

A CONSPECTUS OF SOLANACEAE TRIBE ANTHOCERCIDEAE

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ABSTRACT

Haegi, L. (National Herbarium of New South Wales, Royal Botanic Gardens, Sydney, Australia 2000) 1981. A conspectus of Solanaceae tribe Anthocercideae. *Telopea* 2 (2): 173–180.—A summary of the taxonomy of *Anthocercis* and related genera is presented. These genera all belong to tribe Anthocercideae which consists of seven genera of which two, *Crenidium* Haegi and *Grammosolen* Haegi, are newly described. *Anthocercis* Labill. and *Anthotroche* Endl. are redefined while *Cyphanthera* Miers is reinstated. The new name *Symonanthus* Haegi is provided to replace *Isandra* F. Muell. *nom. illeg.* for another genus to which '*Anthocercis*' *aromatica* is transferred. *Duboisia* R. Br. remains unchanged. Two new species, *Crenidium spinescens* Haegi and *Cyphanthera miersiana* Haegi, and several infraspecific taxa are described. New combinations necessitated by the reclassification are provided, and a diagnostic key to the genera of tribe Anthocercideae is presented.

INTRODUCTION

The taxonomy of *Anthocercis* and related genera has received little attention since Bentham's (1868) treatment in 'Flora Australiensis'. Since that time a related new genus (*Isandra*) and several new species have been described and material unassignable to existing taxa has been collected. Past disagreement about generic delimitation (Miers 1853, Bentham 1868) has remained unresolved and the relationships of these genera to other genera in the family have remained unclear (D'Arcy 1979). An overview of this group of genera (Haegi 1979) and pollen-morphological investigations (Gentry 1979) provided support for its recognition as a distinct tribe [for which the earliest name is Anthocercideae (Don 1838, as 'Anthocerceae')] but a sound classification of the group was still lacking. For these reasons a comprehensive taxonomic revision of the group has been undertaken, and a summary of the taxonomy, together with nomenclatural changes, are presented here, in advance of the complete treatment, as a precursor to the imminent volume on Solanaceae for the new Flora of Australia. In addition to brief discussion of affinities and generic delimitation under each genus a diagnostic key to genera of the tribe is presented. The arrangement of the key reflects the generic relationships within the tribe.

DIAGNOSTIC KEY TO GENERA IN TRIBE ANTHOCERCIDEAE G. Don

1. Anthers bilocular; $n = 36$; [fruit capsular]
 2. Flowers bisexual; corolla with funnel-shaped tube and long \pm slender spreading lobes; stamens 4, didynamous; anthers free; soft-wooded shrubs [9 spp., in W.A. & S.A.] 1. *Anthocercis*
 - 2.* Flowers unisexual (plants dioecious); corolla with \pm cylindrical tube and short oblique lobes; stamens 3–5, equal; anthers coherent in a cylinder at dehiscence; herbaceous plants with perennial rootstock [2 spp., in W.A.] 2. *Symonanthus*
- 1.* Anthers unilocular; $n = 28, 30, 31, 35$ or 56
 3. Fruit baccate; plants \pm glabrous; inflorescences many-flowered, $n = ? 28, 30$ [3 spp., in all Aust. states except Tas., Vic., 1 species extending to New Caledonia] 3. *Duboisia*
 - 3.* Fruit capsular; plants pubescent (usually densely so) with dendritic eglandular hairs (simple or forked glandular hairs sometimes predominant); inflorescences few- to several-flowered
 4. Stamens and style included or if exerted then not longer than the broadly funnel-shaped to patent corolla tube; corolla usually more than 10 mm, always more than 5 mm in total length; corolla striations present; leaves present
 5. Stamens 4, didynamous; anthers reniform, oblique at dehiscence; line of anther dehiscence terminal; $n = 30$ [9 spp., in all states except N.T.] 4. *Cyphanthera*

