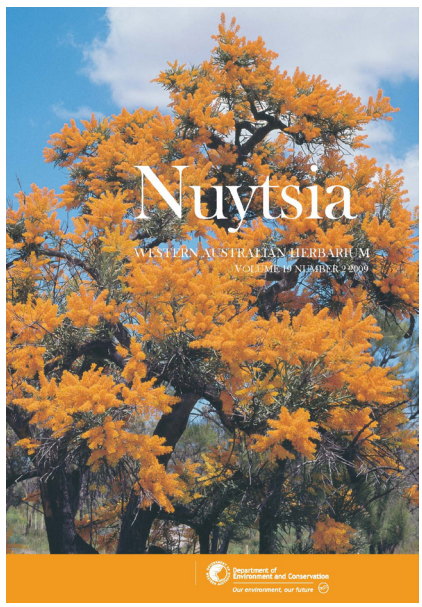
Nuytsia

WESTERN AUSTRALIA'S JOURNAL OF SYSTEMATIC BOTANY

ISSN 0085–4417



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An interim key to the Western Australian tribes and genera of Myrtaceae

Nuytsia 19(2): 313–323 (2009)

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An interim key to the Western Australian tribes and genera of Myrtaceae

In his treatment of Australian Myrtaceae for *Flora Australiensis*, Bentham (1867) provided a key to 41 genera, classified in three tribes. More than a century passed before another key to the Australian genera appeared (Johnson & Briggs 1983), this time with 75 genera and 11 informal groups that were intended to be equivalent to tribes. In 2005 a new formal classification for the Myrtaceae (Wilson *et al.* 2005) increased the number of tribes recognised in Australia to 15[1], but this paper did not include any keys. Approximately 85 Australian genera are now recognised, including 30 endemic to Western Australia. Ten tribes are represented in Western Australia and, since mid 2009, 54 genera have been listed for the State on *FloraBase* (Western Australian Herbarium 1998–).

In Western Australia most of the myrtaceous genera occur in the southern region covered by Blackall & Grieve (1980) and the rest occur in the northern region known as the Kimberley, for which there is a more recent key (Rye 1992). Blackall & Grieve's key contained 29 genera, far less than are now recognised and often very differently circumscribed, and it had the disadvantage that some genera were keyed out jointly, for example *Astartea* DC. with *Baeckea* L. and *Scholtzia* Schauer. Changes to the 12 genera included in the Kimberley key have been much less significant, although species belonging to two additional genera (*Asteromyrtus* Schauer and *Backhousia* Hook. & Harvey) have recently been discovered in the Kimberley. Clearly both regional keys are now inadequate and, in any case, it would be more useful to have a key for the whole State.

Taxonomic research is likely to continue altering the number of genera recognised within the Myrtaceae for many years to come, particularly in the large tribe Chamelaucieae which contains over half of the Western Australian genera. A prime example of the problems within this tribe is the polyphyletic genus *Baeckea s.lat.* With the recognition in the 1980s that *Baeckea s.lat.* comprised a number of distinct genera, including some that had been subsumed by Bentham (1867) in his broad concept of the genus, a process of reinstating old genera and naming new segregate genera was commenced by Trudgen (1986, 1987) and has continued up to the latest papers by Wilson *et al.* (2007), Rye & Trudgen (2008) and Rye (2009a,b). During this process 22 eastern Australian species and 20 Western Australian species have been formally reassigned, while many others have been newly named in their correct genera. *Baeckea s.str*. is now considered to comprise 13 species extending from southern China south to Tasmania, with most species occurring on the east coast of mainland Australia and with no representatives in Western Australia.

