

North Carolina Urban Tree Evaluation Program

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North Carolina

Nature of Work: The North Carolina Urban Tree Evaluation Program is a cooperative venture among cities, corporations, commercial nurseries, community groups, community colleges, professional associations, the North Carolina Urban Forest Council, the North Carolina Division of Forest Resources, and the North Carolina State University. The primary purpose of the North Carolina Urban Tree Evaluation Program is to develop an information data base on the survival, performance, and limitations (disease, insect, and cultural problems) of a wide assortment of tree species and cultivars in North Carolina spanning USDA hardiness zones 6a-8a. The project is coordinated by Thomas G. Ranney and Richard E. Bir, Department of Horticultural Science, N.C.S.U.

One tree of each taxa is planted at each of 15 sites across the state (Fig. 1.). Local cooperators at each site take responsibility for planting, maintenance, and data collection at each site. Planting and maintenance are standardized. Data being collected include survival, trunk diameter, and tree height. Plants are also periodically scouted and rated for presence of diseases and insects.

Results and Discussion: Trees were distributed for evaluation in 1993 and 1994 and include 45 different taxa of trees. Trees currently in the evaluation are: *Acer campestre* 'Evelyn' Queen Elizabeth® (hedge maple); *A. x freemanii* 'Indian Summer' (Freeman maple); *Acer x freemanii* 'Jeffsred' Autumn Blaze® (Freeman maple); *Acer ginnala* 'Flame' (Amur maple); *Acer saccharum* ssp. *floridanum* (*A. barbatum*) (southern sugar maple); *A. truncatum x platanoides* 'Norwegian Sunset' (Norwegian Sunset maple); *A. tuncatum x platanoides* 'Pacific Sunset' (Pacific Sunset maple); *Amelanchier x Trazam* 'Tradition™' (Tradition serviceberry); *Betula ermanii* (Erman birch); *Betula platyphylla* var. *japonica* 'Whitespire' / *B. nigra* ('Whitespire' Japanese birch grafted on river birch rootstock); *Betula platyphylla* var. *kamchatica* (sand birch); *Carpinus betulus* 'Fastigiata' (pyramidal European hornbeam); *Cercis canadensis* ssp. *texensis* 'Oklahoma' (Texas redbud); *Chamaecyparis thyoides* (Atlantic whitecedar); *Chionanthus retusus* (Chinese fringetree); *X Chitalpa Itashkentensis* (chitalpa); *Cladrastis kenttukea* (*C. lutea*) (American yellowwood); *cornus angustata* (oriental dogwood); *Cornus mas* 'Spring Glow' (corneliancherry dogwood); *Evodia hupehensis* (*hupeh* evodia); *Fraxinus pennsylvanica* 'Cimmzam' Cimmaron™ (Cimmaron green ash); *Halesia diptera* var. *magniflora* (two-winged silverbell); *Halesia tetraptera* (*H. carolina*) (Carolina silverbell); *Lagerstroemia fauriei* 'Townhouse' (Townhouse crapemyrtle); *Lagerstroemia indica* X *fauriei* 'Choctaw' (Choctaw crapemyrtle); *Liquidambar styraciflua* 'Rotundiloba' (fruitless sweetgum); *Liriodendron tulipifera* 'Arnold' (Arnold tuliptree); *Magnolia x 'Galaxy'* (Galaxy magnolia); *Malus 'Adirondack'* (flowering crabapple); *Malus 'Doubloons'* (flowering crabapple); *M. 'Golden Raindrops'* (flowering crabapple); *Malus 'Royal Fountain'* (flowering crabapple); *Malus 'Sinai Fire'* (flowering crabapple); *Malus 'Sutyzam' Sugar Tyme®* (flowering crabapple); *prunus x 'Okame'* (flowering cherry); *Prunus x 'Schmidtcis' Big Cis™* (flowering plum); *Prunus ttoementosa* (Nanking cherry);

Prunus x 'White Glory' (weeping nectarine); *Ptelea trifoliata* (hoptree); *Quercus acutissima* (sawtooth oak); *Quercus frainetto* 'Schmidt' Forestgreen® (Forest Green Hungarian oak); *Q. nuttallii* (Nuttall oak); *Styrax japonicus* 'Emerald Pagoda' (Sohuksan) (Emerald Pagoda Japanese styrax); *Tilia tomentosa* 'Sterling' (silver linden); *Xanthoceras sorbifolium* (yellowhorn).

Significance to Industry: This program will provide extensive evaluation of new and underutilized trees for potential use in the S.E. U.S. In addition to providing information on plant performance and limitations, the program will also help to promote and market new plants by allowing practitioners the opportunity to grow and evaluate these plants in regional landscape plantings.

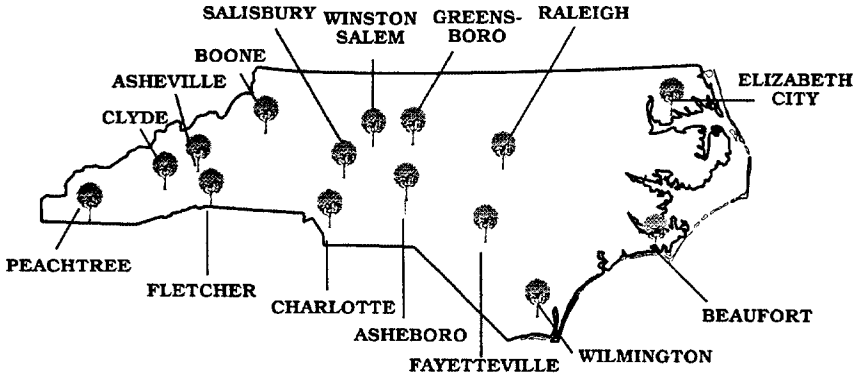


Figure 1. Location of tree evaluation sites in North Carolina.