- 5.* Stamens 5, equal or unequal; anthers hippocrepiform, erect at dehiscence; line of anther dehiscence abaxial; $n = 31$ or 56
6. Bracts present within inflorescence; corolla white with purple striations; corolla lobes glabrous on upper (inner) face, free and erect in bud; $n = 56$ [2 spp., in S.A.] 5. *Grammosolen*
- 6.* Bracts absent from inflorescence; corolla deep violet (though white-flowered forms rarely occur); corolla lobes densely pubescent with dendritic hairs on upper (inner) face, coherent and with incurved apices in bud; $n = 31$ [3 spp., in W.A.] 6. *Anthotroche*
- 4.* Stamens and style exerted, much exceeding the narrow corolla tube in length; corolla 4 mm or less in total length; corolla striations absent; leaves absent except on very immature parts; $n = 35$ [1 sp., in W.A.] 7. *Crenidium*

1. ANTHOCERCIS Labill.

As treated here the genus *Anthocercis* is restricted to include only species with bilocular anthers and bisexual flowers, viz. *A. viscosa* R. Br., *A. fasciculata* F. Muell., *A. angustifolia* F. Muell., *A. littorea* Labill., *A. ilicifolia* Hook. (formerly included in *A. littorea*), *A. intricata* F. Muell. (including *A. arborea* F. Muell.), *A. genistoides* Miers (including *A. spinescens* F. Muell.), *A. anisantha* Endl. and *A. gracilis* Benth. Species with unilocular anthers referred to *Anthocercis* by Cunningham (1825), Mueller (1855, 1859), Bentham (1846, 1868) and all subsequent authors are assigned to the reinstated genus *Cyphanthera* Miers (*q.v.*). In essence this follows the concept of Miers (1853). The dioecious species originally described as *A. aromatica* by Gardner (1939) is transferred to *Symonanthus* (*q.v.*). Three new subspecies in *Anthocercis* are here described:

1. *Anthocercis anisantha* Endl. ssp. *collina* Haegi, ssp. nov. a ssp. *anisantha* ramis foliisque praecipue in partibus immaturis trichomatibus appressis antrorsis egladulosis breviter tomentosis non trichomatibus longis porrectis glandulosis pubescentibus differt.

HOLOTYPE: *A. E. Orchard* 2171, southwestern part of Yandinga Gorge [32° 33' S, 135° 20' E], c. 50 km north of Minnipa, Gawler Ranges, South Australia, 15.8.1969 (AD). *Isotypi*: CANB, K, MO, PERTH distribuendi.

A. anisantha ssp. *collina* differs from ssp. *anisantha* in the branches and leaves (particularly on the immature parts) being closely tomentose mainly with antrorse, appressed egladular hairs. In ssp. *anisantha* the indumentum is of long porrect glandular hairs. The new subspecies is confined to the Gawler Ranges and certain isolated hilltops of northern Eyre Peninsula, South Australia. The epithet, from the Latin *collis*, a hill, refers to the habitat of this taxon.

2. *Anthocercis ilicifolia* Hook. ssp. *caldariola* Haegi, ssp. nov. a ssp. *ilicifolia* calyce valde bulboso pariete crasso differt.

HOLOTYPE: *L. Haegi* 1966, c. 10 km by road SSW. of Kalbarri on coast track to Bluff Point, 27° 41' S, 114° 08' E, Kalbarri National Park, Western Australia, 5.9.1979 (PERTH). *Isotypi*: CANB, K, NSW distribuendi.

A. ilicifolia ssp. *caldariola* is distinguished from ssp. *ilicifolia* by its thick-walled, markedly bulbous calyx. It is confined to the coastal area immediately about the township of Kalbarri, Western Australia, where ssp. *ilicifolia* does not occur. The epithet, from the Latin diminutive *caldariola*, a small cooking pot or cauldron, alludes to the bulbous calyx.

