FLORA OF AUSTRALIA

Volume 1 Introduction

2nd edition

Section 5: Key and Glossary

Key to Families of Flowering Plants

A.E.Orchard

KEY TO FAMILIES OF FLOWERING PLANTS

A.E.Orchard[1]

This key is based on an unpublished key to Queensland flowering plants by the late A.Cayzer. It was modified and published as *Keys to the Families and Genera of Queensland Flowering Plants (Magnoliophyta)*, 2nd edn by H.T.Clifford & G.Ludlow (University of Queensland Press, 1978) and was further modified by H.T.Clifford for publication in *Flora of Australia Volume 1, Introduction*, 1st edn (Australian Government Publishing Service, 1981). In this edition it has again been modified and restructured, based on suggestions from numerous users over the last 15 years. Their contributions are gratefully acknowledged.

1 Embryo with 2 (rarely 1, 3 or more) cotyledons; leaf venation usually reticulate; leaf base rarely sheathing; perianth 4- or 5- (rarely 3- or more than 5-) merous (Dicotyledons).....2

1: Embryo with 1 cotyledon; leaf venation usually convergent; leaf base usually sheathing; perianth 3- (occasionally 2- or 4-) merous (Monocotyledons).....1010

Dicotyledons

2 Flowers with at least one perianth whorl *(1)*.....3

2: Flowers lacking perianth.....992

3 Either one or both perianth whorls fused into a cap *(2)* 4

3: Perianth segments not fused into a cap.....10

4 Leaves invested with peltate scales *(3)*..... **Himantandraceae**

4: Leaves glabrous or, if indumentum present, not of peltate scales.....5

5 Leaves gland-dotted *(4:)*..... **Myrtaceae**

5: Leaves not gland-dotted.....6

6 Leaf base sheathing *(5:)*..... **Epacridaceae**

6: Leaf base not sheathing 7

7 Leaves exstipulate *(6:)*..... **Eupomatiaceae**

7: Leaves stipulate.....8

8 Tendrils present *(7:)*..... **Vitaceae**

8: Tendrils absent.....9

9 Gynophore present; leaves usually alternate *(8:)* ..... **Capparaceae**

9: Gynophore absent; leaves opposite ..... **Eucryphiaceae**

10 Perianth segments more than 6 (counting sepals and petals if both present) or calyx cuplike and unlobed, with 5 or more petals *(3:)* 11

10: Perianth segments 6 or fewer (counting sepals and petals if both present, but not counting the bracts, scales or plumes of the pappus in Asteraceae).....693

11 Corolla segments (or perianth segments) free *(10)*.....12

11: Corolla segments (or perianth segments) united 459

12 All or most flowers unisexual *(11)*.....13

12: Most flowers bisexual.....48

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13 Ovary superior *(12)* 14
13: Ovary inferior 44

14 Floating aquatics; leaves whorled, much divided *(13)* ..... **Ceratophyllaceae**
14: Land plants; leaves alternate, opposite, or absent 15

15 Gynoecium apocarpous *(14:)* 16
15: Gynoecium syncarpous or carpel 1 19

16 Climbers or ramblers *(15)* 17
16: Non-climbers, not spreading 18

17 Climbers; leaves opposite *(16)* ..... **Rutaceae**
17: Climbers (or plants spreading over the ground); leaves alternate ..... **Menispermaceae**

18 Leaves gland-dotted *(16:)* ..... **Rutaceae**
18: Leaves not gland-dotted ..... **Simaroubaceae**

19 Leaves compound *(15:)* 20
19: Leaves simple or absent 26

20 Petals 4 *(19)* 21
20: Petals 5 23

21 Leaves gland-dotted *(20)* ..... **Rutaceae**
21: Leaves not gland-dotted 22

22 Stamens 3–5 in male flowers *(21:)* ..... **Simaroubaceae**
22: Stamens usually 8 in male flowers ..... **Anacardiaceae**

23 Stamens 5 in male flowers *(20:)* ..... **Anacardiaceae**
23: Stamens more than 5 in male flowers 24

24 Stamens usually 8; style 1; stigma entire or lobed *(23:)* ..... **Sapindaceae**
24: Stamens 10; styles or stigmas more than 1 25

25 Ovary entire; stigmas glabrous *(24:)* ..... **Anacardiaceae**
25: Ovary lobed; stigmas plumose ..... **Simaroubaceae**

26 Leaves opposite *(19:)* 27
26: Leaves alternate, clustered, or absent 28

27 Flowers strictly unisexual; shrubs or trees *(26)* ..... **Euphorbiaceae**
27: Flowers polygamous; trees usually with yellow sap ..... **Clusiaceae**

28 Climbers with tendrils *(26:)* ..... **Passifloraceae**
28: Tendrils absent 29

29 Twiners or lianes *(28:)* 30
29: Shrubs, trees or herbs, sometimes scrambling 31

30 Stipules absent; disc absent; petals smaller than sepals, entire, sometimes absent *(29)* ..... **Menispermaceae**
30: Stipules present; disc present; petals as long as or longer than sepals, emarginate ..... **Dichapetalaceae**

31 Latex present *(29:)* ..... **Euphorbiaceae**
31: Latex absent 32

32 Styles more than 3 *(31:)* ..... **Malvaceae**
32: Styles 1–3 or stigmas sessile 33

33 Styles 3, distinct, simple or branched *(32:)* ..... **Euphorbiaceae**
33: Style 1 or absent (stigma sessile) 34

34 Style 1 with 2 or more stigmas *(33:)* 35
34: Style and stigma 1 or stigma sessile 39

35 Male flowers with staminodes *(34)* ..... **Tiliaceae**
35: Male flowers without staminodes 36

36 Ovary 1-locular *(35:)* ..... **Flacourtiaceae**
36: Ovary more than 1-locular 37

37 Fruit a succulent drupe; leaves succulent; seeds non-endospermic *(36:)* **Zygophyllaceae**
37: Fruit dry; leaves not succulent though often thick; seeds endospermic 38

38 Carpels dry, falling entire; stamens fused into a column *(37:)* ..... **Malvaceae**
38: Carpels dry, dehiscent; stamens free or solitary ..... **Euphorbiaceae**

39 Calyx segments free *(34:)* ..... **Euphorbiaceae**
39: Calyx segments united or calyx minute 40

40 Ovary 1-locular *(39:)* 41
40: Ovary more than 1-locular 43

41 Ovary stipitate *(40)* ..... **Capparaceae**
41: Ovary sessile 42

42 Leaves stipulate *(41:)* ..... **Malvaceae**
42: Leaves exstipulate ..... **Icacinaceae**

43 Leaves not succulent; trees; flowers usually unisexual, dioecious; seeds endospermic *(40:)* ..... **Aquifoliaceae**
43: Leaves succulent; shrubs, subshrubs or herbs; flowers bisexual; seeds non-endospermic. ..... **Zygophyllaceae**

44 Climber with tendrils *(13:)* ..... **Cucurbitaceae**
44: Non-climbers 45

45 Herbs or undershrubs *(44:)* 46
45: Trees 47

46 Petals 5 *(45)* ..... **Apiaceae**
46: Petals 0, 2 or 4 ..... **Haloragaceae**

47 Style 1 *(45:)* ..... **Hernandiaceae**
47: Styles 2 or more ..... **Datiscaceae**

48 Gynoecium apocarpous *(12:)* 49
48: Gynoecium syncarpous or carpel 1 88

49 Flowers perigynous *(48)* 50
49: Flowers hypogynous 53

50 Leaves alternate or radical *(49)* 51
50: Leaves opposite 52

51 Sepals 5; stamens numerous *(50)* ..... **Rosaceae**
51: Sepals 4; stamens 4 or 8 ..... **Crassulaceae**

52 Perianth segments numerous; carpels numerous *(50:)* ..... **Idiospermaceae**
52: Sepals 4 or 5; petals 4 or 5; carpels 4 ..... **Crassulaceae**

53 Stamens numerous *(49:)* 54
53: Stamens 10 or fewer 66

54 Leaves peltate *(53)* 55
54: Leaves not peltate 56

55 Carpels embedded in receptacle *(54)* ..... **Nelumbonaceae**
55: Carpels not embedded in receptacle ..... **Cabombaceae**

56 Style 1 with 3–5 stigmas *(54:)* ..... **Ochnaceae**
56: Styles (or stigmas when styles much reduced) as many as carpels 57

57 Climbers *(56:)* 58
57: Non-climbers 60

58 Perianth of tepals; perianth segments 10–14 *(57)* ..... **Austrobaileyaceae**
58: Perianth of distinct sepals and petals 59

59 Sepals 3; petals 6 *(58:)* ..... **Annonaceae**
59: Sepals 4 or 5; petals 3–5 ..... **Dilleniaceae**

60 Perianth segments all petaloid *(57:)* 61
60: One or more whorls of perianth sepaloid 62

61 Herbs *(60)* ..... **Ranunculaceae**
61: Shrubs or trees ..... **Magnoliaceae**

62 Leaves with peltate indumentum; perianth spiral *(60:)* ..... **Himantandraceae**
62: Indumentum, if present, not peltate 63

63 Perianth in 3 whorls of 3 tepals *(62:)* ..... **Annonaceae**
63: Sepals 5; petals 5 64

64 Leaves bipinnate; trees *(63:)* ..... **Mimosaceae**
64: Leaves simple, entire to incised 65

65 Herbs; leaves usually much incised *(64:)* ..... **Ranunculaceae**
65: Trees, shrubs, or undershrubs; leaves entire to distinctly incised ..... **Dilleniaceae**

66 Style 1; stigmas 1 or more *(53:)* 67
66: Styles (or stigmas when styles much reduced) free from one another, as many as there are carpels 72

67 Leaves peltate *(66)* ..... **Tropaeolaceae**
67: Leaves not peltate 68

68 Leaves gland-dotted *(67:)* ..... **Rutaceae**
68: Leaves not gland-dotted 69

69 Leaves alternate *(68:)* 70
69: Leaves opposite 71

70 Stigma simple *(69)* ..... **Ochnaceae**
70: Stigmas 3 or more ..... **Simaroubaceae**

71 Flowers 4-merous *(69:)* ..... **Rutaceae**
71: Flowers 5-merous ..... **Malpighiaceae**

72 Leaves compound *(66:)* 73
72: Leaves simple or absent 74

73 Leaves gland-dotted *(72)* ..... **Rutaceae**
73: Leaves not gland-dotted ..... **Simaroubaceae**

74 Leaves opposite *(72:)* 75
74: Leaves alternate, radical, clustered, or absent 77

75 Sepals 4; petals 4 *(74)* ..... **Crassulaceae**
75: Sepals 5; petals 5 76

76 Petals sessile or with short claws; leaves fleshy *(75:)* ..... **Crassulaceae**
76: Petals with long claws; leaves not fleshy ..... **Malpighiaceae**

77 Flowers 3-merous (usually sepals 6, petals 6, carpels 6 or 3) *(74:)* ..... **Menispermaceae**
77: Flowers 4- or 5-merous 78

78 Flowers 4-merous *(77:)* 79
78: Flowers 5-merous 80

79 Leaves fleshy; seeds lacking endosperm *(78)* ..... **Crassulaceae**
79: Leaves not fleshy; seeds endospermic ..... **Saxifragaceae**

80 Stamens united into one or more groups *(78:)* 81
80: Stamens free 82

81 Carpels 2 *(80)* ..... **Dilleniaceae**
81: Carpels 3 ..... **Malpighiaceae**

82 Leaves not expanded at time of flowering *(80:)* ..... **Anacardiaceae**
82: Leaves present at time of flowering 83

83 Leaves lobed or much dissected *(82:)* ..... **Ranunculaceae**
83: Leaves entire 84

84 Carpels more than 5 *(83:)* ..... **Ranunculaceae**
84: Carpels 5 or fewer 85

85 Leaves fleshy *(84:)* ..... **Crassulaceae**
85: Leaves not fleshy 86

86 Carpels usually 2 or 3 *(85:)* ..... **Dilleniaceae**
86: Carpels 5 87

87 Leaves stipulate; petals white *(86:)* ..... **Simaroubaceae**
87: Leaves exstipulate; petals yellow ..... **Surianaceae**

88 Petals 2–4 *(48:)* 89
88: Petals 5 or more, or whole perianth petaloid or sepaloid 91

89 Petals 2 *(88)* ..... **Polygalaceae**
89: Petals 3 or 4 90

90 Petals 3 *(89:)* 92
90: Petals 4 94

91 Petals 5 *(88:)* 176
91: Petals more than 5, or whole perianth petaloid or sepaloid, sometimes in 1 whorl 416

92 Leaves compound *(90)* ..... **Caesalpiniaceae**
92: Leaves simple 93

93 Sepals 5 *(92:)* ..... **Polygalaceae**
93: Sepals 4 ..... **Zygophyllaceae**

94 Sepals 5 or 6 *(90:)* 95
94: Sepals 4, rarely 2 or 3 96

95 Sepals 5 *(94)* 167
95: Sepals 6 174

96 Ovary superior *(94:)* 97
96: Ovary inferior 151

97 Leaves radical or alternate *(96)* 98
97: Leaves opposite or verticillate 125

98 Styles more than 1, quite free from one another *(97)* ..... **Droseraceae**
98: Style 1, with 1 or more stigmas, or stigma sessile 99

99 Stamens 2–4 *(98:)* 100
99: Stamens 6 or more 109

100 Stamens 2 or 3 *(99)* 101
100: Stamens 4 or 5 103

101 Stamens 3 *(100)* ..... **Caesalpiniaceae**
101: Stamens 2 102

102 Leaves simple, entire or much divided *(101:)* ..... **Brassicaceae**
102: Leaves compound ..... **Caesalpiniaceae**

103 Stamens opposite petals *(100:)* 104
103: Stamens alternating with petals 105

104 Placentation basal or free-central *(103)* ..... **Myrsinaceae**
104: Placentation parietal ..... **Brassicaceae**

105 Climbers with leaf-opposed tendrils *(103:)* ..... **Vitaceae**
105: Plants without tendrils 106

106 Leaves compound *(105:)* ..... **Capparaceae**
106: Leaves simple or absent 107

107 Herbs *(106:)* ..... **Brassicaceae**
107: Shrubs or trees 108

108 Leaves with short, pointed lobes *(107:)* ..... **Aquifoliaceae**
108: Leaves quite entire ..... **Celastraceae**

109 Stamens 6–8 *(99:)* 110
109: Stamens 10 or more 121

110 Stamens 6 *(109)* 111
110: Stamens 7 or 8 113

111 Stamens tetradynamous; leaves simple *(110)* ..... **Brassicaceae**
111: Stamens not tetradynamous 112

112 Leaves apparently cuneate and 2-lobed, in connate pairs in upper stem *(111:)* ..... **Zygophyllaceae**
112: Leaves palmately dissected, alternate ..... **Capparaceae**

113 Stamens united *(110:)* ..... **Meliaceae**
113: Stamens free 114

114 Leaves simple or absent *(113:)* 115
114: Leaves compound 117

115 Leaves dissected *(114)* ..... **Sapindaceae**
115: Leaves entire or absent 116

116 Petals glabrous *(115:)* ..... **Tremandraceae**
116: Petals densely hairy inside ..... **Olacaceae**

117 Leaves 3-foliolate or palmate *(114:)* 118
117: Leaves pinnate 120

118 Ovules numerous in each loculus *(117)* ..... **Capparaceae**
118: Ovules 1 or 2 in each loculus 119

119 Ovules 1 in each loculus *(118:)* ..... **Simaroubaceae**
119: Ovules 2 in each loculus ..... **Burseraceae**

120 Ovules 1 in each loculus *(117:)* ..... **Sapindaceae**
120: Ovules 2 in each loculus ..... **Burseraceae**

121 Flowers in heads or spikes; heads solitary or in racemes *(109:)* ..... **Mimosaceae**
121: Flowers not in heads or spikes 122

122 Ovary borne on long stalk (gynophore) *(121:)* ..... **Capparaceae**
122: Ovary sessile 123

123 Ovary 1-locular *(122:)* ..... **Flacourtiaceae**
123: Ovary more than 1-locular 124

124 Anthers opening by longitudinal slits; fruit dry, breaking into cocci or mericarps (capsule in *Peganum*) *(123:)* ..... **Zygophyllaceae**
124: Anthers opening by terminal pores; fruit a drupe or capsule ..... **Elaeocarpaceae**

125 Leaves large, palmately lobed *(97:)* ..... **Aceraceae**
125: Leaves otherwise 126

126 Stamens 2 or 4 *(125:)* 127
126: Stamens 5 or more 135

127 Stamens 2 *(126)* 128
127: Stamens 4 129

128 Flowers in clusters, racemes, or panicles *(127)* ..... **Oleaceae**
128: Flowers solitary in leaf axils ..... **Lythraceae**

129 Leaves gland-dotted *(127:)* 130
129: Leaves not gland-dotted 131

130 Style and stigma 1 *(129)* ..... **Rutaceae**
130: Styles or stigmas 4 ..... **Cunoniaceae**

131 Stamens perigynous *(129:)* 132
131: Stamens hypogynous 133

132 Anthers opening by pores; anther-connective with sickle-shaped appendages *(131)* ..... **Melastomataceae**
132: Anthers opening longitudinally; connective without appendages ..... **Lythraceae**

133 Styles 4 *(131:)* ..... **Elatinaceae**
133: Style 1 134

134 Trees, shrubs or climbers; leaves simple or scale-like *(133:)* ..... **Celastraceae**
134: Annual herb; leaves 2-lobed ..... **Zygophyllaceae**

