Flora of Tasmania online

92 DILLENIACEAE [1]

AM Gray [2]

Shrubs or trees, rarely climbers or scramblers. Leaves alternate; stipules small, adnate to the petiole, or absent. Flowers solitary, rarely in cymes or racemes, bisexual, usually actinomorphic; receptacle hypogynous. Sepals 5, free or shortly joined at the base, imbricate, persistent. Petals usually 5, free, imbricate, often crumpled in bud, caducous to deciduous. Stamens 1–many, surrounding the ovary or variously united at the base into bundles around the ovary or to one side of it, usually persistent; anthers bilocular, dehiscing by pores or longitudinal slits. Carpels 1–3(–many), usually free or shortly joined at the base. Ovary with 1 or several ovules; styles free with simple terminal stigma. Fruit a follicle, rarely indehiscent. Seed with copious endosperm.

A family of 10–12 genera with over 300 species; mainly pan-tropical but a large number of species in sub-tropical and temperate Australia; 3 genera in Australia, 1 genus in Tasmania. Dilleniaceae are taxonomically isolated and are the sole representative of Dilleniales.

Synonymy: Hibbertiaceae, Soramiaceae.

External resources: accepted names with synonymy & distribution in Australia (APC); author & publication abbreviations (IPNI); mapping (AVH, NVA); nomenclature (APC, APNI, IPNI).

1 HIBBERTIA

Hibbertia Andrews, *Bot. Repos*. 2: t. 126 (1820).

Synonymy: *Pleurandra* Labill., *Nov. Holl. Pl.* 2: 5 (1806). *Candollea* Labill., *Nov. Holl. Pl.* 2: 33, t. 176 (1806). *Adrastaea* DC. *Syst. Nat.* 1: 397, 424 (1817). *Pachynema* section *Huttia* Benth. & Hook., *Gen. Pl. [Endlicher]* 15 (1838); *Huttia* J.Drumm. ex Harv., *Hooker's J. Bot. Kew Gard. Misc.* 7: 51 (1855).

Small shrubs, with simple and/or stellate indumentum; stems erect or procumbent to trailing, rarely scrambling climbers. Leaves alternate, sessile to petiolate; stipules absent but usually with axillary hair tufts; lamina entire, rarely toothed or lobed, flat or ericoid. Flowers sessile or pedunculate, usually bracteate, terminating short lateral branchlets or rarely in cymose clusters (*H. sericea* complex). Sepals 5, imbricate, often slightly connate, outer 3 often differing in size, shape and vestiture from the inner 2, persistent (Tas.) or deciduous, usually enlarging after anthesis. Petals usually (1–)5, pale to golden yellow, free, imbricate, caducous; apex entire and obtuse to distinctly bi-lobed. Stamens 3–many in a complete ring or in groups around the carpels, or if 15 or fewer, confined to a group on one side of the ovary, and rarely with a single stamen opposite (*H. basaltica*); filaments free to almost connate; staminodes sometimes present; anthers dehiscing by terminal pores and/or with vertical slits, lateral to introrse. Carpels 2–5, free or connate at base, erect and with styles terminal, to recurved and with styles inserted dorsally; ovules 2–8. Fruit a follicle; seeds with or without a ± lobed aril, rarely completely enclosed (not in Tas.).

A genus of over 120 species, mainly Australian (all states), but also found in New Guinea, some Pacific Islands and Madagascar. In Tasmania 15 species are currently recognized.

The genus is currently undergoing critical taxonomic revision and the current delineation and identification of some taxa is problematic. Two taxa in particular, *H. appressa* and *H. empetrifolia,* are very difficult to separate,

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2 Tasmanian Herbarium, Tasmanian Museum & Art Gallery, Private Bag 4, Hobart, Tasmania 7001, Australia.

particularly using herbarium specimens. Their separation relies on subtle differences in the characteristics of their respective vestitures. The characters used in the following key and descriptions of these two species follows Toelken (1998). Both species have been retained in the present treatment pending further investigation.

For the accurate identification of many species, fresh, undamaged flowering material is essential, particularly for the determination of petal, stamen and carpel characteristics. The Tasmanian species of *Hibbertia* display three distinctive staminal configurations: those with the stamens in a continuous whorl, or in groups, completely surrounding the carpels, those in which the stamens are confined to a single group on one side of the carpels and a single species (*H. basaltica*) having a group of stamens on one side of the carpels and a single stamen on the opposite side.

NOTE: Petal dimensions are not given in the descriptions as petals are quickly deciduous on collecting and are rarely pressed well on herbarium collections.

Key references: Toelken (1998, 2000).

