Flora of Tasmania



64 URTICACEAE 1

Dennis I Morris[†], Matthew L Baker²

Herbs or small shrubs, sometimes soft-wooded trees (e.g. *Dendrocnide* Miq.) and climbers (not in Australia), the stems often fibrous; sometimes having stinging hairs (eg. *Urtica, Dendrocnide*); enlarged epidermal cells commonly containing cystoliths (cystoliths are concretions of calcium carbonate and sometimes also of silica and other chemical substances.), these are evident on dried leaves as dots or linear markings. Leaves alternate or opposite, simple, usually stipulate. Flowers small, unisexual, rarely bisexual. Perianth of 1 whorl, segments (0–)3–5, free or connate, often persistent and enlarged in the fruiting stage. Staminate flowers: stamens equal in number to the perianth-segments and opposite to them; filaments inflexed in the bud, springing back elastically when the anthers are mature, causing the pollen to be released in a sudden small cloud; rudimentary ovary usually present. Pistillate flowers: small staminodes often present; ovary superior (free) or inferior (adnate to the receptacle and perianth), unilocular; style simple; stigma often a brush-like tuft; ovule solitary, erect. Fruit a small achene or drupe. Seeds with endosperm.

A family of about 54 genera and about 2600 species, widely distributed, especially in tropical and sub-tropical regions; 12 genera and 22 species in Australia. 4 genera, 3 native, in Tasmania. Urticaceae are placed in the Rosales near Moraceae (mostly tropical & warm temperate), Cannabaceae (widespread) and Ulmaceae (widespread).

Some species yield valuable fibres. Ramie, *Boehmeria nivea* Gaudich., native in tropical Asia and cultivated in warm regions, provides a fibre used in cordage.

Key reference: Chew (1989).

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

Leaves opposite, bearing stinging hairs
 Leaves alternate, without stinging hairs
 2

2. Flowers solitary 3 Soleirolia

2: Flowers in clusters

3. Leaves entire; staminate flowers bracteate, perianth 3-4 lobed, stamens 3-4 **2 Parietaria**

3: Leaves coarsely crenate or crenate-dentate; staminate flowers without bracts, perianth irregularly bilabiate, stamen 1 4 Australina

1 URTICA

Urtica L., Sp. Pl. 2: 983 (1753).

Annual or perennial herbs or shrubs, monoecious or dioecious; commonly bearing rigid stinging hairs. Stems angular. Leaves opposite-decussate, petiolate: stipules 2 or 4; lamina toothed. Inflorescence axillary, usually spike-like, bearing clustered cymes. Flowers small, green. Perianth of 4 free segments. Staminate

- 1 This work can be cited as: Baker ML & Morris DI (2009). Urticaceae, version 2019:1. In MF de Salas (Ed.) Flora of Tasmania Online. 7 pp. (Tasmanian Herbarium, Tasmanian Museum and Art Gallery: Hobart). https://flora.tmag.tas.gov.au/treatments/urticaceae/
- 2 Tasmanian Herbarium, Tasmanian Museum & Art Gallery, PO Box 5058, UTAS LPO, Sandy Bay, TAS 7005, Australia.





flowers regular, pistillode present. Pistillate flowers with 2 outer lobes smaller than the inner lobes which in the fruiting stage are enlarged, enclosing the fruit. Achene ovoid, laterally compressed.

A genus of about 50(-100?) species in temperate and warm-temperate regions of both hemispheres. 2 species, 1 native, in Australia.

1. Perennial; monoecious or dioecious; leaf petioles with only stinging hairs; inner perianth segments of pistillate flowers glabrous

1 U. incisa

1: Annual; monoecious; leaf-petioles with stinging and antrorsely appressed non-stinging hairs; inner perianth segments of pistillate flowers with curved hairs around the margin

2 U. urens

1 Urtica incisa Poir. in Lam., Encycl. Suppl. 4: 224 (1816)

Native Nettle

Urtica lucifuga Hook.f., London J. Bot. 6: 285 (1847). Urtica lucifuga var. linearifolia Hook.f., London J. Bot. 6: 285 (1847).

Illustrations: Chew, Fl. Australia 3: 71, fig. 35a (1989); Entwisle & Gebauer, Fl. Victoria 3: 86, fig. 18a-b (1996); Harden, Fl. New South Wales 1, rev. edn: 353 (2000); Harris et al., One Hundred Islands: the Flora of the Outer Furneaux 243 (2001); Woolmore et al., King Island Flora 78 (2002); Gilfedder et al., The Nature of the Midlands 134 (2003); Whiting et al., Tasmania's Natural Flora 339 (2004); Richardson et al., Weeds of the South-East, an Identification Guide for Australia 402 (2006).