A. ilicifolia, published by Hooker (1830) is a name not in general use because the species to which it applies has been confused with and included under the very closely related species *A. littorea*. *A. ilicifolia*, which often occurs sympatrically with *A. littorea*, differs in its large pyramidal (not short racemose) inflorescence and the more brightly coloured flowers with larger tube and shorter, broader lobes.

3. *Anthocercis viscosa* R. Br. ssp. *caudata* Haegi, ssp. nov. a ssp. *viscosa* lobis corollae (3.0–) 3.3–5.0 -plo [non 1.5–2.3 (–2.6) -plo] longioribus quam latoribus et tubo minimum (1.6–) 2.0 -plo (haud minus quam 1.5 -plo) longioribus differt.

HOLOTYPE: *L. Haegi* 1225, upper southeast side of Condingup Peak, 33° 46' S, 122° 33' E, c. 62 km eastnortheast of Esperance, Western Australia, 6.10.1976 (PERTH). *Isotypi*: AD, CANB, K, L, MO, NSW distribuendi.

A. viscosa ssp. *caudata* which occurs on the southern coast of Western Australia between Esperance and Mt Ragged, and in the Walpole-Nornalup National Park, differs from ssp. *viscosa* in having corolla lobes (3.0–) 3.3–5.0 times longer than broad and usually at least twice, rarely only 1.6 times as long as the corolla tube. In ssp. *viscosa* which is found also in Western Australia, from Albany to Bremer Bay with one outlying occurrence near Denmark, the corolla lobes are only 1.5–2.3 (–2.6) times longer than broad and less than 1.5 times as long as the corolla tube. The epithet, from the Latin *caudatus*, tail-like, refers to the narrow corolla lobes.

2. SYMONANTHUS *Haegi*, nom. nov.

REPLACED SYNONYM: *Isandra* F. Muell., [Syst. Census Austral. Pl.: 140 (1882), nom. nud.] S. Sci. Rec. 3: 2 (1883), nom. illeg., non Salisb., Gen. Pl. Fragm.: 67 (1866) [= *Thysanotus* R. Br. (Liliaceae)].

1. *Symonanthus bancroftii* (F. Muell.) *Haegi*, comb. nov.

BASIONYM: *Isandra bancroftii* F. Muell., [Syst. Census Austral. Pl.: 140 (1882), nom. nud.] S. Sci. Rec. 3: 2 (1883).

2. *Symonanthus aromaticus* (C. A. Gardner) *Haegi*, comb. nov.

BASIONYM: *Anthocercis aromatica* C. A. Gardner, [Enum. Pl. Austral. Occ.: 116 (1931), nom. nud.] Hooker's Icon. Pl. ser. 5, 4: t. 3382 (1939).

Symonanthus is most closely related to *Anthocercis* with which it shares the characters of bilocular anthers, capsular fruit and gametic chromosome number of $n = 36$ (Haegi, unpublished data).

At the time when *A. aromatica* was described the generic concepts of *Anthocercis* and '*Isandra*' were such that these genera were separated on the basis of stamen number, the former with 4 and the latter with 5 stamens. Having 4 stamens only, the new species was placed in *Anthocercis* by Gardner who nevertheless recognised the many similarities of *A. aromatica* with '*Isandra*' *bancroftii*. The transfer of *Anthocercis aromatica* to *Symonanthus* here is based on its possession in common with *S. bancroftii* of several characters which serve to distinguish *Symonanthus* from *Anthocercis* (see key above). Gardner stated that both species were andromonoecious. In fact, they are both dioecious, the flowers from male plants containing pollen-bearing stamens but pistils lacking styles and ovules, and those from female plants containing fertile pistils but reduced stamens with anthers lacking pollen.

Symonanthus (from the Greek *anthos*, a flower) is named in honour of David Symon (Waite Agricultural Research Institute, Adelaide); his work in Australian botany has included significant contributions to our understanding of the biology and taxonomy of the Solanaceae.