Despite this new understanding of the correct generic limits of *Baeckea*, it is still far from clear how many genera should be recognised in Western Australia for the very numerous species that await reassignment. In a few cases the only published names available for Western Australian species are in genera that have not yet been reinstated in a research paper. Hence, specimens of *Anticoryne diosmoides* Turcz. and *Tetrapora glomerata* Turcz. are now included under those names on FloraBase although their congeneric relatives are still retained in *Baeckea s.lat.* Fortunately all this taxonomic work has largely solved the problems in eastern Australia, where there are far fewer species belonging to the tribe and no longer any anomalous species included in *Baeckea*.

[1] including one found on Lord Howe Island but not on the mainland

As an interim measure to permit identification of Western Australian genera, a *status quo* key is presented here. At the same time the opportunity is taken to key out the ten tribes represented in Western Australia. In the first half of the key, the genera belonging to all tribes except the Chamelaucieae are accounted for. The remainder of the key is taken up with the many genera of tribe Chamelaucieae. Since the generic concepts in this tribe are under review, alternative generic names are given in brackets below some of the generic names currently in use. It is likely that the names in brackets will eventually become accepted for all or some of the species that key to those positions. *Baeckea s.lat.*, which keys out multiple times and is given in inverted commas, will eventually be eliminated entirely.

This interim key should allow users to begin recognizing the new genera and help them gain an understanding of which genera are related by indicating their placement in the tribal classification. It is intended to update the information presented in the existing electronic key to Western Australian genera of all families (Macfarlane *et al.* 2006–) in the near future to make it effective as an alternative means to identify the Myrtaceous genera.

Notes on the Western Australian tribes

As the primary aim of this key is to provide simple characters to distinguish genera, the main morphological reasons for the recognition of the various tribes are not always apparent. Seven of the tribes each contain only one or two Western Australian genera, making them easy to key. The tribes Melaleuceae and Leptospermeae each contain nine genera and both tribes key out at two or three positions. For the most part they can be distinguished by the presence or absence of stamen fascicles respectively, but one genus of each tribe is atypical in this respect. Another largely complete difference is in the length of the stamens, which always exceed the petals in the Melaleuceae but are shorter than to slightly longer than the petals in all genera of the Leptospermeae except *Asteromyrtus* and *Kunzea* Reichb. A more significant difference between the genera now placed in those two tribes appears to be in their bark anatomy, as first discovered by Bamber (1962). The bark anatomy of the Leptospermeae matches that of the Chamelaucieae and molecular studies (e.g. Wilson *et al.* 2005) have concurred in showing a close relationship between these two tribes.

Anther types in the Myrtaceae

Characteristics of the anthers are crucial in understanding generic boundaries in the Myrtaceae. The primitive anther type (Figure1A), found in some members of all tribes, is dorsifixed and versatile (with the filament narrowly attached on the back of the anther body and an easily moveable anther), and has parallel cells (also known as thecae) that open longitudinally. One of the defining characteristics of the Myrtaceae is the presence of a connective gland, protruding from the connective tissue above the point of attachment of the filament. This connective gland is most obvious in young anthers prior to dehiscence.

Various modifications of the anthers characterise particular genera. These include changes to the way the anther is attached (e.g. to being basifixed or having a broad adnate attachment), changes in the alignment of the anther cells so that they diverge at the base or apex (or they may curve outwards at the middle and meet at both the base and apex), changes to the kind of dehiscence (e.g. to transverse slits or pores), changes in the shape and position of the connective gland, and the fusion or loss of various components of the anther. The anther morphology is sometimes so greatly modified that interpreting its structure can be very difficult.

For the connective gland the most important character used in the key is whether the gland is free or fused. It is regarded as being free if it forms a separate lobe, which varies from much smaller than (Figure 1A) to larger than (Figure 1B) each of the anther cells. It is called fused if its swollen body is adnate to other parts of the stamen or if it is incorporated within the anther rather than forming a distinct structure. This fused state was used by Niedenzu (1893) to separate *Baeckea* subg. *Hysterobaeckea* Nied. from taxa such as *Baeckea s.str.* that had the primitive anther type. Often the connective gland appears to be fused to the distal part of the filament so that the anther is attached not by a narrow filament but by a swelling, the base of which is attached at right angles to the normal filament below (Figure 1C). In *Tetrapora glomerata* the connective gland appears to be absent as it is fused with the cells into a more or less globular, dark-coloured anther (Figure 1D), although the almost black top of the anther is probably where the gland resides. Another example of an anther type in which the fused connective gland is not obvious is the helmet-shaped anther referred to in couplet 50 of the key (Figure 1E).