Erect, decumbent or scrambling perennial herb, dioecious or monoecious; stems usually 60–120 cm. long, occasionally longer in scrambling plants; stems, branches and petioles with stiff, patent, stinging hairs. Leaves very variable; stipules 4; petioles longer or shorter than the lamina; lamina to 15 cm long, 0.5–5.0 cm wide, linear-lanceolate to ovate, serrate-dentate, sparingly beset with rigid stinging hairs, with or without small, appressed non-stinging hairs between them, margins with minute antrorsely curved cilia. Inflorescences usually in pairs from each axil, up to 6 cm long; in monoecious plants, staminate inflorescences usually produced at the lower nodes, pistillate inflorescences at the upper nodes. Staminate flowers 1.5–2.0 mm diam., perianth segments glabrous or occasionally sparingly hairy or some segments bearing a solitary stinging hair; anthers c. 1 mm long; pistillode cupuliform, c. 0.4 mm diam. Pistillate flowers at anthesis c. 0.5 mm long. Achene 1.3–1.5 mm long enclosed in the enlarged inner perianth segment; perianth segments glabrous but occasionally some bearing a solitary stinging hair. Flowering & fruiting Sep.-Mar.

Tas. (all regions except MIS); also WA, NT, SA, Qld, NSW, Vic.; also New Zealand. Widespread in semi-open forest, edges of rainforest coastal shrubberies, near sea level to 950 m alt. *Urtica incisa* exhibits considerable variation throughout its range. Chew (1989) describes the species as monoecious, with leaves 3–6 cm wide but Tasmanian material appears frequently to be dioecious with the narrow leaved form having leaves as little as 5 mm wide. In New Zealand this narrow-leaved plant is regarded as a distinct species, *U. linearifolia* (Hook.f.) Cockayne.

2 * Urtica urens L., Sp. Pl. 2: 984 (1753)

Stinging Nettle

Illustrations: Entwisle & Gebauer, Fl. Victoria 3: 86, fig. 18c (1996); Harden, Fl. New South Wales 1, rev. edn: 353 (2000); Harris et al., One Hundred Islands: the Flora of the Outer Furneaux 244 (2001); Richardson et al., Weeds of the South-East, an Identification Guide for Australia 402 (2006).

Erect, monoecious annual herb up to 60 cm high; stems, branches and petioles with stiff patent stinging hairs and smaller appressed non-stinging hairs, stinging hairs on petioles few or absent. Leaves: stipules 4; petioles usually shorter than lamina; lamina to 4.5 cm long, to 3.5 cm wide, ovate, serrate-dentate, the teeth usually antrorsely curved, upper surface sparingly beset with stinging hairs, abaxial surface with a few stinging hairs and smaller non-stinging hairs confined to the veins, margins ciliate. Inflorescences usually in pairs from each axil, staminate and pistillate flowers intermixed. Staminate flowers c. 1 mm diam.; perianth lobes bearing short curved hairs. Pistillate flowers at anthesis c. 0.5 mm long. Mature achenes 1.5–2.0 mm long, enclosed within the enlarged inner perianth segments which bear a row of antrorsely curved hairs parallel to the margin and along the midvein, frequently also with a solitary stinging hair from the midvein. Flowering & fruiting throughout year.

Tas. (BEL, FUR, TNM, TSE); also naturalized in WA, SA, Qld, NSW, Vic.; native to Europe. Recorded in settled areas throughout the State. A weed of stockyards, saleyards, sea bird rookeries, domestic gardens, and other disturbed areas.

2 PARIETARIA

Parietaria L., Sp. Pl. 2: 1052 (1753).

Synonymy: Freirea Gaudich., Voy. Uranie, Bot. 12: 502 (1830).

Annual to perennial herbs, softly hairy, without stinging hairs. Leaves alternate, exstipulate, petiolate, simple, entire. Inflorescences axillary, cymose, often clustered. Flowers bisexual or unisexual, small, green, involucrate. Staminate and bisexual flowers with perianth tubular, shortly 3–4-lobed; stamens equal in number to the lobes. Pistillate flowers with perianth deeply 3–4-lobed; ovary free, superior; stigma penicillate. Mature achene ovoid surrounded by the enlarged perianth, the lobes enlarged, connivent and enclosed by the persistent involucre.

A genus of about 20 species of Australasia, Asia, Europe and South America; 4 species in Australia, 1 introduced.