1.	Stamens in a single group on one side of the 2 carpels or, stamens in a single group and one stamen on the opposite side	2
1:	Stamens surrounding the (2)3(–5) carpels, sometimes in discrete groups	11
2.	Stamens ≤ 8, in a single group plus 1 stamen on the opposite side of the ovary (rare, basalt soils near Pontville, S Tas.)	**1 H. basaltica**
2:	Stamens > 8, in a single group on one side of the carpels (widespread)	3
3.	Ovaries glabrous; stems red, slender, trailing (rare, possibly extinct, NE Tas.)	**2 H. rufa**
3:	Ovaries pubescent to glabrescent; stems not conspicuously red (widespread)	4
4.	Petals 1–5, narrow-linear, often scarcely as long as the sepals	**3 H. hirsuta**
4:	Petals 5, conspicuous, broader and longer than sepals.	5
5.	Leaves narrow-linear, rigid, tapering to a sharp, stiff apex	**4 H. acicularis**
5:	Leaves narrow elliptic, elliptic-ovate or oblong-obovate with blunt or mucronate apex, not sharp	6
6.	Small shrubs, erect or decumbent; leaves narrow-linear to oblong–linear; margins strongly infolded to, or almost to prominent central ridge	7
6:	Spreading, scrambling or trailing shrubs; leaves elliptical, elliptic-ovate to obovate; margins flat or only shortly recurved; central ridge scarcely prominent	9
7.	Leaves densely villous-silky with long, simple hairs over short stellate hairs; stellate hairs dense on abaxial surface; prominent central ridge not extending right to apex	**5 H. sericea**
7:	Leaves glabrous or scabrous due to tuberculate glands, or, sparsely to more or less densely stellate-hairy; abaxial surface obscured by incurved margins and large central ridge; central ridge extending right to apex	8
8.	Leaves densely crowded on short lateral branchlets; length:breadth ratio 10–15/1; apex blunt or mucronate	**6 H. calycina**
8:	Leaves not densely crowded, well dispersed; length:breadth ratio (3–)5(–10)/1; apex acute-apiculate	**7 H. riparia**

9.	Small, stout, spreading shrub; leaves obovate, (8–)10–15(–20) mm long, (3–)5–8(–10) mm wide, crowded, 2–4 together at each node, or smaller and closely dispersed on very short lateral branches	**8 H. hirticalyx**
9:	Scrambling or trailing shrubs; leaves elliptic to occasionally elliptic-ovate, (5–)8(–10) mm long, (2–)3–4(–7) mm wide, mostly scattered, hardly crowded	10
10.	Leaves and calyces with appressed, simple hairs (usually > 1 mm long) only; young branches with appressed, simple hairs and minute stellate hairs	**9 H. appressa**
10:	Leaves and young branches with erect, simple hairs (< 1 mm long) and minute stellate hairs; calyces with stellate hairs only	**10 H. empetrifolia**
11.	Leaves in densely crowded clusters, terete	**11 H. prostrata**
11:	Leaves scattered or in loose, few-leaved clusters, ± flat or with the margins inrolled	12
12.	Leaves linear with margins strongly revolute	**12 H. serpyllifolia**
12:	Leaves flat or convex, margins not or scarcely revolute	13
13.	Plant prostrate; leaves with apex acute	**13 H. procumbens**
13:	Plant erect; leaves with apex blunt or submucronate, or truncate	14
14.	Plants glabrous; leaves concave; stamens 10–12	**14 H. virgata**
14:	Plants softly pubescent; leaves convex; stamens 30 or more (possibly extinct)	**15 H. obtusifolia**

1 Hibbertia basaltica A.M.Buchanan & Schah., *Muelleria* 22: 105 (2005) *Basalt Guinea-flower*

Illustrations: Buchanan & Schahinger, *Muelleria* 22: 106, fig. 2; 107, fig. 3 (2005).

Prostrate to procumbent subshrubs; branches to 40 cm long, with an indumentum of stellate hairs and sometimes with also scattered, short simple hairs. Leaves alternate, shortly petiolate; lamina linear-oblong, 3–6 mm long, 1–1.6 mm wide, adaxial surfaces with scattered, simple antrorse hairs, abaxial surfaces with a sparse indumentum of short simple and stellate hairs, becoming glabrescent with age, apex blunt with a terminal tuft of hairs, margins entire, almost revolute to the broad central ridge, central ridge usually confluent to the apical margins. Flowers solitary, terminating short lateral branchlets, often numerous; peduncles to 20 mm long, recurved after anthesis. Sepals 4.5–5 mm long, imbricate, spreading, abaxial surfaces with long simple and short stellate hairs, the membranous marginal surfaces glabrous, persistent; 2 outer 2 narrow-ovate; inner 3 oblong-ovate, slightly shorter than outer 2. Petals yellow, caducous, obcordate. Stamens arranged in two groups on opposite sides of the carpels, (3)4–5(–7) on the posterior side, 1 on the anterior side; filaments of the group erect and joined at the extreme base. Carpels 2, fused at the base; ovaries shortly pubescent. Flowering Sep.-Nov.; fruiting Dec.

Tas. (TSE); endemic. Known only from the Pontville-Brighton-Bridgewater area in southern Tasmania, on rocky basalt outcrops on slopes above the Jordan River. Listed as Endangered on the *Tasmanian Threatened Species Protection Act 1995*, and may qualify for listing as endangered on the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*.

2 Hibbertia rufa N.A.Wakef., *Vict. Nat.* 72: 119 (1995) *Brown Guinea-flower*

Illustrations: Toelken, *Fl. Victoria* 4: 309, fig. 61a-b (1999); Harden & Everett, *Fl. New South Wales* 1, rev. edn: 301 (2001).

