Swainsona elegans flowering stem × .8, fruit × 1

Swainsona formosa, creamy-white flower variant W. R. Elliot

Swainsona formosa T. L. Blake

showy when in flower and have potential for cultivation as a summer annual. Requires a sunny situation in well-drained soil. Propagate from treated seed.

Swainsona elegans A. T. Lee
(elegant)
WA
0.1–0.6 m × 0.3–1 m June–Oct

Perennial **herb** with a woody rootstock; **stems** erect or prostrate, with long hairs; young growth sparsely hairy; **leaves** pinnate, 5–10 cm long; **leaflets** 7–15, 1–2 cm × 0.2–0.4 cm, lanceolate, hairy, pointed; **racemes** 8–15 cm long, 8–15-flowered; **flowers** 0.8–1.2 cm long, violet to purple; **calyx** hairy, with short teeth; **pods** 1–2 cm long, ovoid, hairy.

Plants are found in the Carnarvon, Ashburton, Austin and Irwin Districts growing in shrubland in sandy or rocky soils. An ornamental species, it is suitable for areas with a hot dry climate. Requires a sunny situation in well-drained soils. Tolerates light frosts. Propagate from treated seed or cuttings of firm young growth.

Swainsona fissimontana J. M. Black
(split mountain; referring to Broken Hill)
NSW, SA Broken Hill Pea
0.3–0.6 m × 0.3–0.5 m Aug–Nov

Dwarf **shrub** with a compact habit; young growth densely hairy; **leaves** pinnate, 4–10 cm long; **leaflets** 7–13, 0.5–1.5 cm × 0.1–0.3 cm, narrowly elliptic, dark green, often crowded, densely hairy; **racemes** 10–30 cm long, erect, held above the foliage, 3–11-flowered; **flowers** 0.8–1 m long, pink, red or dark purple; **calyx** hairy, with short teeth; **keel** twisted; **pods** 1.5–2.5 cm long, elliptic, hairy.

Broken Hill Pea occurs on stony slopes and flats in sandy or clay loams. Plants are often compact with the inflorescences held well above the foliage. An interesting species, it is suitable for a sunny rock garden or container. Requires free drainage. Propagate from treated seed.

Swainsona flavicarinata J. M. Black
(yellow keel) Hoary Darling Pea
Qld, NSW, SA, WA, NT Aug–Nov; Feb–April

Perennial **shrub** with a taproot; **stems** spreading or erect, hairy; young growth with coarse white hairs; **leaves** pinnate, 2–6 cm long; **leaflets** 5–9, 1–1.5 cm × 0.5–1 cm, elliptic or obovate, glabrous above, softly hairy beneath, blunt; **racemes** 5–12 cm long, erect, hairy, 3–15-flowered; **flowers** 0.5–1 cm long, blue, purple, red or pink with a yellowish keel; **calyx** hairy, with long teeth; **pods** 1–1.5 cm long, oblong, inflated, hairy.

Distributed mainly in inland regions, plants grow in mulga communities in red sand. Although not especially showy, this species has decorative foliage and well-displayed flowers. Suited to a hot sunny position in freely draining soils. Tolerates most frosts. Propagate from treated seed and from cuttings of firm young growth.

Swainsona formosa (G. Don) Joy Thomps.
(beautiful)
Qld, NSW, SA, WA, NT Sturt's Desert Pea
Prostrate–0.6 m × 1–4 m May–March

This renowned species was comprehensively covered in Volume 3 (page 51), under its earlier name of *Clianthus formosus.* It was also recently renamed *Willdampia formosa* (G. Don) A. S. George, but this name change has not been generally accepted.

Due to increased activity in breeding and selection programs, plants with flowers of red-black-white, pink or white to cream are available commercially, although often in small numbers.

