

The trial was conducted in late summer (February-March) when we had fairly high temperatures, 37° to 40°C, for sustained periods of up to one week. The plants were watered overhead for a period of 45 minutes once a day, with an additional late afternoon irrigation for 30 minutes on extremely hot days.

After a period of 6 weeks the plant in the 2 pounds 100 day Osmocote, 3 pound Sierra Blend group were visibly much larger and healthier than plants in any of the other groups. Plants growing in Group 2 appeared to be lacking nitrogen, and plants growing in Group 5 appeared to have their growth retarded by the additional amount of fertilizer. The growth of plants in the other groups appeared to be related to the increased amount of Osmocote and Sierra Blend.

Since these trials we have used the best formulation on several other genera and achieved favourable results with most. There were problems with bottlebrush species and some species of melaleuca.

In conclusion, under our conditions at Grove Nursery, using our water supply and Jarrah sawdust, we found that Sierra Blend did not contain sufficient primary nitrogen to counteract nitrogen drawdown. However, when we used 3 pounds per yard³ in conjunction with a mixture of 4 pounds U.F.38 lime, additional trace elements, and 2 pounds 100 day Osmocote, Sierra Blend proved to be a satisfactory addition to our soil mix.

SOME TASMANIAN PLANTS WORTHY OF CULTIVATION

ALAN M. GRAY

Hobart, Tasmania

There are many Tasmanian endemic plants which would make admirable specimens in any garden or park. Unfortunately, most are either unknown or unavailable to the commercial nursery trade, and hence to the general public. Many of these plants are easily propagated, establish readily, and require little special attention. Some, however, do present problems in propagation and, as such, are a challenge to the amateur and professional plant propagator alike.

I have selected some species which I believe have considerable merit and the potential to become desirable ornamentals. Not only is it desirable to introduce and produce these plants on account of their unquestionable aesthetic value but, surely, as our natural forests and bushlands are being decimated at an

increasing rate it is vital that we make the effort to preserve some of these plants for posterity.

It has been my frustrating experience that many commercial nurseries are reluctant to undertake the propagation and production of native plants — especially Tasmanian natives. It seems that this is due to two main reasons. Firstly, there is the mystery surrounding many of the aspects of the presumed special treatment required by natives. Native plants respond to the same methods and principles as are used with the large majority of well-established popular exotic species. All that is required is the willingness on the part of the nurseryman to experiment a little.

The second reason that so few natives are propagated and presented to the public appears to stem from the fear of being “stuck” with a slow or non-selling line. The nursery, having propagated and offered for sale a “new” plant that has taken considerable time, (hence money) to produce, may not be able to confidently promote to the public all relevant facts relating to the plant’s requirements and likely performance. This is often due to a lack of willingness on the part of the nurseryman to undertake a little research or study. The solution is obvious.

Personally, I believe that the nursery trade in general should make greater efforts in the advertising field and, as well, take a far more active role in the research, propagation and promotion of novelties.

It is not my business to attempt to change the attitudes of nurserymen toward their production and sales approaches. Rather, I am intending to illustrate a number of Tasmania’s more spectacular plant species, point out their intrinsic attractions and, hopefully, win some of you in their favour. Relevant details of each species, e.g. natural habitats, propagation techniques, cultivation and any other necessary details are outlined below:

1. *Prionotes cerinthoides*. EPACRIDACEAE. climbing heath. An epiphyte. Summer hardened tips. Light appl. hormone. Sand/peatmoss 2:1. Bottom heat 15 to 18°C. Mist, Rich leaf mould and humus. Well drained but adequate summer watering. Semi-shade.

2. *Bellenden montana*. PROTEACEAE. mountain rocket. Small alpine shrub to 1 m. Summer hardened tips, cut to a node. Hormone application essential. Sand/peatmoss 2:1. Bottom heat 15 to 18°C. Mist. Light clays with plenty of humus mixed. Well drained. Full exposure, very hardy. Seed germination very difficult.

3. *Telopea truncata*. PROTEACEAE. Tasmanian waratah.

Tall subalpine shrub to 5 m. Seed the only practical method of propagation. Sand/peatmoss/leaf mould, 3:1:1, and *STERILIZE*. Cover with maximum of 1.0 cm mix. Cool, well ventilated area for germination. Damping-off often a problem, may require treatment with fungicide. Well-drained clay soil. Full exposure. Hardy. Can grow 50 cm/year. There is also a rare yellow form in cultivation, which has the advantage of being vegetatively propagated.

4. *Agastachys odorata*. *PROTEACEAE*. white waratah. Tall, subalpine shrub; does best on heavy but well drained, acid peat/humus. Cuttings. Light application hormone. Bottom heat 12 to 15°C. Mist. Potting soil and planting out situation; must have leaf mould and a pH of approximately 4.5 to 5.5. Rapid growth under ideal conditions.

5. *Eucryphia lucida*. *EUCRYPHIACEAE*. leather wood. The source of the famous, distinctive Leatherwood honey. Cutting or seed, (if available). Cuttings do well in 2:1 sand/peatmoss mix. Bottom heat not essential. Mist recommended. Deep rich humus — rich soils for maximum development. Rapid grower; may flower at a very early stage. Should be more widely planted in plantations to ensure continuation of nectar supply. Forestry operations are gradually limiting the natural range of the species.

A small alpine variety, *E. lucida* var. *milliganii*, is also worthy of attention. There is a pink form of this currently under cultivation.

A variegated form of this plant is now in cultivation and has been registered as cultivar, i.e. *Eucryphia lucida* cv. 'Leather-wood cream'.

6. *Anopterus glandulosus*. *ESCALLONIACEAE*. native laurel. Dense shrub with large, glossy leaves and large spikes of delicate white or pinkish flowers. Cuttings. Hormone. 2:1 S/P mix. Bottom heat, 12 to 15°C. Mist. Deep, moist, slightly acid soil. Faster grower in good conditions. Some shelter desirable.

