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Two new species of Australian *Stenanthemum* (Rhamnaceae), with a conspectus and key to species outside Western Australia

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Abstract

Stenanthemum comprises c. 30 species of small shrubs from south-western, central, southern and north-eastern Australia. Two new species, *S. arens* and *S. centrale*, are described and illustrated, and a synopsis and key provided for the seven species of *Stenanthemum* that occur outside Western Australia.

Introduction

Stenanthemum was described by Reissek (1858) to encompass a number of species of Australian *Spyridium* Fenzl and *Cryptandra* Sm. that appeared to him to be misplaced in those genera. Of all the members of the Australian stellate-haired Rhamnaceae (tribe Pomaderreae of Richardson et al. 2000), *Stenanthemum* was historically the most poorly understood and least recognised genus until Rye (1995, 2001) resurrected it and described many new taxa from Western Australia.

This paper describes two new species of *Stenanthemum* which occur in South and Central Australia. The genus now comprises c. 30 species, most endemic to south-western Western Australia where it is one of the most species-rich genera in the family. Five taxa (*S. petraeum*, *S. leucophractum*, *S. notiale* subsp. *notiale*, *S. pimeleoides* and *S. argenteum*), in addition to the new species here described, occur in eastern Australia.

Taxonomic history

In Reissek's treatment of the three genera *Cryptandra*, *Stenanthemum* and *Spyridium*, *Spyridium* comprised species with a short, non-tubular hypanthium, flowers in contracted head-like cymes and a glabrous disk, *Cryptandra* comprised species with a tubular hypanthium and densely tomentose disk, and *Stenanthemum* comprised species with the floral morphology of *Cryptandra* but with an indistinct, glabrous disk.

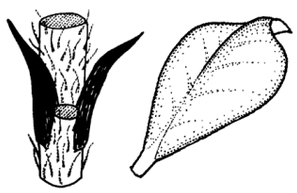
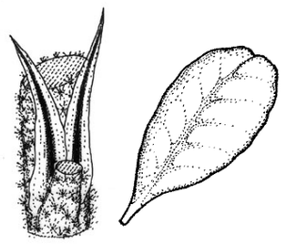
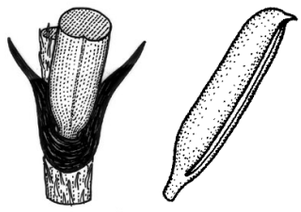
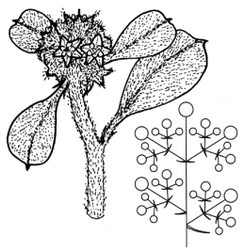
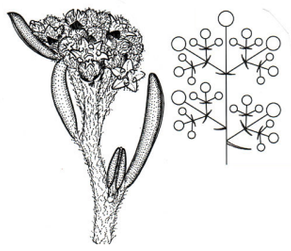
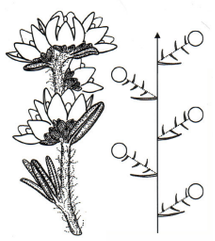
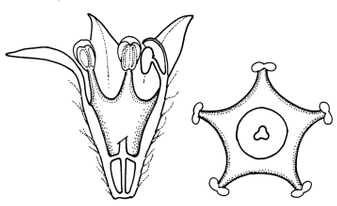
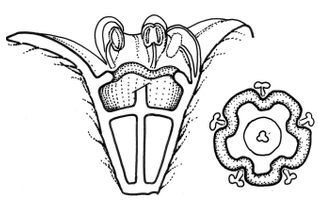
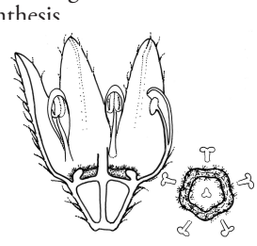
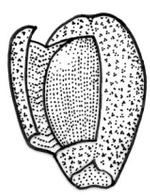
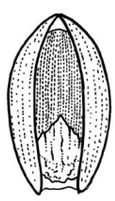
Bentham (1863) accepted Reissek's genus (although with a different circumscription). He regarded *Stenanthemum* as having the "floral characters of *Cryptandra* and the inflorescence of *Spyridium*", noting that *Cryptandra* flowers are mostly solitary and surrounded individually by imbricate bracts, while *Spyridium* and *Stenanthemum* usually have flowers in dense, cymose heads with bracts surrounding the whole inflorescence. Bentham further commented on the difficulties of adequately delimiting genera in the Australian Rhamnaceae, noting that differences between genera were often "very trifling".

