Field key to the eucalypts of the Atherton Tablelands & vicinity

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This version: 15 November 2014. This is a working draft and field testing is not yet comprehensive.
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Eucalypt = Eucalyptus, Corymbia & Angophora

Area covered The Atherton and Evelyn Tablelands north to Mt Molloy, and the western slopes west to Mt
Garnett, Irvinebank, Petford and Mt Molloy.

A field key
The intent of this key is to facilitate getting-to-know your local eucalypts. It grew out of my attempts to do
so. It will not always yield the definitive results that may be expected of a formal botanical key.

- I have deliberately emphasized vegetative traits such as bark and foliage which are, however, prone
to considerable variation within species.
- the key works best with mature (flowering-age) trees because the bark of young trees often hasn’t
developed fully, and the leaves of seedlings, small saplings and coppice growth may differ from
those of mature trees.
- the need to consider buds, flowers and capsules is deferred as long as possible in the key because
these are often not available, but consideration of them is unavoidable for the identification of
many species.

To a reasonable extent, variation within species is allowed for by multiple entries for some species, often in
different groups. It follows that “groups” are not necessarily natural (taxonomic) groups and close relatives
do not necessarily appear close together in the key.

In attempting identifications and especially in the absence of buds, flowers or capsules, the counsel of John
Clarkson (2009) to concentrate on stands of species rather than individual trees (especially aberrant
individuals) should be heeded:
“Take some time to look around .... pick out several trees which you think belong to the same
species ... Once you feel you know something about he sort of variation which exists, look
carefully at the bark.... Look at the size and shape of the leaf and, in particular, at the pattern
of veins in the leaf.”

In most couplets or triplets, some characters are emboldened. If your plant convincingly matches one
emoldened option then you may not need to consider the other characters listed.

Names
The names and relationships of a number of eucalypts in the study area are not fully resolved. I have
adopted those of the Australian Plant Census (https://www.anbg.gov.au/chah/apc/) which was updated for
eucalypts in 2011. Where these differ from those currently adopted by the Queensland Herbarium, I have
drawn attention to the fact.

Key references
Species names (both scientific and common) employed in these sources will not necessarily be the same as
in this field key. In particular, the scientific names of Brooker & Kleinig (2004) are very dated.
Blooming Books: Melbourne.
Collingwood.
Government: Mareeba.
Quick guide to distinctive species

Colour of smooth bark (note that colour varies with time of year)
* bark strikingly pink or patchily pink and grey; leaves lemon-scented when crushed  Corymbia citriodora (Lemon-scented Gum)

* bark pumpkin orange or patchily so (dry, western forests)  Eucalyptus pachycaulis (Pumpkin Gum)
* bark pale lime green (rainforest edges)  Corymbia torelliana (Cadaghi)

Growth form
* straight tall tree (often more than 40 m) with pale smooth bark and a distinct “sock” of rough bark at the base (close to rainforest)  Eucalyptus grandis (Rose Gum)

Flower colour
* flowers orange  Corymbia chartaboma (Queensland Woollybutt)
* flowers with red “throat” (otherwise whitish)  Corymbia rhodops (Red-throated Bloodwood)

Quick guide to groups
Groups are not necessarily exclusive; i.e. a species may belong to more than one group.

- crown leaves mostly opposite (may be more-or-less stalkless)  Group A
- smooth-barked trees  Group B
- half-barks  Group C
- ironbarks  Group D
- rough-barked bloodwoods  Group E
- other rough-barked eucalypts (stringybarks, boxes, mahoganies)  Group F

If in doubt, use the Key to groups below.

Key to groups

1. - crown leaves in pairs (opposite)  Group A
   - crown leaves mostly alternating along the branchlets  2

2. - bark on trunk mostly smooth (may have rough bark at the base extending up the trunk for several metres or as much as 25% of the trunk) (gums & others)  Group B
   - “half-barks” – bark smooth on major branches and often the upper trunk, but rough on most of the trunk  Group C
   - bark on trunk and large branches mostly or entirely rough (bark on smaller branches may be smooth)  3

3. - ironbarks – rough bark hard (may be impregnated with resin), deeply furrowed, slatey-grey, dark grey or blackish  Group D
   - rough bark not as above, fibrous, flaky or tesselated, often brown  4

