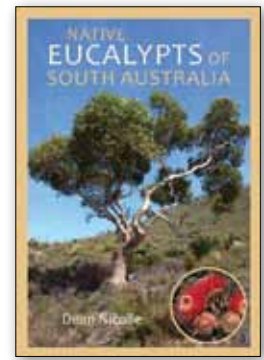


NATIVE EUCALYPTS OF SOUTH AUSTRALIA

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Two choices are given at each step in the key. Choose the most valid choice at each step, followed by the next pair of choices below, until a species name is reached. The key should not be used alone for the identification of species; consultation should be made with the main text and images of the identified species (page number in brackets), and of closely related taxa.

1. Buds, flowers and fruits in groups of 3
 2. Buds and immature fruits waxy white (pruinose)
 3. Buds and fruits prominently longitudinally winged *E. alatissima* (p. 90)
 - 3: Buds and fruits not longitudinally winged
 4. Opercula (bud caps) warty and with a distinct central knob..... *E. bicostata* (p. 160)
 - 4: Opercula (bud caps) smooth
 5. Tree; mature crown primarily composed of petiolate adult leaves..... *E. leucoxyton* subsp. *pruinosa* (p. 202)
 - 5: Mallee; Mature crown primarily composed of sessile juvenile and intermediate leaves *E. gamophylla* (p. 26)
 2. Buds and immature fruits not waxy white (pruinose)
 6. Buds and fruits with multiple prominent ribs
 7. Fruits 35–70 mm wide; adult leaves dull and blue-green *E. youngiana* (p. 88)
 - 7: Fruits 12–25 mm wide; adult leaves glossy and green *E. angulosa* (p. 110)
 - 6: Buds and fruits smooth or with two opposing ribs only
 8. Fruit valves at rim level or exerted above rim
 9. Fruits 10–22 mm wide; leaves dull, very firm..... *E. cosmophylla* (p. 38)
 - 9: Fruits 5–9 mm wide; leaves glossy, relatively thin
 10. Juvenile leaves lance-shaped, green; bark often rough on lower trunk (*E. viminalis*)
 11. Bark mostly smooth; buds and fruits in groups of 3 *E. viminalis* subsp. *viminalis* (p. 156)
 - 11: Bark rough on trunk and major branches; buds and fruits in groups of 3 and/or 7 *E. viminalis* subsp. *cygnetensis* (p. 158)
 - 10: Juvenile leaves round, grey-green; bark completely smooth..... *E. dalrympleana* subsp. *dalrympleana* (p. 154)
 - 8: Fruit valves below rim level
 12. Juvenile leaves sessile (lacking stalks); east of Spencer Gulf and on Kangaroo Island (*E. leucoxyton*)
 13. Juvenile leaves waxy (pruinose); branchlets, buds and fruits often waxy..... *E. leucoxyton* subsp. *pruinosa* (p. 202)
 - 13: Juvenile leaves not waxy (pruinose); branchlets, buds and fruits not waxy
 14. Fruit pedicels (individual stalks) shorter than fruit length *E. leucoxyton* subsp. *stephaniae* (p. 200)
 - 14: Fruit pedicels (individual stalks) equal or longer than fruit length
 15. Adult leaves mostly <25 mm wide; fruits 7–12 mm wide; widespread *E. leucoxyton* subsp. *leucoxyton* (p. 198)
 - 15: Adult leaves 15–45 mm wide; fruits 10–15 mm wide; coastal from Robe south-eastwards *E. leucoxyton* subsp. *megalocarpa* (p. 204)
 - 12: Juvenile leaves petiolate (having stalks); Eyre Peninsula only *E. petiolaris* (p. 206)
 - 1: Buds, flowers and fruits in groups of 7 or more
 16. Adult leaves strongly discolorous (*E. cladocalyx*)
 17. Fruits 6.5–10 mm long, 4–7 mm wide; peduncles 8–14 mm long; Flinders ranges only *E. cladocalyx* subsp. *petita* (p. 34)
 - 17: Fruits 8–16 mm long, 6–11 mm wide; peduncles 11–22 mm long
 18. Small, irregularly-formed tree, 2–18 m tall; Eyre Peninsula only *E. cladocalyx* subsp. *cladocalyx* (p. 30)
 - 18: Large, widely-branching tree, 10–45 m tall; Kangaroo Island only..... *E. cladocalyx* subsp. *crassa* (p. 32)
 - 16: Adult leaves concolorous
 19. Buds and fruits in terminal panicles
 20. Intramarginal leaf vein confluent with leaf edge; fruits 11–35 mm wide; far north of S.A. only (*Corymbia*)
