Pinus strobus - Pinus resinosa / Cornus canadensis Forest

COMMON NAME	Eastern White Pine - Red Pine / Canadian Bunchberry Forest
SYNONYM	Red Pine - White Pine Forest
PHYSIOGNOMIC CLASS	Forest (I)
PHYSIOGNOMIC SUBCLASS	Evergreen forest (I.A)
PHYSIOGNOMIC GROUP	Temperate or subpolar needle-leaved evergreen forest (I.A.8)
PHYSIOGNOMIC SUBGROUP	Natural/Semi-natural (I.A.8.N)
FORMATION	Rounded-crowned temperate or subpolar needle-leaved evergreen forest (I.A.8.N.b)
ALLIANCE	PINUS STROBUS FOREST ALLIANCE

CLASSIFICATION CONFIDENCE LEVEL 2

USFWS WETLAND SYSTEM Terrestrial

RANGE

Acadia National Park

These forests are not common in Acadia and are found both in the area of the 1947 burn and outside of that area.

Globally

This association occurs in Maine, New Hampshire, New York, and Vermont.

ENVIRONMENTAL DESCRIPTION

Acadia National Park

Forests of mid elevations and moderate to somewhat steep (10 - 40%) slopes. Soils are thin (12 cm) sandy loams or loamy sands over granitic bedrock, very well drained to somewhat excessively drained; soil pH 4.8-5.0.

Globally

This dry pine forest occurs on well- to rapidly drained, coarse-textured sand and gravel deposits on flats, such as outwash sands, delta sands, eskers, kames, kame terraces, dry lake sands, as well as some upper slopes.

MOST ABUNDANT SPECIES

Acadia National Park

Stratum	Species
Tree Canopy	*Pinus resinosa, Pinus strobus, Abies balsamea, Picea rubens, Acer rubrum*
Tree Subcanopy	*Picea rubens, Abies balsamea*
Dwarf Shrub	*Vaccinium angustifolia, Gaylussacia baccata, Kalmia angustifolia, Vaccinium myrtilloides*
Herbaceous	*Pteridium aquilinum, Gaultheria procumbens, Maianthemum canadense, Trientalis borealis, Mitchella repens*
Non-vascular	*Dicranum undulatum, Polytrichum juniperinum, Pleurozium schreberi*

Globally

Stratum	Species
Tree Canopy	*Pinus strobus, Pinus resinosa*
Dwarf Shrub	*Kalmia angustifolia, Vaccinium angustifolium, Vaccinium myrtilloides, Gaylussacia baccata*
Herbaceous	*Pteridium aquilinum, Oryzopsis asperifolia, Carex pensylvanica, Mitchella repens, Maianthemum canadense, Gaultheria procumbens, Cornus canadensis, Trientalis borealis*, *Clintonia borealis*

CHARACTERISTIC SPECIES

Acadia National Park

Pinus resinosa as a co-dominant canopy species

Globally

VEGETATION DESCRIPTION

Acadia National Park

Forests dominated by *Pinus strobus* and *Pinus resinosa* forming an incomplete canopy (but not so open as to be typed as woodland). *Picea rubens* or *Acer rubrum* may, as in so many Acadia types, be a prominent canopy associate. *Abies balsamea* is common, though not abundant. Pines are generally absent from the spruce and fir subcanopy, although small *Pinus strobus* may be present in the ground layer. Dwarf shrubs typically include *Vaccinium angustifolium*, *Gaylussacia baccata*, and/or *Kalmia angustifolia*; the dwarf shrub cover in the samples varied from very sparse (3%) to almost 50%.

The basal area ranged from 35 - 51 m^2/ha. Canopy heights were 16 - 22m.

Globally

The canopy is dominated by *Pinus strobus* and *Pinus resinosa*, with scattered minor associates including *Quercus rubra, Betula alleghaniensis, Abies balsamea, Picea rubens*, and *Acer rubrum*. The sparse shrub layer includes *Kalmia angustifolia, Viburnum*

nudum var. *cassinoides* (= *Viburnum cassinoides*), *Vaccinium angustifolium, Vaccinium myrtilloides, Gaylussacia baccata, Amelanchier canadensis*, and *Acer pensylvanicum*. Characteristic herbs include *Pteridium aquilinum, Oryzopsis asperifolia, Carex pensylvanica, Mitchella repens, Maianthemum canadense, Gaultheria procumbens, Cornus canadensis, Trientalis borealis*, and *Clintonia borealis*. The herbaceous layer may be sparse due to needle accumulation and dry conditions. This forest type does not exhibit a well-developed moss layer, although species such as *Dicranum polysetum, Dicranum undulatum, Polytrichum juniperinum, Pleurozium schreberi*, and *Brachythecium* spp. may be abundant.

OTHER NOTEWORTHY SPECIES

CONSERVATION RANK G?.

DATABASE CODE CEGL006253

COMMENTS

Acadia National Park

Eastern Hemlock - White Pine - Red Spruce Forest *(Pinus stobus - Tsuga canadensis - Picea rubens* Forest) can be similar but will have less *Pinus resinosa* in the canopy (<< 40% relative dominance) and is typically on somewhat more mesic sites. Mixed Conifer Woodlands can also be very similar but are distinguished by their more open canopy, their more well developed heath shrub layer (although one of the Red Pine - White Pine Forests sampled has a well-developed heath shrub layer), and they generally will have a greater extent of exposed bedrock.

Heath shrub and herb cover are highly variable. Those on the east side of Mount Desert Island have more of a woodland character while the west side examples are more forest-like.

Globally

This community probably requires periodic fires for maintenance. This association is less mesic and dependent on fire when compared to the Eastern Hemlock - White Pine - Red Spruce (*Pinus strobus - Tsuga canadensis - Picea rubens* Forest) and occurs farther north in a cooler climate than do mixed pine - oak forests or pitch pine woodland communities. *Picea rubens, Viburnum nudum* var. *cassinoides, Betula* papyrifera, and *Vaccinium myrtilloides* differentiate this community from dry pine forests at lower latitudes.