135 Stamens 5–8 *(126:)* 136
135: Stamens 10 or numerous 148

136 Leaves simple or absent *(135)* 137
136: Leaves compound 146

137 Leaves 2-lobed *(136)* ..... **Zygophyllaceae**
137: Leaves entire, or with more than 2 lobes 138

138 Leaves gland-dotted *(137:)* ..... **Rutaceae**
138: Leaves not gland-dotted 139

139 Ovary half-inferior; margins of petals fringed with long hairs *(138:)*..... **Rhizophoraceae**
139: Ovary wholly superior; petals not fringed 140

140 Style and stigma 1 *(139:)*..... 141
140: Styles or stigmas more than 1 145

141 Perianth hypogynous *(140)*..... 142
141: Perianth perigynous..... 144

142 Leaves in whorls of 3 or 4 *(141)* ..... **Tremandraceae**
142: Leaves in pairs, opposite 143

143 Fruits not winged; subshrubs, shrubs, or trees *(142:)* ..... **Rutaceae**
143: Fruits winged; subshrubs..... **Zygophyllaceae**

144 Leaves with 2 or more conspicuous longitudinal veins besides midrib *(141:)* .... **Melastomataceae**
144: Midrib only conspicuous longitudinal vein ..... **Lythraceae**

145 Leaves with revolute margins; style 1, with 3 branches *(140:)*..... **Frankeniaceae**
145: Leaf margins not revolute; styles 2 or 4 ..... **Cunoniaceae**

146 Stamens united *(136:)*..... **Meliaceae**
146: Stamens free..... 147

147 Leaves gland-dotted, usually with several leaflets *(146:)*..... **Rutaceae**
147: Leaves not gland-dotted, with only 2 leaflets ..... **Zygophyllaceae**

148 Flowers hypogynous, polygamous *(135:)* 149
148: Flowers perigynous 150

149 Stipules absent *(148)* ..... **Clusiaceae**
149: Stipules present ..... **Eucryphiaceae**

150 Style and stigma 1 *(148:)*..... **Lythraceae**
150: Styles more than 1 ..... **Cunoniaceae**

151 Leaves gland-dotted *(96:)*..... **Myrtaceae**
151: Leaves not gland-dotted..... 152

152 Stamens numerous *(151:)* 153
152: Stamens 10 or fewer 154

153 Style and stigma 1 *(152)* ..... **Lecythidaceae**
153: Style with 4 stigmas..... **Grossulariaceae**

154 Leaves alternate or radical *(152:)*..... 155

154: Leaves opposite or verticillate 161

155 Style 1, with 1 or more stigmas *(154)*..... 156
155: Styles several, free..... 160

156 Aquatic herbs with alternate, rosetted floating leaves and opposite submerged leaves *(155)* ..... **Trapaceae**
156: Trees, shrubs or herbs..... 157

157 Stigmas 2 or 4 *(156:)* 158
157: Stigma 1 159

158 Stigmas 2 *(157)* ..... **Alangiaceae**
158: Stigmas 4 ..... **Onagraceae**

159 Ovary 1-locular *(157:)* ..... **Combretaceae**
159: Ovary 4-locular ..... **Onagraceae**

160 Herbs; flowers very small *(155:)* ..... **Haloragaceae**
160: Shrubs or trees; flowers greater than 6 mm in diameter ..... **Grossulariaceae**

161 Styles several, free *(154:)* ..... **Haloragaceae**
161: Style 1, with 1 or more stigmas 162

162 Petals fringed with long hairs *(161:)* ..... **Rhizophoraceae**
162: Petals not fringed 163

163 Stamens 4 *(162:)* 164
163: Stamens more than 4, usually 8 165

164 Aquatic herbs *(163)* ..... **Trapaceae**
164: Shrubs ..... **Grossulariaceae**

165 Leaves with 2 or more longitudinal veins besides midrib *(163:)* ..... **Melastomataceae**
165: Midrib the only longitudinal vein 166

166 Ovary 1-locular *(165:)* ..... **Melastomataceae**
166: Ovary 4-locular ..... **Onagraceae**

167 Ovary 1- or 2-locular *(95)* 168
167: Ovary 3–5-locular 171

168 Ovary adnate to one side of calyx tube *(167)* ..... **Chrysobalanaceae**
168: Ovary free 169

169 Fruit indehiscent, globose *(168:)* ..... **Xanthophyllaceae**
169: Fruit dehiscent, a legume or capsule 170

170 Fruit a legume *(169:)* ..... **Caesalpiniaceae**
170: Fruit a capsule ..... **Zygophyllaceae**

171 Ovary usually 3-locular *(167:)* 172
171: Ovary 4- or 5-locular 173

172 Style 1; ovary 3-locular *(171)* ..... **Zygophyllaceae**
172: Styles usually 2 or more (if style 1, then ovary 1-locular) ..... **Sapindaceae**

173 Ovary 4-locular *(171:)* ..... **Elaeocarpaceae**
173: Ovary 5-locular ..... **Meliaceae**

174 Ovary open at top, with sessile stigmas *(95:)* ..... **Resedaceae**
174: Ovary not open at top 175

175 Herbs *(174:)* ..... **Lythraceae**
175: Small shrubs ..... **Saxifragaceae**

176 Sepals 2 or 3 *(91)* 177
176: Sepals 4 or more 186

177 Sepals 2 *(176)* 178
177: Sepals 3 182

178 Flowers zygomorphic *(177)* ..... **Caesalpiniaceae**
178: Flowers actinomorphic 179

179 Twiners *(178:)* ..... **Basellaceae**
179: Non-twiners 180

180 Shrubs or trees *(179:)* ..... **Lecythidaceae**
180: Herbs 181

181 Stamens 5 or fewer; perianth often scarious *(180:)* ..... **Amaranthaceae**
181: Stamens usually more than 5; perianth not scarious; leaves (and often stems) fleshy .... **Portulacaceae**

182 Leaves compound *(177:)* ..... **Caesalpiniaceae**
182: Leaves simple or absent 183

183 Leaf venation palmate *(182:)* ..... **Caesalpiniaceae**
183: Leaf venation not palmate 184

184 Stamens 5 *(183:)* ..... **Hamamelidaceae**
184: Stamens 8 or more 185

185 Stamens 8 *(184:)* ..... **Polygalaceae**
185: Stamens numerous ..... **Lecythidaceae**

186 Sepals 4 *(176:)* 187
186: Sepals 5 or more, or calyx cup-like with indistinct lobes, or entire in bud 188

187 Stamens 8–10, free or united *(186)* ..... **Caesalpiniaceae**
187: Stamens numerous, united ..... **Lecythidaceae**

188 Ovary superior *(186:)* 189
188: Ovary inferior or semi-inferior 381

189 Style 1 with simple stigma, or stigma sessile *(188)* 190
189: Styles or stigmas more than 1 302

190 Leaves opposite or verticillate (rarely absent at flowering in some introduced deciduous species) *(189)* 191
190: Leaves alternate, radical, or absent 212

191 Leaves gland-dotted *(190)* 192
191: Leaves not gland-dotted 194

192 Leaves compound *(191)* ..... **Rutaceae**
192: Leaves simple 193

193 Flowers hypogynous *(192:)* ..... **Rutaceae**
193: Flowers perigynous or epigynous ..... **Myrtaceae**

194 Leaves simple *(191:)* 195
194: Leaves compound 209

195 Leaves 2-lobed, ± succulent with obscure venation *(194)* ..... **Zygophyllaceae**
195: Leaves not 2-lobed, with at least midrib apparent 196

196 Leaves with 2 or more conspicuous longitudinal veins besides midrib *(195:)* .... **Melastomataceae**
196: Midrib only conspicuous longitudinal vein 197

197 Stamens 10 or fewer *(196:)* 198
197: Stamens numerous 207

198 Flowers actinomorphic *(197)* 199
198: Flowers zygomorphic 205

199 Flowers perigynous *(198)* ..... **Lythraceae**
199: Flowers not perigynous 200

200 Stamens 3 *(199:)* ..... **Hippocrateaceae**
200: Stamens 5 or more 201

201 Stamens 5 *(200:)* ..... **Celastraceae**
201: Stamens usually 10 202

202 Ovary half-inferior *(201:)* ..... **Rhizophoraceae**
202: Ovary quite superior 203

203 Petals with narrow, pointed lobes *(202:)* ..... **Rhizophoraceae**
203: Petals entire 204

204 Petals clawed; stamens unequal, usually united at base *(203:)* ..... **Malpighiaceae**
204: Petals sessile, shorter than sepals ..... **Rhizophoraceae**

205 Stamens 5, united; anthers connate around ovary *(198:)* ..... **Violaceae**
205: Stamens 10 206

206 Ovary 1-locular; ovules 2 or more *(205:)* ..... **Fabaceae**
206: Ovary 2- or 3-locular; 1 ovule in each loculus ..... **Malpighiaceae**

207 Flowers perigynous *(197:)* ..... **Lythraceae**
207: Flowers hypogynous 208

208 Ovary 1-locular *(207:)* ..... **Mimosaceae**
208: Ovary 2 or more-locular ..... **Elaeocarpaceae**

209 Stamens 5 *(194:)* ..... **Meliaceae**
209: Stamens more than 5 210

210 Stamens united *(209:)* ..... **Fabaceae**
210: Stamens free 211

211 Ovary 1-locular *(210:)* ..... **Fabaceae**
211: Ovary 2- or more-locular ..... **Zygophyllaceae**

212 Stamens 1–5 *(190:)* 213
212: Stamens 6 or more 219

213 Stamen 1 *(212)* 214
213: Stamens 2–5 215

214 Leaves deeply notched and palmately veined *(213)* ..... **Caesalpiniaceae**
214: Leaves entire and pinnately veined ..... **Anacardiaceae**

215 Stamens 2–4 *(213:)* 216
215: Stamens 5 221

216 Leaves simple *(215)* 217
216: Leaves pinnate or bipinnate 218

217 Leaf venation well-marked and palmate *(216)* ..... **Caesalpiniaceae**
217: Leaf venation inconspicuous, or leaves absent ..... **Olacaceae**

218 Stipules present; calyx oblique, of 5 segments; ovary 4- or 5-locular; fruit a capsule *(216:)* ..... **Melianthaceae**
218: Stipules absent; calyx not oblique, of 5 free sepals; ovary 1-locular; fruit a legume ..... **Caesalpiniaceae**

219 Stamens 10 or more *(212:)* 220
219: Stamens 6–9 (rarely 5–10) 254

220 Stamens 10 *(219)* 261
220: Stamens numerous 285

221 Leaves simple or absent *(215:)* 222
221: Leaves compound 245

222 Leaves bifid; venation palmate *(221)* ..... **Caesalpiniaceae**
222: Leaves not bifid 223

223 Herbs *(222:)* 224
223: Shrubs, trees or woody climbers 227

224 Twiners *(223)* 225
224: Plants ±erect, not twining 226

225 Sap milky *(224)* ..... **Cardiopteridaceae**
225: Sap not milky ..... **Pittosporaceae**

226 Flowers actinomorphic *(224:)* ..... **Byblidaceae**
226: Flowers zygomorphic ..... **Violaceae**

227 Small shrubs; flowers zygomorphic *(223:)* ..... **Violaceae**
227: Shrubs, trees or woody climbers; flowers actinomorphic or nearly so 228

228 Climbers *(227:)* 229
228: Non-climbers, ±erect 230

229 Twiners *(228)* ..... **Pittosporaceae**
229: Climbers with leaf-opposed tendrils ..... **Vitaceae**

230 Stamens opposite petals or tepals *(228:)* 231
230: Stamens alternate with petals or tepals 233

231 Each stamen ±enclosed by small hood-shaped petal *(230)* ..... **Rhamnaceae**
231: Stamens not enclosed by petals 232

232 Fruit dehiscent (a capsule, follicle, samara or schizocarp), usually many-seeded (1 seed in *Waltheria*); ovules 2 per carpel *(231:)* ..... **Sterculiaceae**
232: Fruit a 1-seeded drupe; ovule 1 per carpel ..... **Opiliaceae**

233 Leaves gland-dotted *(230:)* ..... **Rutaceae**
233: Leaves not gland-dotted 234

234 Base of calyx covered by several imbricate sepaloid bracteoles *(233:)* **Epacridaceae**
234: Bracteoles absent or not covering base of calyx 235

235 Sepals free *(234:)* 236
235: Sepals united 240

236 Ovary 3- or 5-locular *(235)* 237
236: Ovary 1- or 2-locular 238

237 Ovary 3-locular *(236)* ..... **Celastraceae**
237: Ovary 5-locular ..... **Grossulariaceae**

238 Ovules 1 per loculus *(236:)* ..... **Corynocarpaceae**
238: Ovules 2–several per loculus 239

239 Ovary 1- or 2-locular; ovules few to many per loculus *(238:)* ..... **Pittosporaceae**
239: Ovary 1-locular; ovules 2 ..... **Icacinaceae**

240 Ovules 1 per ovary *(235:)* ..... **Icacinaceae**
240: Ovules 2 or more per ovary 241

241 Ovary 1-locular *(240:)* 242
241: Ovary 2- or more-locular 243

242 Fruit 1-seeded *(241)* ..... **Icacinaceae**
242: Fruit with 2–numerous seeds ..... **Proteaceae**

243 Ovary subtended by nectar-secreting disc *(241:)* ..... **Celastraceae**
243: Ovary not subtended by nectar-secreting disc 244

244 Style 1 *(243:)* ..... **Pittosporaceae**
244: Styles 2 or more ..... **Grossulariaceae**

245 Climbers with leaf-opposed tendrils *(221:)* ..... **Vitaceae**
245: Non-climbers or, if climbing, tendrils not leaf-opposed or tendrils absent 246

246 Leaves gland-dotted *(245:)* ..... **Rutaceae**
246: Leaves not gland-dotted 247

247 Stamens 5, staminodes 5 *(246:)* 248

247: Stamens 5, staminodes absent 250

248 Herbs; leaves 2-foliolate or pinnate; ovary with axile placentas; fruit usually with 2 or more seeds *(247)* ..... **Zygophyllaceae**

248: Trees or woody climbers 249

249 Trees; leaves pinnate; ovary with 3 parietal placentas; fruit a long 3-angled capsule *(248:)* ..... **Moringaceae**

249: Woody climbers; leaves imparipinnate; ovary with 2 collateral ovules; fruit 1-seeded .... **Connaraceae**

250 Stamens free *(247:)* 251

250: Stamens united 253

251 Ovary 1-locular; leaves bipinnate *(250)* ..... **Mimosaceae**

251: Ovary 3–5-locular; leaves pinnate 252

252 Leaves exstipulate *(251:)* ..... **Meliaceae**

252: Leaves stipulate ..... **Zygophyllaceae**

253 Leaves pinnate *(250:)* ..... **Meliaceae**

253: Leaves bi- or tripinnate ..... **Vitaceae**

254 Stamens 9, united *(219:)* ..... **Fabaceae**

254: Stamens free 255

255 Leaves simple *(254:)* 256

255: Leaves compound 258

256 Style arising from base of ovary *(255)* ..... **Rosaceae**

256: Style terminal 257

257 Fruit a legume *(256:)* ..... **Caesalpiniaceae**

257: Fruit globose ..... **Xanthophyllaceae**

258 Ovary 1-locular, usually with more than 2 ovules *(255:)* ..... **Caesalpiniaceae**

258: Ovary 2- or more-locular, with 1 or 2 ovules per loculus 259

259 Disc present; stamens inserted within disc *(258:)* ..... **Sapindaceae**

259: Disc absent 260

260 Trees *(259:)* ..... **Akaniaceae**

260: Herbs or shrubs ..... **Zygophyllaceae**

261 Flowers zygomorphic *(220)* 262

261: Flowers actinomorphic or nearly so 263

262 Posterior petal enclosed by the remainder in bud, or absent *(261)* ..... **Caesalpiniaceae**

262: Posterior petal enclosing the remainder in bud ..... **Fabaceae**

263 Stamens united *(261:)* 264

263: Stamens free 269

264 Climbers *(263)* ..... **Connaraceae**
264: Non-climbers 265

265 Leaves 1–3-pinnate *(264:)* 266
265: Leaves simple 267

266 Ovary 5-locular; leaves pinnate, bipinnate or tripinnate *(265)* ..... **Meliaceae**
266: Ovary 1-locular; leaves bipinnate ..... **Mimosaceae**

267 Staminal tube long and narrow, surrounding style *(265:)* ..... **Meliaceae**
267: Staminal tube short, open 268

268 Ovary free; stipules persistent *(267:)* ..... **Sterculiaceae**
268: Ovary adnate to one side of throat of calyx; stipules caducous ..... **Chrysobalanaceae**

269 Leaves simple or unifoliolate *(263:)* 270
269: Leaves compound 276

270 Leaves gland-dotted *(269)* ..... **Rutaceae**
270: Leaves not gland-dotted 271

271 Style inserted near base of ovary, hairy *(270:)* ..... **Simaroubaceae**
271: Style terminal 272

272 Ovary and back of petals covered with scales; flowers in heads or clusters at end of branchlets *(271:)* ..... **Rutaceae**
272: Not as above 273

273 Flowers perigynous; ovary enclosed in hypanthium; stamens borne on hypanthium, sometimes near base *(272:)* ..... **Lythraceae**
273: Flowers hypogynous; ovary and stamens not as above 274

274 Ovary usually stipitate; ovules several; sepals united *(273:)* ..... **Caesalpiniaceae**
274: Ovary sessile; ovule 1 per locule 275

275 Fertile locule 1; stipules absent *(274:)* ..... **Anacardiaceae**
275: Locules 5; stipules present ..... **Ochnaceae**