 21. Adult leaves narrow-lanceolate to lanceolate; fruits ± equidimensional *C. eremaea* subsp. *eremaea* (p. 20)
 - 21: Adult leaves lanceolate; fruits longer than wide
 22. Inflorescence branchlets and pedicels thickened; far north-east of S.A. *C. terminalis* (p. 24)
 - 22: Inflorescence branchlets and pedicels not thickened; far north-west of S.A..... *C. opaca* (p. 22)
 - 20: Intramarginal leaf vein distinct from leaf edge; fruits 3–10 mm wide; widespread

- 23: Outer stamens lacking anthers (staminodes); bark wholly smooth, or rough on sapling-stage individuals..... *E. fasciculosa* (p. 196)
- 23: All stamens fertile; bark rough on lower stems
- 24: Adult leaves glossy, green
- 25: Buds and fruits on pedicels (individual stalks) 2–6 mm long; north-west of S.A. only..... *E. sparsa* (p. 172)
- 25: Buds and fruits lacking pedicels (individual stalks) or to 2 mm long; southern half of S.A. only..... *E. behriana* (p. 174)
- 24: Adult leaves dull, bluish to green
- 26: Fruit valves exserted above rim *E. coolabah* (p. 166)
- 26: Fruit valves deeply enclosed in fruit
- 27: Rough bark shaggy, on trunk and sometimes larger branches only *E. intertexta* (p. 170)
- 27: Rough bark tightly held, extending to medium to small branches
- 28: Juvenile leaves linear; fruits 3–5 mm long *E. largiflorens* (p. 168)
- 28: Juvenile leaves narrow-lanceolate to ovate; fruits 4–14 mm long
- 29: Branchlets, buds and immature fruits waxy white (pruinose)..... *E. albens* (p. 176)
- 29: Branchlets, buds and immature fruits not waxy white (pruinose) (*E. microcarpa*)
- 30: Flinders Ranges, mid north and south-east of S.A. *E. microcarpa* (p. 178)
- 30: Adelaide Plains and Adelaide Hills..... *E. microcarpa* 'Adelaide Variant' (p. 180)
- 19: Buds and fruits axillary (single umbels within leaf axils)
- 31: Branchlet pith glands present
- 32: Tree
- 33: Bark decorticating (shedding) in flakes; stamens bundled into four quadrants..... *E. gongylocarpa* (p. 28)
- 33: Bark decorticating (shedding) in strips and ribbons; stamens forming a uniform ring
- 34: Seeds glossy, red-brown; fruits cone-shaped to cup-shaped..... *E. calcareana* (p. 130)
- 34: Seeds dull, dark grey to brown; fruits barrel-shaped to cup-shaped..... *E. albopurpurea* (p. 182)
- 32: Mallee
- 35: Flowers yellow; tertiary leaf venation completely obscured by oil glands..... *E. pimpiniana* (p. 106)
- 35: Flowers white to pink or purple (not yellow); tertiary leaf venation visible with transmitted light
- 36: Seeds glossy and red-brown
- 37: Bark rough on lower half of stems, fibrous (Great Victoria Desert)
- 38: Fruit 6–10 mm long, 6–11 mm wide; adult leaves predominantly lanceolate *E. gypsophila* (p. 142)
- 38: Fruit 10–16 mm long, 9–14 mm wide; adult leaves broad-lanceolate to ovate (*E. canescens*)
- 39: Branchlets, buds and fruits strongly waxy (pruinose); adult leaves greyish..... *E. canescens* subsp. *canescens* (p. 144)
- 39: Branchlets, buds and fruits not waxy (pruinose); adult leaves green *E. canescens* subsp. *beadellii* (p. 146)
- 37: Bark smooth throughout, or ribbony-rough on lower stems and not fibrous
- 40: Branchlets and/or buds waxy (pruinose)
- 41: Branchlets, buds and fruits strongly waxy (pruinose); Eyre Peninsula only *E. cretata* (p. 138)
- 41: Branchlets, buds and fruits weakly or variably pruinose; far north-west of S.A. only..... *E. repullulans* (p. 140)
- 40: Branchlets and buds not waxy (pruinose)
- 42: Mature adult leaves glossy, dark green to olive green
- 43: Fruits wider than long, 7–12 mm wide; peduncles (bud and fruit group stalks) absent or to 6 mm long.....
