

Terrestrial & Palustrine Plant Communities Of Pennsylvania

By Jean Fike

Tuliptree - beech - maple forest

These woods occur on fairly deep, not strongly acidic soils, at a mid-to lower-slope position. The most consistent tree species for this often very mixed type are *Acer rubrum* (red maple) and *Liriodendron tulipifera* (tuliptree). *Fagus grandifolia* (American beech) is often present and, when present, is often codominant. In successional, lower slope situations, *Liriodendron tulipifera* (tuliptree) may occur in nearly pure stands. The long list of possible associates includes various oaks, mostly *Q. rubra* (red oak), as well as *Nyssa sylvatica* (black-gum), *Acer saccharum* (sugar maple), *Carya tomentosa* (mockernut hickory), *C. ovata* (shagbark hickory), *Betula lenta* (sweet birch), *Tsuga canadensis* (eastern hemlock)—less than 25% relative cover and in—western Pennsylvania, *Magnolia acuminata* (cucumber-tree). Common shrubs include various viburnums, *Carpinus caroliniana* (hornbeam), *Cornus florida* (flowering dogwood), *Ostrya virginiana* (hop-hornbeam), *Hamamelis virginiana* (witch-hazel), and *Lindera benzoin* (spicebush). This type has different expressions in different parts of the state as well as according to disturbance history etc. There may be a rich herbaceous layer, especially in the vernal flora. On richer sites that are not over-browsed, this may include species like *Podophyllum peltatum* (may-apple), *Sanguinaria canadensis* (bloodroot), *Botrychium virginianum* (rattlesnake fern), *Dicentra cucullaria* (dutchman's-breeches), *D. canadensis* (squirrel corn), *Allium tricoccum* (wild leek), *Claytonia virginica* (spring-beauty) etc.

Related types: This type is closely related to the "Red oak - mixed hardwood forest" type. They share many species in common. The "Red oak - mixed hardwood forest" type is more widespread, occurs across a broader ecological range, and is usually dominated by oaks and hickories. This type is more restricted, generally occurring on toeslopes, or north-facing lower and midslopes. The dominance of beech, tulip, and maple and the near-absence of heaths, such as *Gaultheria procumbens* (teaberry) and *Kalmia latifolia* (mountain laurel), distinguish these forests from the oak-dominated type.

Range: Piedmont, Pittsburgh Plateau, Ridge and Valley.

Selected references: Pearson 1974, PNDI field surveys.

[**Crosswalk:** falls between Smith's "Dry-mesic acidic central forest" and "Mesic central forest", TNC's *Fagus grandifolia* - *Acer saccharum* (*Liriodendron tulipifera*) Forest Alliance, SAF's Yellow poplar (57) (in part), also some non-oak dominated portions of Yellow poplar white - oak (59).]