Mueller (1883) found the differences to be so "trifling" that he radically departed from previous treatments of the genera by reducing *Stenanthemum*, *Spyridium* and *Trymalium* to synonymy under a very broadly circumscribed *Cryptandra*, allowing only *Pomaderris* among the stellate-haired taxa to remain distinct. Although *Spyridium* and *Trymalium* have since been completely reinstated, *Stenanthemum* remained in relative obscurity for over a century after Mueller's treatment. Recent authors (e.g. Blackall & Grieve 1956; Conn 1983; Canning 1986; Wheeler 1987; Barker 1989, 1993; Harden 1990) failed to take up Reissek's genus, and all species published in or transferred to *Stenanthemum* were included in either *Cryptandra* or *Spyridium*.

Although the genus was reinstated by Rye (1995), the absence of clearly defined diagnostic differences between *Stenanthemum* and related genera has led to continuing uncertainty as to generic limits in the group. Bean (2004), for example, reinstated *Stenanthemum scortechinii* (F.Muell.) Maiden & Betche (basionym: *Cryptandra scortechinii*), an eastern Australian species that clearly belongs in *Spyridium* (see Thiele & West 2004), while three taxa from Western Australia, (*Stenanthemum gracilipes* Diels, *S. grandiflorum* (C.A. Gardner) Rye ms and *S. intropubens* Rye ms, require re-assignment to new genera (see Kellermann et al. 2005, Rye 2001).

Cladistic analyses based on morphological (Thiele, unpublished data) and sequence data (Kellermann et al. 2005) have shown that *Stenanthemum* (after removal of the taxa discussed above) is a natural one. The principal morphological features distinguishing *Stenanthemum* from *Spyridium* and *Cryptandra* are given in Table 1.

Table 1. Principal diagnostic differences of *Stenanthemum*, *Spyridium* and *Cryptandra*

Stenanthemum	***Spyridium***	***Cryptandra***
Leaves usually broad, often folded; *stipules* free or connate behind the petiole	*Leaves* usually broad, rarely folded; *stipules* free or connate behind the petiole	*Leaves* usually revolute-terete; *stipules* connate around the base of the petiole
		
Inflorescences dense, cymose heads; *floral bracts* small or large, surrounding the head	*Inflorescences* dense or loose cymose heads; *floral bracts* usually large, surrounding the head	*Inflorescences* single flowers; *floral bracts* imbricate around the base of the flower
		
Free hypanthium short to long; *floral disk* glabrous, lining the hypanthium tube and often confluent with the filament bases (sometimes apparently lacking); *ovary* fully inferior at anthesis, remaining so after anthesis	*Free hypanthium* usually very short; *floral disk* glabrous, usually forming a shelf at the summit of the hypanthium tube, indented at the filament bases; *ovary* fully inferior at anthesis, remaining so after anthesis	*Free hypanthium* short to long; *floral disk* usually densely tomentose, forming a sinuate ring around the base of the ovary; *ovary* often partly superior at anthesis, becoming more so after anthesis
		
Fruitlets dehiscing by a slit to release the arillate seed; *seed* spotted or mottled (rarely uniform)	*Fruitlets* indehiscent, usually papery, shed whole as the disseminule; *seed* uniform, spotted or mottled	*Fruitlets* dehiscing by a slit to release the arillate seed; *seed* uniformly coloured
		

The shape of the floral disk (lining the hypanthium and confluent with the staminal filaments) is a morphological synapomorphy for the genus.

Stenanthemum **Reissek**

Linnaea 29:295 (1858). — *Spyridium* sect. *Stenanthemum* (Reissek) F.Muell., Fragm. 3: 77 (1862), nom. inval. — *Cryptandra* sect. *Stenanthemum* (Reissek) Suesseng., Nat. Pflanzenfam. ed. 2, 20d: 118 (1953). **Lectotype**: *Stenanthemum leucophractum* (Schltdl.) Reissek, fide Rye, Nuytsia 13: 496 (2001).

Cryptandra subg. *Solenandra* Reissek in Lehm. Pl. Preiss. 2: 288 (1848). — *Solenandra* (Reissek) Kuntze, Rev. Gen. Pl. 1: 120 (1891) non Hook.f., in Benth. & Hook.f., Gen. Pl. 2(1): 43 (1873), nom. illeg. — *Cryptandra* sect. *Solenandra* (Reissek) T.Post & Kuntze, Lex. Gen. Phan. 150 (1903). **Type**: not designated.