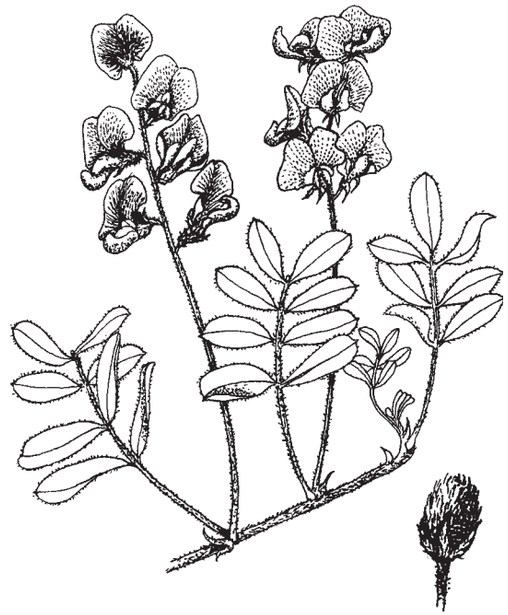
Swainsona forrestii F. Muell. ex A. T. Lee
(after Sir John Forrest, former Premier of WA and Federal minister)
WA Brittle Pea
0.5–1 m × 0.5–1 m May–Nov

Annual **herb** with stiffly erect stems; young growth hairy; **leaves** pinnate, 7–15 cm long; **leaflets** 13–27, 1.5–2.5 cm × 0.6–1 cm, elliptic, dark green and glabrous above, hairy beneath; **racemes** 15–30 cm long, 10–30-flowered; **flowers** 1–1.2 cm long, red to purple or violet; **calyx** hairy, with long teeth; **pods** about 1 cm × 0.6 cm, inflated, hairy, brittle, thin-textured.

This species occurs in the northern Carnarvon District extending south to Shark Bay, growing near ephemeral streams in sandy soil. Virtually unknown in cultivation, it has potential for hot inland areas as a summer-flowering annual. Requires a sunny situation and unimpeded drainage. Frost tolerance is unlikely to be high. Propagate from treated seed.

Swainsona fraseri Benth.
(after Charles Fraser, First Superintendent, Sydney Botanic Gardens)
Qld, NSW
1–2 m × 0.5–1.5 m Aug–Dec

Dwarf to small **shrub**, usually bushy; young growth sparsely hairy; **leaves** pinnate, 5–10 cm long; **leaflets**



Swainsona flavicarinata flowering stem × .7, fruit × 1

Swainsona galegifolia W. R. Elliot

Telopea speciosissima 'Wirrimbirra White' D. L. Jones

2.8–3.8 cm long; **follicles** 5–8 cm long plus beak to about 3.5 cm long, prominently stalked.

This outstanding and generally quick-growing species has its main representation in East Gippsland, and adjacent southern NSW. A disjunct population occurs near Braidwood in NSW. Plants are found from 200–1200 m altitude in wet eucalypt forest and temperate rainforest on a range of acidic soils. In cultivation, they grow well in freely draining loam with a semi-shaded aspect but they can tolerate an open aspect. Plants withstand moderate frosts but during extended dry periods they may need supplementary water. *T. oreades* is usually long-lived and mature specimens can be rejuvenated by judicious removal of old stems and/or branches. It is suitable for tall hedging. *T. oreades* produces timber with a very pleasant light brown appearance like that of Silky Oak (*Grevillea robusta*), and it is utilised to a limited degree for picture frames, furniture and tool handles. Propagation is from seed or cuttings of barely firm young growth.

The cultivar 'Errinundra White' is a selection from a naturally occurring plant on the Errinundra Plateau in farthest East Gippsland. It was registered with the *Australian Cultivar Registration Authority* in 1990. This cultivar is similar to the typical *T. oreades* in all characteristics except for flower colour, which is a creamy-white. It is propagated from cuttings of barely firm young growth.

Hybrids with *T. speciosissima* as the other parent are relatively common. These hybrids are usually vigorous, produce dense foliage cover, and perform very well in cultivation. *T.* 'Shady Lady' is one such hybrid which is well entrenched in cultivation and is now regarded as one of the more reliable telopeas for a wide range of acidic soil types. See also Telopea hybrid entries on page 202–3.