3. DUBOISIA R. Br.

This genus consists of three species, *D. myoporoides* R. Br., *D. leichhardtii* (F. Muell.) F. Muell. and *D. hopwoodii* (F. Muell.) F. Muell. No nomenclatural changes are required.

4. CYPHANTHERA Miers

Miers (1853) erected the genus *Cyphanthera* to accommodate those species with unilocular anthers previously assigned to *Anthocercis*. Later, Bentham (1868) reduced *Cyphanthera* to a section of *Anthocercis sens. lat.* and this has been followed by all subsequent authors. The inclusion of *Cyphanthera* in *Anthocercis* ignores the close affinity of the former with *Duboisia*, a genus which all authors have maintained as distinct. Both *Cyphanthera* and *Duboisia* have unilocular anthers and a gametic chromosome number of 30 (Barnard 1949; Haegi, unpublished data) [but see Ikenaga et al. (1979) for a report of $n = 28$ in *D. leichhardtii*] while in *Anthocercis* the anthers are bilocular and the chromosome number is $n = 36$. *Cyphanthera* differs from *Duboisia* in having capsular (not baccate) fruit and in a usually well-developed indumentum of dendritic hairs (not glabrous). For these reasons the three genera are maintained as distinct and *Cyphanthera* is here reinstated, necessitating the following new combinations. A new species and two new subspecies are also recognised and references to earlier combinations for accepted species provided.

1. *Cyphanthera anthocercidea* (F. Muell.) Haegi, comb. nov.

BASIONYM: *Eadesia anthocercidea* F. Muell., Trans. Philos. Inst. Victoria 2: 71 (1858).

This name applies to the Victorian material widely known as *Anthocercis frondosa* (Miers) J. M. Black. The type of the basionym of the latter name [*Cyphanthera frondosa* Miers], a specimen from Allan Cunningham's herbarium, is of unknown provenance, but is considered to be from a putative hybrid between *Duboisia myoporoides* and *Cyphanthera albicans*. Similar plants have been found from time to time at Douglas Park on the Nepean River, c. 50 km southwest of Sydney, the only known locality where the putative parents are sympatric. This was a locality probably visited by Cunningham.

2. *Cyphanthera albicans* (A. Cunn.) Miers, Ann. Mag. Nat. Hist. ser. 2, 11: 379 (1853).

BASIONYM: *Anthocercis albicans* A. Cunn. in Field, Geogr. Mem. New South Wales: 335, t. 2 (1825).

2a. *Cyphanthera albicans* ssp. *tomentosa* (Benth.) Haegi, comb. et stat. nov.

BASIONYM: *Anthocercis albicans* [var.] *tomentosa* Benth. in DC., Prodr. 10: 92 (1846), 'β. *tomentosa*'.

2b. *Cyphanthera albicans* ssp. *notabilis* Haegi, ssp. nov. a ssp. *albicans* corolla cremeo-alba tomento longiore [0.3–0.5 (–0.7) mm], et a ssp. *ovalifolia* foliis longioribus [(15–) 18–25 mm] corolla majore [13–18 (–22) mm longa], differt.

HOLOTYPE: *L. Haegi* 1379, Timor Rock, 31° 16' S, 149° 09' E, Warrumbungle Ranges, New South Wales, 10.9.1977 (CANB). *Isotypi*: AD, K, L, MO, NSW distribuendi.

C. albicans ssp. *notabilis* and ssp. *albicans* both differ from ssp. *tomentosa* in the white to creamy-white (not yellow) corolla and in the longer tomentum [0.3–0.5 (–0.8) mm as compared with 0.2–0.25 (–0.3) mm] on the leaves and branches. Subspecies *notabilis*, which is restricted in occurrence to the Warrumbungle Ranges, where neither of the other subspecies is found, differs from ssp. *albicans* in its larger corolla [13–18 (–22) mm as compared with (6.5–) 8–11 (–13) mm long] and longer leaves [(15–) 18–25 mm as compared with 6–15 (–20) mm long]. *C. albicans* ssp. *tomentosa* is confined to western New South Wales while ssp. *albicans* occurs in the Great Dividing Range from northeastern Victoria through eastern New South Wales to far southeastern Queensland.