276 Leaves gland-dotted *(269:)* ..... **Rutaceae**
276: Leaves not gland-dotted 277

277 Herbs *(276:)* ..... **Zygophyllaceae**
277: Shrubs or trees 278

278 Leaves bipinnate *(277:)* ..... **Mimosaceae**
278: Leaves pinnate 279

279 Leaflets 2; venation palmate *(278:)* ..... **Caesalpiniaceae**
279: Leaflets more than 2 or, if 2, venation pinnate 280

280 Ovary 1-locular *(279:)* 281
280: Ovary 2- or more-locular 283

281 Stamens unequal; anthers dehiscing by pores *(280)* ..... **Caesalpiniaceae**
281: Stamens equal 282

282 Ovule 1 *(281:)* ..... **Anacardiaceae**
282: Ovules more than 1 ..... **Caesalpiniaceae**

283 Ovary 1- or 3-locular, with 1 ovule (rarely 2) per loculus *(280:)* ..... **Sapindaceae**
283: Ovary 4- or 5-locular, with 2 ovules per loculus 284

284 Trees or large shrubs; fruit not angular *(283:)* ..... **Burseraceae**
284: Small shrubs; fruit prominently angular ..... **Zygophyllaceae**

285 Leaves gland-dotted *(220:)* 286
285: Leaves not gland-dotted 287

286 Flowers hypogynous *(285)* ..... **Rutaceae**
286: Flowers perigynous or epigynous ..... **Myrtaceae**

287 Leaves simple, reduced to phyllodes, or absent *(285:)* 288
287: Leaves compound 300

288 Stamens united into discrete groups *(287)* 289
288: Stamens free or only slightly united at base 290

289 Stamens united into 5 or 10 groups *(288)* ..... **Tiliaceae**
289: Stamens united into a single group ..... **Bombacaceae**

290 Flowers small, in globular heads or obloid or cylindrical spikes; stamens much exserted *(288:)* ..... **Mimosaceae**
290: Flowers not as above; stamens usually not exserted 291

291 Flowers hypogynous *(290:)* 292
291: Flowers perigynous 298

292 Leaves fleshy, entire; shrubs *(291)* ..... **Zygophyllaceae**
292: Leaves not fleshy, entire or divided: shrubs trees or climbers 293

293 Small trees; leaf lamina palmately divided into 5 or 7 lobes *(292:)* ..... **Bixaceae**
293: Shrubs, trees or climbers; leaf margins entire, pinnately toothed or lobed 294

294 Calyx caducous *(293:)* ..... **Bixaceae**
294: Calyx not caducous 295

295 Anthers dehiscing by terminal pores or slits *(294:)* ..... **Elaeocarpaceae**
295: Anthers dehiscing longitudinally 296

296 Ovary 2- or more-locular *(295:)* ..... **Tiliaceae**
296: Ovary 1-locular 297

297 Petals yellow, large *(296:)* ..... **Dilleniaceae**
297: Petals not yellow, small ..... **Flacourtiaceae**

298 Ovary adnate to one side of throat of calyx *(291:)* ..... **Chrysobalanaceae**
298: Ovary free or completely adnate to calyx 299

299 Stamens inserted with petals at rim of hypanthium; ovules 1 or 2 in the ovary *(298:)* ..... **Rosaceae**

299: Stamens inserted on hypanthium below rim (sometimes almost at base); ovules usually numerous..... **Lythraceae**

300 Leaves palmate *(287:)* ..... **Bixaceae**

300: Leaves pinnate or bipinnate 301

301 Petals valvate *(300:)* ..... **Mimosaceae**

301: Petals imbricate ..... **Caesalpiniaceae**

302 Leaves simple or absent *(189:)* 303

302: Leaves compound 368

303 Leaves opposite or verticillate *(302)* 304

303: Leaves alternate, radical, or absent 326

304 Stamens 10 or fewer *(303)* 305

304: Stamens indefinite 324

305 Styles or stigmas 5 *(304)* 306

305: Styles or stigmas less than 5 312

306 Leaves opposite *(305)* 307

306: Leaves verticillate 308

307 Leaves gland-dotted *(306)* ..... **Rutaceae**

307: Leaves not gland-dotted 309

308 Floating aquatic plants without roots *(306:)* ..... **Droseraceae**

308: Plants not aquatic ..... **Caryophyllaceae**

309 Styles 5, free *(307:)* 310

309: Style 1, with 5 stigmas 311

310 Ovary 1-locular *(309)* ..... **Caryophyllaceae**

310: Ovary 2–5-locular ..... **Elatinaceae**

311 Ovary 1-locular *(309:)* ..... **Caryophyllaceae**

311: Ovary 3- or more-locular ..... **Geraniaceae**

312 Leaves palmately lobed *(305:)* ..... **Aceraceae**

312: Leaves otherwise 313

313 Styles free *(312:)* 314

313: Styles united; stigmas 2 or more 318

314 Climbers or twiners *(313)* ..... **Malpighiaceae**

314: Non-climbers, non-twiners 315

315 Leaves gland-dotted *(314:)* ..... **Clusiaceae**

315: Leaves not gland-dotted 316

316 Mostly herbs; stems usually swollen at nodes *(315:)* ..... **Caryophyllaceae**

316: Shrubs or trees; nodes not swollen 317

317 Petals much more than 2 mm long, distinctly clawed *(316:)* ..... **Malpighiaceae**
317: Petals scarcely 2 mm long, sessile or nearly so ..... **Cunoniaceae**

318 Herbs, non-climbers, non-twiners *(313:)* ..... **Caryophyllaceae**
318: Shrubs, trees, climbers or twiners 319

319 Stamens 3 *(318:)* ..... **Hippocrateaceae**
319: Stamens 5 or more 320

320 Stamens 10 *(319:)* ..... **Malpighiaceae**
320: Stamens 5 or 6 321

321 Stamens opposite to and enclosed in petals *(320:)* ..... **Rhamnaceae**
321: Stamens opposite sepals 322

322 Petals clawed, the claws cohering in an angular tube *(321:)* ..... **Frankeniaceae**
322: Petals sessile or if clawed, the claws free 323

323 Petals sessile; stamens 5 *(322:)* ..... **Celastraceae**
323: Petals clawed; stamens usually more than 5 ..... **Malpighiaceae**

324 Leaves in whorls of six *(304:)* ..... **Cunoniaceae**
324: Leaves opposite 325

325 Juice resinous; stipules absent *(324:)* ..... **Clusiaceae**
325: Juice not resinous; stipules present ..... **Cistaceae**

326 Stamens united, often forming a conspicuous staminal tube *(303:)* 327
326: Stamens free or arising from margin of a small disc 339

327 Styles 2 or more, free *(326)* 328
327: Style 1, with 2 or more stigmas 333

328 Stamens 8 *(327)* ..... **Aizoaceae**
328: Stamens 5, 10, or numerous 329

329 Climbers *(328:)* ..... **Linaceae**
329: Non-climbers 330

330 Leaves often dentate or lobed, with stellate hairs *(329:)* 331
330: Leaves entire, glabrous 332

331 Stamens 15 or more, always united into a tube surrounding the ovary; anthers 1-celled; epicalyx often present *(330)* ..... **Malvaceae**
331: Stamens 5, 10, 15 or 20–30, free or sometimes united; anthers 2-celled; epicalyx never present ..... **Sterculiaceae**

332 Stamens 10 *(330:)* ..... **Erythroxylaceae**
332: Stamens 4 or 5 ..... **Linaceae**

333 Petals attached to base of staminal tube; staminal tube usually long; stamens usually indefinite (rarely 10 or fewer); stigmas 3–5; shrubs *(327:)* ..... **Malvaceae**
333: Not as above 334

334 Style branches (or stigmas) 2 or 3 *(333:)* 335

334: Style branches (or stigmas) 5 336

335 Stamens numerous *(334)* ..... **Theaceae**

335: Stamens 10 or fewer ..... **Linaceae**

336 Stamens 5 (sometimes with 5 staminodes as well) *(334:)* 337

336: Stamens 10 or more (staminodes if present 5 or less) 338

337 Stamens 5 usually with alternating staminodes; herbs or shrubs; leaves often with stellate hairs *(336)* ..... **Sterculiaceae**

337: Stamens 5; staminodes 5; glabrous herbs; leaves entire ..... **Linaceae**

338 Stamens 10, usually 3 or 4 without anthers *(336:)* ..... **Geraniaceae**

338: Stamens 10 or indefinite; staminodes sometimes present; leaves often with stellate hairs ..... **Sterculiaceae**

339 Stamens 1–10 *(326:)* 340

339: Stamens numerous 342

340 Stamens 5–10 *(339)* 341

340: Stamens 1–3 343

341 Stamens 5 *(340)* 344

341: Stamens 6–10 360

342 Flowers perigynous *(339:)* ..... **Rosaceae**

342: Flowers hypogynous 366

343 Flowers hypogynous *(340:)* ..... **Tiliaceae**

343: Flowers epigynous ..... **Donatiaceae**

344 Climbers with axillary tendrils *(341)* 345

344: Non-climbers, or climbers without axillary tendrils 346

345 Corona present within corolla *(344)* ..... **Passifloraceae**

345: No corona present ..... **Plumbaginaceae**

346 Styles 2 or more, free *(344:)* 347

346: Style 1, with 2 or more stigmas 352

347 Stamens opposite petals *(346)* 348

347: Stamens alternating with petals 349

348 Styles 5 *(347)* ..... **Plumbaginaceae**

348: Styles less than 5 ..... **Rhamnaceae**

349 Leaves with conspicuous stalked glandular hairs, especially on the adaxial (upper) surface *(347:)* ..... **Droseraceae**

349: Leaves without glandular hairs, or if present, inconspicuous, sessile and confined to the abaxial (lower) surface only 350

350 Leaves small, 1–2 mm long, scale-like, appressed to stem *(349:)* ..... **Tamaricaceae**

350: Leaves larger than 2 mm, with a ±distinct lamina; spreading 351

351 Staminodes present; fruit a capsule *(350:)* ..... **Linaceae**
351: Staminodes absent; fruit a drupe ..... **Dichapetalaceae**

352 Leaves small, appressed to stem *(346:)* ..... **Tamaricaceae**
352: Leaves not appressed to stem 353

353 Stamens opposite petals *(352:)* ..... **Rhamnaceae**
353: Stamens alternating with petals 354

354 Herbs *(353:)* 355
354: Shrubs or trees 357

355 Stamens 5; staminodes 5 *(354)* ..... **Geraniaceae**
355: Stamens 5; staminodes absent 356

356 Fruit a schizocarp *(355:)* ..... **Stackhousiaceae**
356: Fruit a capsule ..... **Saxifragaceae**

357 Flowers perigynous or epigynous *(354:)* ..... **Saxifragaceae**
357: Flowers hypogynous 358

358 Ovary 1-locular *(357:)* ..... **Icacinaceae**
358: Ovary 2- or more-locular 359

359 Hypogynous disc present *(358:)* ..... **Dichapetalaceae**
359: Hypogynous disc absent ..... **Grossulariaceae**

360 Leaves peltate *(341:)* ..... **Tropaeolaceae**
360: Leaves not peltate 361

361 Stamens 8, 6 of them attached to base of corolla *(360:)* ..... **Polygalaceae**
361: Stamens all hypogynous or perigynous 362

362 Stamens 7–10; if 10, some without anthers *(361:)* ..... **Geraniaceae**
362: Stamens 10, all with anthers 363

363 Style 1, with 2 or more stigmas *(362:)* 364
363: Styles several, free 365

364 Flowers hypogynous; sepals free *(363)* ..... **Geraniaceae**
364: Flowers perigynous or epigynous; sepals united ..... **Saxifragaceae**

365 Herbs *(363:)* ..... **Saxifragaceae**
365: Shrubs or trees ..... **Anacardiaceae**

366 Sepals imbricate *(342:)* ..... **Actinidiaceae**
366: Sepals valvate or united 367

367 Petals deeply incised *(366:)* ..... **Elaeocarpaceae**
367: Petals entire ..... **Tiliaceae**

368 Leaves alternate or radical *(302:)* 369
368: Leaves opposite 378

369 Styles or sessile stigmas, free *(368)* 370
369: Style 1, with 2 or more stigmas 373

370 Herbs *(369)* 371
370: Shrubs or trees 372

371 Stamens 5 *(370)* ..... **Droseraceae**
371: Stamens 10 ..... **Oxalidaceae**

372 Styles 2; leaflets 2, occasionally 1 *(370:)* ..... **Sapindaceae**
372: Styles more than 2, or if 2 the leaflets more than 2 ..... **Anacardiaceae**

373 Stamens 3; staminodes 2–5; style petaloid *(369:)* ..... **Caesalpiniaceae**
373: Stamens 5 or more; style not petaloid 374

374 Stamens 5, with or without an additional 5 staminodes *(373:)* 375
374: Stamens more than 5 (if numerous, some often staminodal) 376

375 Stamens 5; staminodes absent *(374)* ..... **Anacardiaceae**
375: Stamens 5, alternating with 5 usually scale-like staminodes ..... **Geraniaceae**

376 Stamens 6–9; stigmas not plumose *(374:)* ..... **Sapindaceae**
376: Stamens 10–numerous; stigmas plumose or not 377

377 Stamens 10; staminodes absent; stigmas plumose *(376:)* ..... **Simaroubaceae**
377: Stamens numerous, some often staminodal; stigmas not plumose ..... **Bombacaceae**

378 Leaves with 3 leaflets *(368:)* ..... **Cunoniaceae**
378: Leaves with more than 3 leaflets 379

379 Trees *(378:)* ..... **Cunoniaceae**
379: Herbs or small shrubs 380

380 Herbs; style simple with 1–5 sessile stigmas *(379:)* ..... **Zygophyllaceae**
380: Herbs or small shrubs; style with 5 short stigmatic branches ..... **Geraniaceae**

381 Stamens 5 *(188:)* 382
381: Stamens more than 5 394

382 Stamens opposite petals *(381)* 383
382: Stamens alternating with petals 386

383 Parasitic shrubs (mistletoes) *(382)* ..... **Loranthaceae**
383: Plants not parasitic 384

384 Leaves gland-dotted *(383:)* ..... **Myrtaceae**
384: Leaves not gland-dotted 385

385 Stamens attached to petals at their bases *(384:)* ..... **Alangiaceae**
385: Stamens free from petals ..... **Rhamnaceae**

386 Leaves gland-dotted *(382:)* ..... **Myrtaceae**
386: Leaves not gland-dotted 387

387 Herbs, non-climbing, non-twining *(386:)* 388
387: Shrubs or trees, sometimes climbing or twining 389

388 Flowers in umbels or heads; styles or stigmas 2 *(387)* ..... **Apiaceae**
388: Flowers not in umbels or heads; style and stigma 1 ..... **Onagraceae**

389 Flowers not in umbels *(387:)* 390
389: Flowers in umbels 393

390 Leaves compound *(389)* ..... **Araliaceae**
390: Leaves simple 391

391 Indumentum of simple or glandular hairs *(390:)* ..... **Grossulariaceae**
391: Indumentum of stellate hairs 392

392 Flowers in subumbellate clusters *(391:)* ..... **Araliaceae**
392: Flowers in elongated spikes ..... **Hamamelidaceae**

393 Fruit a schizocarp, separating into 2 flattened mericarps when mature *(389:)* ..... **Apiaceae**
393: Fruit a berry or drupe ..... **Araliaceae**

394 Leaves gland-dotted *(381:)* 395
394: Leaves not gland-dotted 398

395 Stamens numerous *(394)* ..... **Myrtaceae**
395: Stamens 10 or fewer 396

396 Stamens 10, alternating with staminodes *(395:)* ..... **Myrtaceae**
396: Stamens 10 or fewer; staminodes absent 397

397 Ovary 1-locular; ovules pendulous *(396:)* ..... **Combretaceae**
397: Ovary 2- or more-locular, sometimes 1-locular and then ovules axile or rarely parietal..... **Myrtaceae**

398 Leaves alternate, radical, or absent *(394:)* 399
398: Leaves opposite 407

399 Leaves compound *(398)* 400
399: Leaves simple 401

400 Stamens 2 or 3 opposite each petal *(399)* ..... **Flacourtiaceae**
400: Stamens indefinite, not regularly opposite petals ..... **Rosaceae**

401 Styles or stigmas more than 1 *(399:)* 402
401: Style and stigma 1 404

402 Stamens 6, attached to petals *(401)* ..... **Alangiaceae**
402: Stamens 10 or more, free from petals 403

403 Stamens 10 *(402:)* ..... **Anacardiaceae**
403: Stamens indefinite ..... **Rosaceae**

404 Stamens indefinite *(401:)* ..... **Rosaceae**
404: Stamens 10 or fewer 405

405 Herbs *(404:)* ..... **Onagraceae**
405: Shrubs (sometimes climbing) or trees 406

406 Ovary 1-locular *(405:)* ..... **Combretaceae**
406: Ovary 2- or more-locular ..... **Grossulariaceae**

407 Leaves simple or absent *(398:)* 408
407: Leaves compound 415

408 Leaves with several conspicuous longitudinal veins *(407)* ..... **Melastomataceae**
408: Midrib the only conspicuous longitudinal vein 409

409 Stamens indefinite *(408:)* ..... **Punicaceae**
409: Stamens usually 10, rarely up to 13 410

410 Style 1; stigmas 1 or 2 *(409:)* 411
410: Styles 3 414

411 Leaves unequal, one of each pair much larger than other; anthers with conspicuous appendages *(410)* ..... **Melastomataceae**
411: Leaves of each pair equal; anthers without appendages 412