Evergreen, small shrubs, usually without spinescent short-shoots, with simple and/or stellate hairs on shoots, leaves and flowers. Leaves alternate, sometimes crowded and ± fasciculate, entire or with a few teeth at the apex, shortly petiolate, usually discolorous, usually folded (conduplicate) at least at the apex; stipules free to connate (to about half their length) behind the petiole, persistent, scarious. Inflorescences comprising dense, contracted, cymose heads, usually terminal but often made lateral by vegetative growth from subtending buds, sometimes subtended by whitish floral leaves; bracts persistent, often larger than stipules. Flowers bisexual, 5-merous, ± sessile. Hypanthium produced into a free tube, persistent on the fruit. Sepals usually ± spreading at anthesis. Petals cucullate, ± clawed, smooth, erect. Stamens subequal to petals, erect. Disk usually conspicuous (sometimes apparently lacking), smooth, glabrous, lining the base of the hypanthium tube and appearing confluent with the adnate staminal filaments. Ovary inferior at anthesis, remaining so after anthesis, the ovary summit glabrous or pubescent; carpels 3; style almost entire to slightly lobed. Fruit a schizocarpic capsule, the fruitlets splitting along their inner faces to release the seeds. Seeds cream, fawn or brown usually irregular spotted or mottled, the lower ⅓–⅔ of the seed body covered by a translucent, 3-lobed aril.

30 species endemic to Australia, mostly in south-western Western Australia.

Synopsis of *Stenanthemum* species occurring outside Western Australia[1]

Key to the species of *Stenanthemum* in states other than Western Australia[1]

1 Ovary summit (around the style base inside the hypanthium tube) stellate-hairy
  2 Leaves glabrous and tuberculate above; flowers woolly or villous. . . . . *S. petraeum*
  2: Leaves with stellate and/or simple hairs above; flowers shortly pubescent . . . . . *S. notiale* subsp. *notiale*
1: Ovary summit glabrous
  3 Stem leaves glabrous and tuberculate or scabrid above
    4 Flowers woolly with spreading, white hairs
      5 Leaf margins narrowly recurved, leaves otherwise flat; Tas.. . . . . *S. pimeleoides*
      5: Leaves folded, the margins not recurved; S.A., Vic., N.S.W. . . . . *S. leucophractum*
    4: Flowers villous or sericeous with ± appressed, rusty to silvery hairs
      6 Leaves narrowly obovate, 6–14 mm long, 2–3 mm wide; NE Qld. . . . . .*S. argenteum*
      6: Leaves broadly obovate to almost orbicular, 2–7 mm long and wide; S.A. . . . . .*S. arens*
  3: Stem leaves stellate-hairy above
    7 Free hypanthium tube 0.9–1.2 mm long; S.A. . . . . .*S. arens*
    7: Free hypanthium tube 2.8–3.5 mm long; N.T. . . . . *S. centrale*

Stenanthemum petraeum **Rye**

Nuytsia 19(2): 298 (1995). **Typus**: 189 km N of Neale Junction, Western Australia, 28 July 1974, *A.S. George 12000*; holo: PERTH 01515411!; iso: CANB!, MEL!.

Woody, erect shrub to 1.5 m high, with greyish, densely simple-pubescent young stems. Leaf lamina broadly obovate to almost orbicular, (3–)8–15 mm long, (4–)8–10 mm wide, flat or folded, glabrous and tuberculate above, appressed silvery-villous beneath; base cuneate; apex obtuse to acute, rarely emarginate, recurved; petiole 1–2.5 mm long; stipules 2–3 mm long, triangular, connate. Inflorescences to 1 cm wide, with 15–50 flowers. Flowers white-villous or -woolly. Hypanthium tube 1–1.5 mm long, 1–2 mm diameter. Sepals 1–1.8 mm long. Petals 0.8–1.1 mm long, distinctly clawed. Disk conspicuous. Ovary roof stellate-hairy; style 1.5–2.3 mm long. Fruit 2–3 mm long. Seed 1.5–1.6 mm long.

Widely distributed in inland Western Australia and Northern Territory, between Mt Augustus and Laverton in the west and Glen Edith in the east, usually on stony slopes with *Triodia*. Flowers and fruits: throughout the year.

Stenanthemum notiale **Rye subsp.** ***notiale***

Nuytsia 19(2): 297 (1995). **Typus**: c. 17 km NNW of Young River crossing on Ravensthorpe – Esperance road, Western Australia, *E.N.S. Jackson 1296*; holo: PERTH 01541315!; iso: AD!, CANB!.

Cryptandra tridentata auct. non Steud.,: auctt. Austral. — *Spyridium tridentatum* auct. non (Steud.) Benth., auctt. Austral.

