Table S1. Australian species potentially suitable as multifunctional ornamental plants

Species	Description	Edibility	Uses	Germination
Astroloma serratifolium (DC.) Sond.	Low to erect shrub growing on sandy–clay soils; preferentially occurring in moist habitats.	Berries edible when fully ripe.	Food.	High germination rate; no pretreatment required.
Atriplex semibaccata R.Br.	Prostrate shrub highly tolerant to drought, salinity, and frost.	Fleshy berries; leaves used as a salt substitute.	Food; soil stabilization.	High germination rate; no pretreatment required.
Billardiera cymosa F.Muell.	Small evergreen climber native to coastal forest ecosystems.	Sweet fruits edible.	Food.	Sowing recommended in spring–summer.
Bulbine bulbosa (R.Br.) Haw.	Perennial tufted herb characterized by fragrant flowers.	Not reported.	Ornamental.	Germination in approximately 35 days.
Bulbine semibarbata (R.Br.) Haw.	Annual herb producing yellow flowers.	Not reported.	Ornamental.	Germination in approximately 35 days.
Capparis lasiantha R.Br. ex DC.	Shrub or climbing species with spines producing orange fruits.	Fruit pulp edible.	Food; traditional medicinal uses.	No pretreatment required.
Cochlospermum fraseri Planch.	Deciduous shrub or small tree with conspicuous yellow flowers.	Flowers edible.	Food.	Germination in 21–42 days.
Coprosma quadrifida (Labill.) B.L.Rob.	Shrub reaching up to 3 m in height and producing red fleshy fruits.	Berries edible.	Food.	Germination exceeding 5 months.
Dianella caerulea Sims	Robust perennial species producing blue berries.	Berries edible.	Food; fiber and weaving.	Germination in 1–3 months.
Enchylaena tomentosa R.Br.	Hardy small shrub with woolly leaves.	Red berries edible.	Food; natural dye.	Smoke treatment required.
Ficinia nodosa (Rottb.) Goetgh. et al.	Hardy tufted sedge species adapted to a wide range of conditions.	Seeds edible.	Ornamental.	Germination considered easy.
Lomandra hastilis A.T.Lee	Hardy perennial species with tall inflorescences.	Seeds edible.	Food.	Germination in 4–8 weeks.

Lomandra hystrix (R.Br.) J.F.Macbr.	Evergreen robust species suitable for wet and riparian environments.	Leaf bases edible.	Food.	Germination in 4–6 weeks.
Lomandra longifolia Labill.	Versatile and widely distributed perennial species.	Flowers edible.	Food; fiber.	Germination in 8–10 weeks.
Lomandra spicata (R.Br.) Spreng.	Shade-tolerant perennial species adapted to moist soils.	Leaf bases edible.	Food.	Germination in 4–8 weeks.
Melaleuca brevifolia F.Muell.	Shrub species bearing fragrant white flowers.	Nectar traditionally used for beverages.	Food.	Germination in 14–30 days.
Melaleuca megacephala F.Muell.	Shrub characterized by large yellow–cream inflorescences.	Nectar traditionally used.	Food.	Germination in 14–30 days.
Myoporum insulare R.Br.	Salt-tolerant shrub commonly occurring in coastal habitats.	Berries edible.	Food.	Slow germination.
Nitraria billardierei DC.	Low-growing shrub producing salty, grape-like fruits.	Fruits edible.	Food.	Germination in 2–12 months.
Petrophile pulchella (Schrad. & J.C.Wendl.) R.Br.	Ornamental shrub producing pale yellow flower clusters.	Not reported.	Ornamental.	Germination in 10–28 days.
Santalum acuminatum (R.Br.) A.DC.	Small tree species producing edible drupes (quandong).	Fruit edible.	Food.	Germination in 3–12 weeks.
Solanum lasiophyllum F.Muell.	Shrub species characterized by woolly leaves.	Not reported.	Ornamental.	Germination in 10–28 days.
Solanum orbiculatum Dunal	Compact shrub producing fruits during summer.	Fruit edible.	Food.	Germination enhanced by smoke treatment.
Threlkeldia diffusa R.Br.	Prostrate succulent species adapted to coastal environments.	Leaves edible.	Food.	Germination in 30–90 days.

