

# Terrestrial & Palustrine Plant Communities Of Pennsylvania

By Jean Fike

## Hemlock - tuliptree - birch forest

The presence of tuliptree and a mix of somewhat more southern species distinguish this type from the "Hemlock/white pine - northern hardwood" type. This is generally a lower slope or cove type. *Tsuga canadensis* (eastern hemlock) usually contributes at least 25% of the canopy. *Liriodendron tulipifera* (tuliptree), *Betula alleghaniensis* (yellow birch), and *B. lenta* (sweet birch) are the most characteristic hardwood species. Other tree species commonly found on these sites are *Acer rubrum* (red maple), *A. saccharum* (sugar maple), *Quercus spp.* (oaks)—usually *Q. rubra* (northern red oak), as well as *Fagus grandifolia* (American beech), *Fraxinus americana* (white ash), *Prunus serotina* (wild black cherry), *Tilia americana* (basswood), *Pinus strobus* (eastern white pine), and in western Pennsylvania, *Magnolia acuminata* (cucumber-tree). Shrubs include *Hamamelis virginiana* (witch-hazel), *Rhododendron maximum* (rosebay) and others. The herbaceous layer is highly variable; characteristic species include *Maianthemum canadense* (Canada mayflower)—especially under hemlock, *Podophyllum peltatum* (may-apple), *Dryopteris marginalis* (evergreen wood fern), *Botrychium virginianum* (rattlesnake fern), *Arisaema triphyllum* (jack-in-the-pulpit), *Aster divaricatus* (white wood aster), and *Polystichum acrostichoides* (Christmas fern).

**Related types:** If hemlock contributes less than 25% of the canopy cover, read the description of the "Tuliptree -(beech) - maple forest." This type is in some ways intermediate between the "Hemlock (white pine) - northern hardwoods forest," which has a more northern species composition and range, and the "Hemlock - rich mesic hardwoods forest," which has a richer, more southern species composition and a more southerly range. This type is also closely related to the "Hemlock (white pine) - red oak forest," which often occurs on dryer sites, and generally has *Quercus rubra* (red oak) as a major canopy component.

**Range:** Piedmont, Pittsburgh Plateau, Ridge and Valley.

**Selected references:** Braun 1950, Eyre 1980.

[**Crosswalk:** Smith's "Dry - Mesic Acidic Central Forest," TNC's "*Tsuga canadensis* (mesic) Forest Alliance, *Tsuga canadensis* - *Fagus grandifolia* Community, SAF's Yellow poplar eastern hemlock (58).]