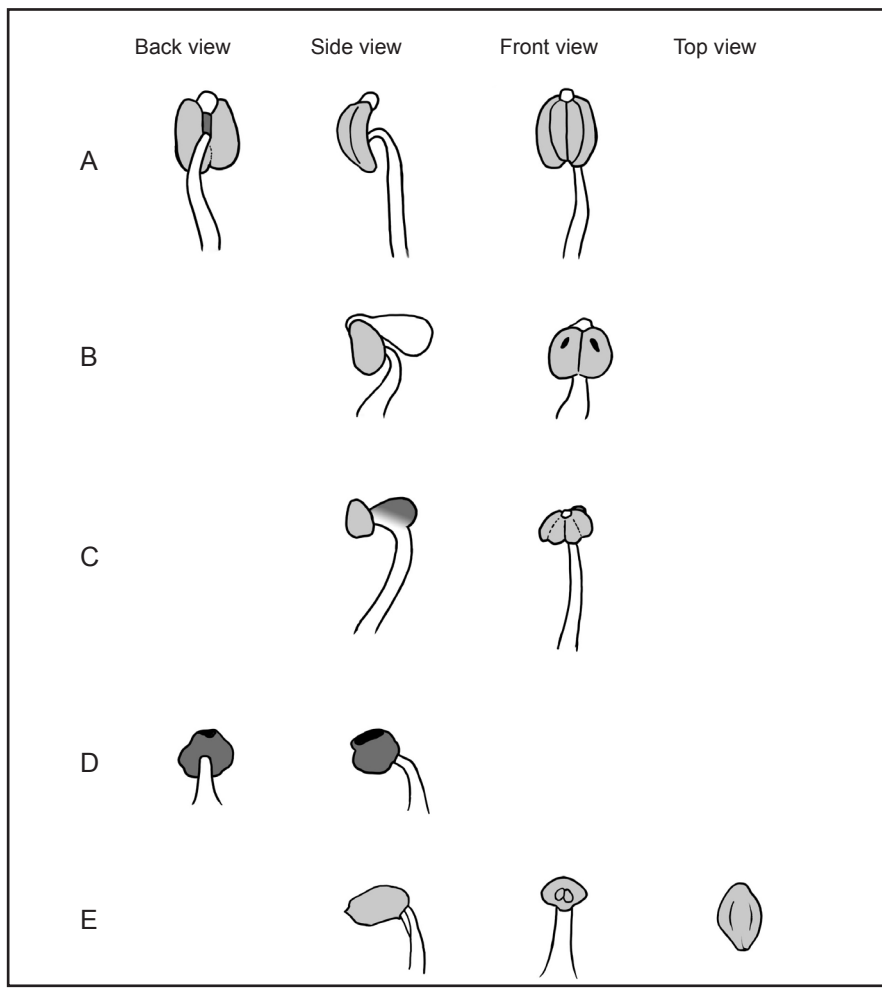

Figure 1. A – stamen of *Baeckea s.str.* with a versatile anther, longitudinal dehiscence and a free terminal connective gland; B – stamen of *Aluta* Rye & Trudgen, with a very large free connective gland directed towards the back of the dorsifixed filament, dehiscent by pores. C – stamen of *Orthomorphus* ms, with the large connective gland apparently fused to the distal end of the filament. D – stamen of *Tetrapora glomerata* Lindl. with an extremely modified dark anther, the more blackened distal part probably being the gland. E – stamen of *Babingtonia* Lindl., the anther resembling a bicycle helmet from top view, no gland visible.