1. Plants perennial; leaves with 1 main vein arising from the lamina/petiole junction; inflorescence with central flower female and lateral flowers bisexual; bracts subtending flowers connate at base, forming a common involucre

3 P. judaica

1: Plants annual; leaves with 3 main veins arising from the lamina/petiole junction; inflorescence with central flower bisexual and lateral flowers female; bracts subtending flowers free at base, not forming a common involucre

2

2. Bracts of lateral flowers lanceolate to elliptic with simple or ± branched venation

1 P. debilis

2: Bracts of lateral flowers ovate-cordate venation pinnate-reticulate

2 P. cardiostegia

1 Parietaria debilis G.Forst., Fl. Ins. Austr. 73 (1786)

Shade Pellitory

Parietaria squalida Hook.f., London J. Bot. 6: 285 (1847); P. debils var. squalida (Hook.f.) Hook.f., Bot. Antarct. Voy., III (Fl. Tasman.) 1: 344 (1855).

Illustrations: Gebauer, Fl. Victoria 3: 86, fig. 18l (1996); Harden, Fl. New South Wales 1, rev. edn: 352 (2000); Harris et al., One Hundred Islands: the Flora of the Outer Furneaux 198 (2001); Woolmore et al., King Island Flora 78 (2002).

Annual herb up to 30 cm tall, becoming softly woody at the base in larger plants; stems, branches, leaves and involucres with soft curved hairs; upper stems, branches and involucres usually also with stalked glandular hairs. Leaf lamina ovate to elliptic, 2–30(–50) mm long, 2–25(–30) mm wide; base rounded, cuneate, slightly cordate or oblique; apex obtuse. Inflorescences usually of 3-flowered cymes; the central flower male or bisexual, often caducous, subtended by a single elliptic-lanceolate bract; lateral flowers pistillate, subtended by three unequal lanceolate to elliptic bracts. Involucre usually shortly exceeding the perianth. Perianth in mature fruit red-brown, c. 2.5 mm long including the 1.5 mm long lobes which are usually minutely papillose-hairy, at least at the base. Achene c. 1.5 mm long, brown, shining. Flowering & fruiting Aug.-Mar.

Tas. (BEL, FUR, KIN, TNM, TSE); also WA, NT, SA, Qld, NSW, Vic.; widely distributed in temperate regions of both hemispheres including New Zealand. Found in shaded situations, creek banks, coastal shrubberies and rocks up to c. 100 m alt., often around seabird rookeries. Plants from interstate appear to have larger flowers and involucres, the bracts often broad-elliptic with a branching midvein whereas in Tasmanian plants the bracts are usually lanceolate to elliptic with an unbranched midvein.

2 Parietaria cardiostegia Greuter, Fl. Australia 3: 190 (1989)

Illustrations: Chew, Fl. Australia 3: 790, fig. 42f-g (1989); Gebauer, Fl. Victoria 3: 86, fig. 18m (1996); Harden, Fl. New South Wales 1, rev. edn: 352 (2000).

Annual herb to 60 cm tall, becoming softly woody at the base in larger plants; stems, branches, leaves and involucres with soft curved hairs; upper stems, branches and involucres usually also with stalked glandular hairs. Leaf lamina elliptic broad ovate, 2–30 mm long, 2–21 mm wide; base rounded; apex obtuse. Inflorescences usually of 3-flowered cymes; the central flower male or bisexual, often caducous, subtended by a single elliptic-lanceolate bract; lateral flowers pistillate, subtended by three unequal broad ovate-cordate bracts constricted at the base to a petiole-like claw, with prominent pinnate-reticulate venation. Involucre larger than and concealing the flower and fruit and shed with the fruit. Perianth in mature fruit red-brown, c. 2.5 mm long including the 1.5 mm long lobes which are usually minutely papillose-hairy, at least at the base. Achene c. 1.5 mm long, brown, shining. Flowering & fruiting Aug.-Mar.

Tas. (FUR); also WA, NT, SA, Qld, NSW, Vic.; recorded only from an island in the Furneaux Group.

3 * Parietaria judaica L., Sp. Pl. 2: 1492 (1763)

Wall Pellitory, Asthma Weed

Illustrations: Gebauer, Fl. Victoria 3: 86, fig. 18j-k (1996); Harden, Fl. New South Wales 1, rev. edn: 352 (2000); Richardson et al., Weeds of the South-East, an Identification Guide for Australia 401 (2006).