This subspecies takes its name from the Latin adjective *notabilis*, noteworthy, because of its relatively large attractive flowers and leaves.

3. *Cyphanthera tasmanica* Miers, Ann. Mag. Nat. Hist. ser. 2, 11: 377–378 (1853).

BASED HEREON: *Anthocercis tasmanica* (Miers) Hook. f., Fl. Tasmania 1: 289, t. 92 [not 88A as stated in text] (1857).

4. *Cyphanthera scabrella* (Benth.) Miers, Ann. Mag. Nat. Hist. ser. 2, 11: 380 (1853).

BASIONYM: *Anthocercis scabrella* Benth. in DC., Prodr. 10: 192 (1846).

5. *Cyphanthera racemosa* (F. Muell.) Haegi, comb. nov.

BASIONYM: *Anthocercis racemosa* F. Muell., Fragm. 1: 211 (1859).

6. *Cyphanthera myosotideae* (F. Muell.) Haegi, comb. nov.

BASIONYM: *Anthocercis myosotideae* F. Muell., Trans. Philos. Soc. Victoria 1: 20–21 (1855).

7. *Cyphanthera miersiana* Haegi, sp. nov. *C. microphyllae* et *C. myosotideae* affinis sed ab ambabus statura majore (c. 70 cm alta) foliis triangulari-cordatis ad basin subauriculata differt. Ab *C. microphylla* basibus staminum pubescentibus et absentia pilorum longorum in lobis corollae, et ab *C. myosotideae* foliis arcte appressis lobis corollae emarginatis praeterea differt.

HOLOTYPE: *C. A. Gardner 19061*, 25 km east of Wiluna, Western Australia [c. 26° 36' S, 120° 25' E], 22.10.1966 (PERTH). *Isotypi*: AD, MO distribuendi.

C. miersiana is known only from the Wiluna area in Western Australia and is related to *C. myosotideae* and *C. microphylla*, with which it shares the characters of predominantly glandular indumentum, small leaves and short, broadly rounded corolla lobes. It differs from both in its greater stature (being about 70 cm, not 25–40 cm tall) and in the triangular-cordate (not broadly ovate to oblong) leaves with subauriculate (not cuneate to truncate) bases. In *C. microphylla* the stamen bases are glabrous and the adaxial surface of the corolla lobes is pubescent, while in *C. miersiana* and *C. myosotideae* the stamen bases are pubescent and corolla lobes glabrous. Both *C. microphylla* and *C. miersiana* differ from *C. myosotideae* in having appressed, rather than oblique to spreading leaves, and emarginate, not entire corolla lobes.

C. miersiana is named in honour of John Miers, an English engineer who turned to botany and published extensively on the Solanaceae last century, contributing significantly to the knowledge of the endemic Australian genera.

8. *Cyphanthera microphylla* Miers, Ann. Mag. Nat. Hist. ser. 2, 11: 381 (1853).

Anthocercis microphylla F. Muell., Fragm. 1: 179 (1859) is a taxonomic synonym of *C. microphylla*, being based on a different type.

9. *Cyphanthera odgersii* (F. Muell.) Haegi, comb. nov.

BASIONYM: *Anthocercis odgersii* F. Muell., Fragm. 10: 19 (1876).

9a. *Cyphanthera odgersii* ssp. *occidentalis* Haegi, ssp. nov. a ssp. *odgersii* indumento longiore 1.0–6.0 mm (non 0.3–2.0 mm) foliis majoribus [18–35 x 8–13 mm (non 11–20 x 7–11 mm)] et 2.3–3.8 -plo (non 1.1–2.0 -plo) longioribus quam latoribus, lobis corollae brevioribus [1.3–1.8 x 1.0–1.6 mm (non 2.0–2.5 x 1.0–1.5 mm)] et trichomatibus glandulosis ad bases staminum carentibus differt.

