



## Winter grafting maples – learning from the experts

by Laura Jones

You can never have too many maples! Sounds like a good concept on paper so, having succeeded pretty well in growing *Acers* from seed, we decided to sign up for Dick van der Maat's maple grafting course in the Netherlands. The expedition began on a freezing cold morning in February. Driving through heavy snow to Birmingham airport, we were crossing fingers that our flight wouldn't be cancelled – the airport had been shut the previous afternoon. Despite three inches of snow in the airport car park, we did manage to escape from wintry Britain on schedule, only to arrive in an ever colder Amsterdam. We whetted our horticultural appetites with a most enjoyable wander around the famous floating flower market, and then retreated to the warmth of a nice restaurant to thaw out!

Saturday morning found us on a train to Boskoop. The closer we got to our destination, the more our confidence ebbed. Would everyone else on the course be an expert maple grower, nurseryman or qualified horticulturalist? The first sight of Dick and Marjan's exceptionally professional nursery only served to hammer home that we were probably a little out of our depth!

However, the warmth of the welcome we received, combined with meeting Margaret, a fellow English 'enthusiast' (see below) helped to dispel nervous qualms. As we waited for everyone to arrive, cuddling hot drinks and chatting to our hosts, we learned



*Butterfly* from Dick van der Maat's Grafting Day. Photo Emery Davis.

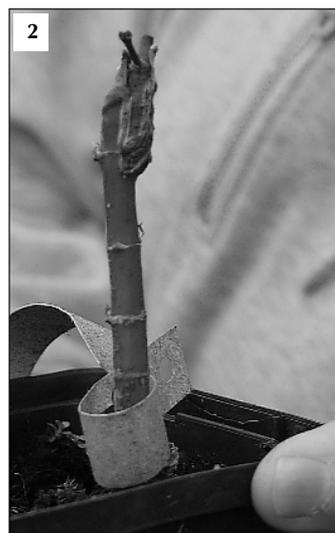
more about maple growing in about 10 minutes than we had previously ever known. A promising start!

Once everyone had gathered in the greenhouse 'office', the day kicked off with a short talk from Dick about maple growing in general, grafting in particular, and the joys and problems of managing a maple nursery. My pen could hardly scribble fast enough to cope with the flow of invaluable information. If you are serious about learning to graft *Acers*, I can only recommend you sign up for next year's course, but here are a few 'tasters':

- When growing from seed, put the seeds in a pot of water and leave for up to 24 hours. Plant those that sink and scrap the ones that remain afloat.
- When grafting, the rootstock should be about 1–2 years old. Don't over-water it prior to grafting, and don't give it any fertilizer. If the rootstock is too moist or fertile the graft will be prone to black rot.
- Your rootstock should, if possible, have been in a pot for a year prior to grafting to build up a vigorous root system.
- 'Bleeding' sap does not really matter when grafting as long as you graft quickly and keep it in a warmish environment.
- Don't use bottom heat on grafts – it encourages mould and fungus.

We then made use of a sunny (but still freezing cold!) spell to tour the nursery, beginning in the cold greenhouse area. The colder half (photo 1) housed rootstocks ready for grafting and some new varieties from the USA. These had been sent as scions, and expertly grafted by Marjan, some from frighteningly small scions (photo 2). The slightly warmer half of the area contained newly grafted maples (photo 3), kept under polythene covers.

Whilst we explored the greenhouse, Dick discussed the various options and techniques for grafting. I had previously had a go at summer grafting on a half day workshop at Westonbirt Arboretum, and have a well-grown 'Bloodgood' as testament to my skills (beginners' luck!)... We were about to learn winter grafting. Is winter best then, I wondered, if that is what Dick and Marjan do mostly?





It seems this decision is largely determined by the scale of operation and whether the scions have to travel from afar. Dick's success rate with summer grafting over the past four years is a dazzling 95%! Nothing wrong with summer grafting then. However, the time window for summer grafting is prohibitive to mass quantity with a small workforce. Because both rootstock and scion are in leaf, once the grafting material has been cut it has to be grafted pretty quickly. When dealing with 50,000 or so grafts, this makes the logistics tricky! Winter grafting can be done at a more leisurely pace, and Dick still gets a more than acceptable 90% success rate.

In November, Dick brings the rootstock seedlings into cold greenhouse conditions. This keeps them frost-free and allows the compost to dry out a little – remember that wet compost can cause rot. The grafting material can also be harvested in November, and kept in a fridge. You can't harvest scions for grafting in sub-

zero conditions, which this year was virtually all winter! However, make sure you cut longer sections than you will need, since they will need to be re-cut when you are



ready to graft them.