Weak, trailing, procumbent shrub; branches slender, reddish, sometimes rooting at the nodes, puberulent, hairs simple, appressed, tubercle based. Leaves: petioles 0.2–0.5 mm long; lamina 3–8 mm long, 0.8–1.4 mm wide,

linear-lanceolate, puberulous to glabrous, margins narrow, recurved to the broad central ridge, apex acute to obtuse with a terminal tuft of hairs. Flowers solitary, almost sessile, axillary or terminal on short shoots; bracts 3–4, 0.8–1.2 mm long, lanceolate, obtuse. Sepals 3.0–3.6 mm long, unequal, reddish, glabrous. Petals bright yellow. Stamens (3)4, filaments connate. Carpels 2; ovaries glabrous, reddish; styles terminal. Flowering & fruiting Aug.-Dec. [based on non-Tasmanian material].

Tas. (TSE); also NSW, Vic. The species was listed as extinct under the Tasmanian *Threatened Species Protection Act 1995*, as it was known, in Tasmania, from a single collection made from near St. Helens in 1892. The species was recollected from near St. Helens in 2008.

3 Hibbertia hirsuta (Hook.) Benth., *Fl. Austral.* 1: 26 (1863) *Hairy Guinea-flower*

Pleurandra hirsuta Hook., *Companion Bot. Mag.* 1: 273 (1836).

Illustration: Stones & Curtis, *The Endemic Flora of Tasmania* 3: t. 55, No. 92 (1971).

Small, prostrate undershrub; branches slender, spreading 10–20 cm; young stems hirsute with stellate and simple hairs. Leaves shortly petiolate; lamina narrow-linear or elliptical, 3–8 mm long, 0.5–1.0 mm wide, margins revolute, both surfaces hirsute, with simple and stellate hairs, apex blunt. Flowers solitary, sessile in the leaf axils or terminating short axillary branches. Sepals 3–4 mm long, broadly ovate, pubescent. Petals 1–5, dull yellow, narrow-linear, bluntly pointed, or the apex somewhat widened and then obovate or obcordate, about as long as the sepals or shortly exceeding them. Stamens few, sometimes only 1. Carpels 2, free; ovaries pubescent. Flowering Sep.-Oct.; fruiting Nov.

Tas. (TSE); endemic. Scattered but not common in the south and east of the state, in dry grassy places, open heaths and woodlands.

4 Hibbertia acicularis (Labill.) F.Muell., *Pl. Indig. Col. Vict.* 1: 17 (1862) *Prickly Guinea-flower*

Pleurandra acicularis Labill., *Nov. Holl. Pl.* 2: 6, t. 144 (1806).

Illustrations: Jessop, *Fl. S. Austral.* 1: 356, fig. 200a (1986); Toelken, *Fl. Victoria* 4: 306, fig. 60r (1999); Harden & Everett, *Fl. New South Wales* 1, rev. edn: 301 (2001).

Small shrubs, erect, spreading or procumbent; branches glabrous, slender, grooved. Leaves sessile or very shortly petiolate, spreading or reflexed; lamina 5–12 mm long, c. 1 mm wide, narrow-linear, rigid, margins recurved to the broad central ridge, abaxial surface glabrous or slightly scabrous, apex tapering to a stiff, pungent point. Flowers solitary, terminal on long or short peduncles 1–2 cm long; bracts very small, clustered at the base of the calyx. Sepals 4–6 mm long, unequal, glabrous or pubescent with straight or hooked, simple hairs. Petals yellow, obovate, apex with a shallow terminal notch. Stamens 3, on one side of the carpels. Carpels 2, free or joined at the base; ovaries glabrescent or pubescent. Flowering Oct.-Dec. [based mainly on non-Tasmanian material].

Tas. (BEL, FLI, TSE, TSR); also SA, Qld, NSW, Vic. Common in dry, open country, sandy heaths etc., in the east and north of the state

5 Hibbertia sericea (R.Br. ex DC.) Benth., *Fl. Austral.* 1: 26 (1863) var. **sericea** *Silky Guinea-flower*

Pleurandra sericea R.Br. ex DC., *Syst. Nat. (Candolle)* 1: 416 (1817). *Pleurandra densiflora* Hook., *J. Bot. (Hooker)* 1: 245 (1834); *Hibbertia densiflora* (Hook.) F.Muell., *Pl. Victoria* 1: 15 (1862); *Hibbertia sericea* var. *densiflora* (Hook.f.) Benth., *Fl. Austral.* 1: 26 (1863). *Hibbertia sericea* var. *scabrifolia* J.M.Black, *Trans. & Proc. Roy. Soc. South Australia* 49: 274 (1925). *Hibbertia cinerea* (R.Br. ex DC.) Toelken, *J. Adelaide Bot. Gard.* 18(2): 133 (1988).

Illustrations: Jessop, *Fl. S. Austral.* 1: pl. 14; 356, fig. 200l (1986); Toelken, *Fl. Victoria* 4: 309, fig. 61j-k (1999); *Fl. New South Wales* 1, rev. edn: 302 (2001).

