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. truncatum 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. kamchatka (sand birch); Carpinus betulus ‘Fastigiata’ (pyramidal European hornbeam); Cercis canadensis ssp. texensis ‘Okahoma’ (Texas redbud); Chamaecyparis thyoides (Atlantic whitecedar); Chionanthus retusus (Chinese fringe tree); X Chitalpa ttashkentensis (chitalpa); Cladrastis kenttukea (C. ilutea) (American yellowwood); cornus angustata (oriental dogwood); Cornus mas ‘Spring Glow’ (cornelian cherry dogwood); Evodia hupehensis (hupeh evodia); Fraxinus pennsylvanica ‘Cimzam’ 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 tulipfera ‘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 ‘Schmidtcs’ Big Cis™ (flowering plum); Prunus ttomentosa (Nanking cherry);
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.