Dick and Marjan then have a longish period in late winter to graft the bulk of their new stock. And practice makes perfect – they can each do 1000 grafts a day. The enormity of this statistic really didn't dawn until later, when we all laboriously managed 10 grafts in a period of 3–4 hours, and with an expected success rate of considerably less than 90%! This year's winter grafting process was about half way complete – around 500 varieties already grafted!

Once the grafting is done, the process is surprisingly fast, although appropriate aftercare is critical. Dick unwound the bands from a 2-week old graft to show us that the callous had already begun to form (see photos 4 & 5). In the next 'row' of pots, 3-week old grafts were beginning to develop buds. At this stage the polythene covering is



removed once a week, pots checked for disease, and the polythene turned over and put back, dry side down. Once the buds break, the polythene covering is put up on hoops to keep it off the emerging foliage, and turned every two days. In 12 weeks the grafting process is complete, and the (very few) failures can be discarded.

Moving outside, Dick explained that the winter grafts from last year were all outdoors (and had had to cope with 50cm of snow this year!) – no change of pot and no fertilizer. This lack of mollycoddling produces really strong, vigorous plants, aided by EM micro-organisms which Dick praised enthusiastically. Hoops allow netting to be used to cover up the youngsters against night frosts if required (photo 6). By contrast, the Chinese growers keep their baby *Acers* indoors, feed them well and produce big impressive plants, the sort supermarkets sometimes sell. Don't be tempted – they will probably die pretty quickly under 'normal' growing conditions.

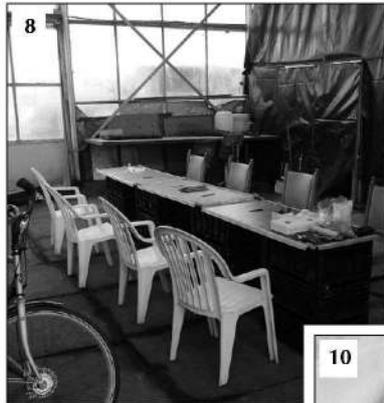


To the right hand side of the main path are all the older maples, including the stock plants. All are beautifully arranged and labelled in alphabetical order (backed up by computer records, since labels are apt to break or be rearranged by enthusiastic birdies). To finish our tour, Dick was asked the million-dollar question: what is his favourite maple cultivar? Well, there are two: *Acer palmatum* 'Bihō' for winter bark colour, but for spring and summer, 'Momoiro koyasan'. Marjan's favourite is *A. palmatum* 'Taylor'.

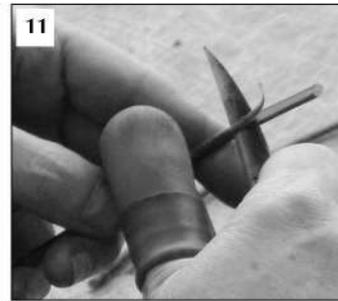
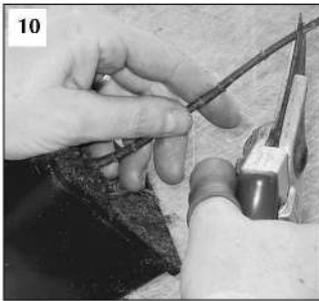
Back in the comparative warmth of the 'office', we were treated to a fabulous lunch from the local Chinese restaurant, and then the serious business of the day began – grafting! Stage one was to learn the deceptively challenging art of winding and tying off a length of rubber band around a twig (photo 7). After several effortless demonstrations from Dick, most of us managed to drop twigs and ping bands across the room for several minutes, before grim concentration (you could almost hear the brain-cells humming) produced something resembling the expert's version.



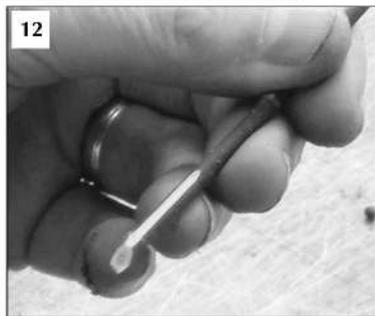
This basic skill more or less mastered, we moved into the colder outer office area where our 'kit' was tidily laid out (photo 8). After being kitted out with rubber thumb guards we learned how to sharpen grafting knives and then practised making scion and rootstock cuts using short twigs. Within a few minutes the tidy table resembled a scene a party of 5-year olds would have been proud to achieve! (photo 9).



Cutting the rootstock twig required some skill. First you cut across at a slight angle (so that water runs off the top later; photo 10), then trim off a little notch at the top of the longer side so you can slide your knife blade in easily under the bark (photo 11). You slice carefully down from this point, producing a strip about 2cm long, *without* chopping the strip off by accident at the bottom. You are left with exposed cambium on the twig and bark strip, which can then encase the scion.



