

Great Smoky Mountains National Park
photographs of
***Picea rubens* - *Tsuga canadensis* / *Rhododendron maximum* Forest**



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COMMON NAME Red Spruce - Eastern Hemlock / Great Rhododendron Forest
SYNONYM Red Spruce - Fraser Fir Forest (Hemlock Type)
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 Conical-crowned temperate or subpolar needle-leaved evergreen forest (I.A.8.N.c.)

ALLIANCE *Picea rubens* Forest Alliance

CLASSIFICATION CONFIDENCE LEVEL 2

USFWS WETLAND SYSTEM Upland

RANGE

Globally

This community is known from the southern Blue Ridge of western North Carolina and Tennessee and may be restricted to the Great Smoky Mountains National Park. This association, or one very similar, may possibly occur in Virginia and West Virginia.

Great Smoky Mountains National Park

This community was sampled on the Mount Le Conte quadrangle and was not found on the Cades Cove quadrangle. It occurs on the northern slopes of Mount Le Conte and on slopes east of Peregrine Peak. It should be looked for in other areas of the Park between 4500 and 5000 feet elevation.

ENVIRONMENTAL DESCRIPTION

Globally

This community is known to occur in the Great Smoky Mountains in the vicinity of Mount Le Conte on steep, middle to high slopes between 4500 and 5000 feet elevation. Sites may be relatively exposed and rocky and subject to disturbance by wind and ice. Soils are well-drained and high in organic matter.

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See above.

MOST ABUNDANT SPECIES

Globally

<u>Stratum</u>	<u>Species</u>
Tree canopy	<i>Picea rubens</i> , <i>Tsuga canadensis</i>
Tall shrub	<i>Rhododendron maximum</i>

Great Smoky Mountains National Park

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Tree canopy	<i>Picea rubens</i> , <i>Tsuga canadensis</i>
Tall shrub	<i>Rhododendron maximum</i>

CHARACTERISTIC SPECIES

Globally

Picea rubens, *Tsuga canadensis*, *Rhododendron maximum*

Great Smoky Mountains National Park

See above

VEGETATION DESCRIPTION

Globally

This needle-leaved, evergreen forest has a canopy dominated by mixtures of *Picea rubens* and *Tsuga canadensis*. *Betula allegheniensis*, *Acer rubrum*, or *Prunus pensylvanica* may form a minor part of the canopy or subcanopy. Typically, there is a dense subcanopy/tall-shrub stratum of *Rhododendron maximum*. Other shrub species can include *Rhododendron catawbiense*, *Ilex montana*, *Rubus canadensis*, and *Amelanchier laevis*. The herb stratum is typically very sparse with scattered ferns and other forbs. The ground cover is dominated by leaf litter and may have scattered large rocks or exposed bedrock.

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See above

OTHER NOTEWORTHY SPECIES

No information

CONSERVATION RANK G2?

RANK JUSTIFICATION

In the southern Blue Ridge, this forest is nearly or entirely restricted to the Great Smoky Mountains National Park. While the total distribution of this community is uncertain, the total acreage is certainly small, less than 10,000 hectares. The only known location with substantial, high-quality occurrences is the Great Smoky Mountains National Park.

DATABASE CODE C EGL006272

COMMENTS

Globally

This association may not be distinct enough from *Picea rubens* / *Rhododendron maximum* Forest (CEGL006152) to warrant recognition from it. Forests with *Picea rubens* and *Tsuga canadensis* occur in Virginia but in a different topographic and hydrologic situation than this association. Occurrences at Salt Pond Mountain, Virginia, are in valley bottoms, within streamheads, and have an unclear hydrology.

Great Smoky Mountains National Park

On the Mount Le Conte quadrangle, these forests may grade into lower elevation forests dominated by *Betula alleghaniensis* or *Tsuga canadensis*. At least some examples are old-growth forest. On more exposed sites, this community may border heath shrublands.

REFERENCES

Schafale and Weakley 1990