

A new hybrid golden diosma, *Diosma* 'Eureka' — Evergreen shrub, fine golden foliage with white flowers.

Eriostemon myopotoides — Wax flowers — Evergreen medium shrub with light green fragrant leaves, pink buds and white flowers winter and spring.

Pimelea rosea — Evergreen small to medium shrub, glossy green leaves, heads of bright pink flowers in spring.

These plants are drought-hardy but are sensitive to high summer humidity. They grow successfully where the climate is favorable for calistemon. Seed for most of the non-hybrids is available from seed dealers in Australia.

FLOWERING TREES OF AUSTRALIA

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The climatic regions in Australia vary considerably, from tropical wet in the north through sub-tropical, to temperate in the south, with isolated areas of intermediate climates. There are small areas of alpine climates in our snowy mountains, an area of Mediterranean type climate, and much desert in the interior of the continent. Consequently, Australia has a wide range of plants with differing requirements, though many have adapted to such an extent that they grow in a variety of climatic regions and conditions. We also have some that are very specific in their requirements, and many of these have not been brought into cultivation successfully at this stage.

Because of the extremely wide range of Australian flowering trees, I will consider only a small selection found in my state of Queensland and give you some idea of the climatic range in which they can be grown.

Acacia longifolia, Mimosaceae. Flowering: Bright yellow racemes in spring. Height: Approx. 3-5 m, variable. Habitat: Dry hillsides, well-drained soils. Climatic tolerance: Annual rainfall 500 to 1000 mm; temperature range 0 to 35°C. Propagation: by seed. A very graceful small tree.

Acacia peringusta, Mimosaceae. Flowering: Pale yellow in winter and early spring. Height: 3-5m. Habitat: Variable but often along banks of watercourses. Climatic tolerance: Annual rainfall 300 to 1400 mm, temperature range 5 to 35°C. Propagation: By seed. A very attractive small garden tree with lacy foliage.

Acacia podalyriifolia, Mimosaceae. Queensland silver wattle — Flowering: Bright yellow in winter. Height: 3-5 m. Habitat: Dry exposed well-drained hillsides in coastal areas, soils derived from sandstone in inland areas. Climatic tolerance: Annual rainfall 600 to 1000 mm, temperature range 0 to 35°C. Propagation: By seed.

Anopterus macleayanue, Escalloniaceae. Flowering: Spring to summer. Height: 15 m in nature, usually only 5 m in cultivation. Habitat: Rainforest, well-

drained soil rich in humus Climatic tolerance Annual rainfall 1600 to 2000 mm, temperature range 0 to 30°C Frost tender when small Propagation By seed and cuttings

Archontophoenix alexandrae, Palmae Alexandra palm Flowering Variable in winter, white to mauve unisexual in pendulous panicles followed by attractive red globular fruits in early summer Height 20 to 30 m Climatic tolerance Annual rainfall 800 to 2000 mm, temperature range 5 to 35°C Habitat Tropical and subtropical rainforest Propagation By seed An attractive house plant in young stage of growth

Archontophoenix cunninghamiana, Palmae Bangalow palm Very similar to the Alexandra palm Easily identified in the young stage of growth by the foliage Alexandra has a silver reverse to the leaf while the Bangalow is green

Baeckia virgata, Myrtaceae Flowering White, similar to leptospermum in summer Height 3 to 5 m Habitat Variable, open forest areas and soil types Climatic tolerance Annual rainfall 300 to 1600 mm, temperature range 0 to 35°C Propagation By seed or cuttings

Banksia integrifolia, Proteaceae Flowering Creamy brushes up to 26 cm long and 10 cm in diameter, mainly autumn and winter Height 5 to 15 m Habitat Sandy coastal soils, open forest of coastal plains and ranges Climatic tolerance Annual rainfall 750 to 2000 mm, temperature range 0 to 35°C Propagation By seed