Prostrate to erect shrub to 0.6 m high, with greyish or rusty, sparsely to (rarely) densely stellate-pubescent young stems. Leaf lamina (3–)5–8(–12) mm long, (2–)3–6 mm wide, flat or folded, moderately to densely greyish-pubescent above with simple and/or stellate hairs, pubescent to villous beneath with grey or rusty, simple and/or stellate hairs; base cuneate; apex acute or obtuse and recurved-apiculate, rarely emarginate; petiole 0.5–2.0 mm long; stipules 1.5–3.5 mm long, ovate to broadly triangular, connate. Inflorescences to 0.8 cm wide, with 10–20 flowers. Flowers densely greyish-pubescent or villous with simple and/or stellate hairs. Hypanthium tube to 0.4 mm long, 0.6–1.2 mm

[1] see Rye (2001) for a key to and synopsis of Western Australian taxa.

diameter. Sepals 0.8–1.2 mm long. Petals 0.5–0.7 mm long, distinctly clawed. Disk conspicuous. Ovary roof stellate-hairy; style 0.6–0.7 mm long. Fruit 2–2.2 mm long; seed 1.1–1.5 mm long.

Widely distributed in south-west Western Australia between Geraldton and Israelite Bay, and also in South Australia on central Eyre Peninsula and in north-west Victoria between Annuello and Hattah, in woodlands, heath and mallee-heath. Flowers and fruits: throughout the year.

Bentham (1863) initiated a broad concept of *Spyridium tridentatum* (Steud.) Benth., which was followed by all Australian authors until Rye (1995) resolved it into five distinct species of *Stenanthemum*. Of these, only *Stenanthemum notiale* occurs outside Western Australia.

***Stenanthemum pimeleoides* (Hook. f.) Benth.**

Fl. Austral. 1: 436 (1863). — *Cryptandra pimeleoides* Hook. f., Fl. Tasman. 75, t. 12B (1855). — *Solenandra pimeleoides* (Hook. f.) Kuntze, Revis. Gen. Pl. 1: 121 (1891) (as '*pimelodes*'). **Typus**: Spring Bay, *Gunn 1041*; iso: K, BM (photos seen)

Prostrate, small shrub with greyish- or rusty-villous young stems. Leaf lamina obovate to almost flabellate, 2–7 mm long, 2–6 mm wide, narrowly recurved, glabrous and minutely tuberculate above, appressed-villous below; base cuneate; apex obtuse; petiole 1–2.5 mm long; stipules 2.5–7 mm long, narrowly triangular, connate behind the petiole, often overlapping and sheathing the stems. Inflorescences to 1 cm wide, with 10–50 flowers, subtended by a few white floral leaves. Flowers densely greyish-woolly; hypanthium tube 2.4–2.7 mm long, 0.8–1.2 mm diameter, glabrous at base. Sepals 0.8–1.2 mm long. Petals 0.6–0.7 mm long, distinctly clawed. Disk apparently absent. Ovary roof glabrous; style (2.2–)3.5–3.8 mm long. Fruit 2–2.5 mm long. Seed 1.2–1.4 mm long.

Endemic to eastern Tasmania, on the east coast between Orford and Bicheno, in heathland and forest. Flowers: Dec.–Feb.

***Stenanthemum leucophractum* (Schltdl.) Reissek**

Linnaea 29:295 (1858). — *Cryptandra leucophracta* Schltdl., Linnaea 20: 640-642 (1847). — *Spyridium leucophractum* (Schldtl) F.Muell., Fragm. 3: 77 (1862). — *Solenandra leucophracta* (Schltdl.) Kuntze, Revis. Gen. Pl. 1: 121 (1891). **Typus**: South Australia, *Behr s.n.*; holo: HAL (photo seen)

Small, spreading shrub to 40 cm (rarely to 1 m) high, with rusty or greyish densely villous or pubescent young stems. Leaf lamina obovate to broadly obovate, 3–6(–10) mm long, 2–6 mm wide, flat or folded, glabrous and tuberculate above, grey or rusty and appressed-villous beneath; base cuneate; apex obtuse and recurved-apiculate, rarely acute; petiole 0.5–2 mm long; stipules 2–4 mm long, narrowly triangular, connate. Inflorescences to 1 cm wide, with 15–40 flowers, subtended by whitish floral leaves. Flowers white woolly-hirsute. Hypanthium tube 2.5–3.5 mm long, 0.8–1.0 mm diameter. Sepals 1.0–1.2 mm long. Petals 0.5–0.6 mm long, distinctly clawed. Disk apparently absent. Ovary roof glabrous; style 3.5–4.0 mm long. Fruit 2.0–3.0 mm long. Seed 1.5–1.8 mm long. *Rusty poison, white cryptandra*.

Widespread in mallee scrub from Eyre Peninsula and Kangaroo Island, South Australia to the Little Desert, Victoira, with an outlying population between Hillston and Ardlethan, New South Wales. Flowers and fruits: Sept.–Dec.