Perennial herb to 40 cm tall (up to 80 cm in other states), stems thickening at the base; stems, branches, leaves and involucres with soft curved and straight hairs; upper stems, branches and involucres without stalked glandular hairs. Leaf lamina elliptic, ovate or rhombic, 10-45(-110) mm long, 5-22(-45) mm wide; base attenuate to cuneate; apex acute. Inflorescences usually of 3-flowered cymes; the central flower pistillate, subtended by a single lanceolate bract; lateral flowers bisexual, subtended by three unequal ovate to lanceolate bracts. Involucre connate in the proximal $\frac{1}{3}-\frac{1}{2}$, exceeding perianth of pistillate flower, \le the bisexual flowers. Perianth in mature fruit red-brown, c. 2 mm long in pistillate flowers, up to 3.8 mm long in bisexual flowers. Achene c. 1 mm long, blackish green, shining. Flowering & fruiting Aug.-Mar.

Tas. (TSE); also naturalized in WA, SA, Qld, NSW, Vic.; native to the Mediterranean region; also naturalized in New Zealand and North and South America. Recorded as a garden weed in two locations in south-eastern Tasmania.

3 * SOLEIROLIA

Soleirolia Gaudich., Voy. Uranie, Bot. 12: 504 (1830).

Monoecious, creeping perennial herbs, rooting at nodes. Leaves alternate, shortly hairy, without stipules, shortly petiolate; lamina entire, 3-nerved from base. Flowers solitary, axillary, small, green; involucre of 1 bract and 2 bracteoles. Perianth 4- or 5-lobed. Male flowers in axils above those bearing female flowers; stamens 4. Female flowers: styles short; stigmatic hairs forming a dense and deciduous tuft. Achene ellipsoid, enclosed within persistent perianth, bract and bracteoles.

A monotypic genus native to islands in the western Mediterranean.

1 * Soleirolia soleirolii (Req.) Dandy, Feddes Repert. 70: 1 (1964)

Baby's Tears, Mind-your-own-business

Helxine soleirolii Req., Ann. Sci. Nat. (Paris) ser. 1, 5: 384 (1825).

Illustrations: Gebauer, Fl. Victoria 3: 86, fig. 18h-i (1996); Harden, Fl. New South Wales 1, rev. edn: 352 (2000); Spencer, Horticultural Flora of South-eastern Australia 3: 132 (2002); Richardson et al., Weeds of the South-East, an Identification Guide for Australia 401 (2006).

Perennial monoecious herb, forming dense evergreen mats; stems slender, often reddish, much branched, rooting at nodes. Leaves alternate, exstipulate, shortly petiolate or subsessile; lamina broadly ovate to orbicular, often asymmetrical, 2–6 mm long, entire, bearing a few long hairs. Flowers small. Staminate flowers with perianth 4-lobed. Pistillate flowers subtended by a fused involucre, perianth tubular, shortly 4-lobed, ovary superior. Fruit enclosed in the persistent perianth and the enlarged involucre, which is often redtinged, with 4–5 thickened ribs. Achene c. 1.5 mm long. Flowering & fruiting Oct.-Nov. (Jun.).

Tas. (FUR, TSE); also naturalized in SA, NSW, Vic.; native to Mediterranean Islands (W of Italy); also naturalized in Europe and North America. Sparingly naturalized in shaded, damp areas in gardens, glasshouses, and suburban areas such as on shaded walls.

4 AUSTRALINA

Australina Gaudich., Voy. Uranie, Bot. 12: 505 (1830).

Monoecious perennial herbs; stems erect, prostrate or ascending. Leaves alternate or rarely opposite; alternate leaves petiolate, stipulate, the stipules lateral and free; opposite leaves partly fused and interpetiolar, lamina serrate or crenate. Inflorescences unisexual, small, green, in axillary clusters. Staminate flowers 1–5, terminal on a common peduncle; perianth fused, clavate in bud, irregularly bilabiate, the abaxial lip inflexed in bud, reflexed later; stamen 1, inflexed in bud, reflexed at anthesis. Pistillate flowers solitary or in few-flowered clusters; perianth ovoid-tubular, obscurely 2–5-toothed, enlarging and persisting in the fruiting stage; ovary superior, stigma linear, villous, persistent.

A genus of 2 species; 1 restricted to the highlands of Ethiopia and Northern Kenya, the other in south-eastern Australia and New Zealand.

1 Australina pusilla (Poir.) Gaudich., Voy. Bonite, Bot. 3: t. 114 (1852)

Shade Nettle

Urtica pusilla Poir., Encycl. (Lamarck) Suppl. 4: 224 (1816). Australina novae-zelandiae Hook.f., Bot. Antarct. Voy. II. (Fl. Nov. Zel.) 2: 226 (1854) [as A. Novae-Zelandiae]. Australina Tasmanica sensu J.D.Hooker, Bot. Antarct. Voy. II. (Fl. Nov. Zel.) 2: 226 (1854), manuscript name only.