HOLOTYPE: *L. Haegi 1100*, Cowcowing Railway Siding, 31° 00' S, 117° 27' E, Western Australia, 23.9.1976 (PERTH). *Isotypi*: AD, CANB, K, MO distribuendi.

The Latin adjective *occidentalis*, western, has been used in naming this subspecies, which occupies the western part of the distribution of *C. odgersii*.

The two subspecies of *C. odgersii* are distinguished as follows:

Leaves with length: breadth ratio of 1.1–2.0, 11–20 x 7–11 mm; indumentum of branches 0.3–2.0 mm long; corolla lobes 2.0–2.5 mm long; stamen bases pubescent with eglandular and glandular hairs [Western Australia: Helms district of Eremaean Province, and Southwestern Interzone]	ssp. odgersii
Leaves with length: breadth ratio of 2.3–3.8, 18–35 x 8–13 mm; indumentum of branches 1.0–6.0 mm long; corolla lobes 1.3–1.8 mm long; stamen bases pubescent with eglandular hairs only [Western Australia: Avon District of Southwestern province and Austin district of Eremaean Province]	ssp. occidentalis

5. GRAMMOSOLEN *Haegi*, gen. nov.

Frutices foliis perdurantibus alternis. Flores 1–2 in cymis bracteatis terminalibus vel axillaribus; cymae interdum 2–3 simul ad idem nodum fasciculatae. Corolla regularis tubularis; limbus patens 5-lobatus; aestivatio loborum ± induplicata marginibus loborum multum incurvis, margine uno saepe altrum lobi ejusdem imbricato, lobis liberis, erectis. Stamina ad basin corollae inserta inclusa 5 duobus longis et tribus brevibus; filamenta ad basin pubescentia; antherae hippocrepiformes erectae, linea dehiscendae abaxiali. Ovarium ad basin disco annulari undulato circumcinctum. Fructus capsularis dehiscencia septifraga marginicida loculicidaque. Semina subreniformia; testa reticulata; embryo parum curvatus non circinatus. Numerus chromosomatium gametarum 56.

HOLOTYPE: *Grammosolen dixonii* (F. Muell. & R. Tate) Haegi (vide infra).

1. *Grammosolen dixonii* (F. Muell. & R. Tate) Haegi, comb. nov.

BASIONYM: *Newcastelia dixonii* F. Muell. & R. Tate, Trans. & Proc. Roy. Soc. South Australia 10: 81 (1888), '*Newcastelia Dixonii*'.

2. *Grammosolen truncatus* (Ising) Haegi, comb. nov.

BASIONYM: *Anthotroche truncata* Ising, Trans. & Proc. Roy. Soc. South Australia 46: 605, t. 38, 39 fig. 1 (1922).

Grammosolen is most closely related to *Cyphanthera* and *Anthotroche*. From the former it is distinguished by its 5 fertile stamens and the hippocrepiform, erect [not oblique] anthers, and from the latter by the presence of bracts in the inflorescence, adaxially glabrous corolla lobes, white flowers and by the aestivation, the corolla lobes being free and erect [not coherent and incurved] in the bud. It differs from both in the gametic chromosome number of 56 (Haegi, unpublished data); this number is unique amongst those recorded in the Solanaceae. This genus, comprising two species, is endemic in South Australia. The name *Grammosolen*, from the Greek words *gramme* (stem gramm-), a line or stroke of a pen, and *solen*, a pipe, refers to the corolla tube which is white with purple striations.

Grammosolen dixonii was first described as a member of the Verbenaceae, in the genus *Newcastelia* (now correctly placed in the segregate family Chloanthaceae—Munir 1978) but clearly belongs to tribe Anthocercideae of the Solanaceae.