412 Ovary 1-locular *(411:)* ..... **Combretaceae**
412: Ovary 2- or more-locular 413

413 Trees of sea-shores or salt creeks *(412:)* ..... **Rhizophoraceae**
413: Plants not growing in salt water ..... **Saxifragaceae**

414 Petals sessile or with very short claws *(410:)* ..... **Saxifragaceae**
414: Petals with slender claws ..... **Malpighiaceae**

415 Leaves petiolate *(407:)* ..... **Cunoniaceae**
415: Leaves sessile ..... **Saxifragaceae**

416 Flowers with 1 or more long spurs *(91:)* ..... **Ranunculaceae**
416: Flowers lacking spurs 417

417 Sepals 2 *(416:)* 418
417: Sepals more than 2, or whole perianth petaloid or sepaloid 419

418 Style short or absent; stigmas usually confluent *(417)* ..... **Papaveraceae**
418: Styles several, free, or style 1 with several free stigmas ..... **Portulacaceae**

419 Ovary superior *(417:)* 420
419: Ovary inferior 440

420 Aquatic herbs with floating or submerged leaves *(419)* ..... **Nymphaeaceae**
420: Herbs (not aquatic), shrubs, or trees 421

421 Leaves alternate *(420:)* 422
421: Leaves opposite or verticillate 436

422 Climbers *(421)* 423
422: Non-climbers 425

423 Tendril climbers *(422)* ..... **Passifloraceae**
423: Not tendril climbers 424

424 Branches spiny *(423:)* ..... **Cactaceae**
424: Branches not spiny ..... **Menispermaceae**

425 One perfect stamen (much longer than the others) and usually 4 or more imperfect stamens *(422:)* ..... **Anacardiaceae**
425: Perfect stamens 5 or more 426

426 Leaves simple or absent *(425:)* 427
426: Leaves compound 435

427 Flowers perigynous *(426)* 428
427: Flowers hypogynous 429

428 Stamens hypogynous or inserted low in hypanthium *(427)* ..... **Lythraceae**
428: Stamens inserted on rim of hypanthium ..... **Rosaceae**

429 Herbs *(427:)* 430
429: Shrubs or trees 431

430 Ovary open at top, with sessile stigmas *(429)* ..... **Resedaceae**
430: Ovary closed; style present ..... **Amaranthaceae**

431 Stamens 6–9 *(429:)* 432
431: Stamens 10 or numerous 433

432 Plants spiny *(431)* ..... **Berberidaceae**
432: Plants without spines ..... **Flacourtiaceae**

433 Perianth segments 3 + 3 + 3; styles numerous *(431:)* ..... **Magnoliaceae**
433: Sepals 5 or more; styles or stigmas 5 or fewer 434

434 Bracteoles present, merging into sepals *(433:)* ..... **Theaceae**
434: Bracteoles absent or small ..... **Flacourtiaceae**

435 Stamens 6 *(426:)* ..... **Berberidaceae**
435: Stamens 10 ..... **Mimosaceae**

436 Leaves compound, with 3 leaflets (each pair looking like a whorl of 6 leaves) *(421:)* ..... **Cunoniaceae**
436: Leaves simple 437

437 Ovary 10–15-locular *(436:)* ..... **Sonneratiaceae**
437: Ovary 3–6-locular 438

438 Leaves with 5–7 conspicuous longitudinal veins *(437:)* ..... **Melastomataceae**
438: Midrib the only conspicuous longitudinal vein 439

439 Stamens inserted on the hypanthium; anthers opening longitudinally *(438:)* **Lythraceae**
439: Stamens at base of hypanthium; anthers opening by terminal pores ..... **Melastomataceae**

440 Aquatic herbs *(419:)* ..... **Nymphaeaceae**
440: Herbs (not aquatic), shrubs, or trees 441

441 Leaves absent, their function taken over by fleshy photosynthetic stems *(440:)* ..... **Cactaceae**
441: Leaves present 442

442 Leaves alternate or clustered *(441:)* 443
442: Leaves opposite 452

443 Branches spiny *(442)* 444
443: Branches without spines 445

444 Plants fleshy, leafless *(443)* ..... **Cactaceae**
444: Plants woody, with leaves ..... **Punicaceae**

445 Plants parasitic (mistletoes) *(443:)* ..... **Loranthaceae**
445: Plants not parasitic 446

446 Leaves fleshy *(445:)* ..... **Aizoaceae**
446: Leaves not fleshy 447

447 Leaves palmate *(446:)* ..... **Araliaceae**
447: Leaves simple 448

448 Stamens (plus staminodes if present) indefinite *(447:)* 449
448: Stamens less than 10 450

449 Style 1; stigma 1 *(448)* ..... **Punicaceae**
449: Stigmas indefinite, sessile on flat surface of ovary ..... **Eupomatiaceae**

450 Stigma 1, sessile *(448:)* ..... **Combretaceae**
450: Distinct style or styles present 451

451 Style 1; stigmas 2 *(450:)* ..... **Alangiaceae**
451: Styles or stigmas 3–5 ..... **Flacourtiaceae**

452 Leaves fleshy; stigmas 5 *(442:)* ..... **Aizoaceae**
452: Leaves not fleshy; stigmas 1 or 2 453

453 Petals absent *(452:)* 454
453: Petals present 455

454 Leaves gland-dotted *(453)* ..... **Myrtaceae**
454: Leaves not gland-dotted ..... **Sonneratiaceae**

455 Leaves with 5–7 conspicuous longitudinal veins *(453:)* ..... **Melastomataceae**
455: Midrib the only conspicuous longitudinal vein 456

456 Sepals and petals each numerous *(455:)* ..... **Rhizophoraceae**
456: Sepals and petals each less than 10 457

457 Stamens 20 or more *(456:)* ..... **Punicaceae**
457: Stamens less than 20 458

458 Ovary 1-locular, with c. 10 ovules *(457:)* ..... **Combretaceae**
458: Ovary 2–5-locular, with 1 or 2 ovules per loculus ..... **Rhizophoraceae**

459 Flowers unisexual *(11:)* 460
459: Flowers mostly bisexual 473

460 Leaves opposite *(459)* 461
460: Leaves alternate 464

461 Ovary inferior *(460)* ..... **Rubiaceae**
461: Ovary superior 462

462 Gynoecium apocarpous *(461:)* ..... **Monimiaceae**
462: Gynoecium syncarpous or carpel 1 463

463 Fruit a berry *(462:)* ..... **Theaceae**
463: Fruit of 1–4 nutlets ..... **Lamiaceae**

464 Perianth segments in 1 whorl *(460:)* 465
464: Perianth segments in 2 whorls 467

465 Ovary inferior *(464)* ..... **Araliaceae**
465: Ovary superior 466

466 Stamens 6 or more in regular series around a disc-like axis; perianth shallow, cup-shaped, entire to slightly lobed *(465:)* ..... **Gyrostemonaceae**
466: Stamens 1–many, not arranged as above; sepals evidently lobed ..... **Euphorbiaceae**

467 Sepals 4; petals 4 *(464:)* 468
467: Sepals and petals each 5 or more 469

468 Climbers *(467)* ..... **Menispermaceae**
468: Non-climbers ..... **Ebenaceae**

469 Ovary superior *(467:)* 470
469: Ovary inferior 472

470 Stamens usually 10 in male flowers *(469)* ..... **Ebenaceae**
470: Stamens 5 in male flowers 471

471 Fruit a capsule *(470:)* ..... **Solanaceae**
471: Fruit a nut or drupe ..... **Olacaceae**

472 Placentation parietal *(469:)* ..... **Cucurbitaceae**
472: Placentation axile ..... **Campanulaceae**

473 Ovary superior *(459:)* 474
473: Ovary inferior or half-inferior 660

474 Fertile stamens 2–4 (sometimes with additional staminodes) *(473)* 475
474: Fertile stamens 5 or more (sometimes with additional staminodes) 477

475 Stamens 3 or 4 *(474)* 476
475: Stamens 2 478

476 Stamens 3 *(475)* ..... **Olacaceae**
476: Stamens 4 (sometimes with additional staminodes) 498

477 Stamens 5 *(474:)* 556
477: Stamens more than 5 642

478 Ovary divided into (usually 4) free or nearly free segments *(475:)* ..... **Lamiaceae**
478: Ovary entire or slightly lobed 479

479 Flowers actinomorphic *(478:)* 480
479: Flowers zygomorphic (sometimes only slightly so) 489

480 Leaves compound *(479)* 481
480: Leaves simple or absent 482

481 Sepals 4 *(480)* ..... **Oleaceae**
481: Sepals 5 ..... **Verbenaceae**

482 Corolla lobes 4 *(480:)* ..... **Oleaceae**
482: Corolla lobes 5 or more 483

483 Corolla lobes more than 5 *(482:)* ..... **Oleaceae**
483: Corolla lobes 5 484

484 Herbs *(483:)* ..... **Scrophulariaceae**
484: Shrubs, undershrubs or climbers 485

485 Climbers *(484:)* ..... **Oleaceae**
485: Shrubs or undershrubs 486

486 Flowers in long terminal spikes *(485:)* ..... **Verbenaceae**
486: Flowers not in spikes 487

487 Style deeply divided into 2 branches *(486:)* ..... **Verbenaceae**
487: Style minutely notched at top 488

488 Corolla lobes 4 *(487:)* ..... **Oleaceae**
488: Corolla lobes 5 ..... **Verbenaceae**

489 Bracteoles enclosing calyx *(479:)* ..... **Acanthaceae**
489: Bracteoles absent or small 490

490 Calyx divided into 2 lobes or segments *(489:)* 491
490: Calyx divided into more than 2 lobes or segments 492

491 Leaves opposite *(490)* ..... **Verbenaceae**
491: Leaves, if present, alternate or radical ..... **Lentibulariaceae**

492 Leaves radical or alternate *(490:)* 493
492: Leaves opposite 494

493 Ovary 1-locular; placentation parietal *(492)* ..... **Gesneriaceae**
493: Ovary 2-locular; placentation axile ..... **Solanaceae**

494 Leaves with viscid hairs *(492:)* 495
494: Leaves glabrous or hairs, if present, not viscid 496

495 Annual or perennial herbs *(494)* ..... **Pedaliaceae**

495: Shrubs or subshrubs ..... **Verbenaceae**

496 Ovary 1-locular *(494:)* ..... **Gesneriaceae**

496: Ovary 2- or more-locular 497

497 Seeds flattened, 2 or 4, or up to 20 per capsule, seated on distinct hooks which persist after seed dispersal; in dried specimens (except *Acanthus*) all green parts with cystoliths (raised white streaks or dots) visible under 10× magnification *(496:)*..... **Acanthaceae**

497: Seeds not flattened, numerous, not seated on distinct hooks; cystoliths lacking .... **Scrophulariaceae**

498 Ovary apocarpous *(476:)* ..... **Monimiaceae**

498: Ovary syncarpous or carpel 1 499

499 Flowers actinomorphic or nearly so *(498:)* 500

499: Flowers zygomorphic 533

500 Leaves opposite, verticillate or radical *(499)* 501

500: Leaves alternate or absent in mature plants 503

501 Leaves radical *(500)* 502

501: Leaves opposite or verticillate 516

502 Sepals 4, free; petals 4, united *(501)* ..... **Plantaginaceae**

502: Sepals 5, free; petals 5, united ..... **Acanthaceae**

503 Leaves alternate, bipinnate *(500:)* ..... **Mimosaceae**

503: Leaves alternate or absent in mature plant, not bipinnate..... 504

504 Corolla lobes 3 *(503:)*..... **Polygalaceae**

504: Corolla lobes 4 or 5 505

505 Corolla lobes 4 *(504:)* 506

505: Corolla lobes 5 511

506 Stamens alternating with corolla lobes *(505)*..... 507

506: Stamens opposite corolla lobes 510

507 Prostrate or erect plants, not twining *(506)* 508

507: Twining plants..... 509

508 Prostrate annuals *(507)*..... **Boraginaceae**

508: Erect perennials..... **Solanaceae**

509 Leaves absent *(507:)*..... **Cuscutaceae**

509: Leaves present..... **Cardiopteridaceae**

510 Ovary 1-locular with several ovules *(506:)* ..... **Myrsinaceae**

510: Ovary 2-locular with 1 ovule per loculus ..... **Sapotaceae**

511 Leaves absent *(505:)*..... **Cuscutaceae**

511: Leaves present..... 512

512 Leaves with viscid hairs *(511:)* 513
512: Leaves glabrous or hairs, if present, not viscid 514

513 Seeds endospermic *(512)* ..... **Solanaceae**
513: Seeds non-endospermic ..... **Pedaliaceae**

514 Anthers connivent around the style *(512:)* ..... **Solanaceae**
514: Anthers not connivent 515

515 Fruit a drupe *(514:)* ..... **Myoporaceae**
515: Fruit a capsule or berry ..... **Solanaceae**

516 Ovary divided into (usually 4) separate segments *(501:)* 517
516: Ovary entire or lobed 518

517 Style terminal *(516)* ..... **Verbenaceae**
517: Style gynobasic, rarely terminal ..... **Lamiaceae**

518 Sepals 4 *(516:)* 519
518: Sepals 5 or more, or calyx 2-lipped or truncate 526

519 Ovary 1-locular, with 2 parietal placentas *(518)* ..... **Gentianaceae**
519: Ovary 2- or 4-locular 520

520 Ovary 4-locular *(519:)* ..... **Verbenaceae**
520: Ovary 2-locular 521

521 Shrubs or trees *(520:)* 522
521: Herbs 523

522 Staminode present in addition to fertile stamens (flowers bisexual) *(521)* ..... **Verbenaceae**
522: Staminodes absent (except in female flowers of dioecious species) ..... **Loganiaceae**

523 Leaves in whorls, usually of 3 *(521:)* ..... **Scrophulariaceae**
523: Leaves opposite 524

524 Ovary half-inferior *(523:)* ..... **Rubiaceae**
524: Ovary quite superior 525

525 Capsule circumscissile *(524:)* ..... **Plantaginaceae**
525: Capsule septicidal ..... **Loganiaceae**

526 Corolla 4-lobed *(518:)* ..... **Verbenaceae**
526: Corolla 5-lobed 527

527 Leaves compound *(526:)* 528
527: Leaves simple or absent 529

528 Seeds winged *(527)* ..... **Bignoniaceae**
528: Seeds unwinged ..... **Verbenaceae**

529 Bracteoles large, ±enclosing calyx *(527:)* ..... **Acanthaceae**
529: Bracteoles absent or not enclosing calyx 530

530 Placentas parietal *(529:)* ..... **Gesneriaceae**
530: Placentas axile 531

531 Ovary 4-locular, with 1 ovule per loculus *(530:)* ..... **Verbenaceae**
531: Ovary 2-locular 532

532 Herbs or small shrubs; ovary with several ovules per loculus *(531:)* ..... **Scrophulariaceae**
532: Trees; ovary with numerous ovules per loculus ..... **Bignoniaceae**

533 Leaves varying in type on one plant *(499:)* 534
533: Leaves all of one type, either simple, compound or reduced to scales 536

534 Leaves mostly in whorls of 3 *(533)* ..... **Bignoniaceae**
534: Leaves opposite, the upper ones sometimes becoming alternate 535

535 Upper leaves simple, lower leaves compound; ovary 2- or 4-locular with 1–many ovules per loculus *(534:)* ..... **Pedaliaceae**
535: Leaves very variable, simple or with 3–5 leaflets; ovary 2-locular with 2 ovules per loculus ..... **Verbenaceae**

536 Leaves all simple or reduced to scales *(533:)* 537
536: Leaves all compound 554

537 Leaves reduced to scales; plants without chlorophyll *(536)* ..... **Orobanchaceae**
537: Leaves not reduced to scales; plants green 538

538 Leaves all radical or all alternate *(537:)* 539
538: Leaves at least in part opposite or verticillate 545

539 Leaves radical *(538)* ..... **Scrophulariaceae**
539: Leaves all alternate 540

540 Calyx of 3 outer and 2 inner sepals, all free; petals 3, united *(539:)* ..... **Polygalaceae**
540: Calyx of 5 free or united sepals in 1 whorl; petals 5, united 541

541 Ovary 4-locular *(540:)* ..... **Myoporaceae**
541: Ovary 2-locular 542

542 Herbs (sometimes climbing) *(541:)* 543
542: Shrubs or small trees 544

543 Corolla actinomorphic or nearly so, usually spreading *(542)* ..... **Solanaceae**
543: Corolla 2-lipped ..... **Scrophulariaceae**

544 Stigmas 2; fruit a capsule or berry *(542:)* ..... **Solanaceae**
544: Stigma 1; fruit a drupe ..... **Myoporaceae**

545 Lower leaves opposite; upper leaves alternate *(538:)* 546
545: Leaves all opposite or verticillate 547

546 Ovary 2-locular *(545)* ..... **Scrophulariaceae**
546: Ovary 4-locular ..... **Pedaliaceae**

547 Ovary divided into 4 nearly separate segments at maturity *(545:)* ..... **Lamiaceae**
547: Ovary simple or lobed 548

548 Ovary 4- or 8-locular *(547:)* 549
548: Ovary 1- or 2-locular 550

549 Ovary 4-locular with 1 ovule per loculus *(548)* ..... **Verbenaceae**
549: Ovary 8-locular with 1 ovule per loculus ..... **Pedaliaceae**

550 Ovary 1-locular; ovules numerous *(548:)* ..... **Gesneriaceae**
550: Ovary 2-locular; ovules 1–numerous 551

551 Seeds seated on distinct hooks which .....persist after seed dispersal; in dried specimens (except *Acanthus*) all green parts with cystoliths .... (raised white streaks or dots) visible under 10× magnification *(550:)* ..... **Acanthaceae**
551: Seeds not seated on hooks; cystoliths absent 552