Key to Western Australian tribes and genera of Myrtaceae

1. Tall shrubs or small trees of mangrove habitats. Petiole base expanded to enclose axillary bud. Sepals and petals identical and forming a single whorl of 8, free (**tribe Osbornieae**)..... **Osbornia**

1: Dwarf shrubs to tall trees, never occurring in mangrove communities. Petioles not expanded, sometimes absent. Sepals 4–6 or rarely absent and petals 4–6, sometimes one or both whorls united into a deciduous operculum

2. Fruit indehiscent, succulent or somewhat succulent (a berry or drupe). Occurring in the northern part of the Kimberley Region

3. Young stems glabrous. Inflorescence of terminal and/or axillary cymes or panicles of cymes. Sepals free or united into an operculum, glabrous. (**tribe Syzygieae**)..... **Syzygium**

3: Young stems hairy. Inflorescence of solitary axillary flowers or rarely axillary cymes. Sepals free, densely hairy outside or densely ciliate. (**tribe Myrteae**)

4. Sepals and petals 4, sparsely hairy or glabrous outside, densely ciliate. Stamens all or some longer than petals..... **Eugenia**

4: Sepals 5, densely hairy; petals 5, moderately hairy outside. Stamens shorter than petals..... **Lithomyrtus**

2: Fruit indehiscent or dehiscent, membranous to very woody (a nut or capsule). Widespread in Western Australia or restricted to the south

5. Sepals and/or petals united into an operculum, which is shed when the bud opens. (**tribe Eucalypteae**)

6. Cotyledons reniform. Hairs commonly present on juvenile plants and sometimes on young stems and leaves. Seeds very compressed and/or with a terminal wing..... **Corymbia**

6: Cotyledons 2-lobed. Hairs absent. Seeds terete or angled to somewhat compressed, sometimes winged along the angles..... **Eucalyptus**

5: Sepals and petals free or shortly united, one or both whorls usually persistent in flower

7. Ovary almost superior, developing into a capsule with longitudinal dehiscence. (Occurring in the Kimberley Region.) (**tribe Xanthostemoneae**)..... **Xanthostemon**

7: Ovary usually inferior or largely inferior, developing either into a capsule that is dehiscent by terminal valves or into an indehiscent fruit

8. Flowers pedicellate, in loose axillary cymes 20–100 mm long (including peduncle). Occurring in the Kimberley Region

9. Stems with a milky sap. Stamens united into 5 antipetalous fascicles. Fruit dehiscent by 3 valves. (**tribe Lophostemoneae**)..... **Lophostemon**

9: Stems without a milky sap. Stamens free. Fruit indehiscent. (**tribe Backhousieae**).... **Backhousia**

8: Flowers sessile or stalked, solitary in the axils or in varied arrangements but not as above. Widespread in Western Australia or restricted to the south

10. Ovary (2)3–5-locular; ovules 1–230, when numerous arranged in multiple rows across the placenta. Fruit a valvate capsule, sessile. Seeds narrow in most genera, with a membranous or papery testa. Embryo with cotyledons equalling or longer than the hypocotyl

11. Stamens united into long antipetalous fascicles greatly exceeding the length of the petals, sometimes with the fascicles also united to one another

12. Placentas axile-basal, with a moderate number of ovules, not peltate. Seeds narrowly elliptic to obovate in outline, distally winged. Occurring in the Kimberley Region. (**tribe Leptospermeae *p.p.***) ..... **Asteromyrtus**

12: Placentas axile-medial, with 1–230 ovules, peltate when ovules numerous. Seeds of varied shape, often narrowly oblong to linear in outline, not winged or with lateral wings. Restricted to southern and central parts of Western Australia except for *Melaleuca*, which is widespread (**tribe Melaleuceae *p.p.***)

13. Anthers attached by the base, erect, the cells often divergent, opening in various ways (transversely, longitudinally or by pores)

