cuttings seem to do much better if dibbled in a cold frame with double glazing, using a rooting mixture of 2 parts sand and 1 part peat moss. The cuttings should be dibbled fairly close together as this prevents drying out. Cuttings should be given a really good watering-in, which should last until they are rooted provided that the frames are shaded on bright days. Rooting should take place in about 6 to 8 weeks after which they should gradually be given air and more light. I like to leave the cuttings in the frame to grow on until the following spring before potting off or planting out into the beds in the open nursery.

Group 3 — Daphnes from root cuttings in December. For this group I recommend — *Daphne genkwa, D. mezereum* 'Grandiflora', and *D. mezereum 'Plena'*. This method provides the most saisfactory way of increasing *Daphne genkwa.*

Stock plants should be grown in pots plunged in the open ground during the summer and taken into a cold frame or cool greenhouse for the winter. For this type of propagation it is wise to have good stock plants growing on in succession for each year. It is better to strip all the roots possible from the plants being used to get the cuttings. Having collected the roots, cut them into ½-inch lengths, and place singly in large thumb pots or similar sized plastic pots. Fill the pots ⅔ full with compost of 2 parts peat, 1 part sand, and 1 part loam then lay the cuttings horizontally and just cover with silver sand; fill the pots with the compost and firm lightly. Plunge the pots up to the rims in ashes or grit in an open propagating bench, water in and cover with white paper. When rooting has taken place move the plants to a cool greenhouse.

PROBLEMS IN NORWAY MAPLE AND SYCAMORE-MAPLE PROPAGATION

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I suppose that it must be the variation in leaf color that attracts me and many others to the *Acer platanoides* and *A. pseudoplatanus* varieties. Nothing is more satisfying than a good stand of 'Goldsworth Purple' contrasting with 'Drummondii' or 'Worleei' and of course there is no difficulty in selling them.

In common with many other growers, we have experienced great difficulty in obtaining a crop of these plants from buds. I can claim nothing original in the method now adopted which over the last few years has given us excellent crops. It is based on a study of successful growers' methods and of the growth pattern of the *Acer* species in question.

Our first requirement is a young rootstock with a fibrous root system. A two-year transplanted seedling, 8 - 10 mm size

seems ideal; anything larger is usually coarse-barked at the level of bud insertion. These rootstocks should be cut back to 18 inches and planted in well-manured ground; it is essential that the stock grow vigorously throughout the summer.

Budding should take place as soon as buds are available and the stocks will open (mid-June). Day-length is important; it has been discovered that a substance produced by sycamore maples has an inhibiting effect on growth and induces dormancy in response to the stimulus of shorter days. When selecting the budwood, the buds should not be too succulent; lateral growth is often preferable to leader shoots. Sometimes the laterals provide only 4 to 6 buds, as the base "eyes" are too small and should not be used. The next requirement is that the bud should be encouraged into growth as soon as possible. Only when the bud has started growth can we consider ourselves to have the making of a crop. To promote this bud burst we cut back the growth on the stock to a handful of leaves. By removing all young growth the inhibiting effect of the terminal bud on the buds below it is abolished and the chance is increased of the bud bursting. By reducing the stock length before planting we have ensured maximum effect on the bud. It would seem that the dominance of the terminal bud is greater in 'Goldsworth Purple' than in 'Drummondii' and that the inhibiting effect on the lateral buds extends further down the shoot. This seems to be reflected in a greater reluctance on the part of 'Goldsworth Purple' to break into growth after stopping. We have tried applying a nitrogenous fertilizer after budding and this may be a worthwhile practice, as in certain plants dominance of the terminal bud almost disappears at high levels of nitrogen nutrition.

It is important to remove the petiole or leaf stem, especially in a wet season; if left this will decay and the bud with it. The petiole will ripen and be ready for removal a fortnight or so after budding, depending on the weather. Great care must be taken not to damage the bud or to force the petiole off too soon. In a wet season one should go over the stocks twice and remove as many petioles as possible each time.

We find that it pays to look over the buds after about three weeks and re-bud any failures. By this time the stock should be recovering and resuming growth and the bud will be plumping up and ready to burst.

The following February or March we head-off our stocks to the bud and paint the wound with fungicide. The maiden growth being staked from the start, this eliminates any chance of die-back from the snag and saves one operation.