***Stenanthemum argenteum* A.R. Bean**

Austrobaileya 6(4): 935 (2004). **Typus**: Queensland: Cook District: The Pepperpot, Mt Mulligan, c. 40 km NW of Dimbulah, 31 May 1985, *J.R. Clarkson 5949*; holo: BRI!; iso: L, MEL, MO, NSW

Low shrub 0.5–0.75 m high with dense, appressed, silvery-villous indumentum on young stems, leaf undersurfaces and flowers. Leaf lamina narrowly obovate, 6–14 mm long, 2–3 mm wide, flat or folded, glabrous and scabrid above; base narrowly cuneate; apex obtuse to acute, recurved-apiculate; petiole 1–1.5 mm long; stipules 1.5–2.5 mm long, narrowly triangular, free. Inflorescences to 0.5 cm wide, with 5–10 flowers. Hypanthium tube 2–2.5 mm long, 1.5 mm diameter. Sepals 1.5–2 mm long, erect or spreading. Petals 1.5 mm long, distinctly clawed. Disk inconspicuous. Ovary roof glabrous; style 3–3.5 mm long.

Endemic to north Queensland on Mts Mulligan and Janet, in woodland on steep pavements in heathland. Flowers: Sept.

Stenanthemum arens* K.Thiele, *sp. nov.

Stenanthemum sp. Gawler Ranges (J.Carrick 2457) K.R. Thiele in Barker et al., J. Adelaide Bot. Gard. Suppl. 1: 91 (2005). **Typus**: At foot of Mt. St. Mungo [2 October 1969], *J. Carrick 2457*; holo: AD; iso: CANB, PERTH.
Species unica in genere Stenanthemo*, distinguenda tecto ovarii glabro, foliis caulis plerumque dense stellato-pubescentibus supra, foliis circum inflorescentiam in folia floris densius pubescentia et latioria mutatis, hypanthio plus minusve uniformiter villoso tubo libero 0.9-1.2 mm longo, et disco prominenti et profunde indentato inter filamenta staminum.*

Twiggy shrub. Young stems moderately to densely pubescent or villous with ± appressed, flexuose, greyish or rusty, simple or substellate hairs, persisting to older stems of current season's growth. Leaves ± concolorous or distinctly discolorous; lamina broadly obovate to almost orbicular, (2–)4–7 mm long and wide, entire, flat or folded, usually densely greyish-stellate above, densely villous beneath with rusty hairs, especially along the veins, over a greyish, stellate sub-indumentum, rarely both surfaces glabrescent; venation penninerved, the veins obscure or clearly visible beneath; base cuneate; apex obtuse and recurved-apiculate, rarely emarginate; petiole (0.5–)1–2 mm long; stipules 2–4 mm long, narrowly triangular to linear-filiform, attenuate, free or shortly connate, abaxially sparsely pubescent or villous. Inflorescences terminal or lateral, to 1 cm wide, with