552 Ovules 1 or 2 per loculus; undershrubs, shrubs or woody vines, rarely trees *(551:)* .... **Verbenaceae**
552: Ovules 2 or more per loculus; herbs, shrubs or trees 553

553 Herbs or small shrubs; ovules 2 or more per loculus; seeds winged or unwinged *(552:)* ..... **Scrophulariaceae**
553: Small or large trees; ovules numerous; seeds with papery wings..... **Bignoniaceae**

554 Climbers, usually woody *(536:)* ..... **Bignoniaceae**
554: Shrubs or trees 555

555 Fifth stamen represented by a staminode; seeds with papery wings *(554:)* **Bignoniaceae**
555: Fifth stamen absent; seeds unwinged ..... **Verbenaceae**

556 Latex present *(477)* 557
556: Latex absent 565

557 Leaves opposite, verticillate or absent *(556)* 558
557: Leaves alternate 560

558 Leaves absent *(557)* ..... **Asclepiadaceae**
558: Leaves opposite or verticillate 559

559 Stamens lacking a coronal appendage; pollen grains single *(558:)* ..... **Apocynaceae**
559: Stamens mostly with a coronal appendage; pollen grains cohering in tetrads or pollinia ..... **Asclepiadaceae**

560 Twiners *(557:)* 561
560: Non-twiners 562

561 Fruits winged *(560)* ..... **Cardiopteridaceae**
561: Fruits not winged ..... **Convolvulaceae**

562 Flowers zygomorphic *(560:)* ..... **Campanulaceae**
562: Flowers actinomorphic 563

563 Anthers connivent around or above stigma *(562:)* ..... **Apocynaceae**
563: Anthers free 564

564 Stamens alternating with lobes or angles of corolla *(563:)* ..... **Convolvulaceae**
564: Stamens opposite corolla lobes ..... **Sapotaceae**

565 Leafless parasites *(556:)* ..... **Cuscutaceae**
565: Leafy plants 566

566 Gynoecium apocarpous or divided into 2 or more free segments *(565:)* 567
566: Gynoecium syncarpous, the ovary entire or lobed, or carpel 1 572

567 Leaves opposite, verticillate or absent *(566)* 568
567: Leaves alternate or radical 570

568 Leaves absent *(567)* ..... **Asclepiadaceae**
568: Leaves opposite or verticillate 569

569 Perianth segments (calyx plus corolla) 10 or fewer *(568:)* ..... **Apocynaceae**
569: Perianth segments c. 15 ..... **Monimiaceae**

570 Inflorescence a monochasial cyme, uncoiling as the flowers open *(567:)* .... **Boraginaceae**
570: Inflorescence not as above 571

571 Plants slender, creeping perennials, rooting at nodes *(570:)* ..... **Convolvulaceae**
571: Plants ±erect ..... **Boraginaceae**

572 Leaves alternate, in alternate pairs, or clustered *(566:)* 573
572: Leaves verticillate or opposite 575

573 Leaves compound *(572)* 574
573: Leaves simple 595

574 Leaves stipulate *(573)* ..... **Mimosaceae**
574: Leaves exstipulate ..... **Leeaceae**

575 Leaves verticillate *(572:)* 576
575: Leaves opposite 577

576 Shrubs or trees *(575)* ..... **Apocynaceae**
576: Floating herbs ..... **Droseraceae**

577 Flowers actinomorphic *(575:)* 578
577: Flowers zygomorphic 593

578 Leaves compound *(577)* ..... **Bignoniaceae**
578: Leaves simple 579

579 Style 1 with 5–many branches, or styles 5 *(578:)* 580
579: Style 1 with 1–4 stigmas or branches 581

580 Styles or style branches 5 *(579)* ..... **Plumbaginaceae**
580: Style 1, apex divided into many minute stigmatic branches ..... **Nyctaginaceae**

581 Style 1 with 3 or 4 branches *(579:)* 582
581: Style 1 with 1 or 2 stigmas 583

582 Style with 4 branches *(581)* ..... **Polemoniaceae**
582: Style with 3 branches 592

583 Inflorescence a monochasial cyme *(581:)* ..... **Boraginaceae**
583: Inflorescence not a monochasial cyme 584

584 Anthers cohering about style *(583:)* 585
584: Anthers quite free 587

585 Herbs *(584)* ..... **Caryophyllaceae**
585: Shrubs 586

586 Leaves opposite *(585:)* ..... **Apocynaceae**
586: Leaves alternate ..... **Solanaceae**

587 Stamens alternating with corolla lobes *(584:)* 588
587: Stamens opposite corolla lobes ..... **Primulaceae**

588 Ovary l-locular *(587)* 589
588: Ovary 2- or 4-locular 590

589 Stipules small, scarious *(588)* ..... **Caryophyllaceae**
589: Stipules absent ..... **Gentianaceae**

590 Plants (including the inflorescence) densely covered with cottony or woolly hairs *(588:)* ..... **Verbenaceae**
590: Not as above 591

591 Leaves all opposite, usually stipulate *(590)* ..... **Loganiaceae**
591: Leaves on non-flowering parts alternate, exstipulate ..... **Solanaceae**

592 Stamens free from corolla *(582:)* ..... **Frankeniaceae**
592: Stamens epipetalous ..... **Polemoniaceae**

593 Leaves compound *(577:)* ..... **Bignoniaceae**
593: Leaves simple 594

594 Ovary 4- or occasionally 2-locular *(593:)* ..... **Verbenaceae**
594: Ovary l-locular; leaves with viscid hairs ..... **Pedaliaceae**

595 Petals 3 *(573:)* ..... **Polygalaceae**
595: Petals 4 or 5 596

596 Style with indusium (pollen cup surrounding stigma) *(595:)* 597
596: No indusium present 598

597 Corolla actinomorphic or nearly so *(596)* ..... **Brunoniaceae**
597: Corolla zygomorphic, usually split down one side ..... **Goodeniaceae**

598 Flowers zygomorphic *(596:)* 599
598: Flowers actinomorphic 600

599 Flowers only slightly zygomorphic; seeds numerous in a berry or capsule *(598)* ..... **Solanaceae**
599: Flowers distinctly zygomorphic; seeds 1 or 2 in 2 or 4 distinct nutlets ..... **Boraginaceae**

600 Stamens completely free from petals *(598:)* 601
600: Stamens attached to petals, sometimes only slightly so at base 610

601 Stigmas 3–5 *(600)* 602
601: Stigmas 1 or 2 603

602 Ovary 3–5-locular; fruit of 3–5 nutlets *(601)* ..... **Stackhousiaceae**
602: Ovary of 5 carpels but unilocular; fruit a single nut..... **Plumbaginaceae**

603 Stamens opposite corolla lobes *(601:)*..... 604
603: Stamens alternating with corolla lobes 606

604 Nectar-secreting disc conspicuous, embedding base of ovary *(603)* ..... **Olacaceae**
604: Nectar-secreting disc absent..... 605

605 Ovary 1-locular with several ovules *(604:)* ..... **Myrsinaceae**
605: Ovary 2- or more-locular with 1 ovule per loculus ..... **Sapotaceae**

606 Herbs *(603:)*..... 607
606: Trees, shrubs, climbers, or twiners..... 608

607 Leaves with glandular hairs; corolla segments only united in short ring at the base *(606)* ..... **Byblidaceae**
607: Leaves not as above; corolla segments cohering to form a tube, but free at the base .... **Stackhousiaceae**

608 Calyx covered at base with usually numerous imbricate sepaloid bracteoles *(606:)*..... ..... **Epacridaceae**
608: Bracteoles absent, or not covering base of calyx 609

609 Anthers versatile; ovules 1 or 2 in ovary *(608:)* ..... **Olacaceae**
609: Anthers not versatile; ovules more than 2 in ovary ..... **Pittosporaceae**

610 Stamens almost free from but usually detached with petals *(600:)* ..... **Pittosporaceae**
610: Stamens distinctly epipetalous, though sometimes attached near the base of corolla tube..... 611

611 Inflorescence a monochasial cyme *(610:)*..... 612
611: Inflorescence not a monochasial cyme 614

612 Styles 2, free *(611)* ..... **Hydrophyllaceae**
612: Style 1, with 1 or more stigmas..... 613

613 Fruit a capsule or berry *(612:)* ..... **Solanaceae**
613: Fruit a drupe or divided into nutlets..... **Boraginaceae**

614 Style 1 *(611:)* 615
614: Styles 2–5 619

615 Stigmas 3–8 *(614)* 616
615: Stigmas 1 or 2, or stigma sessile 620

616 Stigmas 5–8 *(615)* 617
616: Stigmas 3 or 4 618

617 Stigmas 5 *(616)* ..... **Plumbaginaceae**
617: Stigmas 6–8 ..... **Convolvulaceae**

618 Stigmas 3 *(616:)* ..... **Polemoniaceae**
618: Stigmas 4 639

619 Styles 5, free *(614:)* ..... **Plumbaginaceae**
619: Styles 2, free 640

620 Stamens opposite corolla lobes *(615:)* 621
620: Stamens alternating with corolla lobes 623

621 Herbs *(620)* ..... **Primulaceae**
621: Shrubs or trees 622

622 Ovary l-locular, with central placenta *(621:)* ..... **Myrsinaceae**
622: Ovary 2- or more-locular ..... **Sapotaceae**

623 Leaves simple or absent from mature plant *(620:)* 624
623: Leaves compound 637

624 Herbs, growing in marshes or in water *(623)* ..... **Menyanthaceae**
624: Herbs (not aquatic), shrubs or trees, sometimes climbers 625

625 Base of calyx ±covered by imbricate bracts and bracteoles; bracteoles sometimes only 2 *(624:)* ..... **Epacridaceae**
625: Bracteoles absent, or not covering base of calyx 626

626 Climbers, twiners, or prostrate plants *(625:)* 627
626: Plants ±erect 628

627 Anthers connivent in cone around style, dehiscing by pores or slits; ovary 2-locular, usually with many ovules *(626)* ..... **Solanaceae**
627: Anthers not connivent; ovary 1- or 2-locular; ovules 2 or 4 per loculus **Convolvulaceae**

628 Herbs (sometimes coarse), usually annual *(626:)* 629
628: Shrubs or small trees 630

629 Ovules 2 or more per loculus *(628)* ..... **Solanaceae**
629: Ovules 1 per loculus ..... **Boraginaceae**

630 Ovary 1–3-locular *(628:)* 631
630: Ovary 4- or 5-locular 635

631 Ovary l-locular *(630)* ..... **Monimiaceae**
631: Ovary 2- or 3-locular 632

632 Ovary 3-locular *(631:)* ..... **Solanaceae**
632: Ovary 2-locular 633

633 Ovules 1 or 2 per locule *(632:)* 634
633: Ovules more than 2 per loculus ..... **Solanaceae**

634 Ovules 1 per loculus *(633)* ..... **Myoporaceae**
634: Ovules 2 per loculus ..... **Boraginaceae**

635 Ovary usually 5-locular *(630:)* ..... **Epacridaceae**
635: Ovary 4-locular 636

636 Fruit a drupe or nut; ovules 1 per loculus *(635:)* ..... **Boraginaceae**
636: Fruit a berry or capsule; ovules usually more than 1 per loculus ..... **Solanaceae**

637 Tendril climbers *(623:)* ..... **Polemoniaceae**
637: Not tendril climbers but sometimes twiners 638

638 Leaves palmate *(637:)* ..... **Convolvulaceae**
638: Leaves pinnate ..... **Solanaceae**

639 Usually annuals, with slender creeping or trailing stems; ovary 2-locular *(618:)* ..... **Convolvulaceae**
639: Tall shrubs or trees; ovary 4-locular ..... **Boraginaceae**

640 Each of the 2 styles divided into 2 branches *(619:)* ..... **Convolvulaceae**
640: Each style simple 641

641 Ovary 2-locular, with numerous ovules *(640:)* ..... **Hydrophyllaceae**
641: Ovary 2-locular, with 2 ovules per loculus ..... **Convolvulaceae**

642 Latex present *(477:)* ..... **Sapotaceae**
642: Latex absent 643

643 Leaves pinnatisect or compound *(642:)* 644
643: Leaves simple or reduced to phyllodes 648

644 Leaves pinnatisect *(643)* ..... **Ranunculaceae**
644: Leaves compound 645

645 Leaves bipinnate *(644:)* ..... **Mimosaceae**
645: Leaves pinnate or 3-foliolate 646

646 Gynoecium apocarpous *(645:)* ..... **Crassulaceae**
646: Gynoecium syncarpous or carpel 1 647

647 Style l; ovary l-locular *(646:)* ..... **Mimosaceae**
647: Styles 3–5; ovary 3–5-locular ..... **Oxalidaceae**

648 Gynoecium apocarpous *(643:)* 649
648: Gynoecium syncarpous or carpel 1 650

649 Style 1 *(648)* ..... **Rutaceae**
649: Styles as many as carpels ..... **Crassulaceae**

650 Perfect stamens alternating with staminodes (sometimes scale-like) *(648:)* ..... **Sapotaceae**
650: Stamens all perfect 651

651 Stamens 10 or fewer *(650:)* 652
651: Stamens indefinite 656

652 Style 1, the apex divided into many minute stigmatic branches *(651)* **Nyctaginaceae**
652: Styles or stigmas 5 or fewer, apex not as above 653

653 Stamens united *(652:)* ..... **Polygalaceae**
653: Stamens free 654

654 Stamens free from corolla, hypogynous *(653:)* ..... **Ericaceae**
654: Stamens epipetalous 655

655 Style and stigma 1 *(654:)* ..... **Solanaceae**
655: Styles or stigmas 2 or more ..... **Ebenaceae**

656 Ovary of 1 carpel, 1-locular; style and stigma 1 *(651:)* ..... **Mimosaceae**
656: Ovary syncarpous, mostly 3–5-locular; styles or stigmas 2 or more 657

657 Pedicel with a pair of bracts *(656:)* ..... **Theaceae**
657: Pedicel lacking bracts ..... **Actinidiaceae**

658 Leaves opposite or verticillate *(473:)* 659
658: Leaves alternate, radical, or absent 675

659 Petals 4 *(658)* 660
659: Petals 5 or more 663

660 Leaves compound *(659)* ..... **Caprifoliaceae**
660: Leaves simple 661

661 Stamens epipetalous *(660:)* ..... **Rubiaceae**
661: Stamens free from petals 662

662 Ovary l-locular *(661:)* ..... **Grossulariaceae**
662: Ovary 2–5-locular ..... **Campanulaceae**

663 Petals 5 *(659:)* 664
663: Petals more than 5 673

664 Stamen 1 *(663)* ..... **Valerianaceae**
664: Stamens 4 or 5 665

665 Stamens 4 *(664:)* 666
665: Stamens 5 668

666 Flowers in heads surrounded by involucre of bracts *(665)* ..... **Dipsacaceae**
666: Flowers not in heads 667

667 Herbs *(666:)* ..... **Gesneriaceae**
667: Shrubs ..... **Caprifoliaceae**

668 Plants parasitic (mistletoes) *(665:)* ..... **Loranthaceae**
668: Plants not parasitic 669

669 Stamens free from petals *(668:)* 670
669: Stamens epipetalous 671

670 Style expanded into an indusium *(669)* ..... **Goodeniaceae**
670: Style without indusium ..... **Campanulaceae**

671 Flowers zygomorphic *(669:)* ..... **Caprifoliaceae**
671: Flowers actinomorphic 672

672 Leaves stipulate *(671:)* ..... **Rubiaceae**
672: Leaves exstipulate ..... **Caprifoliaceae**

673 Styles or stigmas 3 or 5 *(663:)* ..... **Rubiaceae**
673: Style 1; stigmas 1 or 2 674

674 Plants parasitic (mistletoes) *(673:)* ..... **Loranthaceae**
674: Plants not parasitic ..... **Rubiaceae**

675 Plants parasitic (mistletoes) *(658:)* ..... **Loranthaceae**
675: Plants not parasitic 676

676 Stamens 2–4 *(675:)* 677
676: Stamens 5 or more 679

677 Stamens 2; gynandrous *(676)* ..... **Stylidiaceae**
677: Stamens 3 or 4 678

678 Stamens 3 *(677:)* ..... **Cucurbitaceae**
678: Stamens 4 ..... **Campanulaceae**

679 Stamens 5 *(676:)* 680
679: Stamens more than 5 689

680 Style expanded into an indusium *(679)* ..... **Goodeniaceae**
680: Style without indusium 681

681 Flowers zygomorphic, corolla tube usually split down one side *(680:)* **Campanulaceae**
681: Flowers actinomorphic 682

682 Prostrate plants or climbers; tendrils large *(681:)* ..... **Cucurbitaceae**
682: Non-climbers; tendrils absent 683

683 Stamens alternating with corolla lobes *(682:)* 684
683: Stamens opposite corolla lobes 687

684 Ovary l-locular *(683)* ..... **Menyanthaceae**
684: Ovary 2- or more-locular 685

685 Stems ±succulent, hollow; flowers in dense spikes *(684:)* ..... **Sphenocleaceae**
685: Stems not succulent, solid; flowers racemose or axillary 686