Erect, spreading or rarely decumbent shrubs, 15–60 cm high; branches villous. Leaves sessile or shortly petiolate, spreading to sub-erect; lamina 5–10(–15) mm long, 1–2(–3) mm wide, elliptic to narrow-oblong or oblanceolate, margins revolute, almost to the broad central ridge, adaxial surfaces villous with soft, simple hairs, with minute stellate hairs beneath, abaxial surfaces densely stellate-tomentose between the margin and central ridge, the ridge not obviously extending completely to the apex, apex blunt or acute. Flowers solitary or 2–3(–5) in sessile clusters, terminating short lateral branches; subtended by bract-like leaves as long as or longer than the cauline leaves. Sepals 6–9 mm long; outer 2 narrow-ovate, villous; inner 3 ovate, with stellate and simple hairs except at the margins. Petals yellow, spreading, obcordate, deeply notched. Stamens 8–16, on one side of the carpels; filaments free to slightly connate. Carpels 2, joined at the base; ovaries densely silky-hairy. Flowering & fruiting Jun.-Nov.

Tas. (FLI, KIN, TNS, TSE); also SA, Qld, NSW, Vic. Common in open, dry, coastal heaths and dunes in the north of the state. The species is listed as Vulnerable under *The Tasmanian Threatened Species Protection Act 1995*. Toelken (2000) has recognized at least three informal [subspecific] groups in *H. sericea*, two of which occur in Tasmania, as well as two putative hybrids (not in Tas.).

6 Hibbertia calycina (DC.) N.A.Wakef., *Vict. Nat.* 72: 122 (1955) *Lesser Guinea-flower*

Pleurandra calycina DC., *Syst. Nat. (Candolle)* 1: 422 (1817); *Hibbertia stricta* var. *calycina* (DC.) Benth., *Fl. Austral.* 1: 27 (1863).

Illustrations: Toelken, *Fl. Victoria*, 4: 309, fig. 61e-f (1999); Harden & Everett, *Fl. New South Wales* 1, rev. edn: 302 (2001).

Erect or semi-erect shrubs to 1 m high; branches with many short lateral shoots, sparsely pubescent, the hairs tubercle-based, short, simple, rarely some bifurcate or multi-branched. Leaves very shortly petiolate, erect; lamina 3.5–15 mm long, 0.5–1 mm wide, linear, margins revolute, raised above and touching broad central ridge which extends to the apex, adaxial surfaces with scattered short hairs arising from tuberculate bases, abaxial surfaces obscured by the inrolled margins. Flowers sessile, terminal on short lateral branches, subtended by a single triangular bract. Sepals 4.5–6.5 mm long, unequal, puberulous to tomentose. Petals bright yellow, spreading, oblong-obovate, about as long as the sepals. Stamens 8–20 in a single cluster; filaments slightly connate at the base. Carpels 2; ovaries tomentose to villous. Flowering & fruiting Apr.-Jun./Sep.-Oct.

Tas. (FLI); also NSW, Vic. Uncommon, localised in dry, stony areas in open forest near the north-east coast. Listed as Vulnerable under the *Tasmanian Threatened Species Protection Act 1995*.

7 Hibbertia riparia (R.Br. ex DC.) Hoogl., *Kew Bull.* 29: 155 (1974) *Erect Guinea-flower*

Pleurandra riparia R.Br. ex DC., *Syst. Nat.* 1: 419 (1817). *Pleurandra stricta* R.Br. ex DC., *Syst. Nat*. 422 (1817); *P. riparia* var. *stricta* (R.Br. ex DC.) Hook.f., *Bot. Antarct. Voy. III. (Fl. Tasman.)* 1: 17 (1855); *Hibbertia stricta* (R.Br. ex DC.) F.Muell, *Pl. Victoria* 1: 15 (1862). *Pleurandra riparia* var. *glabriuscula* Hook., *J. Bot. (Hooker)* 1: 245 (1834). *Pleurandra riparia* var. *microphylla* Hook.f., *Bot. Antarct. Voy. III. (Fl. Tasman.)* 1: 17 (1855). *Hibbertia stricta* var. *glabriuscula* Benth., *Fl. Austral*. 1: 27 (1863). *Hibbertia australis* N.A.Wakef., *Vict. Naturalist* 72: 129 (1995).

Illustrations: Curtis & Morris, *The Student's Flora of Tasmania* 1, 2nd edn: 22, fig. 7 (1975); Jessop, *Fl. S. Austral*. 1: 356, fig. 200h (1986); Toelken, *Fl. Victoria* 4: 309, fig. 61n (1999); Harden & Everett, Fl. *New South Wales* 1, rev. edn: 302 (2001).