To prepare the scion, cut the twig down to two pairs of nodes. At the top end cut to about 1.5cm above the node to take account of possible die-back later. Then shave the bark off both sides of the lower end to expose the cambium, nearly but not quite opposite. Finally make a slant cut across the bottom to fit neatly into the V-shape of the rootstock cut (photo 12). The shaved area on the side to fit to the rootstock stem should be a little wider than the side matched up to the sliver of bark, so take care which direction you angle the cut. The scion can then be slotted into the V-shape cut on the rootstock, the cambiums carefully matched together, and the graft bound up with the elastic band (photo 13).

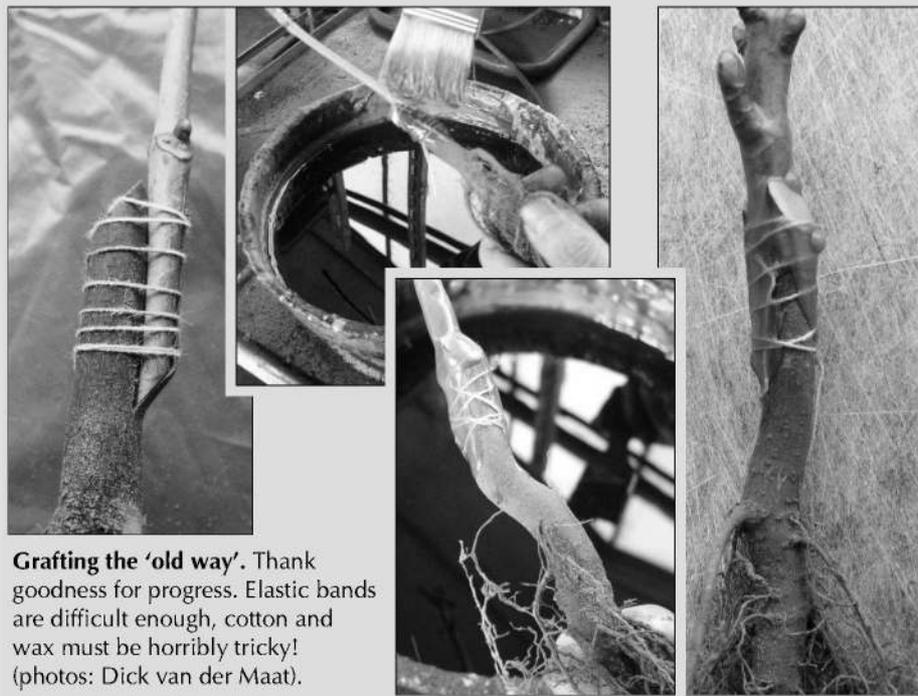


Once we had all had a good practice at the cutting and winding processes (photo 14), the carnage was cleared away, and our rootstocks and grafting material arrived (photo 15). We each had 10 maples to graft, all 'easy' varieties. Faced with something that 'mattered', suddenly all the confidence acquired chopping twigs into little pieces evaporated completely! A silence born of deep concentration descended on the room, punctuated by occasional sighs and words of ire as things went awry! I think my first graft





took me about 20 minutes to complete (photo 16). Graham's initial plan of 'Osakazuki' was 'downgraded' (literally) to 'Sango kaku', which should be grafted near to soil level, since the first two attempts at shaving down the bark sliver came a nasty cropper. This in fact turned out to be the hardest part of the procedure: slicing down a fine and even bark sliver, especially as the knife passes over a node area, required a lot of care (how on earth can anyone do 1000 a day??).



**Grafting the 'old way'.** Thank goodness for progress. Elastic bands are difficult enough, cotton and wax must be horribly tricky! (photos: Dick van der Maat).

Almost as difficult is winding the band around the joint without anything slipping out of place (photo 17). Comparatively easy on a twig; doing it on a 'twig' rooted into a pot of compost which can't be moved around is a whole different ball-game. Nevertheless, by the end of the afternoon we had all achieved 10 passable grafts (photo 18) which were tenderly placed under polythene in Dick's greenhouse (photo 19).



We emerged from our day in Boskoop with a real sense of achievement, and a humble awe for the professional growers who do this for a living. We had a most enjoyable day, in great company with a very varied set of people having a shared passion. A big thank you must go to Dick and Marjan for all their wisdom and encouragement, and the regular email updates and photos on our grafts' progress (photo 20). Our latest information is that 15 of our 20 grafts have survived so far, and in September will be shipped over to us. How exciting, and where on earth can we find space to put them? Oh, and thank goodness we didn't try to travel by train – we'd have been stuck in England and missed a wonderful day.



*Photos: Laura Jones & Dick van der Maat.*