686 Fruit a capsule *(685:)* ..... **Campanulaceae**
686: Fruit a berry ..... **Epacridaceae**

687 Herbs *(683:)* ..... **Primulaceae**
687: Trees or climbers 688

688 Trees or climbers; stigma 1 *(687:)* ..... **Myrsinaceae**
688: Trees; stigmas 3 ..... **Alangiaceae**

689 Stamens 6 *(679:)* ..... **Alangiaceae**
689: Stamens 10 or more 690

690 Stamens 10 *(689:)* ..... **Ericaceae**
690: Stamens numerous 691

691 Leaves, if present, caducous *(690:)* ..... **Cactaceae**
691: Leaves persistent 692

692 Leaves gland-dotted *(691:)* ..... **Myrtaceae**
692: Leaves not gland-dotted ..... **Symplocaceae**

693 Flowers unisexual *(10:)* 694
693: Flowers mostly bisexual 777

694 Leafless stem parasite embedded in host; only the flowers emergent *(693)* ..... **Rafflesiaceae**
694: Not an embedded parasite (though sometimes leafless) 695

695 Leaves or scales in whorls of 3 or more *(694:)* 696
695: Leaves or scales alternate, opposite, or absent 698

696 Shrubs or trees *(695)* ..... **Casuarinaceae**
696: Aquatic herbs 697

697 Ovary inferior *(696:)* ..... **Haloragaceae**
697: Ovary superior ..... **Ceratophyllaceae**

698 Latex present *(695:)* 699
698: Latex absent 701

699 Separate male and female flowers inside pear-shaped receptacle which opens by narrow aperture at top *(698)* ..... **Moraceae**
699: Not as above 700

700 Leaves stipulate; ovary 1-locular with 1 ovule *(699:)* ..... **Moraceae**
700: Leaves exstipulate; ovary 2- or more-locular ..... **Euphorbiaceae**

701 Perianth segments 2 or 3 *(698:)* 702
701: Perianth segments 4 or more, or perianth obscurely lobed or truncate 717

702 Perianth segments 2 *(701)* 703
702: Perianth segments 3 708

703 Ovary superior *(702)* 704
703: Ovary inferior 707

704 Climbers *(703)* ..... **Menispermaceae**
704: Non-climbers 705

705 Ovary 2- or 3-locular; styles 2 or 3 *(704:)* ..... **Euphorbiaceae**
705: Ovary l-locular; styles 2 706

706 Leaves stipulate *(705:)* ..... **Urticaceae**
706: Leaves exstipulate ..... **Chenopodiaceae**

707 Flowers minute, in heads, surrounded by an involucre of bracts; style 1 with bifid stigma *(703:)* ..... **Asteraceae**

707: Flowers not in heads, or if in heads, lacking an involucre of bracts; styles 2 (± fused at base) ..... **Gunneraceae**

708 Ovary inferior *(702:)* 709

708: Ovary superior 710

709 Herbs *(708)* ..... **Gunneraceae**

709: Parasitic shrubs (mistletoes) ..... **Viscaceae**

710 Succulent root parasites without chlorophyll, 5–10 cm high with scale-like leaves *(708:)* ..... **Balanophoraceae**

710: Herbs, shrubs, or trees, not parasitic 711

711 Style or stigma 1 *(710:)* 712

711: Styles or style branches 2 or more 715

712 Stigma penicillate *(711)* ..... **Urticaceae**

712: Stigma not penicillate 713

713 Leaves compound *(712:)* ..... **Sapindaceae**

713: Leaves simple 714

714 Leaves with 7–20 primary veins on each side of midrib *(713:)* ..... **Myristicaceae**

714: Midrib the only prominent vein, if any ..... **Santalaceae**

715 Ovary 2- or 3-locular *(711:)* ..... **Euphorbiaceae**

715: Ovary l-locular, with 1 ovule 716

716 Leaves stipulate *(715:)* ..... **Polygonaceae**

716: Leaves exstipulate ..... **Amaranthaceae**

717 Perianth segments 4 *(701:)* 718

717: Perianth segments 5 or more, or perianth obscurely lobed or truncate 742

718 Plants parasitic on roots or stems *(717)* 719

718: Plants not parasitic 720

719 Leafless succulents, parasitic on roots *(718)* ..... **Balanophoraceae**

719: Shrubs parasitic on stems (mistletoes) ..... **Viscaceae**

720 Ovary or gynoecium superior *(718:)* 721

720: Ovary inferior 740

721 Gynoecium apocarpous *(720)* 722

721: Gynoecium syncarpous or carpel 1 725

722 Styles 4, connate *(721)* ..... **Sterculiaceae**

722: Styles free 723

723 Leaves alternate *(722:)* ..... **Phytolaccaceae**

723: Leaves opposite 724

724 Leaves simple *(723:)* ..... **Monimiaceae**
724: Leaves compound ..... **Ranunculaceae**

725 Leaf terminating in a tendril or pitcher provided with a lid *(721:)* ..... **Nepenthaceae**
725: Leaf not terminating in a tendril or pitcher, or leaves absent 726

726 Styles or stigmas penicillate *(725:)* ..... **Urticaceae**
726: Neither styles nor stigmas penicillate 727

727 Styles 1 or 2 *(726:)* 728
727: Styles 3–6 729

728 Styles 2 *(727)* ..... **Ulmaceae**
728: Style 1 730

729 Placentation axile *(727:)* ..... **Euphorbiaceae**
729: Placentation parietal ..... **Flacourtiaceae**

730 Leaves simple or absent *(728:)* 731
730: Leaves compound 739

731 Leaves alternate *(730)* 732
731: Leaves opposite ..... **Urticaceae**

732 Leaves without stinging hairs, or leaves absent *(731)* 733
732: Leaves with stinging hairs ..... **Urticaceae**

733 Stamens 2–4 in male flowers *(732)* 734
733: Stamens 6 or more in male flowers 737

734 Stamens 2 in male flowers *(733)* ..... **Thymelaeaceae**
734: Stamens usually 4 in male flowers 735

735 Leaves not expanded at time of flowering; stigma sessile *(734:)* ..... **Santalaceae**
735: Leaves present at time of flowering 736

736 Leaves stipulate *(735:)* ..... **Urticaceae**
736: Leaves exstipulate ..... **Phytolaccaceae**

737 Stamens 6 in male flowers *(733:)* ..... **Lauraceae**
737: Stamens 10 or numerous in male flowers 738

738 Ovary glabrous *(737:)* ..... **Flacourtiaceae**
738: Ovary with hooked bristles ..... **Phytolaccaceae**

739 Leaves stipulate *(730:)* ..... **Rosaceae**
739: Leaves exstipulate ..... **Sapindaceae**

740 Herbs *(720:)* ..... **Haloragaceae**
740: Shrubs or trees 741

741 Fruit a nut *(740:)* ..... **Fagaceae**
741: Fruit a capsule ..... **Datiscaceae**

742 Ovary or gynoecium superior *(717:)* 743
742: Ovary inferior 772

743 Gynoecium apocarpous *(742)* 744
743: Gynoecium syncarpous or carpel 1 748

744 Leaves opposite *(743)* ..... **Monimiaceae**
744: Leaves alternate 745

745 Perianth segments 6 *(744:)* ..... **Menispermaceae**
745: Perianth segments 5 746

746 Leaves gland-dotted *(745:)* ..... **Rutaceae**
746: Leaves not gland-dotted 747

747 Ovules 1 per carpel *(746:)* ..... **Phytolaccaceae**
747: Ovules 2 or more per carpel ..... **Sterculiaceae**

748 Leaves alternate, radical, or absent *(743:)* 749
748: Leaves opposite 769

749 Climbers *(748)* 750
749: Non-climbers 752

750 Styles 3, free *(749)* ..... **Amaranthaceae**
750: Styles connate or united; stigmas 3 751

751 Stamens 2–5 in male flowers; plants monoecious *(750:)* ..... **Euphorbiaceae**
751: Stamens c. 8 in male flowers; plants usually dioecious ..... **Polygonaceae**

752 Perianth segments 5, or perianth obscurely lobed or truncate *(749:)* 753
752: Perianth segments 6 766

753 Leaves simple or absent *(752)* 754
753: Leaves compound 764

754 Perianth shallow cup-shaped, scarcely lobed; stamens ±sessile *(753)* .... **Gyrostemonaceae**
754: Perianth ±erect, clearly lobed; stamens with filaments 755

755 Styles or stigmas 8 or more *(754:)* ..... **Phytolaccaceae**
755: Styles or stigmas 1–3 (if style 2 or 3, stigmas sometimes 4 or 6, i.e. style bifid) 756

756 Style and stigma 1 *(755:)* 757
756: Styles or stigmas usually 2 or 3 759

757 Ovary 3- or more-locular *(756)* ..... **Sapindaceae**
757: Ovary 1-locular 758

758 Style terminal; ovule 1 *(757:)* ..... **Euphorbiaceae**
758: Style gynobasic; ovules 2 ..... **Surianaceae**

759 Herbs *(756:)* 760
759: Shrubs or trees 761

760 Ovary l-locular *(759)* ..... **Amaranthaceae**
760: Ovary 2- or more-locular ..... **Euphorbiaceae**

761 Ovary 2- or 3-locular *(759:)* ..... **Euphorbiaceae**
761: Ovary l-locular with 1 ovule 762

762 Leaf base sheathing *(761:)* ..... **Polygonaceae**
762: Leaf base not sheathing 763

763 Leaves stipulate *(762:)* ..... **Ulmaceae**
763: Leaves exstipulate ..... **Chenopodiaceae**

764 Herbs *(753:)* ..... **Rosaceae**
764: Shrubs or trees 765

765 Leaves 3-foliolate *(764:)* ..... **Euphorbiaceae**
765: Leaves pinnate ..... **Sapindaceae**

766 Slender creeping perennials *(752:)* ..... **Polygonaceae**
766: Shrubs or trees 767

767 Perianth in 2 whorls each of 3 united segments *(766:)* ..... **Ebenaceae**
767: Perianth segments usually all free 768

768 Perianth segments in 1 series; style 1, entire or shortly lobed *(767:)* ..... **Sapindaceae**
768: Perianth segments usually in 2 series; styles usually 3, simple or divided ..... **Euphorbiaceae**

769 Styles 2 or more *(748:)* ..... **Euphorbiaceae**
769: Style 1, with 1 or 2 stigmas 770

770 Woody climbers *(769:)* ..... **Nyctaginaceae**
770: Shrubs or trees 771

771 Stamens 2 in male flowers *(770:)* ..... **Oleaceae**
771: Stamens more than 2 ..... **Sapindaceae**

772 Leaves compound *(742:)* ..... **Apiaceae**
772: Leaves simple 773

773 Style and stigma 1, or stigma sessile *(772:)* ..... **Combretaceae**
773: Styles and stigmas 2–8 774

774 Styles or stigmas 2 *(773:)* 775
774: Styles or stigmas 3–8 776

775 Fruit indehiscent, 1-seeded (a cypsela) *(774)* ..... **Asteraceae**
775: Fruit 2-locular, breaking at maturity into 2 unicarpellate units (a schizocarp) ... **Apiaceae**

776 Fruit a nut *(774:)* ..... **Fagaceae**
776: Fruit a capsule ..... **Datiscaceae**

777 Latex present *(693:)* 778
777: Latex absent 782

778 Ovary inferior *(777)* 779
778: Ovary superior 781

779 Perianth small, insignificant or absent *(778)* ..... **Moraceae**
779: Perianth ±showy, petaloid 780

780 Perianth strongly zygomorphic *(779:)* ..... **Asteraceae**
780: Perianth ±actinomorphic ..... **Rubiaceae**

781 Flowers unisexual; ovary 3-locular *(778:)* ..... **Euphorbiaceae**
781: Flowers bisexual; ovary 2–many-locular ..... **Papaveraceae**

782 Ovary or gynoecium superior *(777:)* 783
782: Ovary inferior 951

783 Gynoecium apocarpous *(782)* 784
783: Gynoecium syncarpous or carpel 1 802

784 Perianth segments 2 or 4 *(783)* 785
784: Perianth segments 5 or 6 791

785 Perianth segments 2 *(784)* ..... **Winteraceae**
785: Perianth segments 4 786

786 Climbers *(785:)* ..... **Ranunculaceae**
786: Non-climbers 787

787 Herbs *(786:)* 788
787: Shrubs or trees 789

788 Leaves radical *(787)* ..... **Ranunculaceae**
788: Leaves alternate ..... **Phytolaccaceae**

789 Perianth segments united *(787:)* ..... **Sterculiaceae**
789: Perianth segments free 790

790 Leaves stipulate *(789:)* ..... **Magnoliaceae**
790: Leaves exstipulate ..... **Monimiaceae**

791 Perianth segments 5 *(784:)* 792
791: Perianth segments 6 795

792 Leaves gland-dotted *(791)* ..... **Rutaceae**
792: Leaves, if present, not gland-dotted 793

793 Leaves opposite *(792:)* ..... **Cunoniaceae**
793: Leaves alternate, radical or absent 794

794 Leaves all alternate, or absent *(793:)* ..... **Phytolaccaceae**
794: Leaves radical, or radical and alternate ..... **Ranunculaceae**

795 Leaves opposite *(791:)* ..... **Monimiaceae**
795: Leaves alternate or radical 796

796 Leaves mostly radical *(795:)* 797
796: Leaves all alternate 798

797 Leaf pitchers present *(796)* ..... **Cephalotaceae**
797: Leaf pitchers absent ..... **Ranunculaceae**

798 Aquatic herbs with peltate leaves *(796:)* ..... **Cabombaceae**
798: Shrubs, trees or woody climbers 799

799 Woody climbers *(798:)* ..... **Menispermaceae**
799: Shrubs or trees, non-climbers 800

800 Stamens 8 *(799:)* ..... **Phytolaccaceae**
800: Stamens indefinite 801

801 Leaves distichous; receptacle short *(800:)* ..... **Annonaceae**
801: Leaves not distichous; receptacle elongated ..... **Magnoliaceae**

802 Perianth segments 1–3 *(783:)* 803
802: Perianth segments 4–6 812

803 Perianth segment 1 *(802)* ..... **Caryophyllaceae**
803: Perianth segments 2 or 3 804

804 Perianth segments 2 *(803:)* 805
804: Perianth segments 3 807

805 Stamens 5 or fewer *(804)* ..... **Chenopodiaceae**
805: Stamens numerous 806

806 Herbs or small shrubs *(805:)* ..... **Papaveraceae**
806: Trees ..... **Winteraceae**

807 Leaves alternate or absent *(804:)* 808
807: Leaves opposite or verticillate 811

808 Leaves absent *(807)* ..... **Chenopodiaceae**
808: Leaves alternate 809

809 Styles 2 or 3 *(808:)* ..... **Amaranthaceae**
809: Style 1 810

810 Tendrils present *(809:)* ..... **Vitaceae**
810: Tendrils absent ..... **Caryophyllaceae**

811 Stigma 1 *(807:)* ..... **Lythraceae**
811: Stigmas 3 ..... **Elatinaceae**

812 Perianth segments 5 or 6 *(802:)* 813
812: Perianth segments 4 814

813 Perianth segments 5 *(812)* 869
813: Perianth segments 6 928

814 Leaves alternate, radical, or absent *(812:)* 815
814: Leaves opposite or verticillate 854

815 Style and stigma 1 *(814)* 816
815: Styles or stigmas more than 1 846

816 Stamens (excluding staminodes) 2 or 3 *(815)* 817
816: Stamens 4 or more 819

817 Stamens 3 (with or without additional staminodes) *(816)* 818
817: Stamens 2 823

818 Stamens 3; staminodes absent *(817)* ..... **Rosaceae**
818: Stamens 3; staminode 1 ..... **Proteaceae**

819 Stamens 4 or 5 *(816:)* 820
819: Stamens 6 or more 821

820 Stamens 4 *(819)* 827
820: Stamens 5 ..... **Rosaceae**

821 Stamens 6 *(819:)* 822
821: Stamens more than 6 840

822 Fruit a berry *(821)* ..... **Lauraceae**
822: Fruit an achene ..... **Rosaceae**

823 Leaves simple or absent *(817:)* 824
823: Leaves compound 826

824 Leaves radical or absent *(823)* ..... **Lentibulariaceae**
824: Leaves alternate 825

825 Herbs; perianth segments free *(824:)* ..... **Brassicaceae**
825: Shrubs; perianth segments united ..... **Thymelaeaceae**

826 Floating aquatics *(823:)* ..... **Lentibulariaceae**
826: Rooted land plants ..... **Rosaceae**

827 Plants usually climbers with leaf-opposed tendrils *(820)* ..... **Vitaceae**
827: Plants without tendrils 828

828 Leaves compound *(827:)* 829
828: Leaves simple 831

829 Stamens adnate to perianth segments *(828)* ..... **Proteaceae**
829: Stamens not adnate to perianth segments 830

830 Fruit an achene *(829:)* ..... **Rosaceae**
830: Fruit a legume ..... **Caesalpiniaceae**

831 Leaves with stinging hairs *(828:)* ..... **Urticaceae**
831: Leaves without stinging hairs 832

832 Stamens distinctly adnate to perianth segments *(831:)*.....833

832: Stamens adhering to base of perianth, or free from it.....834

833 Stamens same number as and opposite perianth segments and often sessile on them *(832)* ..... **Proteaceae**

833: Stamens same number as and alternate with perianth segments, or twice as many, on short filaments..... **Elaeagnaceae**

834 Flowers in axillary spikes *(832:)*.....835

834: Flowers not in spikes.....837

835 Leaves glabrous or with scattered hairs *(834)*.....836

835: Underside of leaves white with close-set hairs ..... **Urticaceae**

836 Perianth segments united into 4-lobed floral tube *(835)* ..... **Opiliaceae**

836: Perianth segments not united ..... **Santalaceae**

837 Perianth petaloid *(834:)*.....838

837: Perianth sepaloid.....839

838 Stamens same number as and opposite perianth segments *(837)* ..... **Proteaceae**

838: Stamens same number as and alternate with perianth segments or more numerous..... ..... **Phytolaccaceae**