Erect, spreading or occasionally decumbent shrubs, 15–90 cm high; branches glabrous or puberulose-tomentose with short simple and stellate hairs. Leaves very shortly petiolate, erect, spreading or recurved; lamina (3–)5–12(–15) mm long (to 23 mm in some Victorian specimens), 1–1.5(–2.5) mm wide, linear, margins revolute to the broad central ridge, completely obscuring the abaxial surfaces, adaxial surfaces glabrous to sparsely tomentose-puberulent, apex acute or obtuse. Flowers terminal or sometimes on short lateral shoots, sessile, or rarely with peduncles to 10 mm or more; bracts 1-several, linear-lanceolate, about as long as the leaves. Sepals

4.5–8 mm long, unequal, glabrous to puberulous. Petals bright yellow, obcordate, a little longer than the sepals. Stamens 5–12, in a single cluster on one side of the carpels. Carpels 2, free; ovaries silky-hairy. Flowering & fruiting Apr.-May/Aug.-Jan.

Tas. (BEL, FLI, TNM, TNS, TSE, TSR); also SA, Qld, NSW, Vic. Widespread and very common in dry, open heaths, open shrubberies and woodlands at lower altitudes. A very variable taxon, requiring critical taxonomic revision.

8 Hibbertia hirticalyx Toelken, *J. Adelaide Bot. Gard*. 18 (2): 146 (1998) *Bassian Guinea-flower*

Pleurandra ovata var. *scabra* (R.Br. ex DC.) Hook.f., *Bot. Antarct. Voy. III.* (*Fl. Tasman*.) 1(1): 16 (1855). *Hibbertia billardierei* var. *monadelpha* F.Muell. ex Benth., *Fl. Austral*. 1: 28 (1863); *H. ovata* var. *monadelpha* (F.Muell. ex Benth.) Domin, *Biblioth. Bot*. 89(4): 976 (1930). *Hibbertia billardierei* F.Muell., *Pl. Victoria* 1: 14 (1862) [as *H. Billardierii*], *p.p., nom. illeg*. *Hibbertia billardierei* var. *obovata* R.Br. ex Benth., *Fl. Austral.* 1: 28 (1863); *H. ovata* var. *obovata* (R.Br. ex Benth.) Domin, *Biblioth. Bot*. 89(4): 976 (1930). *Hibbertia aspera sensu* W.M.Curtis & D.I.Morris *The Student's Flora of Tasmania* 1: (2nd edn) 23 (1975), *non* DC (1817).

Illustrations (often as *H. aspera*): Jessop, *Fl. S. Austral*. 1: 356, fig. 200B (1986); Toelken, *J. Adelaide Bot. Gard*. 18 (2): 148, fig. 9 (1998); Toelken, *Fl. Victoria* 4: 309, fig. 61o (1999); Harden & Everett, *Fl. New South Wales* 1, rev. edn: 301 (2001); Simmons *et al*., *A Guide to Flowers and Plants of Tasmania* 4th edn, 151 (2008).

An erect, spreading to decumbent shrub, 50–70(–100) high; branches tomentose, with few tubercle based, simple hairs over shorter stellate hairs. Leaves often crowded, 2–4 together on very short lateral branches; petioles 1–2.5 long; lamina 5–25 mm long, 3–10(–12) mm wide, obovate to oblanceolate, margins flat or slightly revolute, widely distant from the narrow mid-vein, adaxial and abaxial surfaces uniformly stellate-tomentose, apex rounded to obtuse, mid-vein rarely extended into a blunt mucro. Flowers terminal but often apparently axillary when produced on very short lateral branches; solitary or 2–3 together on peduncles 3–5(–10) mm long, subtended by a linear bract just below the calyx. Sepals 3–5 mm long, unequal, stellate-pubescent. Petals bright yellow, obovate-cuneate. Stamens 6–12; filaments nearly free or half-connate. Carpels 2, free or joined at the base; ovary densely villous. Flowering & fruiting Aug.-Dec.

Tas. (BEL, FLI); also Vic. Scattered and localised in dry heaths and open woodlands in the north-east and the Furneaux Islands.

9 Hibbertia appressa Toelken, *J. Adelaide Bot. Gard*. 19: 54 (2000) *Southern Guinea-flower*

Pleurandra ovata Labill., *Nov. Holl. Pl.* 2: 5, t. 143 (1806); *Hibbertia ovata* (Labill.) Druce, *Bot. Exch. Club Soc. Brit. Isles [report for 1916] Suppl.* 2: 628 (1917). *Pleurandra ovata* var. *prostrata* Hook. f., *Bot. Antarct. Voy. III.* (*Fl. Tasman*.) 1(1): 16 (1855), *nom. inval. Hibbertia billardierei* F.Muell., *Pl. Victoria* 1: 14 (1862) [as *H. Billardierii*], *p.p., nom. illeg*. *Hibbertia billardierei* var. *ovata* Benth*., Fl. Austral.* 1: 28 (1863). *Hibbertia ovata* var. *typica* Domin, *Biblioth. Bot*. 89(4): 976 (1930), *nom. inval*. *Hibbertia appressa* Toelken, *J. Adelaide Bot. Gard*. 18(2): 120 (1998), *nom. inval*.

Illustration: Toelken, *J. Adelaide. Bot. Gard.* 18(2): 122, fig. 3a-f (1998).

