the places that, if you come North, you should go to visit because Bruce is always trying something new. I would like to now present Bruce Briggs:

PROGRESS REPORT ON THE ROOTING OF JAPANESE MAPLES

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We will attempt, with the aid of some colored slides, to cover the highlights of our experience during the last eight years or so on the rooting of the many forms of *palmatum* maples.

Soil Mixes: Our first work was with the same mix used for Rhododendron cuttings, 50% each of sand and peat. The rooting was good, but we had trouble hardening them off for winter. We then tried many other soil mixes, such as sawdust, charcoal, pumice and perlite, looking for one which would give good drainage when the cuttings are set outside for the winter.

Perlite offered many advantages such as drainage, sterility, lightness, and obtainability. However, with perlite alone, the maples failed to root. This was also true with *Rhus cotinus* 'Royal Purple' cuttings tried the same year. This year we did root *Rhus cotinus*, R.P., cuttings in perlite alone, but under heavy mist.

At the present time, we prefer a mixture of some 40 to 50% peat and Sponge Rok, #3 medium. This mix gives lots of air and drainage with enough peat to bring rapid rooting. We root the maples in this mix in deep plastic pots, where they are left through the first winter.

Treatment of Cuttings. Cuttings are taken from actively growing tips and are prepared by removing all except the top few leaves. A heavy wound aids rooting and in some cases, a double wound on the heavier wood is used. The cuttings of normal length are then put into a bath of Morton's Soil Drench or a 5% solution of household Clorox. (Clorox as it comes from the store is diluted 20 to 1). Either drench seems to give excellent disease control.

After draining, the cuttings are given a quick dip in a solution of 5000 ppm each of indolebutyric acid and naphthaleneacetic acid. We have found here on the West Coast, as did Mr. James Wells (1) on the East Coast, that the maples react well to a high strength of hormone. A close examination of the roots shows that at times, the high strength of hormone burns some ½ inch of the bottom of the cutting. However, they still root much better and faster, even with the burn.

Overwintering of Rooted Cuttings. A large percentage of *palmatum* maples are successfully rooted during the summer, but are lost during the first winter. Various methods of overwintering have been tried, including: removal of all soil

from the plant and storage in plastic bags under cool conditions, leaving the cuttings in flats and storing them outside, or putting them under lights in the greenhouse. Because maples are so subject to verticillium wilt, we have found that it is best not to cut, transplant, or in any way disturb the plant going into the fall and winter season.

Hardwood Cuttings. It would be desirable to find a feasible way to root *palmatum* maples by hardwood cuttings, as they would then have a longer growing season to become established and there would be fewer losses in overwintering. We took cuttings of maples late in the fall, treated them with hormones and stored them for callusing, following procedures tried on fruit tree cuttings at Oregon State (2) and the University of California (3). Our results were no better than the check.

Better results have been obtained when the cuttings were taken earlier while the plants were more active. However, this presented the problem of storing the callused wood.

This year we intend to try the method reported by John Ravestein (4) on magnolias, maples and other deciduous materials. This calls for completely covering the dormant wood with sphagnum moss in a propagation bench with high bottom heat. Then after callusing, potting up the cuttings to carry through the winter in the greenhouse.

Summary. Take cuttings from young plants in vigorous growth, such as those growing in greenhouses or plastic sheds.

Root maples as early as possible in the spring, in order to get one summer's growth before winter dormancy. The faster they root, the better they grow.

Uses a strong hormone with a heavy wound, even on soft wood.

Never let the soft leaves dry or burn on the edges, as this will stop the rooting.

Give them a high humidity and lots of water in well drained soil. If a closed case is used, remove the cuttings immediately after rooting.

There is evidence that top applications of hormones every 10 days or so onto the foliage of the harder-to-root *A. palmatum* forms will increase the hormones within the cutting and produce faster rooting.

Rooting directly in a pot has many advantages.

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[1]Wells, James S Plant Propagation Practices p 183-192, Macmillan, N Y 1955

[2]Roberts, A N Propagation of Cherry Rootstocks Proceedings Fourth Annual Meeting, Western Region Plant Propagators' Society p 269-273 1963

[3]Westwood, M N and Brooks, L A Propagation of Hardwood Pear Cuttings Proceedings Fourth Annual Meeting, Western Region Plant Propagators' Society p 261-268 1963

[4]Ravestein, John, 1958 Rooting of **Magnolia** and **Viburnum** from Hardwood Cuttings Proceedings Eighth Annual Meeting, Plant Progagators' Society p 96-98 1958