubmoss are particularly apparent in the winter.

White Pine needles and trunk. Photos: Chris Evans, University of Illinois, Bugwood.org.

Differentiating from Related Communities: White Pine - Oak Forests have >25% cover of white pine overall (not just local patches). They are often in a successional sequence from Successional White Pine Forests: the key difference is the >25% of oaks in the WPOF canopy. In southern or very dry areas WPOF may grade into Pitch Pine - Oak Forests/Woodlands which have >25% cover of pitch pine and <25% canopy of white pine. Related forest types in the oak continuum have <25% white pine. Coastal Forests/Woodlands are within a few miles of the coast at <~60 ft. elevation and receive storm winds and spray. The diverse canopies include oaks and often American holly, sassafras, and black gum; white pine may be present. In the northern areas, WPOF may grade into Northern Hardwoods - Hemlock - White Pine Forests that are dominated by sugar maple and white ash with <25% canopy cover of white pine and the only oak is red oak.



Habitat for Associated Fauna: There are no species known to be restricted to the White Pine - Oak Forest, most animals in the forest are widespread generalists. All types of upland forest provide valuable structural attributes such as tree cavity den sites (which are utilized by a variety of bird and mammal species) and large woody material (which is utilized by various amphibian, reptile, and invertebrate species). Oak acorn production, an important source of wildlife food, is substantially greater in oak forest types than in northern forest types. Oaks and acorns play a fundamental role in the organization and dynamics of wildlife communities.

Examples with Public Access: Myles Standish SF, Plymouth; Freetown SF, Freetown; Quabbin Reservation, Belchertown; Wachusett Meadow WS (MAS), Princeton.

White Pine Oak Forest on an upper rocky slope. Photo: Patricia Swain, NHESP.

From: *Classification of Natural Communities of Massachusetts* http://www.mass.gov/nhesp/
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