Spreading or decumbent shrubs, often scandent, spreading to 2 m or more; branches wiry, puberulous, with long, antrorse, ± appressed simple hairs, c. 1 mm long, over smaller, scattered stellate hairs, both hair types arising from small tubercles. Leaves sessile to shortly petiolate, spreading or slightly reflexed; lamina (2–)3.5–5(–12) mm long, (1–)2.5–3.5(–6) mm wide, elliptic-lanceolate, ovate-elliptic or obovate elliptic, margins narrowly recurved, distant from the prominent, narrow mid-vein, both surfaces pubescent to glabrescent with robust, simple, appressed antrorse hairs, the hairs sometimes hooked, particularly on the adaxial surface, both surfaces soon becoming glabrous but with the tubercles persisting, giving the surfaces a scabrous appearance, apex acute to mucronate. Flowers terminal or on short lateral branches or shoots, subtended by 2–3 sub-whorled leaves; peduncle 2.5–12 mm long; bract linear-subulate, less than ½ as long as calyx. Sepals unequal, lanceolate-

oblong-lanceolate, 2.2–5.3 mm long, pubescent to puberulous with long, simple appressed hairs over very few to mostly absent, smaller stellate hairs. Petals bright yellow, almost twice as long as the calyx, cuneate, distinctly bi-lobed. Stamens (7–)9–12 in a single cluster at one side of the carpels; filaments c. ½ or less connate. Carpels 2; ovaries pilose with straight, simple hairs. Flowering & fruiting Jun.-Dec.

Tas. (KIN, TNS, TSE, TWE); also Vic. Widespread but scattered in damp heaths, shrubberies and open forests in the north, east and south-east of the state, and on the west coast.

10 Hibbertia empetrifolia (DC.) Hoogl., *Kew Bull*. 29: 155 (1974) subsp. **empetrifolia**

Scrambling Guinea-flower

Pleurandra ovata Labill., *Nov. Holl. Pl.* 2: 5, t. 143 (1806). *Pleurandra empetrifolia* DC., *Syst. Nat. (Candolle)* 1: 420 (1807). *Pleurandra scabra* R.Br. ex DC., *Syst. Nat*. *(Candolle)* 1: 418 (1817); *P. ovata* var. *scabra* (R.Br. ex DC.) Hook.f., *Bot. Antarct. Voy. III.* (*Fl. Tasman*.) 1(1): 16 (1855); *Hibbertia billardierei* var. *scabra* (R.Br. ex DC.) Benth., *Fl. Austral*. 1 28 (1863); *H. ovata* var. *scabra* (R.Br. ex DC.) Domin, *Biblioth. Bot*. 89(4): 976 (1930). *Pleurandra scabra* var. *beta* DC., *Syst. Nat*. *(Candolle)* 1 419 (1817). *Pleurandra parviflora* R.Br. ex DC., *Syst. Nat*. *(Candolle)* 1: 418 (1817); *Hibbertia billardierei* var. *parviflora* (R.Br. ex DC.) Benth., *Fl. Austral.* 1 28 (1863). *Pleurandra astrotricha* Sieber ex Spreng., *Syst. Veg. (ed. 16) (Sprengel)* 4(2): Cur. Post. 191 (1827); *Hibbertia astrotricha* (Sieber ex Spreng.) N.A.Wakef., *Vict. Naturalist* 73(10): 167 (1957). *Hibbertia billardierei* F.Muell., *Pl. Victoria* 1: 14 (1862) [as *H. Billardierii*], *p.p., nom. illeg*.

Illustrations: Toelken, *J. Adelaide. Bot. Gard.* 18(2): 141, fig. 7a-f (1998); Toelken, *Fl. Victoria*, 4: 309, fig. 61p (1999); Harden & Everett, *Fl. New South Wales* 1, rev. edn: 302 (2001).

Spreading shrubs, often prostrate, or scandent and forming tangled masses amongst other undergrowth; branches wiry, pubescent to puberulous with tubercle-based erect, simple hairs (sometimes hooked), over scattered stellate hairs. Leaves sessile or very shortly petiolate; lamina 4–10 mm long, 3–5(–7) mm wide, elliptical to oblong-lanceolate, margins narrow, revolute, distant from the hardly prominent mid-vein, adaxial surfaces with scattered erect, simple hairs < 1 mm long and shorter stellate hairs, abaxial surfaces with scattered, hooked simple hairs and short stellate hairs, apex obtuse to rounded, or sub-mucronate. Flowers terminal or often apparently axillary on reduced short branches, or on main branches with continued axillary growth; peduncles 2–10 mm long, subtended by a subulate bract. Sepals 2.5–4 mm long, unequal, pubescent, with stellate hairs, occasionally with a few long, simple hairs at the base of the calyx. Petals mid to bright yellow, c. twice as long as the sepals, obcordate and notched almost to the middle. Stamens 4–12 at one side of the carpels; filaments c. ½ connate. Carpels 2, free or joined at the base; ovaries densely villous-tomentose. Flowering Jun.-Oct.; fruiting Nov.-Dec.

Tas. (TSE); also NSW, Vic. Localised and scattered in damp heaths, shrubberies and open forests near the east coast.

