

WHY LEAVES CHANGE COLOR IN THE FALL

LEAVES OF DECIDUOUS TREES convert light energy to chemical energy through photosynthesis during the growing season, which lasts from April through October in the Piedmont. This process ceases when temperatures and daylight hours decrease in the autumn, and the last of the energy the leaves have produced flows back toward the roots. At this time deciduous trees usually form membranes that seal off each leaf from the rest of the plant. The unstable green pigment, chlorophyll, which has broken down and regenerated constantly during warm weather, breaks down first. The yellow pigment, carotene, which has been present throughout the life of the leaf and is thought to assist in the transfer of light energy to chlorophyll, is then revealed. A red or purple pigment, anthocyanin, is sometimes produced in reaction to sugars that become trapped in the leaves when they are sealed off from the twigs. Exposure to sunlight increases the amount of anthocyanin, so leaves on the sunny side of trees are often more brilliant red or purple than those on the shady side. Coloration can vary due to the interaction of several environmental factors, mainly temperature, sun exposure, nutrients, disease, and drought.

THE 129 ACRES KNOWN AS Reynolda Gardens of Wake Forest University were part of the 1,067-acre estate developed by Richard Joshua Reynolds and Katharine Smith Reynolds in the early twentieth century. In accordance with the Deed of Gift, 125 acres of woodlands, fields, and an artificial wetland that remains from the former Lake Katharine have been preserved for education and quiet recreation.

LEAF COLLECTION POLICY

- Groups must make reservations for guided collection walks by calling the education office. Space is limited for these programs; early registration is recommended.
- Leaves may be collected from the ground only.
- No part of any live plant may be removed.

WAKE FOREST
UNIVERSITY

REYNOLDA GARDENS OF WAKE FOREST UNIVERSITY

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REYNOLDA GARDENS

OF WAKE FOREST UNIVERSITY



SELECTED DECIDUOUS TREES

Identification

TREE IDENTIFICATION

THE REYNOLDA GARDENS woodland has reached the climax stage of hardwood forest, with very few pines and other conifers remaining. Many of the trees at Reynolda Gardens are common throughout the Piedmont.

Large trees such as hickory, oak, and tulip tree create the canopy.



HICKORY
Carya (several species)



WHITE OAK
Quercus alba



POST OAK
Quercus stellata



SOUTHERN RED OAK
Quercus falcata



TULIP TREE
Liriodendron tulipifera

Leaf shape is an important characteristic of a tree; however, leaf shape and size can vary within a species and even on an individual tree.

Other large trees include sugar maple, red maple, American beech, sweet gum, sycamore, and blackgum.



SUGAR MAPLE
Acer saccharum



RED MAPLE
Acer rubrum



AMERICAN BEECH
Fagus grandifol



SWEET GUM
Liquidambar styraciflua



SYCAMORE
Platanus occidentalis

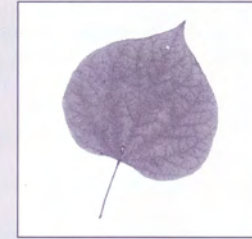


BLACKGUM
Nyssa sylvatica

Small trees such as flowering dogwood, redbud, ironwood, and sourwood are understory trees.



FLOWERING DOGWOOD
Cornus florida



REDBUD
Cercis canadensis



IRONWOOD
Carpinus caroliniana



SOURWOOD
Oxydendrum arboreum

Cherry and sassafras are mid-size trees.



CHERRY
Prunus (several species)



SASSAFRAS
Sassafras albidum