14. Anther cells opening at the top by transverse slits. Ovules 1 per loculus..... **Beaufortia**

14: Anther cells opening by terminal pores or opening outwards by transverse or longitudinal slits. Ovules 2 to numerous per loculus

15. Anther cells opening outwards by transverse slits ..... **Phymatocarpus**

15: Anther cells opening by longitudinal slits or by pores

16. Leaves usually not exceeding 15 mm long. Stamen fascicles 5, of varied colours

17. Leaves opposite and decussate. Flowers in dense heads. Ovules 4 per loculus ..... **Regelia**

17: Leaves alternate. Flowers solitary or in small clusters of 2 or 3. Ovules 7–23 per loculus..... **Eremaea**

16: Leaves usually at least 20 mm long. Stamen fascicles 4 or sometimes 5, usually red..... **Calothamnus**

13: Anthers dorsifixed, versatile, with parallel cells opening longitudinally

18. Stamen fascicles united into a tube for at least half their length ..... **Lamarchea**

18: Stamen fascicles separate or shortly united at the base

19. Leaves opposite. Ovules 1 per loculus..... **Conothamnus**

19: Leaves alternate or rarely opposite. Ovules 2–230 per loculus ..... **Melaleuca**

11: Stamens free, shorter than to slightly exceeding petals in most genera but distinctly longer in *Callistemon* and *Kunzea*.

20. Stamens distinctly longer than the petals

21. Leaves 30 mm or more long. Flowers red, 20–30 mm long, in a subterminal cylindrical spike up to 120 mm long. (**tribe Melaleuceae *p.p.***) ..... **Callistemon**

21: Leaves up to 15 mm long. Flowers usually pink, white or yellow and 4–20 mm long but red and *c.* 30 mm long in one species, in a head or rarely a short spike, usually terminal. (**tribe Leptospermeae *p.p.***)..... **Kunzea**

20: Stamens shorter than to just exceeding the petals. (**tribe Leptospermeae *p.p.***)

22. Leaves opposite. Fruit thin-walled..... **Angasomyrtus**

22: Leaves alternate. Fruit woody

23. Flowers in dense, globular, axillary or terminal heads. Petals tending to persist after flowering. Ovules and seeds erect or ascending

24. Stamens 10, with 1 opposite each sepal and petal. Ovules 2(3) per loculus..... **Taxandria**

24: Stamens more than 10, with 3–7 opposite each sepal and 1 or none opposite each petal, i.e. mostly antisepalous. Ovules 3–14 per loculus

25. Leaves not clustered. All stamens antisepalous, none opposite the petals ..... **Agonis**

25: Leaves densely clustered. Antipetalous stamens present as well as antisepalous ones ..... **Paragonis**

23: Flowers solitary, loosely arranged or clustered but not in globular heads. Petals deciduous. Ovules and seeds horizontal or pendulous

26. Leaves grading into bracts. Seeds 1 per loculus, developed from the basal ovule (i.e. the upper 'ovules' functionally ovulodes)..... **Pericalymma**

26: Leaves quite distinct from the bracts. Seeds not restricted to 1 per loculus (i.e. more than 1 true ovule present in each loculus)

27. Anthers not ridged. Ovary summit glabrous or hairs not forming radiating bands. Seeds varied but not as below ..... **Leptospermum**

27: Anthers with 2 abaxial ridges on each side of connective. Ovary summit with radiating bands of hairs delimiting the loculi. Seeds disc-shaped, winged..... **Homalospermum**

10: Ovary 1–3(–5)-locular; ovules 1–12(–25) per loculus, when numerous arranged either in 2 parallel rows or in a circle (i.e. radiating from the centre of the placenta). Fruit either indehiscent or containing seeds with a hard testa. Embryo with cotyledons much smaller than the large hypocotyl. (**tribe Chamelaucieae**)

