

Propagation of *Alangium platanifolium* and *Alangium platanifolium* var. *macrophyllum*®

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INTRODUCTION

The genus *Alangium* comprises 17 species of shrub or shrub like trees with the majority being tropical and ranging from Africa to China and to Eastern Australia. Most of the species of *Alangium* are considered to be tropical with Zone 9 or 10 for a hardiness classification. However, *A. platanifolium* and *A. platanifolium* var. *macrophyllum* are hardy to Zone 6 and might have a value in the landscape for Zones 6 and higher.

The trees are relatively fast growing and have no serious pests at least in the Northeastern portion of the U.S.A. The species name *platanifolium* refers to the leaves having a superficial resemblance to *Platanus*, although the degree of similarity is perhaps a challenge for the imagination, the name does indicate a *Platanus* or *Acer* look. They are generally 3 to 5 lobed and have a long petiole. Flowering occurs in cymes and the individual flowers resemble a very, very small honeysuckle flower, which are white. The fruit is a drupe but of those plants I have seen in the U.S.A., none had any fruit.

Perhaps the most significant feature of these two alangiums is their tolerance for shade. In fact, thinking that the plants would grow faster if moved to the sun I soon found that they became chlorotic and lacked vigor and generally declined. Shade seems to be an absolute requirement rather than an adaptive characteristic. This of course opens the door for these two interesting plants to fit in to the urban landscape, which often lacks for plants that are openly shade tolerant.

Fall color is a clear yellow and the trees quickly become deciduous with even small doses of cold. The two forms mentioned here have a determinate growth pattern and once the initial flush has hardened they will not resume new growth until the following spring. They do not seem to be particular with respect to soil conditions and will live almost anywhere provided they are supplied with their requirement for shade.

Alangium platanifolium is an interesting small tree and might prove to be useful in the shade garden along with hosta and ferns. It is certainly an uncommon tree and something that discriminating gardener could offer as the newest and the latest, since few if any have ever heard of this plant.

PROPAGATION

The propagation of both forms is rather straightforward. Terminal cuttings of 4–5 nodes are gathered just before the terminal bud is formed and before the last set of leaves has fully expanded. Usually around June 10th to 20th in the Philadelphia, Pennsylvania, area. The cuttings are wounded and treated with either 0.8% IBA powder or Dip-N-Gro (1 : 10 dilution). Grace 500 mix, a proprietary artificial soil of the Scotts Company, is an ideal rooting substrate. Cuttings are stuck so that the lowest node is submerged beneath the soil surface. Cuttings should be placed under mist and bottom heat is helpful but not a requirement. Cuttings root fast and can

resume growth if the terminal bud was not too hard at the time of sticking the cuttings. Rooting takes about 14 to 21 days and the root growth of the cuttings is quite fast. A check several weeks after rooting might suggest moving the rooted cuttings into a large pot. The root system is very vigorous and the rooted cuttings should be ready for potting up or planting out during the next spring.

Overwintering in a minimum heat house seems to be adequate and in general the plants are trouble free. Rooting and overwintering is on the order of 100%.

LITERATURE CITED

Griffiths, M. 1994. Index of garden plants. Timber Press. Portland, Oregon.

Low Maintenance Plants and a Soil Mix for Roadside Planters in the Northeast[®]

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INTRODUCTION

The Rhode Island Department of Transportation and the University of Rhode Island are collaborating to develop low maintenance plant and soil combinations for use in bridge and bike path concrete planters in Providence, Rhode Island. Green roof plant and soil technologies combined with sub-irrigation are being tested in replicated concrete mesocosms (scaled-down versions of the actual planters). We are evaluating three mineral-based soil mixtures and 10 plant taxa selected from over 40 accessions. The goal of the work is to develop a planting scheme and soil mixture that offers a range of textures, colors, and multi-season interest, while requiring minimal maintenance and little or no supplemental irrigation.

MATERIALS AND METHODS

Nine replicate mesocosms were fashioned from 1.22-m (i.d.) concrete sewer risers set on concrete blocks. The mesocosms were lined with 2.5-cm polystyrene insulation and rubber roofing membrane (60 mil EPDM). Each mesocosm drains through landscape fabric and $\frac{3}{4}$ inch crushed stone into a 3.8-cm perforated PVC pipe that allows sampling of runoff water. Subirrigation reservoirs [Planter Technology, Inc., controlled watering modular (CWM) container irrigation systems, Hayward, California] were installed before the mesocosms were filled. Three soil mixtures are being evaluated initially: Mix 1 [80% Hydrocks[™] (Garick Corp., Cleveland, Ohio) lightweight expanded clay aggregate + 10% field soil + 10% compost]; Mix 2 [80% Norlite[™] expanded shale + 20% compost]; and Mix 3 [40% Hydrocks[™] + 40% field soil + 20% compost]. Ten plant taxa, listed in Table 1, were chosen based on performance in greenhouse trials. On 21 May 2004 three plants of each taxon were planted 17.8 cm apart in a random pattern. The mesocosms were watered once a week for a month. All plants were measured weekly through the summer. Pseudovolumes were calculated from measurements of north-south and east-west widths, and height. Soil water content was monitored using TDR (Time Domain Reflectometry) sensors.

DISCUSSION

We are 1 year into a 5-year effort that will culminate in the installation of planters on a bike path adjacent to I-195 over the Providence River. The planters will need to