11 Hibbertia prostrata Hook., *J. Bot. (Hooker)* 1: 246 (1834) *Prostrate Guinea-flower*

Hibbertia virgata Hook., *Hooker's Icon. Pl*. 3: t. 267 (1840), *nom. illeg*. *Hibbertia virgata* var. *pilosa* Walp., *Repert. Bot. Syst.* (Walpers) 1(1): 64 (1842). *Hibbertia virgata* var. *glabra* Walp., *Repert. Bot. Syst.* (Walpers) 1(1): 99 (1842). *Hibbertia fasciculata sensu* J.D.Hooker, *Bot. Antarct. Voy. III.* (*Fl. Tasman*.) 1: 14 (1855); G. Bentham, *Fl. Austral.* 1: 33 (1863); L.Rodway, *Tasman. Fl.* 5 (1903); W.M.Curtis & D.I.Morris, *The Student's Flora of Tasmania* 1, 2nd edn: 24 (1975), *non* R.Br. ex DC. (1817). *Hibbertia fasciculata* var. *prostrata* (Hook.) Hook.f., *Bot. Antarct. Voy. III.* (*Fl. Tasman*.) 1: 14 (1855). *Hibbertia fasciculata* var. *glabrata* Hook.f., *Bot. Antarct. Voy. III.* (*Fl. Tasman*.) 1: 14 (1855). *Hibbertia fasciculata* var. *pubigera* Benth., *Fl. Austral*. 1: 33 (1863). *Hibbertia fasciculata* f. *spiceri* Gand., *Bull. Soc. France* 47: 300 (1900). *Hibbertia fasciculata* f. *adunca* Gand., *Bull. Soc. France* 47: 305 (1900).

Illustrations: Jessop, *Fl. S. Austral*. 1: 356 fig. 200G; & Pl. 14 (right) (1986); Toelken, *Fl. Victoria* 4: 306 fig. 60d-e (1991); Harden & Everett, *Fl. New South Wales* 1, rev. edn: 297 (2001).

Small, much branched shrubs, erect or procumbent, 15–90 cm high; older branches glabrous, younger branches silvery with antrorse, straight or crisped, simple hairs. Leaves sessile, the leaves usually densely crowded into fasciculate clusters on much reduced lateral branches; blade 4–12(–15) mm long, 0.5–1 mm wide, narrow-linear, terete, margins inrolled to the midvein, surface glabrous or puberulous, rarely tomentose, apex obtuse, erect or somewhat incurved. Flowers bright yellow, solitary, sessile, terminating the short lateral branches; bracts 2, triangular. Sepals unequal, 3.5–6.5 mm long, glabrous or rarely puberulous toward the apex. Petals obovate, at least twice as long as the sepals. Stamens 8–12, usually in 3 groups surrounding the carpels; filaments free. Carpels 3; ovaries glabrescent or with a few long hairs toward the apex. Flowering & fruiting Aug.-Apr.

Tas. (BEL, FLI, KIN, TCH, TNS, TSE, TWE); also SA, NSW, Vic. Common, though scattered, throughout the state except the south-west, in heaths and open woodlands, from sea-level to c. 1000 m alt.

12 Hibbertia serpyllifolia R.Br. ex DC., *Syst. Nat.* 1: 430 (1817) *Thyme Guinea-flower*

Illustrations: Toelken, *Fl. Victoria*, 4: 306, fig.60j-k (1999); Harden & Everett, *Fl. New South Wales*, 1, rev. edn: 300 (2001).

Small shrubs, erect, procumbent or prostrate; branches numerous, slender, spreading 50–75 cm, glabrous or sparsely pubescent, the hairs simple. Leaves sessile to shortly petiolate; blade 1.5–6.5 mm long, 0.5–1.2 mm wide, linear to oblong-elliptic, margins revolute almost to the mid-vein, both surfaces glabrous or puberulous, apex obtuse, with a terminal tuft of hairs extending from the end of the mid-vein. Flowers solitary, sessile, terminating short lateral branches; bracts 1(–3) linear. Sepals unequal, 4–6 mm long, glabrous. Petals yellow, obovate-obcordate, slightly longer than the sepals. Stamens 12(–20), surrounding the carpels; filaments mostly free. Carpels 3, free; ovaries silky-hairy or pubescent. Flowering & fruiting Sep.-Jan.

Tas. (FLI, TCH, TNM, TNS, TSE); also NSW, Vic. Common but scattered in dry, sandy heaths and open woodlands in the midlands, north and north-east of the state, from sea-level to c. 750 m alt.

13 Hibbertia procumbens (DC.) Hoogl., *Kew Bull*. 29: 155 (1974) *Scrambling Guinea-flower*

Dillenia procumbens Labill., *Nov. Holl. Pl*. 2: 16, t. 156 (1806). *Pleurandra enervia* DC., *Syst. Nat. (Candolle)* 1: 421 (1817), *p.p.*; *Candollea enervia* (DC.) Druce, *The Bot. Exch. Club Soc. Brit. Isles [report for 1916], Suppl.* 2: 612 (1917); *Hibbertia enervia* (DC.) Hoogl., *Kew Bull*. 29(1): 156 (1974). *Hibbertia ericifolia* Hook.f., *Bot. Antarct. Voy. III. (Fl. Tasman.)* 1: 14 (1855) [as *H. ericaefolia*].