4. - leaf veins feather-like – lateral veins typically more than 5 per cm on each side of the mid-vein, more or less straight and parallel, diverging from the mid-vein at an angle of about 60°; rough bark often tesselated; flowers in terminal branched inflorescences (corymb); capsule urn- or barrel-shaped with deeply recessed disc and valves (red and yellow bloodwoods, part genus Corymbia)  Group E
   - leaf veins not feather-like, typically with fewer than 5 lateral veins per cm, veins typically curved and forming loops (in some species diverging at an angle of less than 45°); rough bark often fibrous or flaky or finely fissured; flowers often arranged in simple or compound axillary inflorescences (umbels or panicles); capsule of various shapes with the disc and valves of many species at or above the rim  Group F
Eucalyptoids

A suite of species related to eucalypts – known as eucalyptoids – may be confused with them. Beyond the notes below, eucalyptoids are not covered by this field key. The species in the study area are:

- Brush Box (*Lophostemon confertus*)
- Northern Swamp Box (*Lophostemon grandiflorus*)
- Honey Myrtle (*Lophostemon suaveolens*)
- Stockwellia (*Stockwellia quadrifida*)
- Turpentine (*Syncarpia glomulifera*)

Stockwellia occurs only deep within rainforest where no eucalypt occurs. The capsules of Stockwellia and Turpentine are fused into structures that are obviously compound, unlike any local species of eucalypt. Flowers of the three *Lophostemon* species have petals and could thus only be confused with Rough-barked Apple (*Angophora floribunda*) in this area. The stamens on *Lophostemon* flowers are in five bundles and the petals are obvious, whereas the stamens are unbundled in Rough-barked Apple and the petals are small and hidden below the stamens.
Group A: crown leaves mostly in pairs (opposite)

A1 - **bark smooth** on large branches and often much of the trunk .......... .................. .................. .................. A1


A2 - **crown leaves stalked, green;** capsules with teeth extending beyond the rim .......... .................. .......... A3

   - **crown leaves stalkless, often silvery;** capsules lacking teeth (but may be ribbed) .......... .................. .......... A5

A3 - **crown leaves darker above than below, mostly less than 15 cm long, not leathery;** flowers with small white petals; capsules no more than 12 mm long (known only from Tumoulin area) .......... .................. A3

   - **crown leaves the same colour on both sides, often more than 15 cm long, leathery;** flowers without petals; capsules more than 15 mm long (western slopes from Irvinebank to Mutchilba and Dimbulah) .. .................. .................. .................. .................. .................. A4

A4 - **buds and fruits strongly ribbed, more-or-less square in cross-section** .. .................. .......... .......... Eucalyptus megasepala (Cape York Stringybark)

   - **buds and fruits not or weakly ribbed, more-or-less circular in cross-section** .. .................. .......... .......... Eucalyptus tetrodonta (Darwin Stringybark)

A5 - **crown leaves small** (to 9 x 5 cm but often less); **tree more-or-less erect though often small;** common stalk for bud, flower and capsule clusters 0.5 to 1.5 cm long; buds and capsules not ribbed .......... Eucalyptus melanophloia (Silver-leaved Ironbark)

   - **crown leaves to 13+ x 8+ cm but can be smaller;** stunted small tree or large shrub, often multi-stemmed and gnarled; common stalk for bud, flower and capsule clusters 1.7 to 3.7 cm long; buds and capsules often ribbed .......... .......... .......... Eucalyptus shirleyi (Shirley’s Silver-leaved Ironbark)
Group B: smooth-barked trees (gums & others)

Note that the smooth bark of most species changes colour with time of year.

B1 - crown leaves broad – mostly more than 4 cm wide and less than twice as long as wide ... B2
- crown leaves narrow – mostly less than 4 cm wide and more than twice as long as wide ... B3

B2 - crown leaf stalks absent or less than 5 mm long; crown leaves mostly in pairs (opposite) (western slopes) ... Corymbia confertiflora (Broad-leaved Carbeen)
- crown leaves 10 – 24 mm long; crown leaves alternate, markedly darker above than below (tree of rainforest margins, especially near Kuranda) ... Corymbia torelliana (Cadaghi)
- crown leaves 25 – 70 mm long; crown leaves alternate, the same colour on both sides (tree of drier woodlands particularly on plains) ... Eucalyptus platypylla (Poplar Gum)

B3 - crown leaves darker on one side ... B4
- crown leaves the same colour on both sides ... B6

