NEW PLANT FORUM

Mr. William Flemer III served as moderator for the new plant forum.

Dr. Elwin Orton of Rutgers University showed slides of five hollies which he has developed. These are being introduced to the trade as *Ilex* 'Green Dragon', *I.* 'Dwarf Pagoda', *I.* 'Harvest Red', *I.* 'Autumn Glow' and *I.* 'Jersey Princess'. Andy Knauer showed slides and discussed *Idesia polycarpa*. Jim Wells showed slides of *Magnolia* 'Leonard Messel', deciduous azaleas, *Rhododendron* 'Pink William', *R.* 'Peachy Keen', unnamed seedling designated as R. WS 1, *R.* 'Gillian's Gold', *R.* 'Windsor Daybreak', *R.* 'Windsor Buttercup', *R.* 'Vivacious' and a fragrant *R.* 'Clear Yellow' which he's currently increasing. Dr. Gus Mehlquist showed slides of his rhododendron breeding research aimed at developing a white and a red rhododendron. Mr. Flemer finished the plant forum with slides of trumpet flowers *Campsis* × *tagliabuana* 'Mme. Galen' and *Campsis* 'Crimson Trumpet', a fragrant double flowered wisteria, a sugar maple, *Acer saccharum* 'Bonfire', *Aesculus pavia* 'Splendens', and two new cotoneasters bred at the U.S. National Arboretum for resistance to fire blight and apple scab.

Tuesday Evening, August 24, 1976

Dr. Chiko Haramaki served as moderator for the program on ericaceous plants.

DECIDUOUS AZALEA LINER PRODUCTION

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When we decided to go into azalea production the first thing we did was to acquire good stock plants. They were fairly large plants, 4 to 5 ft in height. These were planted in well-prepared beds and were heavily mulched with pine bark. They were then cut back hard and left alone for two growing season.

Immediately after flowering the plants were dead-headed which seems to hasten shoot development. When the new shoots were 4 to 6″ long and slightly firm, cuttings were made. Normally, this is from May 1 to June 15. We have both cut and stripped them and it doesn't seem to make any difference.

However we did try to leave a stub to encourage future branching.

The cuttings are dipped into a solution of Vapor Guard, Sevin and Captan as described by Larry Carville when he spoke to us in Mobile in 1967. We use two pails, one for the dip and one to drain the cuttings, which are then packed into plastic bags for storage in a cooler. We feel it is good for them to be in the cooler for a day or more; they seem more crisp and turgid. Also, as we run into rainy days, we have work for the inside crew.

The cuttings are stripped, the buds pinched out and dipped into Hormodin 3, to which Benlate is added. With later cuttings or those that are hardened, a slight wound is made with the fingernail.

The prepared cuttings are stuck in flats containing a peat and perlite medium; 1 bale German peat to 3 bags of coarse perlite, to which 1 cup of granular Aqua-Gro is added. This is thoroughly mixed and put through a shredder.

The flats are placed under mist in a shade house. We start with 1 min every 6 min, utilizing two 30 sec bursts. The weather determines the number of hours of misting during the day, and the time of the burst is gradually lessened.

When rooted (6 to 8 weeks) the cuttings are potted and placed under lights. The potting mix consists of 1 bale of peat, 2 bags of perlite (4 cu ft) 3/4 oz of FTE, 1 lb of Osmocote and 1 cup of Aqua-Gro granular. As the flats are filled, the potted plants are drenched with a solution of 4 oz Truban, 6 oz Benlate and 2 cups Aqua-Gro/100 gal water. The cuttings remain under lights until sufficient top growth has started. The amount of top growth does not seem to be critical, but it is vital that there is some for, in many cases, well-rooted cuttings that go into dormancy without breaking, will not break come spring. The amount and kind of light we give is not sufficient for photosynthesis but just enough to break the photoperiod requirements.

When we feel we have enough growth the lights are turned off and the heat kept to a minimum of 35°F for the winter. We try to keep the houses as cool as possible by ventilating in the spring, but it is very hard to keep them cool once the days get longer. The plants are trimmed 2 or 3 times in April and early May to keep them from becoming too leggy. A couple of years ago we tried sticking some of the trimmings and much to our amazement they rooted well and we were then doing two batches a year.

One advantage of April cuttings is that they do not need supplemental lighting, as they are rooted by June and grow

naturally, thus saving energy. An interesting aspect of our April cuttings was that some cultivars that had low rooting percentages in May/June did very well while some cultivars that we never had trouble with did poorly in April.

All the azalea cuttings are potted since we are selling liners and it is easy to handle them this way, and we are planting by a machine. The machine consists of two Holland Peat Pot Planters, mounted offset on a tool bar. The boys drop the peat pots into the guides which are then picked up by the fingers of the machine and dropped into a furrow made by the shoes. Rows 1 and 3 are planted, then the tractor comes back over the bed and plants rows 2 and 4. The plants are then mulched and left for 2 seasons at which time we get a heavy 12″ to 15″ plant.

INTERNAL FLOODING OF RHODODENDRON LEAVES IN WINTER STORAGE[1]

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Abstract. Internal leaf flooding is caused by movement of excessive water into leaves by root pressure while transpiration is inhibited by high relative humidity. Experimental evidence indicated that neither the flooded condition, nor freezing alone cause leaf injury. Flooded leaves were somewhat less cold hardy than normal leaves. Holding at low temperatures for 20 hours or more caused much more injury to both normal and flooded leaves than freezing for 2 hours. Tests of leaves sampled in Febuary revealed a wide variation in cold hardiness among cultivars and among plants of the same cultivar in the field and in storage. Suggestions are given for clearing leaves of internal flooding and for preventing injury associated with flooding.

One of the major reasons for placing plants in winter storage is for protection from damage. Nurserymen are concerned when storage injury develops and demand an explanation and recommendations for avoiding it. Questions have arisen about a condition called internal leaf flooding that may occur on rhododendron in storage.

Normal leaves have air-filled intercellular spaces occupying perhaps 10 to 20% of the leaf. Flooded leaves have dark blotches due to water infiltration of the intercellular spaces. It is not surprising that the discovery of this condition on

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