839 Flowers ebracteate, in terminal racemes *(837:)* ..... **Brassicaceae**

839: Flowers bracteate, in clusters, cymes, or heads..... **Urticaceae**

840 Leaves simple *(821:)* 841

840: Leaves compound.....845

841 Herbs *(840)* 842

841: Shrubs or trees 843

842 Sepals 2, valvate, completely enclosing bud; ovules several in each loculus *(841)*..... ..... **Papaveraceae**

842: Sepals not as above; ovule 1 in each loculus ..... **Phytolaccaceae**

843 Stamens 10 or fewer *(841:)*..... **Thymelaeaceae**

843: Stamens indefinite.....844

844 Leaves gland-dotted *(843:)* ..... **Winteraceae**

844: Leaves not gland-dotted..... **Tiliaceae**

845 Shrubs or trees *(840:)*..... **Caesalpiniaceae**

845: Herbs ..... **Rosaceae**

846 Stamens 4 or fewer *(815:)*.....847

846: Stamens 5 or more.....850

847 Herbs, either aquatic or growing in wet places; leaves radical, floating or absent; sepals 2; petals united; corolla 2-lipped *(846)* ..... **Lentibulariaceae**

847: Plants not as above.....848

848 Leaves with ochrea *(847:)*..... **Polygonaceae**

848: Leaves without ochrea 849

849 Herbs or shrubs; leaves covered with mealy scales *(848:)* ..... **Chenopodiaceae**
849: Trees ..... **Ulmaceae**

850 Stamens 5–10 *(846:)* 851
850: Stamens numerous 853

851 Style 1; stigmas usually 2 *(850)* ..... **Sapindaceae**
851: Styles more than 1 852

852 Trees with irritant hairs; stipules reniform; fruit a large drupe *(851:)* **Davidsoniaceae**
852: Herbs without irritant hairs; stipules sheath-like; fruit a small nut ..... **Polygonaceae**

853 Ovary 3- to 5-locular *(850:)* ..... **Nymphaeaceae**
853: Ovary 1-locular ..... **Papaveraceae**

854 Style and stigma 1 *(814:)* 855
854: Styles or stigmas more than 1 864

855 Stamens 2, 3 or 5 *(854)* 856
855: Stamens 4 or 8 859

856 Stamens 3 or 5 *(855)* ..... **Lythraceae**
856: Stamens 2 857

857 Stamens free from perianth, united into a cup at base *(856:)* ..... **Amaranthaceae**
857: Stamens adnate to perianth 858

858 Annual herbs, frequently in moist situations *(857:)* ..... **Lythraceae**
858: Small shrubs ..... **Thymelaeaceae**

859 Stamens 8 *(855:)* ..... **Thymelaeaceae**
859: Stamens 4 860

860 Leaves with stinging hairs *(859:)* ..... **Urticaceae**
860: Leaves without stinging hairs 861

861 Stamens distinctly adnate to perianth *(860:)* 862
861: Stamens free from perianth or attached at the base of the perianth segments 863

862 Shrubs or trees *(861)* ..... **Proteaceae**
862: Herbs ..... **Lythraceae**

863 Herbs *(861:)* ..... **Amaranthaceae**
863: Shrubs or trees ..... **Santalaceae**

864 Stamen 1 *(854:)* ..... **Caryophyllaceae**
864: Stamens 4 or more 865

865 Stamens 4 *(864:)* 866
865: Stamens more than 4 867

866 Stamens alternating with the perianth lobes *(865)* ..... **Aizoaceae**
866: Stamens opposite the perianth lobes ..... **Santalaceae**

867 Styles 2 *(865:)* ..... **Cunoniaceae**
867: Styles 4 868

868 Stamens indefinite *(867:)* ..... **Aizoaceae**
868: Stamens 8 ..... **Cunoniaceae**

869 Leaves alternate, radical, or absent *(813)* 870
869: Leaves opposite or verticillate 913

870 Stamens 5 or fewer *(869)* 871
870: Stamens more than 5 892

871 Style and stigma 1 *(870)* 872
871: Styles or stigmas more than 1 880

872 Climbers with leaf-opposed tendrils *(871)* ..... **Vitaceae**
872: Non-climbers, or climbers without leaf-opposed tendrils 873

873 Leaves compound *(872:)* ..... **Caesalpiniaceae**
873: Leaves simple or absent 874

874 Flowers in clusters of 2–4, surrounded by conspicuous coloured bracts *(873:)* ..... **Nyctaginaceae**
874: Flowers not as above 875

875 Stamens 3 or fewer, with or without staminodes *(874:)* 876
875: Stamens 5, all with anthers 877

876 Stamens 2 or 3, with or without anthers, united at base into a short cup *(875)* ..... **Amaranthaceae**
876: Stamens 3; staminodes 5 ..... **Olacaceae**

877 Herbs or undershrubs *(875:)* ..... **Amaranthaceae**
877: Shrubs or trees 878

878 Stamens opposite perianth segments *(877:)* ..... **Santalaceae**
878: Stamens alternate with perianth segments 879

879 Ovary surrounded by nectar-secreting disc *(878:)* ..... **Rhamnaceae**
879: Ovary not surrounded by nectar-secreting disc ..... **Sterculiaceae**

880 Twiners or climbers *(871:)* 881
880: Not climbers or twiners 884

881 Tendril climbers *(880)* 882
881: Twiners, without tendrils 883

882 Tendrils axillary *(881)* ..... **Passifloraceae**
882: Tendrils terminating inflorescence ..... **Polygonaceae**

883 Perianth segments free; styles 3 *(881:)* ..... **Amaranthaceae**
883: Perianth segments united; style 1, with 2 short stigmas ..... **Rhamnaceae**

884 Herbs *(880:)* 885
884: Shrubs or trees 889

885 Ovary 3–5-locular, with several ovules in each loculus *(884)* 886
885: Ovary 1-locular, with 1–several ovules 887

886 Flowers hypogynous; calyx free, divided to base or nearly so *(885)* .... **Molluginaceae**
886: Flowers perigynous; calyx entirely or partly adnate to ovary, or free but with a distinct tube..... **Aizoaceae**

887 Leaves with ochrea *(885:)* ..... **Polygonaceae**
887: Leaves without ochrea 888

888 Flowers with 1 bract and usually 1 or 2 bracteoles *(887:)*..... **Amaranthaceae**
888: Flowers without bracts or bracteoles ..... **Chenopodiaceae**

889 Stamens opposite perianth segments *(884:)*..... 890
889: Stamens alternating with perianth segments 891

890 Perianth segments free; tall shrubs or trees *(889)* ..... **Ulmaceae**
890: Perianth segments united; shrubs, usually small ..... **Chenopodiaceae**

891 Stamens 5; staminodes 5; ovary 5-locular *(889:)*..... **Sterculiaceae**
891: Stamens 5; ovary 2- or 3-locular ..... **Rhamnaceae**

892 Leaves simple or absent *(870:)* 893
892: Leaves compound 910

893 Style 1 *(892)* 894
893: Styles 2 or more, free..... 905

894 Stigma large, peltate *(893)*..... **Surianaceae**
894: Stigma not peltate..... 895

895 Flowers in clusters of 3–5, surrounded by 3 large coloured bracteoles *(894:)* .... **Nyctaginaceae**
895: Flowers not surrounded by conspicuous bracteoles 896

896 Climbers, shrubs or trees *(895:)*..... 897
896: Herbs, non-climbers 898

897 Climbers *(896)* ..... **Polygonaceae**
897: Shrubs or trees 900

898 Stamens indefinite *(896:)*..... **Molluginaceae**
898: Stamens 10 or fewer 899

899 Flowers hypogynous *(898:)* ..... **Polygonaceae**
899: Flowers perigynous ..... **Aizoaceae**

900 Perianth segments united *(897:)*..... 901
900: Perianth segments free..... 903

901 Leaves absent; stems flat and green *(900)* ..... **Polygonaceae**
901: Leaves present..... 902

902 Stamens 10 or fewer; stigmas 2 or 3 *(901:)* ..... **Sapindaceae**
902: Stamens indefinite; stigma 1 ..... **Elaeocarpaceae**

903 Flowers small, in heads or spikes; stamens exserted *(900:)* ..... **Mimosaceae**
903: Flowers not in heads or spikes; stamens usually not exserted 904

904 Seeds endospermic; stipules present, often caducous *(903:)* ..... **Flacourtiaceae**
904: Seeds non-endospermic; stipules absent ..... **Lauraceae**

905 Styles 2 or 3 *(893:)* 906
905: Styles 5 or more 907

906 Styles 2 *(905)* ..... **Polygonaceae**
906: Styles 3 908

907 Styles 5 *(905:)* ..... **Aizoaceae**
907: Styles c. 8 ..... **Phytolaccaceae**

908 Ovary 1-locular; ovule 1 *(906:)* ..... **Polygonaceae**
908: Ovary 3-locular; ovules several per loculus 909

909 Flowers hypogynous; calyx free, divided to base or nearly so *(908:)* ..... **Molluginaceae**
909: Flowers perigynous; calyx entirely or partly adnate to ovary, or free but with a distinct tube ..... **Aizoaceae**

910 Leaves bipinnate *(892:)* ..... **Mimosaceae**
910: Leaves pinnate 911

911 Stigmas 2 *(910:)* ..... **Sapindaceae**
911: Stigma 1 912

912 Ovary 1-locular *(911:)* ..... **Caesalpiniaceae**
912: Ovary 2- or more-locular ..... **Sapindaceae**

913 Style and stigma 1 *(869:)* 914
913: Styles or style-branches more than 1 919

914 Leaves gland-dotted *(913)* ..... **Myrtaceae**
914: Leaves not gland-dotted 915

915 Stamens free from perianth *(914:)* 916
915: Stamens adnate to perianth 917

916 Perianth segments free *(915)* ..... **Amaranthaceae**
916: Perianth segments united ..... **Nyctaginaceae**

917 Opposite leaves unequal in size *(915:)* ..... **Aizoaceae**
917: Opposite leaves equal in size 918

918 Stamens 10 *(917:)* ..... **Thymelaeaceae**
918: Stamens less than 10 ..... **Lythraceae**

919 Stamen 1 *(913:)* ..... **Caryophyllaceae**
919: Stamens 2 or more 920

920 Stamens 2–5 *(919:)* 921
920: Stamens more than 5 925

921 Stamens adnate to perianth *(920)* ..... **Aizoaceae**
921: Stamens free from perianth 922

922 Ovules more than 1 *(921:)* 923
922: Ovule 1 924

923 Placentation free-central *(922)* ..... **Caryophyllaceae**
923: Placentation axile ..... **Molluginaceae**

924 Perianth segments scarious *(922:)* ..... **Amaranthaceae**
924: Perianth segments herbaceous ..... **Chenopodiaceae**

925 Flowers perigynous; stamens borne on calyx tube *(920:)* ..... **Aizoaceae**
925: Flowers hypogynous 926

926 Shrubs or trees *(925:)* ..... **Cunoniaceae**
926: Herbs 927

927 Ovary 1-locular; leaves opposite or verticillate *(926:)* ..... **Caryophyllaceae**
927: Ovary 3–5-locular; leaves alternate, often clustered in axils so as to appear verticillate ... . **Aizoaceae**

928 Leaves alternate, radical, or absent *(813:)* 929
928: Leaves opposite or verticillate 945

929 Sepals 2, often caducous; petals 4 *(928)* 930
929: Perianth in 1 series, or if in 2 series usually of 3 + 3 segments 931

930 Flowers actinomorphic; stamens numerous *(929)* ..... **Papaveraceae**
930: Flowers zygomorphic; stamens 6 ..... **Fumariaceae**

931 Stamens 5 or more *(929:)* 932
931: Stamens 3 933

932 Stamens 5 or 6, sometimes with staminodes *(931)* 935
932: Stamens more than 6 939

933 Climbers with leaf-opposed tendrils *(931:)* ..... **Vitaceae**
933: Trees or shrubs 934

934 Style and stigma 1 *(933:)* ..... **Lauraceae**
934: Styles 2 or 3 ..... **Euphorbiaceae**

935 Climbers with leaf-opposed tendrils *(932)* ..... **Vitaceae**
935: Plants without tendrils 936

936 Leaves large, compound *(935:)* ..... **Burseraceae**
936: Leaves simple 937

937 Perianth segments united *(936:)* ..... **Ebenaceae**
937: Perianth segments free 938

938 Leaves with ochrea *(937:)* ..... **Polygonaceae**
938: Leaves without ochrea ..... **Euphorbiaceae**

939 Leafless parasitic twiners *(932:)* ..... **Lauraceae**
939: Non-twiners 940

940 Style and stigma 1 *(939:)* 941
940: Styles or stigmas 2 or 3 944

941 Flowers with 1 or more long spurs *(940)* ..... **Ranunculaceae**
941: Flowers lacking spurs 942

942 Ovary 1-locular *(941:)* ..... **Lauraceae**
942: Ovary 2- or more-locular 943

943 Leaves gland-dotted *(942:)* ..... **Rutaceae**
943: Leaves not gland-dotted ..... **Elaeocarpaceae**

944 Perianth segments free *(940:)* ..... **Polygonaceae**
944: Perianth segments united ..... **Ebenaceae**

945 Stamens 3 *(928:)* ..... **Elatinaceae**
945: Stamens 9 or more 946

946 Stamens 9, usually with 3 staminodes *(945:)* ..... **Lauraceae**
946: Stamens 10 or indefinite 947

947 Woody climbers *(946:)* ..... **Monimiaceae**
947: Non-climbers 948

948 Leaves trifoliolate *(947:)* ..... **Cunoniaceae**
948: Leaves not trifoliolate 949

949 Herbs *(948:)* ..... **Lythraceae**
949: Shrubs or small trees 950

950 Carpels 2 *(949:)* ..... **Aquifoliaceae**
950: Carpels 4–15 ..... **Sonneratiaceae**

951 Plants parasitic (mistletoes) *(782:)* ..... **Loranthaceae**
951: Plants not parasitic 952

952 Leaves alternate, radical, or absent *(951:)* 953
952: Leaves opposite or verticillate 973

953 Leaves gland-dotted *(952)* 954
953: Leaves not gland-dotted, or leaves absent 955

954 Stamens 10 *(953)* ..... **Combretaceae**
954: Stamens indefinite ..... **Myrtaceae**

955 Perianth actinomorphic *(953:)* 956
955: Perianth zygomorphic 971

956 Perianth quite entire, or of 3 segments *(955)* ..... **Aristolochiaceae**
956: Perianth of 4–6 segments 957

957 Perianth segments 4 *(956:)* 958
957: Perianth segments 5 or 6 963

958 Stamens 2 or 4 *(957)* 959
958: Stamens 5 or more 960

959 Stamens 2 *(958)* ..... **Gunneraceae**
959: Stamens 4 961

960 Stamens 5 *(958:)* ..... **Asteraceae**
960: Stamens 6 or more ..... **Aizoaceae**

961 Flowers not in umbels or heads *(959:)* ..... **Santalaceae**
961: Flowers in umbels or heads 962

962 Flowers in umbels *(961:)* ..... **Araliaceae**
962: Flowers in heads surrounded by involucral bracts ..... **Asteraceae**

963 Stamens 5 *(957:)* 964
963: Stamens more than 5 969

964 Anthers united around style *(963)* ..... **Asteraceae**
964: Anthers free 965

965 Herbs *(964:)* ..... **Apiaceae**
965: Shrubs or trees 966

966 Styles 2, free *(965:)* ..... **Araliaceae**
966: Style 1, with 1 or 2 stigmas 967

967 Stamens opposite perianth segments *(966:)* ..... **Santalaceae**
967: Stamens alternating with perianth segments 968

968 Leaves simple and entire *(967:)* ..... **Rhamnaceae**
968: Leaves compound or dissected ..... **Araliaceae**

969 Leaves compound *(963:)* ..... **Araliaceae**
969: Leaves simple 970

970 Trees; stamens usually 10 *(969:)* ..... **Combretaceae**
970: Herbs or shrubs; stamens usually indefinite ..... **Aizoaceae**

971 Fruit a cypsella *(955:)* ..... **Asteraceae**
971: Fruit a nut, a many-seeded capsule, or fleshy and indehiscent 972

972 Stigmas 1 or 2, each with indusium (pollen cup surrounding stigma) *(971:)* ..... **Goodeniaceae**
972: Stigmas 3–6, without indusium ..... **Aristolochiaceae**

973 Leaves gland-dotted *(952:)* ..... **Myrtaceae**
973: Leaves not gland-dotted 974

974 Perianth segments 3 or 4 *(973:)* 975
974: Perianth segments 5 or 6 984

975 Perianth segments 3 *(974)*..... **Rubiaceae**
975: Perianth segments 4..... 976

976 Stamens 2–5 *(975:)*..... 977
976: Stamens 8 or more..... 978

977 Stamens 2 *(976)*..... **Thymelaeaceae**
977: Stamens 4 or 5..... 980

978 Stamens 8 *(976:)*..... **Cunoniaceae**
978: Stamens numerous..... 979

979 Leaves simple *(978:)*..... **Myrtaceae**
979: Leaves compound or unifoliolate..... **Flacourtiaceae**

980 Stamens 4 or 5; anthers fused together (syngenesious) *(977:)*..... **Asteraceae**
980: Stamens 4; anthers not syngenesious..... 981