B4 - trees of wet tall forests or rainforest edges; bark smooth throughout or with a stocking of flaky bark at base usually covering less than 25% of the trunk ... B5
- trees of woodlands or open forests (can be montane, but with a dry understorey); trunk with a stocking of rough bark often covering more than 25% of the trunk ... go to Group C (half-barks)

B5 - erect, tall tree (often much more than 30 m tall); smooth bark white or pale grey; inflorescence in leaf axils and unbranched; capsule with valves exerted beyond the rim ... Eucalyptus grandis (Rose Gum)
- spreading or erect tree usually less than 30 m tall; smooth bark often greenish; inflorescence terminal and much-branched; capsule with valves enclosed below the rim ... Corymbia torelliana (Cadaghi)

B6 - trunk with a distinct stocking of grey or black tesselated rough bark at the base extending 1 – 4 m up the trunk, abruptly smooth and white above ... Corymbia tessellaris (Moreton Bay Ash)
- trunk not as above (mostly smooth-barked) ... B7

B7 - leaf veins feather-like (lateral veins more or less straight and parallel, diverging from the mid-vein at an angle of about 60°, more than 5 per cm on each side of the mid-vein, ); leaves lemon- (citronella-) scented when crushed (bark often strikingly pink) ... Corymbia citroidora (Lemon-scented Gum)
- leaf veins not feather-like (lateral veins typically diverging at an angle of 45° or less, curved and forming loops and typically with fewer than 5 lateral veins per cm), leaves eucalypt-scented when crushed ... ... ... B8

B8 - bud caps rounded; capsule with the valves enclosed below the rim ... Corymbia dallachiana (Dallachy’s Ghost Gum)
- bud caps pointed; capsule with the valves strongly exerted above the rim ... B9

B9 - bud/flower/fruit clusters in simple pairs emerging from the base of the leaf stalk; valves of capsule exerted and spiky (new bark “pumpkin”-coloured; rocky areas on western slopes) ... Eucalyptus pachycalyx (Pumpkin Gum)
- bud/flower/fruit clusters simple and singular emerging from the base of the leaf stalk; valves of capsule exerted but not spiky ... B10
B10 In our area, these species may be reliably distinguished only by the colour of the seed, and local trees attributed to River Red Gum may actually be a hybrid population between these two species.

- **stream-bank tree** of the Walsh River and tributaries; bark often with brown patches  
  _Eucalyptus camaldulensis_ (River Red Gum)
- **widespread tree** (can occur on stream banks but if so, usually extending to adjacent slopes); bark usually lacking brown patches  
  _Eucalyptus tereticornis_ (Forest Red Gum*)
* known locally as Blue Gum.

**Group C: half-barks**

C1 - crown leaves mostly in pairs (opposite), broad, stalkless or short-stalked  
  _Corymbia confertiflora_ (Broad-leaved Carbeen)
- crown leaves alternate, much longer than wide, with stalks usually more than 5 mm long  
  C2

C2 - crown leaves darker on one side  
  C3 - crown leaves the same colour on both sides  
  C4

C3 - buds and capsules large and strongly ribbed; bud caps tapered (buds 1.6–2.1 cm long, capsules 3–7.5 cm long) (tree often multi-stemmed and spreading, confined to far western areas)  
  _Eucalyptus chartaboma_ (Queensland Woollybutt)
- buds and capsules small and not ribbed; bud caps rounded (buds and capsules less than 1 cm long)  
  _Eucalyptus cloeziana_ (Gympie Messmate)

C4 - rough bark strongly tiled (tesselated); leaves with feather-like veins  
  C5 - rough bark not tiled; leaves lacking feather-line venation  
  _Eucalyptus lockyeri_ (Lockyer’s Box)

C5 - rough bark dark grey to black, changing abruptly above to smooth bark  
  _Corymbia tessellaris_ (Moreton Bay Ash)
- rough bark of thin loose flakes which are grey-brown over rich red-brown and/or with reddish tiles, changing gradually to smooth bark with numerous flakes  
  _Corymbia erythrophloia_ (Red Bloodwood)
### Group D: Ironbarks

