

phill Seedling' but we haven't received any at all yet. The *Daphne* 'Somerset' clone received from Long Ashton is magnificent but so far only three nurseries have requested material.

M. DUNNETT, Chairman: Brian and Ian will do their bit very adequately, but if people don't respond with cuttings, and the L.A. clones are not taken up afterwards, then the scheme won't work. That, to me, would be a disaster. The scheme may have certain shortcomings, but unless it is given a try we shall never know.

COLLECTING PLANT MATERIAL IN VIRGINIA

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During August, 1979, my family and I were on holiday in Hampton, Virginia, situated on the south-eastern seaboard of the United States, where we stayed with James D. Ashley (I.P.P.S. Southern Region) and his wife, Beatrice. We had the privilege to meet a number of fellow I.P.P.S. members and friends which included, firstly, Robert McCartney of the Williamsburg Foundation which contains many interesting native plants. Secondly, Ken and Sandra McDonald of Le Mac Nurseries in Hampton, a foremost grower of field and container-grown azaleas. Thirdly, Charles Parkerson of Lancaster Farms in Suffolk, a quality container grower, in particular for junipers and hollies. Fourthly, Pam Harper of Robanna Shores, Seaford, a most enthusiastic plantsman who has an interesting and successful business — "The Harper Horticultural Slide Library".

When in their company one is naturally encouraged by their enthusiasm to obtain plant material. One subsequently realized that this was not plant collecting in its true word, as it was not obtained in its native habitat. However, the aim of this paper is not to discuss the merits and limitations of individual plants but to briefly relate the procedures involved in the transportation for a three to four week period of unrooted plant material often in daytime temperatures of over 32°C (90°F), together with information on their subsequent aftercare.

Procedures. Following the advice of James Ashley I purchased a large icebox from a local discount store. One person could easily handle this size container and it contained a tap to drain off water collecting at the base. The major problem I was confronted with was to prevent desiccation of the plant material under such high temperature conditions. The cuttings, on collec-

tion, were placed and sealed in a polyethylene bag containing droplets of water. These were labelled, recorded and placed as soon as possible into a domestic refrigerator. That same day the cuttings were removed from the polyethylene bag and graded. Next, damaged or very soft and excessive stem and leaf tissue was removed. They were then relabelled and returned to the refrigerator.

When it was necessary to travel on, a large pack of crushed ice was purchased. The polyethylene bags were then pierced to allow air to escape from them — this was necessary in order that the quantity of cuttings obtained could be put into a limited space. After two to three layers of polyethylene bags had been placed inside the box, a small amount of crushed ice was evenly spread over them. Before the lid was sealed a much heavier layer of crushed ice was applied. Each day the tap at the base of the box was opened to remove excess water, which was made easier by tilting and, where possible, every third day some more crushed ice was obtained and applied over the top layer of polyethylene bags. Crushed ice could easily be obtained at stores and petrol stations. The period of cooling combined with the insulation of the ice box was very adequate for a simple technique producing results beyond one's original expectations. This, in turn, resulted in a wide range of plants being ready for subsequent propagation.

Propagation and Aftercare. It was necessary to handle the cuttings with extreme care when preparing them. Damaged tissue was first removed and then they were prepared as nodal stem cuttings. They were then immersed into a Benlate solution. A rooting hormone of 0.3% IBA in talc was applied to the softwood cuttings, while a strength of 0.8% IBA was used for the semi-hardwood cuttings. The rooting compost used was a mixture of 2 parts medium grade sphagnum peat and one part perlite. After being watered in with a fungicidal solution the trays were placed into a separate area of a shaded mist propagation unit. A few losses occurred during the first two weeks but after they had adapted to the different environment good progress was maintained. After weaning off, they were overwintered in a slightly heated structure and potted off the following April.