981 Aquatic herbs *(980:)*..... **Haloragaceae**
981: Plants not aquatic..... 982

982 Leaves in whorls of 4–8 *(981:)*..... **Rubiaceae**
982: Leaves opposite..... 983

983 Stamens alternating with perianth segments *(982:)*..... **Rubiaceae**
983: Stamens opposite perianth segments..... **Santalaceae**

984 Perianth segments 5 *(974:)*..... 985
984: Perianth segments 6..... 989

985 Stamen 1 *(984)*..... **Valerianaceae**
985: Stamens 5 or more..... 986

986 Stamens indefinite *(985:)*..... **Aizoaceae**
986: Stamens 5..... 987

987 Anthers syngenesious *(986:)*..... **Asteraceae**
987: Anthers free..... 988

988 Anthers opposite perianth segments *(987:)*..... **Santalaceae**
988: Anthers alternating with perianth segments..... **Rubiaceae**

989 Leaves compound *(984:)*..... **Caprifoliaceae**
989: Leaves simple..... 990

990 Stamens 3 *(989:)*..... **Rubiaceae**
990: Stamens 10 or more..... 991

991 Stamens 10 *(990:)*..... **Portulacaceae**
991: Stamens numerous..... **Sonneratiaceae**

992 Latex present *(2:)*..... 993
992: Latex absent..... 994

993 Styles or stigmas 3 or more *(992)* ..... **Euphorbiaceae**
993: Style or stigma 1 ..... **Moraceae**

994 Succulent herbs 5–10 cm high, parasitic on roots; leaves absent or scale-like *(992:)* ... . **Balanophoraceae**
994: Plants not parasitic; leaves green if present 995

995 Flowers mostly unisexual *(994:)* 996
995: Flowers mostly bisexual 1008

996 Climbers or twiners *(995)* 997
996: Non-climbers 998

997 Placentation apical *(996)* ..... **Cannabaceae**
997: Placentation basal ..... **Piperaceae**

998 Leaves alternate *(996:)* 999
998: Leaves opposite 1000

999 Leaves in whorls of 4 or more, or reduced to scales *(998)* 1001
999: Leaves not as above 1002

1000 Aquatic herbs, usually non-littoral; seeds endospermic *(998:)* ..... **Callitrichaceae**
1000: Littoral shrubs; seeds non-endospermic ..... **Bataceae**

1001 Shrubs or trees; leaves reduced to minute scales *(999)* ..... **Casuarinaceae**
1001: Aquatic herbs; leaves entire or divided but not reduced to scales..... **Haloragaceae**

1002 Plants monoecious *(999:)* 1003
1002: Plants dioecious 1005

1003 Herbs or undershrubs; flowers in heads *(1002)* ..... **Asteraceae**
1003: Trees; flowers otherwise 1004

1004 Leaves serrate-crenate; deciduous *(1003:)* ..... **Betulaceae**
1004: Leaves entire; evergreen ..... **Euphorbiaceae**

1005 Leaves palmately dissected *(1002:)* ..... **Cannabaceae**
1005: Leaves not dissected 1006

1006 Both male and female flowers in dense spikes *(1005:)* ..... **Salicaceae**
1006: Female flowers solitary or racemose; male flowers solitary or in spikes..... 1007

1007 Male flowers in catkins; female flowers with involucre of bracts but no perianth *(1006:)* ..... **Balanopaceae**
1007: Male flowers solitary or in open spikes; perianth shallow cup-shaped, inconspicuous ... . **Gyrostemonaceae**

1008 Herbaceous plants, growing only on rocks in running water *(995:)*... **Podostemaceae**
1008: Land plants 1009

1009 Stamens 10 or fewer, usually 2 or 3 *(1008:)* ..... **Piperaceae**
1009: Stamens indefinite ..... **Mimosaceae**

Monocotyledons

1010 Plants of marine or brackish habitats *(1:)* 1011
1010: Plants of fresh-water or land habitats 1017

1011 Leaves ligulate *(1010)* 1012
1011: Leaves eligulate 1014

1012 Plants of brackish habitats *(1011)* ..... **Zannichelliaceae**
1012: Marine plants 1013

1013 Leaf blade and sheath shed leaving a circular scar *(1012:)* ..... **Cymodoceaceae**
1013: Leaf blade shed but sheath persistent and fibrous ..... **Posidoniaceae**

1014 Leaves with 7 or more longitudinal veins *(1011:)* ..... **Hydrocharitaceae**
1014: Leaves with 1–5 longitudinal veins 1015

1015 Leaves 1–3 per shoot *(1014:)* ..... **Hydrocharitaceae**
1015: Leaves 4 or more per shoot 1016

1016 Carpel solitary; stigmas 2, filiform *(1015:)* ..... **Zosteraceae**
1016: Carpels 4–8; stigma 1, peltate ..... **Ruppiaceae**

1017 Floating plants with 1 or more flat, leaf-like stems 1–8 mm in diameter, cohering by their edges, with or without roots hanging from the undersurface *(1010:)* **Lemnaceae**
1017: Plants not as above 1018

1018 Flowers unisexual *(1017:)* 1019
1018: Flowers bisexual 1042

1019 Leaves opposite or verticillate *(1018)* 1020
1019: Leaves alternate, radical, crowded at apex of stem, or absent 1022

1020 Slender, twining land plants *(1019)* ..... **Dioscoreaceae**
1020: Aquatic or marsh plants 1021

1021 Perianth in male flowers absent or of one segment *(1020:)* ..... **Najadaceae**
1021: Perianth segments in male flowers 3 + 3; stamens 3–9 ..... **Hydrocharitaceae**

1022 Leaves simple *(1019:)* 1023
1022: Leaves compound 1041

1023 Flowers closely packed in a dense, simple, unbranched spadix, with a usually convolute, coloured, or petal-like spathe arising from base *(1022)* ..... **Araceae**
1023: Spathe sometimes present, but inflorescence not as above and often branched 1024

1024 Trees or shrubs, rarely climbers; aerial stem woody *(1023:)* 1025
1024: Herbs (sometimes large, e.g. banana) 1026

1025 Perianth absent; trees, shrubs, or climbers *(1024)* ..... **Pandanaceae**
1025: Perianth segments 3 + 3; climbers ..... **Smilacaceae**

1026 Flowers inconspicuous, often minute, within imbricate bracts or scales, in heads or spikelets; perianth absent or of 1–8 scales or bristles, usually concealed within bracts *(1024:)* 1027

1026: Flowers otherwise 1031

1027 Flowers small in spherical androgynous heads 2–8 mm in diameter without conspicuous bracts; mostly marsh or aquatic plants *(1026)* ..... **Eriocaulaceae**

1027: Flowers in spikelets surrounded by glume-like bracts 1028

1028 Leaf-sheath with connate margins *(1027:)* ..... **Cyperaceae**

1028: Leaf-sheath with free margins, sometimes overlapping 1029

1029 Leaves ligulate *(1028:)* ..... **Poaceae**

1029: Leaves eligulate 1030

1030 Wiry plants with jointed stems *(1029:)* ..... **Restionaceae**

1030: Tiny, slender plants without erect stems ..... **Hydatellaceae**

1031 Aquatic or marsh plants *(1026:)* 1032

1031: Land plants 1035

1032 Ovary inferior *(1031)* ..... **Hydrocharitaceae**

1032: Ovary superior 1033

1033 Plants dioecious *(1032:)* ..... **Hanguanaceae**

1033: Plants monoecious 1034

1034 Flowers in cylindrical, terminal spikes *(1033:)* ..... **Typhaceae**

1034: Flowers in globular, lateral heads ..... **Sparganiaceae**

1035 Climbers *(1031:)* 1036

1035: Non-climbers 1037

1036 Ovary superior; stems often spiny *(1035)* ..... **Smilacaceae**

1036: Ovary inferior; stems not spiny at least in upper part ..... **Dioscoreaceae**

1037 Ovary inferior *(1035:)* ..... **Musaceae**

1037: Ovary superior 1038

1038 Leaves large, pinnately or palmately divided (palms) *(1037:)* ..... **Arecaceae**

1038: Leaves otherwise 1039

1039 Leaves with a well-defined petiole; lamina with many cross-nerves; fruit a fleshy, thick-walled, 1–3-seeded drupe *(1038:)* ..... **Hanguanaceae**

1039: Leaves without a well-defined petiole; lamina parallel-veined; fruit a berry, capsule or dry and indehiscent 1040

1040 Fruit containing many small dust-like seeds; perianth segments sepaloid; fruit a capsule *(1039:)* ..... **Juncaceae**

1040: Fruit containing 3 large seeds, or if more than 3, then not dust-like; perianth segments petaloid; fruit a berry, capsule or dry and indehiscent ..... **Liliaceae**

1041 Ovary superior *(1022:)* ..... **Arecaceae**

1041: Ovary inferior ..... **Dioscoreaceae**

1042 Flowers closely packed in a simple spadix, usually with coloured spathe ±enclosing it *(1018:)* ..... **Araceae**

1042: Flowers not in spadix; inflorescence often branched; spathe sometimes present 1043

1043 Gynoecium apocarpous *(1042:)* 1044

1043: Gynoecium syncarpous or carpel 1 1051

1044 Land plants *(1043)* 1045

1044: Aquatic or marsh plants 1047

1045 Woody plants; leaves compound, or pinnately or palmately divided (palms) *(1044)* .... **Arecaceae**

1045: Small herbaceous plants; leaves, if present, entire 1046

1046 Saprophyte, lacking chlorophyll; leaves reduced to scales *(1045:)* ..... **Triuridaceae**

1046: Tufted chlorophyllous herbs; leaves linear ..... **Centrolepidaceae**

1047 Perianth segments 2; stamens 6; carpels 3 *(1044:)* ..... **Aponogetonaceae**

1047: Perianth segments 3 or more 1048

1048 Perianth segments 4; stamens 4; carpels 4 *(1047:)* ..... **Potamogetonaceae**

1048: Perianth segments 3–6, rarely 4; stamens 3–numerous; carpels 3–numerous 1049

1049 Perianth segments all similar in texture and colour *(1048:)* ..... **Juncaginaceae**

1049: The two perianth whorls different in texture and/or colour 1050

1050 Gynoecium of 3 or more free carpels; fruits achenes *(1049:)* ..... **Alismataceae**

1050: Gynoecium of c. 6 free carpels; fruits follicles ..... **Limnocharitaceae**

1051 Ovary superior or perianth absent *(1043:)* 1052

1051: Ovary inferior 1084

1052 Flowers inconspicuous, often minute, within imbricate bracts or scales (glumes), in spikelets; perianth absent or of 1–8 scales or bristles, usually concealed within bracts *(1051)* 1053

1052: Flowers otherwise 1057

1053 Leaves ligulate *(1052)* 1054

1053: Leaves eligulate 1055

1054 Embryo visible through fruit wall *(1053)* ..... **Poaceae**

1054: Embryo not visible through fruit wall ..... **Cyperaceae**

1055 Stamens more than 1 *(1053:)* ..... **Cyperaceae**

1055: Stamen 1 1056

1056 Small annuals; inflorescence simple *(1055:)* ..... **Centrolepidaceae**

1056: Rhizomatous perennials; inflorescence usually branched ..... **Cyperaceae**

1057 Perianth segments 4 or fewer *(1052:)* 1058

1057: Perianth segments 6 (rarely 5) 1061

1058 Stamen 1 *(1057)* ..... **Philydraceae**

1058: Stamens 3 or 4 1059

1059 Stamens 3 *(1058:)* ..... **Xyridaceae**
1059: Stamens 4 1060

1060 Leaves alternate; twiners *(1059:)* ..... **Stemonaceae**
1060: Leaves radical; inflorescence spicate ..... **Araceae**

1061 Leaves compound (palms) *(1057:)* ..... **Arecaceae**
1061: Leaves simple or absent 1062

1062 Stems woody; leaves broad (palms) *(1061:)* ..... **Arecaceae**
1062: Not as above 1063

1063 Stamens 3 (rarely 2) *(1062:)* 1064
1063: Stamens 6 (rarely 5) 1069

1064 Inner perianth segments united *(1063)* ..... **Xyridaceae**
1064: Inner perianth segments free 1065

1065 The two perianth whorls different in texture and/or colour *(1064:)* ..... **Commelinaceae**
1065: Perianth segments all similar in texture and colour 1066

1066 Stamens inserted at base of inner perianth segments *(1065:)* ..... **Haemodoraceae**
1066: Stamens free from perianth 1067

1067 Perianth segments petaloid *(1066:)* ..... **Liliaceae**
1067: Perianth segments sepaloid 1068

1068 Carpels free or almost free; stigmas sessile *(1067:)* ..... **Juncaginaceae**
1068: Carpels fused; style 1, stigmas 3 ..... **Juncaceae**

1069 Leaf tips prolonged into tendrils *(1063:)* 1070
1069: Not as above 1071

1070 Corolla c. 3 mm long *(1069)* ..... **Flagellariaceae**
1070: Corolla c. 10 mm long ..... **Liliaceae**

1071 The two perianth whorls different in texture and/or colour *(1069:)* 1072
1071: Perianth segments all similar in texture and colour 1075

1072 Much-branched leafy climbers *(1071)* ..... **Smilacaceae**
1072: Rosette or scrambling plants 1073

1073 Inflorescence spicate; glandular hairs present *(1072:)* ..... **Commelinaceae**
1073: Flowers solitary or inflorescence cymose; if spicate no glandular hairs 1074

1074 Inner perianth segments fringed *(1073:)* ..... **Liliaceae**
1074: Inner perianth segments not fringed ..... **Commelinaceae**

1075 Perianth segments petaloid *(1071:)* 1076
1075: Perianth segments sepaloid 1080

1076 Aquatic plants, floating or rooted *(1075)* ..... **Pontederiaceae**
1076: Land plants 1077

1077 Coarse woody climbers; venation predominantly reticulate *(1076:)* ..... **Smilacaceae**
1077: Non-climbers or, if climbers, the venation convergent 1078

1078 Inflorescence a tall woody spike *(1077:)* ..... **Xanthorrhoeaceae**
1078: Inflorescence otherwise 1079

1079 Much-branched leafy climbers *(1078:)* ..... **Smilacaceae**
1079: Not as above ..... **Liliaceae**

1080 Marsh or aquatic plants *(1075:)* ..... **Juncaginaceae**
1080: Land plants 1081

1081 Climbers *(1080:)* ..... **Araceae**
1081: Non-climbers 1082

1082 Style branched; stigmas 3 *(1081:)* ..... **Juncaceae**
1082: Style 1, simple 1083

1083 Inflorescence a tall woody spike *(1082:)* ..... **Xanthorrhoeaceae**
1083: Inflorescence otherwise ..... **Liliaceae**

1084 Flowers gynandrous (i.e. with stamens adnate to pistil) *(1051:)* 1085
1084: Flowers not gynandrous 1087

1085 Flowers strongly gynandrous *(1084)* ..... **Orchidaceae**
1085: Flowers only weakly gynandrous 1086

1086 Venation pinnate *(1085:)* ..... **Cannaceae**
1086: Venation convergent ..... **Orchidaceae**

1087 Submerged aquatics; leaf lamina submerged or floating; styles or stigmas 6, each 2-lobed *(1084:)* ..... **Hydrocharitaceae**
1087: Not as above 1088

1088 Leaf lamina deeply dissected *(1087:)* ..... **Taccaceae**
1088: Leaves entire or with serrate margins 1089

1089 Climbing plants; leaves alternate with many longitudinal veins from midrib; veinlets reticulate *(1088:)* ..... **Smilacaceae**
1089: Not as above 1090

1090 Venation obviously pinnate *(1089:)* 1091
1090: Venation convergent (middle vein sometimes stronger than others) parallel, or obscured by the thickness of leaf 1095

1091 Stamens 5 *(1090)* ..... **Musaceae**
1091: Stamens 1–3 1092

1092 Ligule present at junction of leaf-sheath and lamina *(1091:)* 1093
1092: Leaves eligulate 1094

1093 Leaves 2-ranked *(1092)* ..... **Zingiberaceae**
1093: Leaves more than 2-ranked ..... **Costaceae**

1094 Pulvinus present at junction of petiole (or leaf-sheath) and blade *(1092:)*..... .....**Marantaceae**

1094: Pulvinus absent ..... **Cannaceae**

1095 Stamens 3 *(1090:)* 1096

1095: Stamens 6..... 1099

1096 Perianth segments united at base *(1095)*..... 1097

1096: Perianth segments free..... 1098

1097 Anthers with transverse dehiscence *(1096)*.....**Burmanniaceae**

1097: Anthers with longitudinal dehiscence.....**Iridaceae**

1098 Ovules 1 or 2 per loculus *(1096:)* ..... **Haemodoraceae**

1098: Ovules usually several per loculus .....**Iridaceae**

1099 Plant a colourless saprophyte *(1095:)* 1100

1099: Plant chlorophyllous..... 1101

1100 Perianth actinomorphic *(1099)*.....**Burmanniaceae**

1100: Perianth zygomorphic..... **Corsiaceae**

1101 Leaf margins serrate *(1099:)*..... **Bromeliaceae**

1101: Leaf margins entire..... 1102

1102 The two perianth whorls different in texture and/or colour *(1101:)*..... **Bromeliaceae**

1102: Perianth segments all similar in texture and colour..... 1103

1103 Flowers in umbels, rarely solitary on a leafless scape *(1102:)*..... **Liliaceae**

1103: Flowers in simple or compound racemes..... 1104

1104 Leaves narrow, up to 20 cm long, arising from an underground rhizome *(1103:)*..... ..... **Liliaceae**

1104: Leaves thick, fibrous, up to 2 m long, in tufts at base or apex of trunk-like stem ....**Agavaceae**