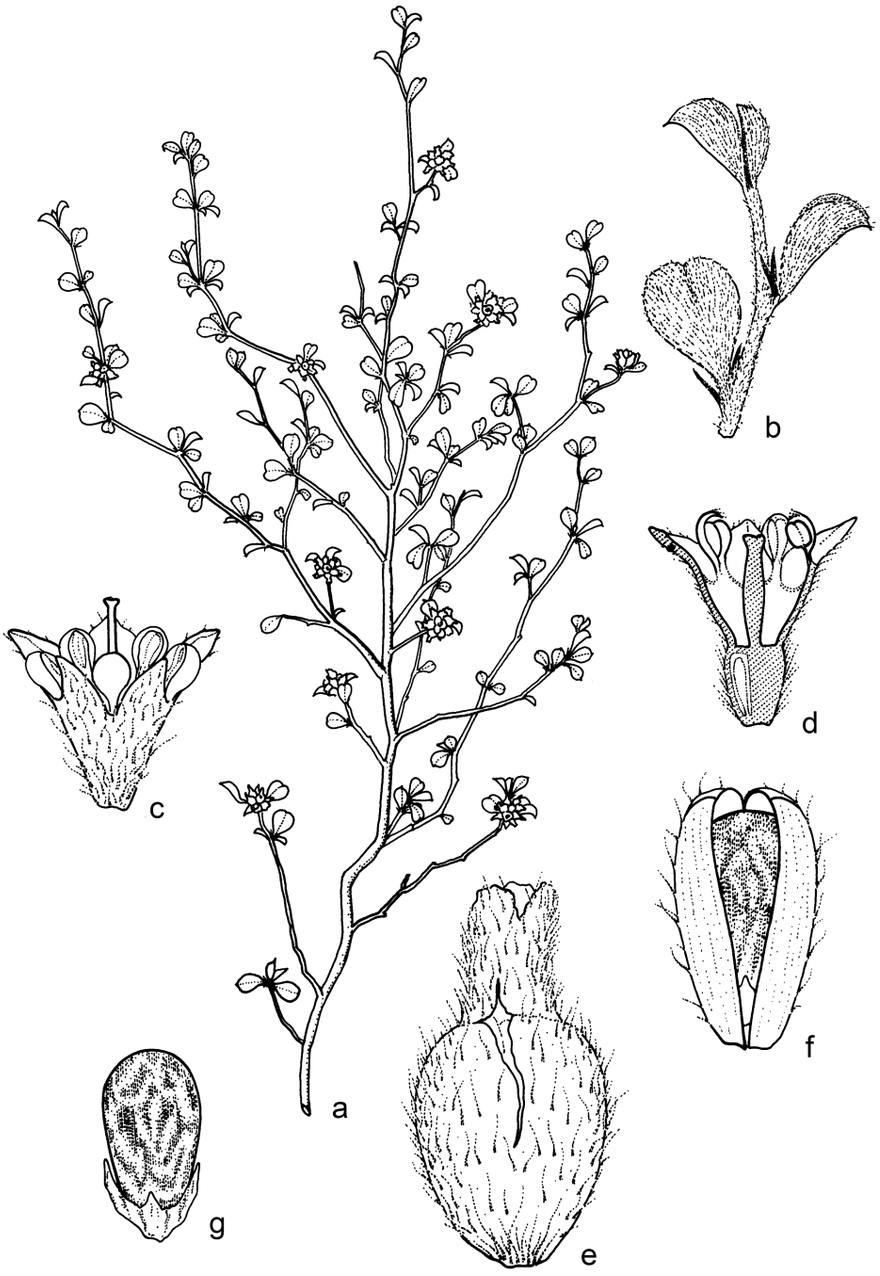


Fig. 1. *Stenanthemum arens*. **a** Habit ×1; **b** Leaves and stipules ×3; **c** Flower ×10; **d** Flower in longitudinal section ×10; **e** Fruit ×10; **f** Fruitlet and seed, adaxial ×10; **g** Seed ×10. (*Carrick 2457* except c-d, *Scoles 40*).

10–20 flowers, usually with subtending whitish floral leaves (though these scarcely differentiated from stem leaves); bracts ovate to triangular, 1.5–2.5 mm long, acute or awned, ciliate on the margins, sparsely to moderately villous or pubescent. Pedicels to 0.2 mm long, moderately to densely villous. Hypanthium tube 0.9–1.2 mm long, 1.2–1.5 mm diameter, moderately villous or sericeous with flexuose, loosely appressed, silvery, mostly simple hairs, the hairs slightly longer and denser at the base. Sepals 1.2–1.4 mm long, spreading, pubescent to villous, the hairs slightly shorter and denser than those on the hypanthium, otherwise similar. Petals 0.7–0.8 mm long, erect, smooth, with a few hairs along the midline on the back, indistinctly clawed. Stamens 0.6–0.8 mm long, erect; anthers 0.5–0.6 mm long. Disk conspicuous, deeply scalloped between the staminal filament bases. Ovary roof glabrous; style 1.7–1.9 mm long. Fruit 2.2–3 mm long, greenish or brown, obovoid, obtuse. Seed 1.6–1.8 mm long, irregularly mottled pale fawn and reddish-brown. Fig. 1.

Derivation of epithet. From the Latin *arens* (dry, parched), in reference both to the habitat and the appearance of the plant.

Distribution and habitat. Endemic to South Australia, on rocky hills in the north-west Gawler Ranges. Flowers :July; fruits: Sept.–Oct.

Notes. Similar in habit, habitat and general appearance to *Stenanthemum leucophractum*, which differs in having glabrous-tuberculate stem leaves and longer (2.5–3.5 mm), white-woolly flowers. *Stenanthemum leucophractum* is widespread in the south-east Gawler Ranges but appears to be absent from the north-west Gawler Ranges where *S. arens* occurs.

Conservation Status. *Stenanthemum arens* occurs on grazing freehold, and is not known from conservation reserves. A conservation code of 2V (following the codes of Briggs & Leigh 1989) is suggested.