..... *E. conglobata* subsp. *conglobata* (p. 128)
- 43: Fruits equal to or longer than wide, 5–10 mm wide; peduncles (bud and fruit group stalks) 3–16 mm long
- 44: Opercula (bud caps) prominently ribbed, wider than hypanthia (bud bases) at join *E. pileata* (p. 120)
- 44: Opercula (bud caps) weakly ribbed, ± flush with hypanthia (bud bases) at join
- 45: Tree or mallee; pedicels (individual bud and fruit stalks) 1–6 mm long..... *E. calcareana* (p. 130)
- 45: Mallee; pedicels (individual bud and fruit stalks) absent or to 3 mm long (*E. phenax*)
- 46: Peduncles 8–16 mm long; fruit equal in length and width or wider than long;
Kangaroo Island and lower Fleurieu Peninsula *E. phenax* subsp. *compressa* (p. 126)
- 46: Peduncles 3–10 mm long; fruit longer than wide; mainland only (*E. phenax* subsp. *phenax*)
- 47: Crown of leaves not distinctively fine and erect-held; widespread *E. phenax* subsp. *phenax* (p. 122)
- 47: Crown of fine, erect-held leaves; hills on northern Eyre Peninsula and Gawler Ranges.....
..... *E. phenax* subsp. *phenax* 'Hills Variant' (p. 124)
- 42: Mature adult leaves dull to slightly glossy, blue-green to greyish
- 48: Adult leaves greyish, 22–40 mm wide *E. cyanophylla* (p. 136)
- 48: Adult leaves green to blue-grey, 10–25 mm wide
- 49: Operculum (bud cap) wider than hypanthium (bud base) at join, ribs on opercula > 0.8 mm high..... *E. percostata* (p. 134)
- 49: Operculum (bud cap) ± flush with hypanthium (bud base) at join, ribs on opercula < 0.5 mm high..... *E. dumosa* (p. 132)
- 36: Seeds brown, grey or black
- 50: Adult leaves dull and blue-green to greyish, at least when young; buds, fruits and opercula smooth
- 51: Adult leaves dull and blue-green to greyish at all stages; inland regions..... *E. trivalva* (p. 50)
- 51: Adult leaves maturing glossy and green; lower Eyre Peninsula and Kangaroo Island *E. albopurpurea* (p. 182)
- 50: Adult leaves glossy and green at all stages; buds and/or fruits and/or opercula usually ribbed

52. Fruits barrel-shaped to cylinder-shaped to urn-shaped
53. Fruits smooth or ribbed, 7–12 mm wide; Gawler Ranges eastwards in S.A. *E. incrassata* (p. 112)
- 53: Fruits distinctly ribbed, 12–15 mm wide; southern fringe of Great Victoria Desert *E. capitanea* (p. 108)
- 52: Fruits cup-shaped to cone-shaped
54. Bark usually smooth throughout, fruits coarsely-angled or ribbed; coastal *E. rugosa* (p. 118)
- 54: Bark usually rough on lower stems, fruits smooth or lightly ribbed; coastal or inland
55. Operculum (bud cap) narrower than hypanthium (bud base) at join; coastal and wheatbelt areas..... *E. brachycalyx* (p. 116)
- 55: Operculum (bud cap) wider than hypanthium (bud base) at join; Great Victoria Desert..... *E. concinna* (p. 114)
- 31: Branchlet pith glands absent
56. Bark fibrous and stringy throughout
57. Fruit disc descending, valves enclosed within fruit..... *E. obliqua* (p. 214)
- 57: Fruit disc level to ascending, valves at rim level or exerted above rim
58. Opercula (bud caps) beaked, smooth *E. macrorhyncha* (p. 208)
- 58: Opercula (bud caps) rounded, smooth or warty
59. Buds warty; fruit disc steeply ascending *E. baxteri* (p. 212)
- 59: Buds not warty; fruit disc slightly ascending *E. arenacea* (p. 210)
- 56: Bark not fibrous and stringy throughout
60. Fruit disc prominently ascending, valves strongly exerted
61. Bark ‘minniritchi’ type (peeling into thin longitudinal strips that curl backwards and remain partly attached to the stem) throughout *E. minniritchi* (p. 92)