Brachychiton acerifolius, Sterculiaceae Illawarra flame tree Flowering Bright red late spring and early summer Height 40 m in nature, usually about 10 m in cultivation Habitat Rainforest Climatic tolerance Annual rainfall 1000 to 3000 mm, temperature range 0 to 35°C Propagation By seed Reliable garden subject in coastal eastern Australia

Callistemon 'Gawler hybrid', Myrtaceae Flowering Red bottlebrush-like flowers up to 26 cm in length and about 5 cm in diameter Height 3 to 5 m Habitat A wide range of soil types Climatic tolerance Annual rainfall 800 to 1500 mm, temperature range 0 to 35°C Propagation Usually by cuttings to maintain type A very desirable garden plant

Callistemon polandii, Myrtaceae Flowering Red bottlebrush-type flowers with golden-tipped stamens in spring Height 3 to 6 m Habitat Fairly wide range of soil types Climatic tolerance Annual rainfall 1000 to 2000 mm, temperature range 0 to 35°C Propagation Usually by cuttings, variable from seed

Callistemon salignus, Myrtaceae Willow bottlebrush Flowering Spring to summer Usually cream, but there are other color variations to pink Height 2 to 10 m, quite variable in form Habitat Swamps and watercourses Climatic tolerance Annual rainfall 600 to 2000 mm, temperature range 0 to 35°C Propagation By seed or cuttings Quite good in cultivation, many cultivars

Castanospermum australe, Leguminosae Papilionaceae Black bean, Moreton Bay chestnut Flowering Spring to summer Height 40 m in nature but usually about 12 m in cultivation Habitat Rainforests near streams and on coastal flats Climatic tolerance Annual rainfall 1000 to 2000 mm, temperature range 5 to 40°C Propagation By seed or cuttings, makes quite a good container plant, and has potential as a Bonsai plant Fruits are poisonous

Ceratopetalum gummiferum, Cunoniaceae New South Wales Christmas bush Flowering White in spring followed by colorful red bracts in summer Height Up to 7 m Habitat Open forest Climatic tolerance Annual rainfall 1000 to 1600 mm, temperature range 0 to 35°C Propagation Usually by seed but can be grown from cuttings Good garden subject in well-drained soils

Doryanthes palmeri, Amaryllidaceae Spear lily Flowering Long red drooping spikes in spring Height 2 to 3 m Habitat Cliffs and rocky hillsides in and near rain forests, usually above 600 m elevation Climatic tolerance Annual

rainfall 1600 to 2500 mm, temperature range 0 to 35°C Propagation By seed or division Seedlings take up to ten years to flower

Eucalyptus ptychocarpa, Myrtaceae Swamp bloodwood Flowering Mainly summer and autumn, many color forms Height Up to 18 m Habitat. Open forests often along water courses Climatic tolerance Annual rainfall 100 to 1600 mm, temperature range 10 to 35°C Propagation. By seed A very spectacular tree

Eucalyptus torquata, Myrtaceae Flowering Usually pinky orange in spring and summer There are some different color forms Height 5 to 15 m Habitat Open forest, usually sandy well-drained soils Climatic tolerance Annual rainfall 500 to 1600 mm, temperature range 0 to 35°C Propagation By seed A very attractive small to medium tree

Evodia elleryana, Rutaceae Flowering In summer, color forms red to pink or mauve Height Up to 30 m, but usually smaller in cultivation Habitat Rainforest Climatic tolerance Annual rainfall 1000 to 2000 mm, temperature range 10 to 35°C Propagation By seed Seedlings have been known to flower in three years, but seedlings are frost-tender

Grevillea banksii, Proteaceae Red silky oak or Banks' grevillea Flowering Usually in spring but in cultivation almost always some flower Color varies from red to pink and white Height 5 to 9 m There are also different forms with varying heights These include a 1-m low spreading type, a 2- to 3-m shrubby form and a slender erect small tree Habitat Stony ridges, gravelly clays to sandy soils It prefers acid conditions Climatic tolerance Annual rainfall 1000 to 1600 mm, temperature range 5 to 30°C Does best in areas not subject to severe frost Propagation. By seed and by cuttings A very attractive group