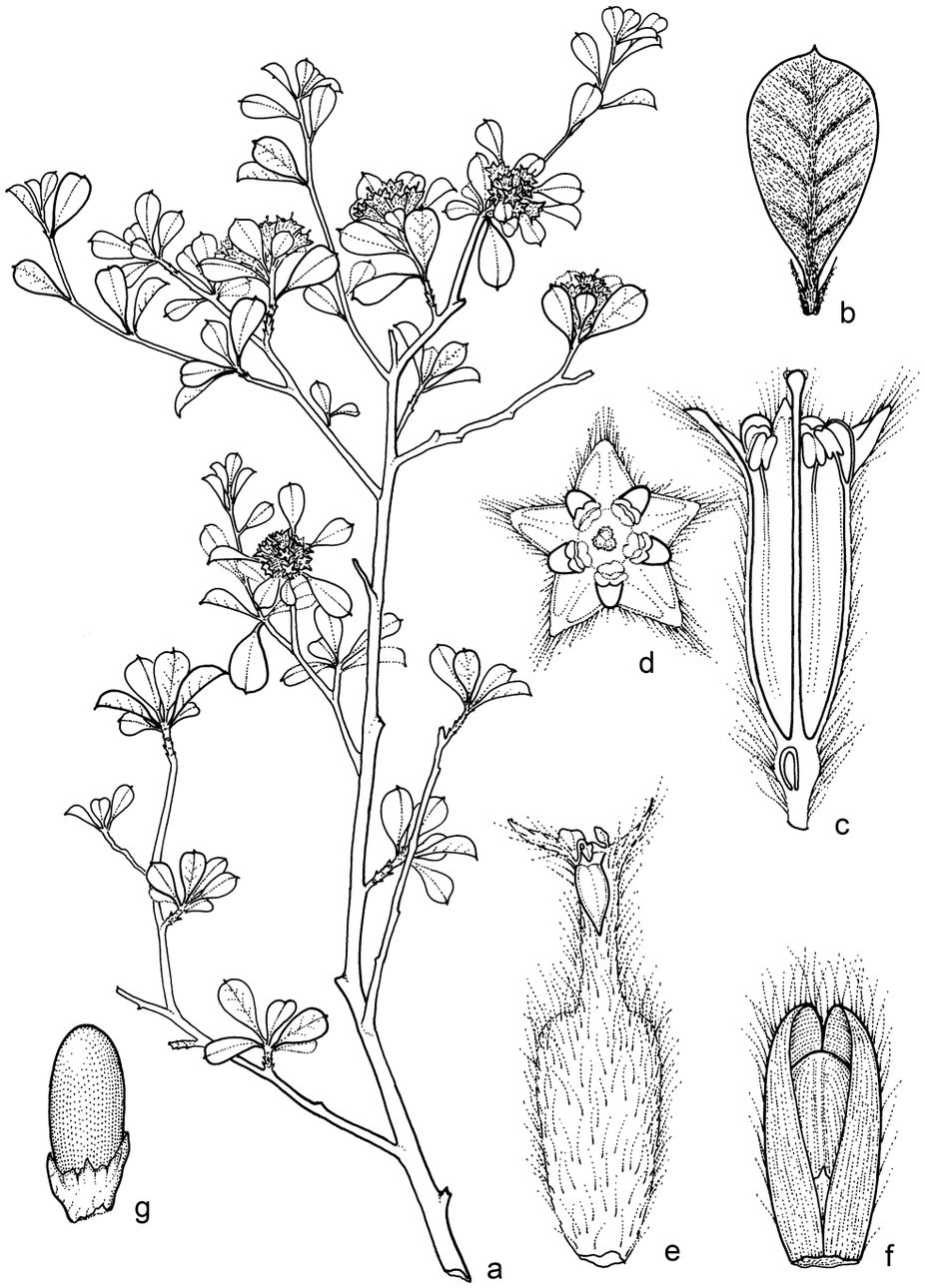


Fig. 2. *Stenanthemum centrale*. **a** Habit ×1; **b** Leaf and stipules, abaxial ×3; **c** Flower in longitudinal section×10; **d** Flower in plan view ×10; **e** Fruit ×10; **f** Fruitlet and seed, adaxial ×10; **g** Seed ×10. (*Latz 1876* except e-g, *Latz 11539*).

Other specimens examined. South Australia: Mt. Wallaby, c. 3 km WNW of Koondoolka HS., 24 Sept. 1972, *E.N.S. Jackson 2034* (AD); c. 48 km E of Wirrulla, 10 July 1967, *D. Scoles 40* (AD); Hiltaba Station, c. 3 km N of Hiltaba HS., 4 Sept. 1972, *B.J. Blaylock 1892* (AD, PNH, PR); Hiltaba H.S., 3 Sept. 1972, *A.G. Spooner 2240* (AD); Hiltaba Station, E of Barker [probably Barber] Hill, 16 June 1969, *G. Gardiner s.n.* (AD); Surrounding hills NE of Koondoolka HS., 23 Sept. 1972, *J.Z.Weber 3041* (AD).