- 61: Bark not ‘minniritchi’ type
62. Smooth bark decortivating (peeling) in ribbons
63. Fruits 10–20 mm wide; arid regions in north-west of S.A.
64. Opercula (bud caps) rounded; bark rough on lower stems..... *E. glomerosa* (p. 84)
- 64: Opercula (bud caps) sharply pointed; bark smooth throughout..... *E. oxymitra* (p. 86)
- 63: Fruits 5–9 mm wide; wetter, southern parts of S.A.
65. Juvenile leaves tapering to base (not amplexicaul), slightly crenulate; Carpenter Rocks area *E. arcana* (p. 152)
- 65: Juvenile leaves amplexicaul (stem-clasping), not crenulate *E. viminalis* subsp. *cygnetensis* (p. 158)
- 62: Smooth bark decortivating (peeling) in plates or strips
66. Tree; seeds yellow (*E. camaldulensis*)
67. Opercula (bud caps) distinctly beaked; southern regions..... *E. camaldulensis* subsp. *camaldulensis* (p. 44)
- 67: Opercula (bud caps) rounded to cone-shaped to slightly beaked; northern regions
68. Opercula (bud caps) rounded to bluntly cone-shaped; fruits 4–9 mm wide..... *E. camaldulensis* subsp. *arida* (p. 48)
- 68: Opercula (bud caps) cone-shaped to slightly beaked; fruits 3–6 mm wide *E. camaldulensis* subsp. *minima* (p. 46)
- 66: Mallee; seeds black
69. Juvenile leaves ovate to orbicular; Flinders Ranges and Olary Spur *E. flindersii* (p. 40)
- 69: Juvenile leaves lanceolate; far north-west of S.A..... *E. gillenii* (p. 42)
- 60: Fruit disc level to descending or very slightly ascending, valves enclosed in fruit or near rim level
70. Outer stamens of flower lacking anthers (staminodes), twisted and longer than inner fertile anthers
71. Flowers crimson-red; Gawler Ranges only *E. lansdowneana* (p. 194)
- 71: Flowers white or pink
72. Buds and fruits 4-sided and square in cross-section (*E. calycogona*)
73. Adult leaves 13–24 mm wide; fruit 6–9 mm wide, ribs prominent *E. calycogona* subsp. *spaffordii* (p. 104)
- 73: Adult leaves 7–15 mm wide; fruit 4–7 mm wide, ribs less prominent
74. Bark smooth or rough only at base; Eyre Peninsula and Waitpinga to Monarto *E. calycogona* subsp. *calycogona* (p. 100)
- 74: Bark rough and tessellated on lower stems; eastwards from Spencer Gulf..... *E. calycogona* subsp. *trachybasis* (p. 102)
- 72: Buds and fruits round in in cross-section
75. Adult leaves 4–15 mm wide; widespread on mainland and eastern half of Kangaroo Island *E. gracilis* (p. 98)
- 75: Adult leaves 20–40 mm wide; western half of Kangaroo Island only *E. remota* (p. 220)
- 70: All stamens of flower fertile
76. Adult leaves with secondary veins (side veins) nearly parallel with primary vein (midrib) *E. pauciflora* subsp. *pauciflora* (p. 218)
- 76: Adult leaves with secondary veins (side veins) at an angle from the primary vein (midrib)
77. Mallees; fruits usually with valve tips fused at tip (persistent style remnants), especially when fruits immature
78. Crown composed of opposite or sub-opposite, sessile, ovate to orbicular juvenile leaves
79. Leaves 38–61 mm long; fruit 6–9 mm long, 6–8.5 mm wide; eastern parts of S.A. *E. gillii* (p. 80)
- 79: Leaves 55–85 mm long; fruit 9–11 mm long, 9–10.5 mm wide; far western part of S.A. *E. wyolensis* (p. 78)
- 78: Crown composed of disjunct, petiolate, linear to ovate (adult) leaves
80. Whole plant strongly waxy white (pruinose); adult leaves waxy, 20–54 mm wide..... *E. vokesensis* (p. 76)