Grevillea glauca gibbosa (Syn *Grevillea glauca*), Proteaceae. Flowering In winter Height 5 to 8 m Variable from coastal lowlands to higher altitudes of 500 m or so in a variety of soil types Climatic tolerance Annual rainfall 500 to 2000 mm, temperature range 10 to 35°C Propagation By seed

Grevillea pinnatifida, Proteaceae White oak Flowering In late spring and early summer Height Up to 25 m in nature but rarely more than 8 m in cultivation Habitat Rainforest Climatic tolerance Annual rainfall 2000 to 3000 mm falling throughout the year, temperature range 10 to 30°C Propagation By seed Quite a desirable tree for sub-tropical to tropical regions

Grevillea robusta, Proteaceae Silky oak Flowering Spring to early summer Yellowish-orange Height Up to 40 m in nature, usually smaller in cultivation Habitat Rainforest Climatic tolerance. Annual rainfall 600 to 1400 mm, temperature range 0 to 30°C Propagation By seed A very attractive tree

Grevillea 'Coochin Hill', Proteaceae Flowering: creamy yellow in winter and spring Height 3 to 6 m, erect Habitat Sandy or stony soil in open forest Climatic tolerance Annual rainfall 700 to 900 mm, mainly during summer, temperature range 10 to 30°C Propagation. By seed or cuttings

Hibiscus heterophyllus, Malvaceae Native rosella Flowering: Yellow up to 12 cm in diameter, during summer and autumn mainly. Height Up to 5 m Habitat Open forest often in rocky well-drained areas. Climatic tolerance Annual rainfall 600 to 1400 mm, temperature range 10 to 35°C Propagation: By seed or cuttings

Hymenosporum flavum, Pittosporaceae. Native frangipanni Flowering. Light cream when young, darkening to yellow with age, up to 5 cm in diameter; spring Height Variable up to 20 m in nature, usually smaller in cultivation. Habitat Rainforest, deep moist loams Climatic tolerance Annual rainfall 1000 to 2000 mm, temperature range 0 to 35°C Frost tender when young Propagation. Usually by seed Very attractive as a garden specimen tree

Jagera pseudorhus, Sapindaceae Foam bark, fern top, pink tamarind Flowering Minute flowers followed by attractive orange colored fruits Height

Up to 12 m Habitat Hillside slopes, light loam to stony clay Climatic tolerance Annual rainfall 800 to 2000 mm, temperature range 10 to 35°C Frost tender when young Propagation. Usually by seed A very attractive small tree

Melaleuca decora, Myrtaceae Flowering White, loose spikes 1 to 6 cm long and 1.5 cm in diameter in summer Height Up to 8 m Habitat Coastal lowlands, heath and open forests in areas of poor drainage Climatic tolerance Annual rainfall 700 to 1400 mm, temperature range 0 to 35°C Very young plants are frost tender Propagation By seed or cuttings

Melaleuca symphyocarpa, Myrtaceae Flowering Usually reddish globular heads 3 to 4 cm in diameter but color variants of yellow and orange Height Up to 6 m Habitat Open forests on sandy soils associated with watercourses Climatic tolerance Annual rainfall 1000 to 2500 mm, temperature range 5 to 40°C Propagation By seed or cuttings

Oreocallis wickhamii, Proteaceae Pink silky oak, satin oak, red silky oak Flowering Profuse, bright red, 5 cm long on a 4 cm stalklet in spring to early summer Height Up to 27 m in nature but usually about 10 m in cultivation Habitat Rainforest Climatic tolerance Annual rainfall 1000 to 2000 mm, temperature range 0 to 35°C Propagation Usually by seed but can be grown by cuttings A truly magnificent tree

Randia fitzalanii, Rubiaceae Yellow mangosteen Flowering Spring followed by summer fruits Height About 6 m. Habitat Open rainforest along watercourses Climatic tolerance Annual rainfall 1000 to 2000 mm, temperature range 10 to 35°C Propagation Easy from seed