28. Flowers in a daisy-like inflorescence with the outer flowers sterile, 4-merous, with 4 petaline sepals, 4 petals and 8 stamens ..... **Actinodium**

28: Flowers variously arranged, all fertile, 4–6-merous and usually with sepals and petals dissimilar, if 4-merous then sepals absent, never with a constant stamen number of 8

29. Androecium with 20 filaments (stamens or staminodes) united at base into a ring, the antipetalous ones always stamens and those alternating with the petals and sepals usually staminodes; staminodes (present in all genera except *Pileanthus*) varying from tooth-like or filiform to expanded and resembling a small petal. Fruit 1-locular, indehiscent

30. Sepals deeply 2-lobed. Stamens 20. Staminodes absent ..... **Pileanthus**

30: Sepals entire to greatly divided, sometimes also with accessory lobes. Stamens 10 or rarely 5. Staminodes 10 or rarely 15

31. Sepals deeply divided; petals deeply divided to entire..... **Verticordia *s.lat.*** (including **Chrysorhoe**)

31: Sepals and petals never deeply divided, margin entire, denticulate or ciliate

32. Anthers dehiscent by 2 longitudinal slits. Ovules 4–10..... **Chamelaucium**

32: Anthers dehiscent by 2 terminal pores. Ovules 2..... **Darwinia *s.lat.*** (including **Genetyllis**)

29: Androecium of 3–150 free or united filaments, not consistently with 20 filaments; staminodes absent or not constant in number, not arranged as described above, never petal-like but sometimes retaining the connective gland. Fruit 1–5-locular, indehiscent or dehiscent

33. Leaves alternate (except in a few species of *Calytrix*). Petals and stamens erect in bud (except in most species of *Homalocalyx*). Hypanthium often very slender. Stamens 10–150; anther dorsifixed and usually versatile. Ovary 1-locular, with 2 ovules (except 1 species with 3 or 4 ovules)

34. Stamens all or mostly erect in bud. Sepals long-awned in most species. Embryo straight, the cotyledons erect ..... **Calytrix**

34: Stamens all inflexed in bud except in *H. ericaeus*. Sepals not awned. Embryo curved, with cotyledons on a slender neck appressed to a massive hypocotyl ..... **Homalocalyx**

33: Leaves opposite or whorled. Petals and stamens inflexed in bud or rarely petals sub-erect. Hypanthium moderately slender to very broad. Stamens 3–60 or if more numerous then anther ± basifixed. Ovary 1–5-locular, with 1–25 ovules per loculus

35. Connective gland free from the filament and anther cells, usually obvious and dorsal or terminal but if gland not obvious then cells free and long

36. Anthers basifixed or with filament attached almost at base of connective. Seeds often with a prominent adnate protrusion along the inner surface

37. Anther cells close at apex but very divergent at base, the connective triangular, with a wide basal attachment. Seeds strongly facetted, with no inner protrusion..... **Seorsus**

37: Anther cells ± parallel, the connective not much broader at base than at top. Seeds not facetted or with facets poorly developed, often with an obvious inner protrusion

38. Stamens 8–30, united into an undulating or fairly level petaline ring (the leaves always opposite-decussate). Seed body and enclosed embryo broadest towards distal end of the fruit loculus ..... **Cyathostemon**

38: Stamens 3–125 in varied arrangements (if androecium as above then leaves in whorls of three). Seed body and enclosed embryo broadest towards base or outer margin of the fruit loculus

39. Leaves tending to be fasciculate, always narrow. Stamens 3–60, when very few then all or mostly widely spaced, when more numerous then all or mostly in antisepalous fascicles. Seeds 0.5–1.3 mm long, thin-walled or moderately thick-walled..... **Astartea**

39: Leaves never fasciculate, sometimes broad. Stamens 10–125, basally united into a continuous circle or, when few, sometimes with gaps present. Seeds 0.8–2.3 mm long, thick-walled..... **Hypocalymma**