- 80: Adult leaves not waxy pruinose, 4–46 mm wide

81. Seedling leaves crowded (1–12 mm apart), spiralled around a 5- or 7-sided stem (*E. oleosa*)
82. Seedling leaves linear, 4–20 times longer than wide*E. oleosa* subsp. *oleosa* (p. 56)
- 82: Seedling leaves elliptical, 1.8–5 times longer than wide.....*E. oleosa* subsp. *ampliata* (p. 58)
- 81: Seedling leaves less crowded (generally >10 mm apart), decussate around a 4-sided stem
83. Opercula (bud caps) round to cone-shaped, about equal in length to hypanthia (bud bases)
84. Juvenile leaves elliptical to orbicular, often waxy (pruinose); adult leaves light green
85. Juvenile leaves elliptical, weakly or not waxy (pruinose); mature crown entirely of adult leaves
.....*E. leptophylla* (p. 94)
- 85: Juvenile leaves ovate to orbicular, waxy (pruinose); mature crown often composed of some juvenile leaves
..... *E. sp. Great Victoria Desert* (p. 96)
- 84: Juvenile leaves lanceolate to narrowly elliptical, not pruinose; adult leaves dark green
86. Pedicels (individual bud and fruit stalks) 1–5 mm long; adult leaves 8–20 mm wide;
northern desert areas only *E. mannensis* subsp. *mannensis* (p. 52)
- 86: Pedicels (individual bud and fruit stalks) absent or to 1 mm long; adult leaves 5–10 mm wide;
Kangaroo Island and Fleurieu Peninsula only *E. cneorifolia* (p. 54)
- 83: Opercula (bud caps) cone-shaped to horn-shaped, longer than hypanthia (bud bases)
87. Opercula (bud caps) cone-shaped
88. Fruit cone-shaped; coastal regions including Murray mallee..... *E. yalataensis* (p. 64)
- 88: Fruit spherical; Great Victoria Desert (*E. eremicola*)
89. Adult leaves highly glossy, green *E. eremicola* subsp. *eremicola* (p. 60)
- 89: Adult leaves dull to slightly glossy, blue-green*E. eremicola* subsp. *peeneri* (p. 62)
- 87: Opercula (bud caps) distinctly horn-shaped
90. Juvenile leaves strongly decurrent; Eyre Peninsula only.....*E. peninsularis* (p. 82)
- 90: Juvenile leaves not decurrent; widespread including Eyre Peninsula
91. Buds >6.5 mm wide; fruits 8.5–11 mm wide.....*E. yumbarrana* (p. 74)
- 91: Buds <6.5 mm wide; fruits 4–9.5 mm wide (*E. socialis*)
92. Seedling leaves green; adult leaves maturing glossy, green *E. socialis* subsp. *viridans* (p. 68)
- 92: Seedling leaves blue-green to greyish; adult leaves dull, blue-green
93. Fruits 7–11 mm long, 6.5–9.5 mm wide; buds 12.5–19 mm long;
Great Victoria Desert *E. socialis* subsp. *victoriensis* (p. 72)
- 93: Fruits 4.5–8 mm long, 4.5–7.5 mm wide; buds 8–13 (–17) mm long
94. Branchlets and buds not or scarcely waxy (pruinose); flowers creamy-white; widespread
..... *E. socialis* subsp. *socialis* (p. 66)
- 94: Branchlets and buds usually waxy (pruinose); flowers cream to pale yellow;
north-west of S.A. only..... *E. socialis* subsp. *eucentrica* (p. 70)
- 77: Trees or mallees; fruits without valve tips fused at tip (persistent style remnants) at all stages
95. Fruit valves at rim level or exerted above rim
96. Adult leaves usually undulate and relatively thin; poorly-drained sites (swamps) in high-rainfall areas
97. New adult leaves slightly blue-green; fruits cylindrical to obconical or slightly campanulate.....*E. paludicola* (p. 36)
- 97: New adult leaves green; fruits consistently obconical (*E. ovata*)