Table S2. Australian native species common names and picture links

Species	Common name	Image link
Styphelia serratifolium (DC.) Hislop, Crayn & Puente-Lel.	Kondrung	https://bie.ala.org.au/species/https://id.biodiversity.org.au/taxon/apni/51767860
Atriplex semibaccata R.Br.	Creeping/berry saltbush	https://profiles.ala.org.au/opus/foa/profile/Atriplex%20semibaccata
Billardiera cymosa F.Muell.	Sweet apple berry	https://profiles.ala.org.au/opus/foa/profile/Billardiera%20cymosa
Bulbine bulbosa (R.Br.) Haw.	Wild native leek	https://profiles.ala.org.au/opus/foa/profile/Bulbine%20bulbosa
Capparis lasiantha R.Br. ex DC.	Native orange 'nepine'	https://profiles.ala.org.au/opus/foa/profile/Capparis%20lasiantha
Cochlospermum fraseri Planch.	Kapok bush	https://profiles.ala.org.au/opus/foa/profile/Cochlospermum%20fraseri
Coprosma quadrifida (Labill.) B.L.Rob.	Prickly currant bush	https://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:747487-1
Dianella caerulea Sims	Blue flax lily	https://profiles.ala.org.au/opus/foa/profile/Dianella%20caerulea
Enchylaena tomentosa R.Br.	Ruby salt bush	https://bie.ala.org.au/species/Enchylaena_tomentosa
Ficinia nodosa (Rottb.) Goetgh., Muasya & D.A.Simpson	Knobby club rush	https://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:1015492-1
Lomandra hastilis (R.Br.) Ewart	Mat-rush	https://profiles.ala.org.au/opus/foa/profile/Lomandra%20hastilis
Lomandra hystrix (R.Br.) L.R.Fraser & Vickery	Creek mat rush	https://profiles.ala.org.au/opus/foa/profile/Lomandra%20hystrix
Lomandra longifolia Labill.	Spiny headed mat rush	https://powo.science.kew.org/taxon/443678-1
Lomandra spicata A.T.Lee	Yellow flowered mat rush	https://profiles.ala.org.au/opus/foa/profile/Lomandra%20spicata
Melaleuca brevifolia Turcz.	Short leaf mallee honey-myrtle	https://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:597858-1
Melaleuca megacephala F.Muell.	Large flowered melaleuca	https://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:598016-1

Myoporum insulare R.Br.	Native juniper 'boobialla'	https://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:585290-1
Nitraria billardierei DC	Nitre bush	https://profiles.ala.org.au/opus/foa/profile/Nitraria%20billardierei
Petrophile pulchella (Schrad. & J.C.Wendl.) R.Br.	Conesticks	https://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:705558-1
Santalum acuminatum (R.Br.) A.DC.	Desert quandong 'native peach'	https://profiles.ala.org.au/opus/foa/profile/Santalum%20acuminatum
Solanum lasiophyllum Dunal	Flannel bush	https://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:819753-1
Solanum Orbiculatum Dunal	Wild tomato	https://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:820339-1
Threlkeldia diffusa R.Br.	Coast bonefruit 'wallaby saltbush'	https://profiles.ala.org.au/opus/foa/profile/Threlkeldia%20diffusa

Table S3. Australian and South African species potentially suitable as ornamental plants and source of bioactive compounds

Species	**Common Name**	**Reported Uses**	**Main Characteristic Bioactive Compounds**	**References**
Tulbaghia violacea Harv.	Society garlic	Rhizome essential oil with reported antioxidant and nitric oxide scavenging activity	Sulfur-containing compounds, including thiosulfinates and other volatile organosulfur compounds	[46,47]
Acacia sp.	Wattle	Traditional medicinal uses with reported antioxidant, anti-inflammatory, antimicrobial and metabolic-related activities	Alkaloids, flavonoids, tannins, terpenes, polysaccharidic gums, non-protein amino acids	[56]

Persoonia sp.	Geebungs	Traditional use for gastrointestinal disorders; reported antibacterial activity	Triterpenoid saponins, tannins	[60]
Citrus australasica F. Muell.	Finger lime	Edible fruit with potential functional properties associated with metabolic health	Organic acids, vitamin C, flavonoids, carotenoids, chlorophylls	[65]
Santalum sp.	Sandalwood	Essential oil and extracts widely used for their reported biological activities	Sesquiterpenes (α- and β-santalol), phenolic compounds, fatty acids	[66]
Melaleuca sp.	Honey myrtle	High essential oil content with reported anti-inflammatory and bioactive properties	Monoterpenes and sesquiterpenes (e.g., terpinen-4-ol), pentacyclic triterpenes	[67]
Eriocephalus africanus L.	Wild rosemary	Traditional medicinal uses for skin and gastrointestinal conditions; reported antifungal activity	Essential oils (mainly monoterpenes), flavonoids, sesquiterpene lactones	[68]
Gynura sp.	Longevity spinach	Edible and medicinal plant with reported antioxidant activity	Flavonoids, phenolic acids, polyphenolic compounds	[69,70]