Illustrations: Chew, Fl. Australia 3: 71, fig. 35h-i (1989); Harden, Fl. New South Wales 1, rev. edn: 351 (2000).

Stems prostrate and ascending, hairy, the hairs appressed or spreading, red sessile glandular hairs scattered among the others. Leaves opposite; stipules linear to lanceolate, up to 1 mm long; petiole to 1.5 cm long; lamina to 3.5 cm long, orbicular, elliptic or ovate, base cuneate or truncate, with 3–6 rounded teeth on each side, adaxial surface with a few stiff hairs, oblong cystoliths prominent, abaxial surface with appressed hairs along the veins. Male inflorescences usually in axils of upper leaves, 1–5-flowered; peduncle to 5 mm long; flowers subsessile, to 2.5 mm long, pubescent; anthers white, c. 1.5 mm long, extrorsely dehiscent. Female inflorescences sessile, axillary, 1–4(–6)-flowered, 0.8–1.5 mm long, pubescent to subglabrous, apex 2-toothed; style exserted. Achene ellipsoid, asymmetric, smooth, brown, enclosed in the expanded and persistent perianth. Flowering & fruiting Oct.-Mar.

Tas. (all regions except MIS); also Qld, NSW, Vic.; also New Zealand. Found in damp, shaded situations from sea level to c. 750 m altitude.

There are 2 subspecies, both in Tasmania. The two subspecies have a geographical separation, subsp. pusilla occurring in New Zealand and Tasmania with a few specimens collected in southern Victoria, subsp. muelleri is found in Victoria and New South Wales with a few collections from Tasmania. A few specimens from south-eastern Australia and Tasmania appear intermediate between the two.

1. Stems prostrate and ascending, up to 1 mm diam.; indumentum of appressed hairs; leaf-lamina to 1.7 cm long with up to 3 teeth on each side

1a subsp. pusilla

1: Stems prostrate and erect, up to 1.5 mm diam.; indumentum of spreading hairs; leaf-lamina to 3.5 cm long with up to 6 teeth on each side

1b subsp. muelleri

1a Australina pusilla (Poir.) Gaudich. subsp. pusilla

Small Shade Nettle

Illustrations: Entwisle, Fl. Victoria 3: 86, fig. 18e (1996); Woolmore et al., King Island Flora 78 (2002).

Stems slender, up to 35 cm long, creeping and rooting at the nodes, indumentum of retrorsely appressed hairs and scattered reddish sessile glandular hairs. Leaf-lamina to 1.7 cm long, broad-ovate to suborbicular, base cuneate to truncate, up to 3 rounded teeth on each side. Male inflorescences 1–2 flowered; female flowers in clusters of 2–4. Flowering & fruiting Oct.-Mar.

Tas. (all regions except MIS); also Vic. (Wilsons Promontory), New Zealand. Found from sea level to c. 750 m altitude.

1b Australina pusilla subsp. **muelleri** (Wedd.) Friss & Wilmot-Dear, *Nordic J. Bot.* 7(2): 126 (1987) Shade Nettle Australina muelleri Wedd, Arch. Mus. Hist. Nat. 9: 545 (1857).

Illustrations: Entwisle, Fl. Victoria 3: 86, fig. 18f-g (1996); Woolmore et al., King Island Flora 77 (2002).

Stems prostrate and erect, rooting only at the lower nodes, indumentum of spreading hairs which hide the sessile glandular hairs. Leaf-lamina to 3.5 cm long, elliptic to ovate, margins with up to 6 rounded teeth on each side, upper surface with stiff hairs between and parallel to the veins. Male inflorescences 4–6 flowered. Female flowers in clusters of 2–6. Flowering & fruiting Oct.-Nov.

Tas. (KIN, TSE); also NSW, Vic. Has been collected from King Island and on Mt Wellington (c. 475 m alt.).

REFERENCES

ALA (Atlas of Living Australia) http://www.ala.org.au/

APC (Australian Plant Census) https://biodiversity.org.au/nsl/services/apc

APNI (Australian Plant Name Index) https://biodiversity.org.au/nsl/services/apni

AVH (Australia's Virtual Herbarium) (Council of Heads of Australasian Herbaria) http://avh.chah.org.au/

Chew WL (1989) Urticaceae. Flora of Australia 3 68-93.

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

NVA (Natural Values Atlas) (Department of Primary Industries and Water: Hobart) https://www.naturalvaluesatlas.tas.gov.au/

NOTE: Web addresses can and do change: a list of current web addresses is maintained in the web version of this treatment on the *Flora of Tasmania Online* website at https://flora.tmag.tas.gov.au

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