Some 62 different kinds of plants were successfully rooted from an original quantity of three to 20 cuttings each. Amongst these were species/cultivars of the following genera:

<i>Azalea</i>	<i>Garrya</i>	<i>Leucothoe</i>	<i>Passiflora</i>
<i>Abelia</i>	<i>Gordonia</i>	<i>Ligustrum</i>	<i>Santolina</i>
<i>Alnus</i>	<i>Hedera</i>	<i>Lyonia</i>	<i>Sebastina</i>
<i>Aucuba</i>	<i>Hypericum</i>	<i>Loropetalum</i>	<i>Spiraea</i>
<i>Callistemon</i>	<i>Illicium</i>	<i>Magnolia</i>	<i>Vaccinium</i>
<i>Campsis</i>	<i>Ilex</i>	<i>Osmanthus</i>	<i>Zenobia</i>
<i>Cliftonia</i>	<i>Lagerstromia</i>	<i>Podocarpus</i>	

Overall Points to Consider. As a summary the following considerations may prove helpful when collecting plant material abroad.

- (i) Thoroughly check on plant health regulations. Our local Plant Health Officer, Mr. O. Hadjiphanis, at Maidstone, Kent was most helpful and gave much useful advice.
- (ii) Be advised by friends on what they feel would be useful plant material to be introduced to the United Kingdom.
- (iii) Keep accurate records on the nomenclature and where and when the material was collected.
- (iv) Before departure to the U.K. prepare a complete list of the plant material to accompany the appropriate form for Customs at the point of entry.
- (v) Take all reasonable measures to keep the cuttings turgid and prevent them from being damaged.
- (vi) When preparing the cuttings on one's return do not be tempted to over-utilize the material. Their "food reserve" will have already been considerably depleted. It is better to root successfully a few cuttings and then use these young plants for future material.
- (vii) Keep records on their ease of propagation, subsequent growth and development. Hardiness is an important aspect to consider.
- (viii) Distribute early-on a few plants to some trusted propagator friends. This is a much safer way to ensure one's original material is not lost.

Conclusions. Not being a plantsman myself it was difficult at times to know exactly what to collect. One has to rely very much on one's own intuition on what plant may be of considerable commercial or botanical interest for the U.K. However, a point of great importance is that one should be guided by one's friends within that country on what they feel would be a useful plant for the U.K. — remembering that it is likely that a number of friends have travelled within Western Europe. Upon one's return, the situation will arise whereby one will find growing in the U.K. the same plant one has collected — but it is important to remember that one may well have a different form of it.

It is hoped this paper will spur interest in other members — even if it does create problems at the time; the rewards can be very gratifying. A sight which I shall always remember is pacing out with Robert McCartney a small area of forest and then observing the multitude of different plant material growing in its

natural habitat. It made one realise the contribution that this part of the world had made to the many plants now seen in general cultivation within the United Kingdom. In conclusion, I wish to acknowledge the advice and kindness given to us by the many I.P.P.S. members of South Virginia.

HERBACEOUS PROPAGATION

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Firstly I would like to refer to heat input in the propagation of herbaceous plants. Unlike many branches of the nursery trade who have found that heated mist units have revolutionized their propagation, it must be said basically herbaceous propagation techniques have changed very little in nearly 50 years, when I first remember seeing herbaceous propagation done at our family business at Christchurch, Dorset.

Cold frames were used then for any type of propagation where protection was required, and I can honestly say this is still our only requirement. In stating this I have one reservation. Here at Blooms Nurseries during the last two years we have used a 50'×10' polythene tunnel, fitted with mist without any form of artificial heat. This has proved successful with late-spring soft-type cuttings which wilt badly in frames, where although shaded — and the cuttings damped as often as possible — the higher temperatures proved too much. They soon lost their turgidity, finally giving only a 50% take.

Cuttings are taken and inserted in boxes and stood on each side of a central path in the polythene tunnel. As soon as sufficiently rooted, the boxes are moved to a net shaded tunnel for hardening.

Examples of plants to which I refer are:

Aster amellus cultivars
Heliopsis cultivars
Lythrum cultivars, etc.,

Euphorbia griffithii 'Fireglow'
Kirengeshoma palmata

The materials in the construction of frames have changed over the years, from my grandfather's beautifully built wooden frames complete with runners, to concrete blocks, and railway sleepers, all taking a 6'×4' light, and finally to asbestos which we now use. These latter are built to fit a standard Dutch light. Frames can be constructed very quickly with the aid of steel or wooden stakes which are grooved to slot in the asbestos.