In nature, *T. oreades* hybridises with *T. mongaensis* and some of the progeny are likely to be in cultivation.

Telopea speciosissima (Sm.) R. Br.
(extra beautiful)
NSW Waratah; NSW Waratah; Native Tulip Tree
1.5–5 m × 1.5–3.5 m Aug–Dec

Small to tall, often lignotuberous **shrub**; **stems** usually few; **branches** few; **branchlets** glabrous; **young leaves** often lobed; **mature leaves** 8–30 cm × 2–7 cm, narrowly obovate to narrowly spathulate, tapering to base, mainly spreading, dark green, mainly glabrous above and below or with rusty hairs below, margins toothed mainly in upper half and often wavy, venation prominent, apex blunt to somewhat pointed; **flowerheads** to about 15 cm across, somewhat hemispherical to cone-shaped in outline, terminal, many crowded flowers opening at base first, very conspicuous, small to large and very prominent bright red bracts 5–10 cm long, sometimes with white tips; **flowers** usually scarlet, rarely cream to greenish-white, on short to long stalks, lowest ones open first; **tepals** 1–3.5 cm long; **follicles** 8–15 cm long, with long stalk.

The NSW Waratah is one of Australia's best known iconic plants. The flowerheads are widely depicted in art and other visual media. It is the floral emblem of NSW. Plants occur in open eucalyptus forests of the Central Coast, Central and Southern Tablelands. They are commonly found on sandy soils which may overlie clay subsoils. This majestic species made an impact on the first European settlers and as early as 1789 plants were grown in England. Cultivation can be problematic but is usually successful in freely draining acidic sandy or loam soils with a semi-shaded or moderately sunny aspect, especially if plants are exposed to plenty of air movement. Plants tolerate most frosts and light snowfalls but can benefit from supplementary water during extended dry periods. Tip pruning of young plants will encourage the development of more stems and/or branching. As plants mature, the removal of old stems above the lignotuber may help to promote vigorous new growth. If more branches are desired, it is advisable to cut flowering stems before there are any signs of the new growth that will emerge from just below the flowerheads; waratahs usually have one spurt of growth which can often begin before the

Telopea 'Braidwood Brilliant' D. L. Jones

Telopea speciosissima, a pink-flowered seedling that originated in Canberra D. L. Jones

flowerheads have matured. This young growth will bear next year's flowerheads. Well suited to cultivation in containers and can be kept to an appropriate size by regular pruning during and after flowering.

CULTIVARS of TELOPEA SPECIOSISSIMA

As a result of selection and breeding using different variants of *T. speciosissima*, a number of cultivars have been introduced into cultivation. Some are regularly available while others have not proved popular.

'Brimstone Blush' produces large hemispherical flowerheads of red tinged with pink. The style fades from pink to white with age.

'Brimstone Scarlet Starlet' has pinkish-red flowers in slightly flattened heads and very prominent broad upcurved bracts.

'Cardinal' is an early-flowering cultivar which was registered under the *Plant Breeder's Rights Act* but was subsequently withdrawn from registration. It grows to about 3 m × 3 m and has deep red somewhat flattened flowerheads of about 12 cm tall and 15 cm across. The spreading bracts grow to about 8 cm × 3 cm. It originated in 1955 on a property at Werombi, NSW. It has been used for controlled pollination with 'Wirrimbirra White' which resulted in plants with pale pink flowers. Also known as 'Pope Weromba Cardinal'.

'Corrakee' is a vigorous selection with brilliant red flowerheads and very prominent sizeable bracts. The styles have whitish tips. It grows to about 4 m × 2.5 m.