98. Peduncles 3–12 mm long; fruits 4–7.5 mm wide.....*E. ovata* subsp. *ovata* (p. 148)
- 98: Peduncles 10–20 mm long; fruits 7.5–12 mm wide, often flared at rim*E. ovata* subsp. *grandiflora* (p. 150)
- 96: Adult leaves flat and firm; well-drained sites (hills and/or sandy soils) in high- to low-rainfall areas
99. Juvenile leaves strongly waxy (pruinose); fruit sessile (lacking individual stalks) (*E. goniocalyx*)
100. Adult leaves glossy, dark green; adult branchlets not waxy (pruinose)..... *E. goniocalyx* subsp. *goniocalyx* (p. 162)
- 100: Adult leaves dull, green to bluish; adult branchlets often slightly waxy (pruinose)... *E. goniocalyx* subsp. *exposa* (p. 164)
- 99: Juvenile leaves not waxy (pruinose); fruit sessile (lacking individual stalks) or pedicellate (with individual stalks)
101. Fruits barrel-shaped to cylinder-shaped to urn-shaped
102. Fruits smooth or ribbed, 7–12 mm wide; Gawler Ranges eastwards in S.A.....*E. incrassata* (p. 112)
- 102: Fruits distinctly ribbed, 12–15 mm wide; southern fringe of Great Victoria Desert.....*E. capitanea* (p. 108)
- 101: Fruits rounded to cup-shaped to cone-shaped
103. Juvenile leaves opposite for many pairs, adult leaves with acutely-angled secondary venation
and sparse oil glands; coastal sands and limestone (*E. diversifolia*)
104. Juvenile leaves 25–55 mm wide; fruits 8–16 mm wide, disc level to ascending.....
..... *E. diversifolia* subsp. *diversifolia* (p. 222)
- 104: Juvenile leaves 20–30 mm wide; fruits 6–11 mm wide, disc level *E. diversifolia* subsp. *hesperia* (p. 224)
- 103: Juvenile leaves disjunct after a few pairs, adult leaves with mid-angled secondary venation
and numerous oil glands; rocky ridges of Flinders Ranges and Olary Spur *E. flindersii* (p. 40)
- 95: Fruit valves below rim level
105. Bark scribbles often present; ovules in 2 rows; south-east of S.A. only *E. falciformis* (p. 216)
- 105: Bark scribbles absent; ovules in 4 rows; widespread

- 106.** Flower buds egg-shaped; adult leaves consistently glossy and green; fruits equidimensional *E. porosa* (p. 192)
- 106:** Flower buds egg-shaped to spindle-shaped; adult leaves often dull, at least when young;
fruits usually longer than wide
- 107.** Juvenile leaves ovate; flowers white, pink or purple
- 108.** Usually a mallee; fruits 6–11 mm long, 5–9 mm wide; Eyre Peninsula and Kangaroo Island .. *E. albopurpurea* (p. 182)
- 108:** Usually a tree; fruits 4–7 mm long, 3–5 mm wide; mainland east of Spencer Gulf (*E. microcarpa*)
- 109.** Flinders Ranges, mid north and south-east of S.A..... *E. microcarpa* (p. 178)
- 109:** Adelaide Plains and Adelaide Hills *E. microcarpa* 'Adelaide Variant' (p. 180)
- 107:** Juvenile leaves linear to narrowly-elliptical; flowers white
- 110.** Branchlets usually waxy (pruinose); Flinders Ranges only *E. polybractea* (p. 190)
- 110:** Branchlets not waxy (pruinose); widespread, including Flinders Ranges
- 111.** Juvenile leaves narrow-lanceolate to narrow-elliptical; adult leaves 7–20 mm wide *E. odorata* (p. 184)
- 111:** Juvenile leaves linear to narrow-lanceolate to narrow-elliptical; adult leaves 3–15 mm wide
- 112.** Sandy or loamy flats and low rises in the south-east of S.A. only..... *E. wimmerensis* (p. 188)
- 112:** Stony to clayey sites on Eyre Peninsula, Flinders Ranges, and ridges to the east *E. cajuputea* (p. 186)