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<tbody>
<tr>
<td>D1</td>
<td>- crown leaves in pairs (opposite), stalkless, often rounded (silver-leaved ironbarks)</td>
<td>..</td>
<td>..</td>
<td>D2</td>
<td>- crown leaves alternate (not paired), stalked, not rounded</td>
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<td>D3</td>
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<td>D2</td>
<td>- crown leaves small (to 9 x 5 cm but often less); tree more-or-less erect though often small; common stalk for bud, flower and capsule clusters 0.5 to 1.5 cm long; buds and capsules not ribbed</td>
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<td>Eucalyptus melanophloia (Silver-leaved Ironbark)</td>
<td>- crown leaves to 13+ x 8+ cm but can be smaller; stunted small tree or large shrub, often multi-stemmed and gnarled; common stalk for bud, flower and capsule clusters 1.7 to 3.7 cm long; buds and capsules often ribbed</td>
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<td>Eucalyptus shirleyi (Shirley’s Silver-leaved Ironbark)</td>
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<td>D3</td>
<td>- many crown leaves more than 2 cm wide; intramarginal vein present</td>
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<td>D4</td>
<td>- most crown leaves 1–2 cm wide; intramarginal vein present</td>
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<td>D4</td>
<td>- canopy leaves green and glossy; branchlets, buds and fruit without whitish wax; leaf stalks mostly less than 2 cm long</td>
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<td>Eucalyptus granitica (Granite Ironbark)</td>
<td>- canopy leaves not glossy, often blue-grey; branchlets, buds and often also the fruit covered with a whitish wax; leaf stalks often more than 2 cm long</td>
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<td>D5</td>
<td>- capsule with level or ascending rim and strongly exerted valves (western slopes only)</td>
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<td>..</td>
<td>..</td>
<td>Eucalyptus cullenii (Cullen’s Ironbark)</td>
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</table>

Ironbarks with alternate leaves can be difficult to identify and intergradation may occur. *Eucalyptus crebra*, *E. granitica* and *E. exilipes* are very closely related. There is some doubt about the occurrence of *E. exilipes* in this area.
Field key to eucalypts of the Atherton Tablelands & vicinity

Group E: red & yellow (rough-barked) bloodwoods

E1 - bark yellow, yellow-brown or yellow-grey (yellowjackets) .. .. .. .. .. .. E2
- bark grey or brown or with red patches .. .. .. .. .. .. .. .. E3

E2 - leaves the same colour on both sides, often more than 14 cm long and 2 cm wide; buds and capsules tightly clustered (stalks 0–4 mm long) on a longer common stalk (6–25 mm long); capsules mostly more than 10 mm long by 8 mm wide; sapling/coppice leaves broad .. .. .. Corymbia leichhardtii (Yellowjacket)
- leaves mostly darker on one side than the other, mostly less than 14 cm long and 2 cm wide; buds and capsules loosely clustered (stalks 2–7 mm long) on a shorter common stalk (4–13 mm long); capsules no more than 10 mm long by 8 mm wide; sapling/coppice leaves slender (2.5–7 cm wide) (bark is variably yellowish or brown) .. .. .. Corymbia trachyphloia (Brown Bloodwood)

E3 - bark rough (as on the trunk) to the smaller branches .. .. .. .. .. .. .. .. E4
- bark on smaller branches smooth or strongly flaking or lightly furrowed .. .. .. .. .. .. E5

E4 - leaves much darker on one side than the other and tending quite strongly to be held horizontal; capsules mostly less than 1.5 times as long as wide.. .. Corymbia intermedia (Pink Bloodwood)
- leaves not as markedly contrasting in colour between sides and somewhat pendulous; capsules mostly 1.5–2 times as long as wide .. .. .. Corymbia clarksoniana (Clarkson’s Bloodwood)
These species may be difficult to distinguish. Pink Bloodwood is generally a taller tree (to 35 m cf to 15 m) of moister and/or more fertile sites. It generally has broader leaves and somewhat looser, less tesselated bark than Clarkson’s Bloodwood. The capsules of Pink Bloodwood are often rusty when fresh whereas those of Clarkson’s Bloodwood are often green.