Stenocarpus sinuatus, Proteaceae Wheel of fire tree Flowering Profuse in summer and autumn Bright red umbels of 6 to 20, up to 10 cm across Height. Up to 30 m in nature but usually about 10 m in cultivation Habitat Rainforest Climatic tolerance Annual rainfall 1000 to 2000 mm, temperature range 10 to 35°C Propagation By seed

Syzygium coolminianum, Myrtaceae, Syn *Eugenia coolminiana* Blue lilly pilli Flowering White with numerous stamens about 1 cm in diameter followed by very colorful berries in spring and summer Height Up to 10 m Habitat Rainforest from low to high altitudes and along creek banks Climatic tolerance. Annual rainfall 1000 to 1500 mm, temperature range 5 to 35°C Propagation. From seed after removing outer flesh.

Syzygium jambolana, Myrtaceae, Syn *Eugenia moorei* Coolamin, robbi, rose apple Flowering Usually red but sometimes pink, rarely white, followed by large globular creamy-white fruit approximately 5 cm in diameter Height. About 40 m in nature but usually about 10 m in cultivation. Climatic tolerance Annual rainfall about 1000 to 1500 mm, temperature range 5 to 35°C Habitat Rainforest along rivers and creek banks Propagation By seed after removing outer flesh

Syzygium luehmannii, Myrtaceae Syn *Eugenia luehmannii* and *E. parvifolia* Small leaf, water gum, cherry alder Flowers Cream to white, small panicles in summer Height Up to 30 m in nature but usually about 9 m in cultivation in subtropical regions Habitat Rainforest along rivers and creek banks from low to relatively high altitudes Climatic tolerance Annual rainfall 1000 to 1500 mm, temperature range 5 to 40°C Propagation From seed Tree bears heavy crop of berries after flowering Flesh must be removed before sowing Can also be grown from cuttings New growth is an attractive bright pinky bronze

Brachychiton rupestris, Sterculiaceae Bottle tree Flowering Fairly insignificant, but this is a most unusual tree Height Up to 20-25 m Habitat Usually found in drier inland areas Climatic tolerance. Annual rainfall 400 to 1000 mm, temperature range 0 to 40°C Propagation. By seed A most unusual novelty tree

Xanthorrhoea australis, Xanthorrhoeaceae Grass tree, black boy, yacca, kangaroo tail Flowering Small white to cream, borne in large numbers along a long spike up to 3 m long and approximately 6 cm or more in diameter, in late spring

Height 7 m including flower spike Habitat: Open forest, mountainous areas, usually in volcanic soil but also can be found in poor sandy soils in heath lands Climatic tolerance Annual rainfall 350 to 1500 mm, temperature range 10 to 35°C Propagation Quite easy from seed

These are just a few of the magnificent plants that Australia is endowed with. I trust that this gives some idea of the wide range of material that is available to us. The following references will enable further investigation of Australian flora.

REFERENCES

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- 3 Kelly, Stan 1976-8 *Eucalypts*, Vol 1 and 2 West Melbourne, Vic Thomas Nelson
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THE COLD STORAGE OF DORMANT MATERIAL

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General Considerations. I would suggest that there are two reasons for using cold storage. Both of these are tools of management: (1) to avoid the closed season when lifting cannot be undertaken, (2) to extend the planting and lining-out season by holding material dormant and prolonging the optimum condition for planting and establishment. Our experience is wholly with this second reason, and I propose to discuss our successes and failures at some length.

In North America and on the Continental mainland of Europe, it is most necessary to avoid the closed season by placing plants in store. However, the British Isles, with their maritime climate is usually open for most of the lifting season and the necessity to lift in the autumn and hold throughout the season seldom arises. However, where stock is required for grading and dispatch of plants to more favorable climates or stock for bench grafting is required, there is no alternative to the early lift. The main problems in the storage of this material are linked to the proper hardening-off before lifting. Die-back and disease particularly become a problem when foliage is taken into store and buds are not hardened-off. Plants that are under stress in store could