'Corroboree' was selected from a batch of seedlings in 1974 and registered with the Australian Cultivar Registration Authority in 1989. It is a moderately compact and fairly vigorous cultivar of about 1.5 m × 2.5 m but can be maintained at about 1.5 m × 1.5 m. The compact deep pinkish-red flowerheads are about 12 cm × 12 cm and have prominently extended styles. The bracts are somewhat purplish-red. Flowerheads are excellent for floral decoration.

'Dreaming' was a seedling in the early 1990s from a controlled pollination of an unnamed red-flowered selection and 'Wirrimbirra White'. It is a vigorous compact cultivar which is registered under the *Plant Breeder's Rights Act*. The flowerheads are deep pink

Telopea truncata D. L. Jones

with paler styles and about 10 cm high × 12.5 cm across. They are subtended by moderately sized pointed bracts.

'Fire and Brimstone' originated from a wild collection. This vigorous upright shrub lacks a lignotuber and grows to about 2.5 × 1.5 m. It is regarded as a polyploid with large leaves to about 45 cm long and sizeable, somewhat flattened but compact flowerheads of about 12 cm tall × about 15 cm across. The contrast between the red tepals and the white style-tips is eye-

Telopea 'Emperor's Torch' W. R. Elliot

Wittsteinia vacciniacea × .6

from seed, which may be difficult to germinate. Cuttings of firm young growth strike readily. Divisions of stems with aerial roots transplant reasonably well.

WODYETIA A. K. Irvine
(after Wodyeti, last male Aboriginal with traditional knowledge of the Bathurst Bay–Cape Melville area, Qld)
Arecaceae
A monotypic genus endemic to Australia.

Wodyetia bifurcata A. K. Irvine
(twice forked; referring to the secondary forking of the leaflets and the forked fibres in the seed endocarp)
Qld Foxtail Palm
8–15 m tall Jan–May
Solitary, feather-leaved **palm**; **trunk** 20–25 cm thick, grey, ringed; **crownshaft** 80–120 cm long, light green with greying powdery bloom; **leaves** 2.6–3.2 m long, 6–10 in the crown; **petiole** 30–42 cm × 4–5 cm; **primary leaflets** 90–107 per leaf, divided into 765–950 densely clustered secondary segments, 45–70 cm × 2–4.8 cm, margins ribbed, light green and glossy above, dull and whitish beneath, the apex lacerate or appearing chewed; **inflorescence** 75–112 cm long, arising from the base of the crownshaft; **flowers** unisexual, 2.5–3 cm across, yellowish-green, in 3s, one female flanked by 2 males; **drupes** 5–6.5 cm × 3–5 cm, ovoid, orange to red, with a black fibrous endocarp, ripe Oct–March.

This spectacular palm is restricted to the Melville Range and Bathurst Bay area on the eastern side of Cape York Peninsula. It grows in sandy or gravelly soil among low scrub and huge granite boulders in full sun. Soon after its discovery in the early 1980s, this species attracted considerable attention from palm enthusiasts because of its majestic stature, unusual feathery leaves and large clusters of colourful fruit. A strong international demand for seed resulted in illegal raids on the natural stands of the palm, which are extremely isolated and entirely within the boundaries of a National Park. The palm's survival was in jeopardy but seed from cultivated plants has now largely overcome this problem.

Foxtail Palm is now widely planted in tropical, subtropical and to a lesser extent warm temperate regions. They are commonly planted around large buildings and resorts. They are also eminently suitable for street, driveway and avenue planting. Plants grow easily and are adaptable to a range of soils and conditions. They are fast-growing and relatively tolerant of dryness once established. Plants benefit from mulching, watering during long dry periods and light fertiliser applications. Withstands light frosts. Single plants are capable of producing seed. Propagation is from seed, which has a limited period of viability and is best sown fresh.

WOLLEMIA W. G. Jones, K. D. Hill & J. M. Allen
(after the Wollemi National Park in the Central Tablelands, NSW)
Araucariaceae
An endemic monotypic genus.

