

**AN INVESTIGATION OF THE PLANT  
*HOSTA FORTUNEI* 'AUREO MACULATA' ('ALBOPICTA')  
TO FIND RAPID METHODS OF PROPAGATION**

LILA W. DICK

*The West of Scotland Agricultural College  
Department of Horticulture and Beekeeping  
Auchincruive, Ayr KA6 5AE, Scotland*

As hostas are valuable ground cover plants and also in demand for flower arrangers, it was decided to look at this plant from a propagation viewpoint. The work was a practical project carried out with 5 BSc III degree students at the West of Scotland College over 10 hours of the October-December Term (the rest of the practical work being carried out by nursery staff). We found very few references to the propagation of hostas and relied on the R.H.S. Dictionary for basic information (1). Hostas are named after the Austrian Botanist Nicolaus Thomas Host (1761-1834) and the plant belongs to the family Liliaceae.

**Methods of Propagation**

1) *Seed*. As *H. fortunei* does not set seed regularly and progeny would not be true-to-type, we discounted this method.

2) *Division*, the usual method of increasing hostas. Five plants were lifted on 13th October, soil washed from them, placed in peat and put in the cold store (4-6°C; 90-100° R.H.) for 50 days (to simulate the winter dormant period). On December 2nd the plants were removed, two used for division, and two held for "In Vitro" culture, and one for use of buds in leaf cuttings and roots for root cuttings.

After removing the peat it was concluded that instead of just obtaining 3 or 4 plants from division, thorough washing revealed the available buds and roots to be 16 on 1 plant and 12 on the other. After cutting into individual buds plus roots, they were then dusted with Captan at the cut surface and the 16 individual buds + roots potted directly into J.I. No. 1 in 4" (10 cms) black poly bags and kept in a cool greenhouse. The reason for using 4" bags was the length of roots, plus the growth habit of the plant. The 12 from the other plant were planted directly into a frame and covered with dutch lights.

3) *In Vitro*. The remaining two plants were used for *in vitro* culture. As the result of hearing an American speaker at the Eastern Region Conference at Rutgers University in August 1976, it was decided to try this method too. It is easy to make up the medium as one is able to buy packeted units of Murashige & Skoog medium and then add plant hormones as required. We carried out the work on a lamina flow bench and

then placed the tubes in an incubator with a 16-hour/day illumination.

No contamination occurred but unfortunately no growth either. This was possibly due to the procedure not being attempted at the correct time. It may be better to use plants which have overwintered outside, and to attempt the method in the spring. We hope to continue with this by contacting the U.S.A. speaker.

4) *Leaves*. As this plant is a member of the Liliaceae it was decided to try the individual leaves in a manner similar to lily scales. Some leaves stayed alive for several weeks but no sign of regeneration occurred.

5) *Roots*. These were made into root cuttings but again no success.

**In Conclusion.** Until we can be successful with *in vitro* culture we concluded that by very thorough washing of the lifted plants which revealed many more buds than first apparent, it is possible to use a single bud + roots which did make reasonable sized plants and in fact were sold in July. The plants in the frame also developed well but would have to be left for a season before being lifted and potted up or planted out.

#### LITERATURE CITED

1. Dictionary of Gardening. Royal Horticultural Society, London. 1951.

### PRODUCTION OF EUCALYPTUS

JOHN J. COSTIN

*Sap, Ltd.,*

*Carbury, Co. Kildare*

The eucalyptus embody many of the desirable characteristics that a diligent plant breeder would endeavor to collect into one plant, if set the task of breeding a modern tree. They are evergreen, fast growing and virtually without pests and diseases in this country and have both amenity and forestry values. Nevertheless eucalyptus are not as widely planted as they should be. A popular misconception is that they are soft and will not grow in the greater area of the British Isles. Our experience suggest that with the proper seed provenance and exact cultural programme, excellent results can be obtained with eucalyptus.

Eucalyptus have many modern potential uses because of their rapid growth and evergreen canopy. They must be considered as a serious contender as a quick temporary replacement in areas ravaged by Dutch Elm Disease, or as a screen for indus-