

Reports

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## Red Maple *Acer rubrum* L.

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# Technical Report



## Wetland Flora

No. 91-5 / May 1991

Gene Silberhorn

### Red Maple

*Acer rubrum* L.

#### Growth Habit and Diagnostic Characteristics

An immature red maple tree has relatively smooth, gray bark similar to American beech (*Fagus grandifolia*), which retains even gray bark throughout life. In contrast, as red maple ages, the bark darkens, longitudinal furrows form and often breaks off in strap-like fashion. The leaves are arranged oppositely on the stem and are fan-lobed, exhibiting the familiar 'maple leaf shape.'

The twigs and buds are reddish, especially in the spring, hence the name red maple. The underneath side of the leaves is whitish in color. This characteristic is particularly evident in a breeze. The winged fruit (samara) occurs in pairs and is reddish in the spring, turning straw-brown as it matures.

A similar species, silver maple (*Acer saccharinum*), may also be found in wet woods, but it can be distinguished from red maple by the deeper notches between the leaf lobes. Red maple is much more common in bottomland hardwood forests or swamps of coastal Virginia than silver maple.

Another tree species that may be confused with red maple is sweet gum, (*Liquidambar styraciflua*), because it has similarly shaped five-lobed leaves. This tree may also be a component of certain wet woods, but it has *alternate* leaves, green on the underneath side, and large, spherical, bur-like fruits, often referred to as 'gum balls.'

#### Distribution

Red maple is found throughout most of the eastern two thirds of the United States in both uplands and wooded wetlands.

#### Habitat

*Acer rubrum* occurs in a very wide range of habitats, from hillsides to swamps, which may have standing water three to six weeks or more of the year. It is usually a common community component of winter wet woods, otherwise known as PFO1A (Palustrine, Forested, Broad-leaved Deciduous, Temporarily Flooded) wetlands according to

federal terminology/classification. In this wetland type, it often occurs with sweet gum (*Liquidambar styraciflua*), black gum (*Nyssa sylvatica*), green ash (*Fraxinus pennsylvatica*) and American hornbeam (*Carpinus caroliniana*). Red maple is a very opportunistic tree, often one the chief invaders or pioneer species that proliferates cutover woodlands or even abandoned fields.

This tree is also found in a wide variety of other freshwater wetland types. Red maple is a common subordinate species in the tidal swamps in the Pamunkey River Watershed of Virginia, occupying sites with two dominant species, green ash and black gum (*Nyssa sylvatica* var. *biflora*). *Acer rubrum* is also very common in the Great Dismal Swamp in Virginia and North Carolina, especially in areas that were timbered within the last 50 years.

#### Ecological Values/Benefits

Since red maple is found in several different wetland types, both tidal and nontidal, the broad range of ecological values attributable to forested wetlands in general may be applied to this species as a common component of these habitats. Nontidal wetlands function as natural filters of high nutrient loads which often originate from croplands as well as sediment runoff, pesticide and herbicide residues and other potential toxins. They also serve as habitat for wildlife. Specifically, red maple often produces abundant seeds, a food source for birds and squirrels. As a pioneer species, *A. rubrum* is known to rapidly invade cutover woodlands, eventually providing cover and shade, browse for deer, adding organic matter to the soil and other modifying contributions.

#### Hydrophytic Factor/Federal Delineation

According to the *Federal Manual for Identifying and Delineating Jurisdictional Wetlands* (1989) and the *National List of Plant Species that Occur in Wetlands: Virginia* (1988), *Acer rubrum* is classified as a **facultative plant (FAC)**. FACs are plants that are "equally likely to occur in wetlands or nonwetlands (estimated probability 34%-66%)."

*Acer rubrum L.*

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