E5 - crown leaves often more than 4 cm wide, dark green and glossy above, much paler below; individual buds and capsules more or less stalkless; capsules large (to c. 3 by 2.5 cm) (stunted tree of elevated, harsh sites with strikingly broad, dicolorous leaves and huge capsules) .. .. .. .. .. .. Corymbia abergiana (Range Bloodwood)
- crown leaves less than 4 cm wide, the same colour above as below or only somewhat paler below; individual buds and capsules stalked (may be short); capsules less than 3 x 2.5 cm .. .. .. E6

E6 - leaves more or less the same colour on both sides (bark often with prominent red tiles) .. .. .. E7
- leaves somewhat darker on one side than the other (bark not red or may be reddish underneath) E8

E7 - bark on lower trunk thin, flaky, with prominent red tiles Corymbia erythrophloia (Red Bloodwood)
- bark on lower trunk becoming thick with age, coarsely chunky, the redness underlying the outer layer .. .. .. .. .. .. Corymbia ellipsoidea (Western Slopes Bloodwood)
These species can be difficult to distinguish and may not be distinct.

E8 - leaves tapered to an elongated point; capsules more than 10 mm long .. .. .. .. .. .. E9
- leaves pointed but not strongly elongated; capsules no more than 10 mm long .. .. .. Corymbia trachyphloia (Brown Bloodwood)

E9 - bark not flaky, capsules 17–28 mm long; individual capsule stalks often more than 13 mm long; flowers with red throat .. .. .. .. .. .. Corymbia rhodops (Red-throated Bloodwood)
- bark somewhat to quite flaky; capsules mostly less than 16 mm long; individual capsule stalks no more than 13 mm long; flowers with yellow/green throat .. .. .. .. .. .. Corymbia stockeri (Gum-topped Bloodwood)
Field key to eucalypts of the Atherton Tablelands & vicinity

**Group F: miscellaneous rough-barked species (boxes, stringybarks, mahoganies)**

**F1** - bark on branches c. 4 cm diameter smooth .. .. .. .. .. .. .. .. F2
- bark on branches c. 4 cm diameter rough .. .. .. .. .. .. .. .. F4

**F2** - bark on trunk long-fibred, furrowed, peeling in strips (stringybark); capsules in tight clusters (stalkless or nearly so) .. .. *Eucalyptus tindaliae* (Tindal’s Stringybark)*
- bark on trunk not as above (more-or-less box-type); capsules stalked and in loose clusters .. F3
* known locally as White Stringybark, and by the Queensland Herbarium as *E. reducta*.

**F3** - bark on smooth branches white, cream or pale grey; erect tree .. .. .. .. .. .. *Eucalyptus moluccana* (Gum-topped Box)
- bark on smooth branches dull copper or reddish-brown; small, spreading tree often branched close to the ground .. .. .. .. .. .. *Eucalyptus lockyeri* (Lockyer’s Box)

**F4** - leaves held more-or-less horizontal, darker above than below (medium to tall tree of moist forests with strikingly elongated bud caps and the common stalk to bud and capsule clusters prominently flattened) .. .. .. *Eucalyptus resinifera* (Red Mahogany; known locally as Red Stringybark)
- leaves held more or less vertically, the same or similar colour on both sides (small to medium trees of woodlands and drier open forests; bud caps and common stalks not as above) .. .. .. F5

**F5** - bark long-fibred, peeling in strips .. .. .. .. .. .. .. .. F6
- bark short-fibred (box-type), not peeling in strips .. .. *Eucalyptus leptophleba* (Molloy Red Box)

**F6** - bark in flattish strips; leaves not leathery, mostly less than 15 cm long, semi-glossy or glossy; buds and capsules not toothed (Tablelands & western slopes) .. .. .. .. .. .. .. .. .. .. *Eucalyptus mediocris* (Inland White Mahogany)*
- bark furrowed; leaves leathery, often more than 15 cm long, dull; buds and capsules toothed (western slopes only) .. .. .. .. .. .. .. .. .. .. .. *Eucalyptus megasepala* (Cape York Stringybark)
* known locally as Yellow Stringybark. There remains much uncertainty about the classification and naming of white mahoganies. A white mahogany species abundant in dry eucalypt forest around Herberton, here named as *E. mediocris*, is known by the Queensland Herbarium as *E. portuensis*. There are also reports of *E. acmenoides* in moister eucalypt forest on the Tablelands but I have treated these as unconfirmed. *E. acmenoides* differs from *E. mediocris* in being a taller tree with the leaves more distinctly darker above than below, but the species intergrade.

**F7** - buds and fruits strongly ribbed, more-or-less square in cross-section .. .. .. .. .. .. *Eucalyptus megasepala* (Cape York Stringybark)
- buds and fruits not or weakly ribbed, more-or-less circular in cross-section .. .. .. .. *Eucalyptus tetrodonta* (Darwin Stringybark)