Stenanthemum centrale K.Thiele, *sp. nov.*

Stenanthemum A83203 Palm Valley: C.R. Dunlop et al., Checkl. Vasc. Pl. Northern Terr. 97 (1995). — *Stenanthemum sp. Palm Valley (P.K.Latz 10086)*: Cowie & Albrecht, Checkl. NT Vasc. Pl. [p. 45] (2005). **Typus**: Finke Gorge National Park, 1.5 km SW of confluence of Little Palm Creek and Finke River, 13 July 1995, *D.E. Albrecht 6783*; holo: CANB; iso: AD, DNA, MEL, PERTH, NT.

Species unica in genere Stenanthemo*, distinguenda paginis adaxialibus foliorum dense stellato-pubescentibus et floribus albo-villosis tubo hypanthii 2.8-3.5 mm longo.*

Woody, pale grey shrub to 1.5 m high. Young stems densely pubescent with loosely appressed or spreading, flexuose, greyish, simple or substellate hairs, persisting to older stems of current season's growth. Leaves ± discolorous; lamina obovate to broadly obovate, (6–)10–15(–18) mm long, 5–8 mm wide, entire, flat or folded, densely greyish-stellate above, densely silvery-villous with appressed hairs beneath, sometimes with scattered rusty hairs along the veins; venation penninerved, the veins clearly visible beneath; base cuneate; apex obtuse with a straight or recurved apiculum; petiole 1.5–3.5 mm long; stipules 2.5–4.5 mm long, narrowly triangular, attenuate, free, sparsely to moderately pubescent abaxially. Inflorescences terminal or lateral, 0.6–1 cm wide, with 10–40 flowers, sometimes with subtending whitish floral leaves (though these scarcely differentiated from stem leaves); bracts ovate to triangular, 3–4 mm long, acute or bilobed, ciliate on the margins, densely villous. Flowers sessile. Hypanthium tube 2.8–3.5 mm long, 0.8–1.5 mm diameter, densely villous with loosely appressed to spreading, white or silvery, simple hairs, the hairs denser at the base. Sepals 1.2–1.5 mm long, erect or spreading, densely villous with hairs similar to those on the hypanthium. Petals 0.8–1.1 mm long, erect, glabrous, distinctly clawed. Stamens 0.8–1.1 mm long, erect; anthers 0.5–0.8 mm long. Disk apparently lacking. Ovary roof glabrous; style 3.5–4 mm long. Fruit c.3.5 mm long (not including the persistent, withered hypanthium), pale brown, obovoid, obtuse. Seed 2.0-2.5 mm long, reddish-brown, not mottled. Fig. 2.

Derivation of epithet. From the Latin *centrum* (central point), in reference the distribution of the species in Central Australia.

Distribution and Habitat. Endemic to the MacDonnell Ranges bioregion of the Northern Territory, on slopes, ridges and rocky gorges of porous sandstone with *Triodia* in the Krichauff, Waterhouse and James Ranges, south-west of Alice Springs (White et al. 2000). Flowers throughout the year.

Notes. Collections at DNA and MEL (*Kempe 219*) labelled "Finke River, S.A." refer to the Finke River at Hermannsburg in Northern Territory, where Kempe was a missionary.

Similar in habit, habitat and general appearance to *S. petraeum*, which differs in having glabrous-tuberculate stem leaves, shorter (1–1.5 mm), woollier hypanthium, and a stellate-hairy ovary roof. *Stenanthemum petraeum* is widespread in inland Western Australia, extending east to Glen Edith and Laurie Ck in the Northern Territory (c. 100 km west of Areyonga). As far as is known, the two species ranges do not overlap.

Conservation Status. Most collections note that the plant is rare at the collection site. It occurs in Finke Gorge National Park, and is not under any known threat. White et al. (2000) note that it is able to persist in fire-prone and frequently burnt areas. A conservation code of 3RC- (following the codes of Briggs & Leigh 1989) is suggested.

Other specimens examined. Northern Territory: Glen of Palms, 1872, *E. Giles s.n*. (MEL); Finke River, 1880, *H. Kempe 219* (DNA); Waterhouse Range S of Alice Springs, 3 Feb. 1976, *P.K. Latz 6347* (DNA, NT); Palm Valley, 26 Dec. 1971, *P.K. Latz 1876* (CANB, DNA); 1 km N of Palm Valley camping area, 18 July 1985, *P.K. Latz 10086* (DNA, NT); James Range, 13 km S of Areyonga, 21 Sept. 1989, *P.K.Latz 11593* (DNA, MEL, NT); 25 km NE of Areyonga, 22 June 1988, *D.J. Parsons 47* (AREF, DNA, NT)

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