7. *Geum talbotianum*. *ROSACEAE*. Geum. Densely tufted alpine ground cover. Large wrinkled leaves, exquisite white flowers. Divisions, seed. Supply of each would need to be investigated or arranged. Damp soaks among clefts in rocks. Rich leaf mould. Tolerates much exposure.

8. *Dacrydium franklinii*. *PODOCARPACEAE*. Huon pine. A large but very slow-growing tree in nature; develops rather more rapidly in a garden situation provided the soil is deep, fertile and constantly moist. Cuttings extremely easy to strike. Pure sand or just a little peatmoss. No hormone. Mist and, for faster results, bottom heat, approximately 15°C. Pot into 1:1 sand bush leaf mould. Fairly sheltered location in garden; deep,

constantly moist soils. If cuttings are stored in the refrigerator crisper the root number increases by 50%.

9. *Microcachrys tetragona*. PODOCARPECEAE. Creeping pine. This is not a "pine"; however, it is a true conifer. An alpine species which may cover areas of more than 4 to 6 m on some Tasmanian mountains. It rarely grows more than 4 to 8 cm in height and is commonly observed creeping over rocks and draping down banks. Tolerates extreme exposure and low temperatures. Cuttings easy although a little slow. Bottom heat and mist greatly assist. No hormones. Excellent rockery plant or potted specimen. Heavy soil with much humus, constant moisture.

10. *Microstrobos niphophilus*. PODOCARPACEAE. A miniature conifer from the Tasmanian mountains. Grows to 3 m. Cuttings slow but with high strike rate. No hormone. Heavy humus, moist but well-drained. Good hedge or tub specimen.

11. *Diselma archeri*. CUPRESSACEAE. cheshunt pine. Very similar, superficially, to the last. The leaves and fruit differ. The shrub may reach 4 to 5 m high and with similar spread. The habit is also a little more "formal". Cuttings and similar treatment as for *Microstrobos*; a little easier to strike. Birds eat the berries and regurgitate the pellets containing seed which then germinate well.

12. *Athrotaxis selaginoides*. TAXODIACEAE. King Billy pine. *A. cupressoides*. pencil pine. *A. laxifolia*. loose-leaved pine. These three species are often large, majestic forest trees, but all three make magnificent garden specimens and grow considerably faster than in the wild. Cuttings or seed. Cuttings callus easily but may take some time to root; roots are fragile. Bottom heat (15 to 18°C) and mist greatly assist. Sand/peatmoss, 2:1. Seed must be fresh, sown thinly and covered no deeper than 5 to 8 mm, moist but never saturated. Care must be taken to avoid damping-off with young seedlings. Trees tolerate exposure. Deep, humus-rich, moist soils. Growth can be surprisingly rapid: 2 to 3 m in 10 to 12 years.

13. *Nothofagus gunnii*. FAGACEAE. tanglefoot. Australia's only truly winter deciduous tree. Subalpine, a magnificent display of golden-bronze leaves in autumn. Seed only. Must be fresh; 4:1 sand/peatmoss. Sow thickly, little heat. Moist but not saturated. Stratification, 8 weeks at 2 to 3°C (after sowing) can be advantageous. Pot as soon as possible after seed germination. Leaf mould and peat moss with a little light clay in the proportions of 4:2:1 is ideal. Cool root-run is essential; moist, well drained site. Ideal for tub planting or miniaturizing. Grows best

at high altitudes, e.g. 3000 ft.

14. *Senecio centropappus* (Syn.: *S. brunonis*). ASTERACEAE. tree groundsel. Occurs naturally only on Mt. Wellington, near Hobart. Cuttings have not yet been successful as far as is known. Seed is easily collected and germinated. Sand/peatmoss mix, 2:1. Does best in clay soils. This beautiful plant is a rapid grower.

15. *Richea scoparia*. *R. dracophylla*. EPACRIDACEAE. Two spectacular heaths from the mountain regions of Tasmania. Propagation from cuttings has, so far, proven almost impossible. Seed is produced in enormous quantities, however the length of viability is very short — perhaps one or two days; seedlings are minute. The propagation of *Richea*, (there are 10 species in Tasmania and one in Victoria, New South Wales and the Australian Capital Territory) poses a very interesting challenge.

16. *Cyathodes* species. EPACRIDACEAE. cheese berry, pink mountain berry. These spectacular “berries” have yet to be produced from seed, the technique for success still eludes the plant propagator. Cuttings are difficult and very slow. The *Cyathodes* plant is yet another challenge.

17. *Gunnera cordifolia*. HALORAGACEAE. A prostrate subalpine plant. Spreads rapidly by long runners. The plant is easily propagated by divisions. Will grow in wet, boggy situations and, thus, makes an excellent ground cover in such conditions. One plant may cover 1-2 m² in area.

18. *Leptospermum humifusum* (Syn.: *L. rupestre*). MYRTACEAE. creeping ti-tree. A high altitude plant, usually creeping over boulders and mounds but occasionally ascending up to 1 to 2 m. Very hardy and easily propagated from seed or cutting. Cuttings taken from a prostrate plant will grow accordingly; seedlings might be prostrate or erect. Sand/peat moss, 3:1 for seed or cuttings; sow seed thickly, but shallowly.

Problems and challenges for the plant propagator:

<i>Bellendenia montana</i>	seed
<i>Telopea truncata</i>	cuttings
<i>Nothofagus gunnii</i>	cuttings
<i>Senecio brunonis</i>	cuttings
<i>Richea</i> species	cuttings (seed viability problems)
<i>Cyathodes</i> species	seed (need a more efficient cutting method)