Wollemia nobilis W. G. Jones, K. D. Hill & J. M. Allen
(after David Noble, National Parks and Wildlife Ranger and original collector)
NSW Wollemi Pine
15–40 m × 4–8 m
Medium to tall, columnar **tree** with pale green young growth; **trunks** solitary or multiple, usually straight; **bark** initially thin and scaly, becoming covered in soft brown spongy pimples with age; **branchlets** initially spreading to ascending, becoming somewhat pendent

Wodyetia bifurcata fruits D. L. Jones

Wollemia nobilis foliage D. L. Jones

on upper growth, leafy and similar to fishbone-fern; **leaves** 0.3–8 cm × 0.2–0.8 cm, linear to narrowly triangular, opposite to nearly opposite, juvenile mid to deep green above and glaucous below, becoming a duller pale to mid green, usually paler below, glabrous, midrib absent, parallel venation prominent, apex pointed to rounded; **female cones** to about 12.5 cm × 10 cm, globular to broadly ellipsoidal, terminal, initially green becoming brown at maturity; **male cones** to about 11 cm × 2 cm, cylindrical, terminal; **seeds** to about 1.1 cm × 0.9 cm, winged, pale brown.

This species is a botanical rarity which has garnered publicity around the world since it was discovered in 1994. It is regarded as a relict from the age of the dinosaurs and is declared endangered. Plants are known from only two small populations (location undisclosed) in the Wollemi Wilderness region on the Central Tablelands. There are fossil records from as far south as near Princetown on the coast of south-western Vic. Plants were first released to the public by auction in 2005 and as a general release in 2006. Wollemi pines respond very well to cultivation in freely draining acidic soils and are highly regarded as indoor or outdoor container plants. The growing medium whether in the garden or in a container should be kept moist though plants do not like to become waterlogged. A semi-shaded site is recommended as this species can be subject to foliage-burn from strong sunshine. Pale apple-green new growth in spring is often a highlight on young plants. In its natural habitat plants can be multi-trunked, and in cultivation it has been observed that plants respond very well to regular coppicing, which also makes them suitable for growing over a long period in large containers. Shortening of branches can also promote bushy growth. Trials have shown that plants tolerate a range of temperatures from –10°C (sometimes lower) to 45°C. Wollemi Pine responds well to light applications of a low phosphorus controlled-release fertiliser. Propagation is from untreated seed or stem cuttings, which can be fairly slow to slow to form roots.

WOOLLSIA F. Muell.
(after Rev. William Woolls, 19th-century botanical collector, NSW)
Ericaceae (alt. *Epacridaceae*)
This monotypic endemic genus is confined to south-eastern Qld and eastern NSW.

Woollsia pungens (Cav.) F. Muell.
(sharp, prickly-pointed)
Qld, NSW
0.3–1.5 m × 0.3–1 m Sept–May; also sporadic
Dwarf to small, usually upright **shrub** with hairy young growth; **branches** usually spreading to erect, woody, stiff; **branchlets** often short, leafy, hoary; **leaves** 0.4–1.3 cm × 0.2–0.6 cm, ovate, spreading to somewhat reflexed, sessile or nearly so, base rounded to cordate, non-sheathing, crowded, deep green, sometimes with purplish tones, apex extended with sharp point; **flowers** to about 1.5 cm across, white, pale pink to deep pink, in upper axils forming tight leafy spikes, can be profuse and highly conspicuous, sweet honey fragrance; **corolla** tubular with spreading broad lobes that are twisted or contorted in bud, with many ovate to triangular bracts on lower part; **calyx** 5-lobed; **style** exserted; **stamens** included; **capsule** about 0.25 cm across, globular.

This species is highly ornamental when in full flower with a sweet floral fragrance that permeates the close surrounds. It occurs in south-eastern Qld and in NSW where its distribution extends from the North Coast District to the South Coast District, and in the Central and Southern Tablelands. Plants are found on

Woollsia pungens, pink-flowered selection D. L. Jones