

PROPAGATION TRIALS IN KENYA

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In 1979 I started our first trials to establish a small propagation unit in the Highlands of Kenya, with the intention of rooting a range of hardy shrubs for the European market. We managed to obtain a small area of land situated at an altitude of 7000 ft. in one of the main tea (*Camellia sinensis*) [syn. *C. thea*] growing districts. Rainfall at this altitude is generally around 60-70 in. per annum, the long rains arriving during March, April and May. Later in the year are the less reliable short rains which occur in October/November.

The first task was to establish a stock bed to supply the necessary cuttings. As very little local material was available in the plants we required, this operation had to begin with very small rooted cuttings.

For the next three years we had to wait for the plants to develop. This was slower than expected and various hazards such as extreme hail storms occurred, which almost finished the whole project.

By 1982 the plants had developed from small 6 in. rooted cuttings up to 2 to 3 ft. bushy specimens. The main plants we had started for our trials included three camellias, 'Donation', Adolphe Audusson', and 'Aerjeshii', *Magnolia* × *soulangiana* and *M. stellata*, *Elaeagnus* 'Limelight', *Ceanothus dentatus* and *C. 'cascade'*, *Pittosporum* 'Irene Patterson' and *P. garnettii*, and × *Cupressocyparis leylandii* 'Castlewellan'.

In January, 1982, we inserted around 3000 cuttings from a selection of all these shrubs. As plastic trays are difficult to obtain in Kenya we made up stout wooden boxes from local timber. As a rooting medium, which had to be sterile for export to England, we used a mix of 50% washed river sand and 50% local vermiculite with a small amount of polystyrene granules added for improved drainage.

All camellias and magnolias were taken as leaf-bud cuttings, the remainder as tip cuttings, wounded, dipped in Sera-dix No. 2 and watered in with Benlate. The filled trays were placed in a polyhouse where they were hand-misted twice a day.

Temperatures during the day rose to around 90°F which resulted in high temperatures in the polythene tunnel. To cool the houses we covered the whole structure with dense hessian

and sprayed the paths regularly.

To combat *Botrytis* we introduced a routine fungicide spray using Captan and Benlate every 10 to 14 days. With the high temperatures and humidity this was a constant danger. Within 8 to 10 weeks we had achieved around 70% rooting, the trays were removed from the polythene tunnel, and all cuttings allowed to harden off outside.

We air-freighted our first shipments to England of 2000 rooted cuttings in June, 1982. These cuttings were ready earlier, but we decided to wait until temperatures and light conditions were at their best in England, with equally cool conditions in Kenya. After passing the necessary Ministry of Agriculture health checks we had the cuttings back on our nursery 18 hours after their shipment from Nairobi. They were all potted into 7 cm pots within 24 hours, placed in a closed polyhouse and covered with a sheet of white papronet.

The cuttings had made no new growth from the moment we had taken them in January/February until their arrival in England in June. Within 2 to 3 weeks of potting we noticed new root movement and this was quickly followed by 2 to 3 in. of fresh shoot growth.

We experienced a minimum of loss in nearly all cultivars, the exceptions being *ceanothus* and \times *Cupressocyparis leylandii* 'Castlewellan'. By late spring the following year we had well established liners ready for resale or potting on.

THE GENUS *PIERIS*: ITS PROPAGATION AND PRODUCTION

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Pieris belongs to the family Ericaceae and, like other members of the family such as *Kalmia* and *Rhododendron*, they thrive in light shade and do best with a cool, moist root run. Whilst perhaps not the choicest of evergreen shrubs they do offer a distinct ornamental quality for acid soils.

The most distinctive feature is, of course, the colour of the young growth. This can vary from brilliant red to pink, as well as creamy yellow, bronze, or copper. The flowers which are usually white, but sometimes pink or red, are lily-of-the-valley shaped and born profusely on racemes or panicles. Various species and hybrids flower in the garden from February to June. The flower buds, which are formed in late summer are