36: Anthers dorsifixed near centre of dorsal surface, but in one genus (*Rinzia*) adnate to the inner surface of a flattened filament. Seeds either with a free aril on inner surface or with no obvious inner protrusion

40. Style base inserted in a depression. Fruit 2–5-locular, dehiscent or if indehiscent (*Enekbatus*) then with a very thick hard wall. Seeds ± reniform (rarely obovoid), sometimes with a whitish free aril; testa thick, hard, usually colliculate or tuberculate

41. Androecium of 5–12 stamens; antipetalous filaments 0.5–1 mm wide, emarginate, truncate or obtuse; antisepalous filaments (when present) united shortly at base or for half to nearly their full length to the antipetalous filaments; anthers attached to inner surface of filament ..... **Rinzia**

41: Androecium of 3–30 stamens; filaments very slender or rarely up to 0.6 mm wide, attenuate at apex, free; anthers with a narrow dorsal attachment at slender summit of filament

42. Ovary 2–5-locular, sometimes with one loculus sunken below the others or with 2 superposed ovules in each loculus. Fruit fully indehiscent or with 2 upper loculi dehiscent and a somewhat lower loculus indehiscent

43. Flowers ± sessile. Hypanthium circular in transverse section. Ovary loculi usually all with 2 ovules. Fruit with all of the 2–5 loculi at the same level, fully indehiscent ..... **Enekbatus ms**

43: Flowers stalked. Hypanthium 5-angled. Ovary loculi with 1–7 ovules, upper loculi usually with more than 2 ovules. Fruit with loculi at two overlapping levels, lower level with an indehiscent loculus and upper level with 2 dehiscent loculi ..... **Astus**

42: Ovary 3-locular in all or most flowers, with ovules collateral or in 2 rows. Fruit with all loculi dehiscent

44. Leaves with parallel venation usually visible on upper surface. Peduncles 0.5–9 mm long, 1–4-flowered. Antipetalous processes forming prominent groups. Seeds usually with an obvious free whitish aril surrounding a small hilum ..... **Euryomyrtus**

44: Leaf venation obscure or not as above. Peduncles ± absent or up to 0.6 mm long, 1-flowered. Antipetalous processes free and inconspicuous or absent. Seeds without an aril but sometimes with a large concave or flat hilum

45. Filaments of antipetalous stamens flat, 0.25–0.6 mm wide throughout. Seeds without any obvious cavity or large hilum; testa minutely colliculate..... **Rinzia (=Latistemon ms)**

45: Filaments narrow for all or most of their length, less than 0.25 mm wide in distal half. Seeds either with a large concave or flat hilum on inner surface or with the testa tuberculate

46. Androecium with 5–20 stamens but no regularly occurring staminodes, with varied arrangements of the stamens but rarely exactly as in the next choice. Ovules 2 per loculus. Seeds 1.1–1.5 mm long, with a large concave and longitudinally divided hilum;testa colliculate ..... **'Baeckea' (=Semasperma ms)**

46: Androecium with a circle of 16–36 members consisting of 3 or 4 long stamens opposite each petal (i.e. antipetalous) and with shorter antisepalous stamens or staminodes. Ovules 3–5 in all or some loculi. Seeds 1.6–2.2 mm long, with hilum either small or flat, not divided; testa tuberculate ..... **'Baeckea' (=Aethestemon ms & Xeromesos ms)**

40: Style base not in a depression. Fruit 1(2)-locular, indehiscent, thin- or moderately thick-walled. Seeds of very varied shapes including reniform, never arillate; testa very thin, membranous, smooth

47. Stamens 5–10, with one stamen opposite each petal (i.e. antipetalous) and sometimes also opposite all or some of the sepals; antisepalous stamens (when present) shorter and often lower than antipetalous stamens; anther cells ± parallel or divergent at summit. Ovules somewhat pendulous from a placenta that is located towards summit of ovary

