

metropolitan highschool systems, with a number of notable exceptions, has turned out to be less than a successful undertaking.

Whenever in the past our Society decided to support a new important endeavor, it has always succeeded. Within our organization we have an education committee. I feel strongly that if we decided to energetically start promoting the instituting of schools, like the one in Farmingdale, or the one we visited during our Toronto meeting in the Niagara Parks System, in various parts of this country we would be well on our way to overcome the training bottleneck mentioned before.

The panel that is sitting in front of you here this afternoon is living proof that it has been done in the past, that it is getting done at present in Canada and across the Atlantic all the time. A progressive and prosperous nursery industry in our United States can afford no less! I know that I have touched on a sensitive subject, but keeping in touch with the close intermediate training that is taking place in Holland, Denmark and especially West Germany, I feel we cannot afford to fall so far behind.

VIBURNUM DENTATUM AS AN UNDERSTOCK FOR VIBURNUM CARLESII OR V. CARLESII 'COMPACTUM'

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As we all know, everyone all these years has used *Viburnum lantana* as a viburnum understock, either for budding or grafting. However, over 30 years ago we stumbled into using *Viburnum dentatum*. The reason? We did not have any *V. lantana* that year, but did have *V. dentatum*—so we used it hoping for the best. We not only found it satisfactory, but far superior to *V. lantana*. When we used *V. lantana*, we were always bothered with black spot, which develops about mid-August. Naturally, we had heavy leaf drop which weakened the plants. Ever since we have used *V. dentatum* we have not been bothered with black spot, consequently we have stronger plants and better growth.

Now a word about the *V. dentatum* seedlings that we use. We always try to get a strong 1-year seedling, grafting size. The reason is that a 1-year seedling does not have as many sucker buds as a 2-year seedling or transplant. Before we start potting these seedlings we trim them and start to eliminate the danger of suckers by carefully going over the neck of the root and through the root itself and cut out whatever buds we can find. We pot these in the winter and graft them by the end of August, or beginning of September, under double glass. When we graft these we cut the understock off to about 1½ inch above the pot. After about 4 weeks they are ready to be picked up. Now if

there are any sucker buds left, they are forced out by cutting that understock back to 1½ inch and we rub them off again. We winter these grafts in a cold frame and plant them out the following June. Again we watch for suckers and find a few more which we eliminate when we bed them. The following spring we dig and go over them again and watch for suckers, at which time we either ship them or line them out. After they are lined out you very seldom find any more suckers.

While I am on the subject of *Viburnum carlesii*, I would like to mention a hint about *Viburnum carlesii* from softwood cuttings. Every so often people will ask me what is wrong with their *Viburnum carlesii* cuttings. They can root them without any trouble but cannot get them to start growth in the spring. Of course we used to have that trouble too, but through experience we have learned how to overcome this. It seems that *Viburnum* does not like to be disturbed after it is rooted, so we do not stick them in frames or benches from which they will have to be removed. Instead, we stick these cuttings in flats of sand in the summer. In the fall after they are rooted, we move the flats to a frame with a heating pipe and set the thermostat at 35° F to prevent freezing and stem splitting, but still they have a long dormancy period. In the spring they come along with the weather, each plant responds and, by June, we have a strong, healthy flush of growth without any setback, ready to be planted in a frame with shading. We use the same procedure for *Hamamelis* and we are finding the same results with *Acer griseum* which we are now trying to grow.

I understand that this forum was to tell about old methods and new methods of propagation. I don't know, anymore, what is considered old or new; but here is a real old one. Did you ever hear of grafting *Parthenocissus* (*Ampelopsis*)? Well, I did it when I was a youngster. Years ago we grew *Parthenocissus tricuspidata* 'Veitchii' either by hardwood cuttings or grafting. You can graft *P. t.* 'Veitchii' on a 1-year rooted cutting of *P. quinquefolium* and in 1 year you have a heavy 3-4 ft plant. This is a quick way of getting heavy saleable stock when they are scarce.

Years ago when we could not root cuttings of *Juniperus sabina* 'Tamariscifolia', we layered them. We also layered *Rhododendron* 'Cunningham's White' and 'Catawbiense Grandiflorum' or dug a deep hole and sunk a 15-18 inch plant in it and filled the soil back in the center and spread the branches all around, but all other hybrid rhododendrons were grafted on *Rhododendron ponticum*.

Another good old-fashioned trick is to graft beeches outside in the field in the spring. Use a well-calipered 5 or 6 year old *Fagus sylvatica*, cut it back to about 12 inches above the ground, graft it, wax it and in a year's time, you have a 3-4 ft 'Rivers' beech.

'Kwanzan' ('Sekiyana') cherries are still being budded but we

have rooted them from softwood cuttings for several years now; we find such plants superior to the budded ones. We produce a beautiful straight whip without any knobs by budding or grafting high. We have a perfectly clean stem whether they are 30' clearing or 6' clearing and also find them to caliper up much better and we have a beautiful root system. We also root *Prunus cerasifera* 'Thundercloud', *Prunus triloba* and beach plum for the very same reason; we can produce plants with a much better root system and most important—without suckers.

THE OLD WAYS
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I was told not to talk too much about the old plant propagating ways. I don't agree with that view; we are all becoming part of history. So why don't we talk about it. I admire the old plantsmen who took the time to teach us the basics of this trade, and what a wonderful trade this is. If I compare the facilities and conditions they had to work with and under, then a salute is in order for them.

There is a great difference in the way they used to produce and the present methods. They were also more secretive about their work and the only exchange of information took place on Sunday morning either inside or outside the church. Location depended a lot on the type of sermon for that day.

Let's take the item — rhododendrons; making cuttings was unheard of, you had to graft them. That was done in the spring in cold frames under double glass. Sometimes with disastrous results, but there was no research or any other information available, and still they produced good saleable plants. A lot of real hard work went into it.

At the present time, we have every imaginable piece of information at our fingertips; we have come a long way. There are also several ways of producing plants that are completely done away with—layering, for instance, is little used anymore for ornamentals. Still that particular method for that time was a sure thing. It worked better with difficult-to-root items than any other method that I have ever seen. In the early days they did a lot more grafting than we do now. For instance, when the time arrived for the dormant grafting the whole family got into the act. During the day there was absolutely no time to waste on dormant grafting, that was done nights. There was no television to distract you. Everyone worked and practically everything was grafted right there in the home: wisterias, flowering crabs, lilacs, weigelias, golden chain, etc. etc. The next morning some