Illustrations: Toelken, *Fl. Victoria* 4: 306 fig. 60f-g (1999); Harden & Everett, *Fl. New South Wales* 1, rev. edn: 298 (2001); Simmons *et al.*, *A Guide to Flowers and Plants of Tasmania,* 4th edn, 76 (2008).

Small, prostrate shrubs, often mat-forming; numerous, slender branches spreading 15–30 cm, glabrous or with sparse, simple straight or crisped hairs. Leaves sessile or very shortly petiolate; blade 3–10(–15) mm long, 0.5–2 mm wide, linear-elliptic, margins flat, adaxial surfaces ± furrowed, abaxial surfaces ± convex, both surfaces glabrescent. Flowers solitary, terminating short lateral branches; bracts 2–6, sheathing, leaf-like; flowers on warm days with a foetid smell. Sepals unequal, 5–10.5 mm long, glabrous to puberulous. Petals bright yellow, oblong to obovate, equal to or c. 1/3 longer than the sepals. Stamens 20–25, in 4 groups surrounding the carpels. Carpels 4, rarely 5, free or slightly joined at the base; ovaries glabrescent. Flowering & fruiting Sep.-Mar.

Tas. (BEL, FLI, KIN, TCH, TNS, TSE, TSR, TWE); also NSW, Vic. Widespread and common in damp heaths and open shrubberies, throughout the state, from sea-level to c. 1000 m.

14 Hibbertia virgata R.Br. ex DC., *Syst. Nat.* 1: 428 (1817) *Twiggy Guinea-flower*

Illustrations: Toelken, *Fl. Victoria* 4: 306, fig. 60c (1999); Harden & Everett, *Fl. New South Wales* 1, rev. edn: 297 (2001).

Small, erect shrub, rarely decumbent; branches to 1.5 m high, slender, glabrous to tomentose. Leaves sessile, of different sizes, usually with one large and 3–6 much smaller in sessile clusters, or clustered at the ends of short axillary branches; lamina 5–10(–45) mm long, 0.5–2(–3) mm wide, linear to narrow oblanceolate, margins concave-spreading, central vein not apparent, surfaces glabrous, rarely sparsely sericeous, apex acute, recurved. Flowers sessile, terminating the short lateral branches; bracts 2 or more, glabrous, inner ones brown, scarious, each with a broad basal sheath longer than its leaf-like apex. Sepals unequal, 5.5–10 mm long, glabrous or rarely the margins ciliolate toward the apex. Petals bright yellow, obovate, slightly notched, a little longer than the sepals. Stamens 15–20 in groups surrounding the carpels; filaments free. Carpels 3, free; ovaries glabrescent. Flowering & fruiting Aug.-Oct.

Tas. (FLI, TNS, TSE); also SA, NSW, Vic. Localised in dry heaths and sandy areas in the north-east of the state. Listed as Rare under the *Tasmanian Threatened Species Protection Act 1995*.

15 † ? Hibbertia obtusifolia DC., *Syst. Nat. (Candolle)* 1: 428 (1817) *Grey Guinea-flower*

Hibbertia linearis var. *obtusifolia* (DC.) A.Gray, *U.S. Expl. Exped, Phan.* 1: 20 (1854).

Illustrations: Toelken, *Fl. Victoria* 4: 306, fig. 60i (1999); Harden & Everett, *Fl. New South Wales* 1, rev. edn: 299 (2001).

Erect, spreading or rarely decumbent shrubs; branches to 30–75 cm long, pubescent with crisped, simple hairs. Leaves sessile, scattered or clustered on very short axillary branches; lamina 10–15(–20) mm long, 1.5–3(–5) mm wide, oblanceolate to oblong-spathulate, convex, the margins slightly recurved, both surfaces pubescent with scattered, often crisped simple hairs, apex obtuse to truncate. Flowers sessile, terminal on very short lateral branches; bracts oblong, obtuse. Sepals unequal, 4.5–8.5 mm long, puberulous to pubescent. Petals pale to mid-yellow, obovate, 1/3–1/2 as long as the sepals. Stamens 30 or more, surrounding the carpels; filaments free. Carpels 3, free; ovaries glabrescent or with sparse hairs near the apex. Flowering & fruiting Sep.–Dec. [Based on non-Tasmanian material].

Tas. (FLI), possibly extinct in Tas.; also Qld, NSW, Vic. In Tasmania known only from two specimens, one collected by J.H. and E.Maclaine from Clark Is., Bass Strait, in 1892, the other, of doubtful identity, from the west coast in 1983. Listed as Endangered under the *Tasmanian Threatened Species Protection Act 1995*.

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AVH (Australia's Virtual Herbarium) (Council of Heads of Australasian Herbaria) http://www.anbg.gov.au/avh.html

IPNI (International Plant Name Index) http://www.ipni.org/index.html or http://www.us.ipni.org/index.html

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