48. Peduncle fused at summit to the bracteoles and flower. Sepals dimorphic, the 2 abaxial sepals broad and the 3 adaxial sepals narrower. Anthers terminated by a long-stalked connective gland..... **Corynanthera**

48: Peduncle free. Sepals ± equal. Anthers with a short unstalked connective gland..... **Micromyrtus**

47: Stamens 5–40, if few then all antisepalous, if 10 then often alternating with the sepals and petals, in the few species with 10 opposite sepals and petals the anther cells divergent at the base. Ovules erect, attached laterally or towards the base of ovary

49. Hypanthium reticulate-pitted or closely wrinkled. Connective gland (of the anther) with a long obovoid body directed towards outside of flower. Disc markedly reticulate-pitted. Ovules 4–6 ..... **Aluta**

49: Hypanthium with 5–16 irregular longitudinal ribs or smooth or rugose. Connective gland (of the anther) with a compact body, directly above top of cells and directed inwards. Disc smooth or with prominent oil glands. Ovules 2 in most species but up to 10..... **Thryptomene *s.lat.*** (including **Paryphantha**)

35: Connective gland adnate to the filament or cells or fully incorporated with fused cells into a very modified anther, the cells often short

50. Anthers helmet- or shield-like, often with a groove along each side or distally 2-lobed. Filaments compressed, numerous and continuous or less commonly few and antisepalous (i.e. with gaps opposite the petals)

51. Peduncles 1-flowered. Flowers with petals 4–7 mm long, sepals 1.1–1.6 mm long and 12–45 stamens. Restricted to Fitzgerald River National Park ..... **Anticoryne**

51: Peduncles 1–20-flowered. Flowers with petals 1.3–6.5 mm long (if petals more than 5 mm long then sepals 0.2–1.1 mm long) and 3–25 stamens. Occurring from north of Geraldton to the Mount Barker area..... **'Baeckea'** (**=Babingtonia**)

50: Anthers of varied shape including globular to obloid but not as in the above choice. Filaments of varied shape and arrangement, sometimes matching above choice

52. Fruit indehiscent, 1–3-locular, usually with a maximum of 1 seed per loculus

53. Ovules 1 or 2 per loculus ..... **Scholtzia**

53: Ovules 3–20 per loculus

54. Ovary 1-locular; ovules 3–8 ..... **Malleostemon *s.lat.***

54: Ovary 2- or 3-locular; ovules 4–20 per loculus

55. Petals white. Stamens 16–29. Ovules 4–14 per loculus. Fruit not very woody..... **'Baeckea'**[2]

55: Petals bright pink or orange to red. Stamens 30–60. Ovules 10–20 per loculus. Fruit very woody ..... **Cheyniana**

[2] *B. pentagonantha* F.Muell. group and *B*. sp. Melita Station (H. Pringle 2738)

52: Fruit dehiscent by 2 or 3 terminal valves, usually with multiple seeds per loculus

56. Hypanthium petaloid, orange to red, 9–20 mm long, with sepals and petals the same colour. Style 20–24 mm long at maturity..... **Balaustion**

56: Hypanthium herbaceous, green to reddish, 0.5–4 mm long, with sepals and/or petals contrasting in colour. Style 0.7–12 mm long at maturity

57. Fruit fully inferior, with the style inserted within a broad funnelled depression (which is also visible on the ovary of dried flowers)..... **Oxymyrrhine *s.str.***

57: Fruit usually partially superior, with apex level or raised, the style terminal or inserted within a narrowly cylindrical depression

58: Anthers globular, 0.2–0.3 mm long, black..... **Tetrapora**

58: Anthers of varied shapes, if globular then not as above ..... **'Baeckea'** (many groups including **Tilophloia ms** & **Orthomorphus ms**)

Acknowledgements

This research has been supported by ABRS funding. I am grateful to Kevin Thiele for suggesting this paper and for his constructive comments, to the referee for his comments, and to Lisa Rye for assistance with the illustration.

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