6. ANTHOTROCHE Endl.

As treated here this genus includes three species, viz. *A. myoporoides* C. A. Gardner, *A. pannosa* Endl. (including *A. blackii* F. Muell. and *A. healiana* F. Muell.) and *A. walcottii* F. Muell. The species originally described as *A. truncata* is transferred to *Grammosolen* (q.v.).

7. CRENIDIUM Haegi, gen. nov.

Frutices praeter partes immaturissimas aphylli. Folia alterna caduca. Flores in fasciculis cymosis bracteatis ad nodos dispositi. Corolla regularis anguste tubularis; limbus patens, 5-lobatus; aestivatio loborum \pm induplicata lobis cohaerentibus et apicibusque incurvis. Stamina ad basin corollae inserta, multo exserta, reclinata, 4 didynama inter stamina longiora staminodio, vel stamine quinto interdum fertili; filamenta glabra; antherae \pm reniformes uniloculares. Ovarium ad basin disco annulari undulato circumcinctum. Fructus capsularis dehiscentia septifraga marginicida loculicidaque. Semina subreniformia; testa reticulata; embryo parum curvatus non circinatus. Numerus chromosomatum gametarum 35.

HOLOTYPE et species singularis cognita: *Crenidium spinescens* Haegi (vide infra).

1. *Crenidium spinescens* Haegi, sp. nov. Frutex 1.0–1.7 m altus in statu maturo aphyllus. Rami spinescentes photosynthetici granulati, in partibus immaturis trichomatibus ramosis eglandulosis 0.03–0.05 mm longis dense breviter tomentosi. Folia in partibus immaturis remota obliqua ad adpressa sessilia caduca. Bractee inflorescentiae 0.5–1 x 0.3–0.5 mm. Pedicellus calyxque extus dense tomentosi trichomatibus ramosis eglandulosis 0.1–0.2 mm longis. Corolla citrina, 2.5–4 mm longa, extus trichomatibus ramosis eglandulosis 0.1–0.2 mm longis, intus praecipue in lobis trichomatibus ramosis eglandulosis 0.1–0.25 mm longis cellulis late ellipticis instructa; tubus cylindricus ad obconoideus; lobi ovati, interdum late ovati. Stamina 3.5–4 et 4–5 mm longa, quantum ubi fertile 2.5–3.5 mm. Ovarium 8–20 ovula capiens. Capsula ovoidea 4–4.5 x 2–2.5 mm; semina 2–4, 2.5–4 x 1 mm. Numerus chromosomatum gametarum 35.

HOLOTYPE: *C. A. Gardner* 13070, Mongers Lake [= Lake Monger, c. 28° 56' S, 117° 19' E], Western Australia, 12.6.1961 (PERTH). *Isotypi*: CANB, K, MO distribuendi.

The unilocular anthers of *Crenidium* indicate that it is related to the genera *Duboisia*, *Cyphanthera*, *Grammosolen* and *Anthotroche*. It differs from all of these in its very small flowers with stamens and style much exserted from the narrow corolla tube, which lacks striations, and in the stamen number varying from 4 to 5. In *Duboisia*, *Cyphanthera*, *Grammosolen* and one species of *Anthotroche* (*A. myoporoides*) the stamens and style are included within the funnel-shaped corolla tube while in the remaining species of *Anthotroche* the stamens do not exceed the tube in length but are effectively exserted as a result of the upper half of the tube becoming patent at anthesis. The corolla tube is striated and the stamen number is constantly 4 or constantly 5 in all these genera. The gametic chromosome number of 35 (Haegi, unpublished data) is unique among those reported not only from tribe Anthocercideae but also from family Solanaceae as a whole.

The generic name *Crenidium* from the Greek *krenidion*, a small spring or fountain, alludes to the exserted stamens and style, and the Latin specific epithet refers to the spinescent branches characteristic of *C. spinescens*.

C. spinescens is endemic in southern eremaeian Western Australia where it occurs on the margins of salt lakes in the Austin District of the Eremaean Province, the Coolgardie District (Southwestern Interzone) and the Avon District of the South-western Province.

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