

# FLORA OF AUSTRALIA

[Home \(/opus/foa\)](#) / [ROSANAE](#) / [MYRTALES](#) / [MYRTACEAE](#) / [ASTUS](#)

## *Astus* Trudgen & Rye

[ALA \(https://bie.ala.org.au/species/https://id.biodiversity.org.au/node/apni/2920663\)](https://bie.ala.org.au/species/https://id.biodiversity.org.au/node/apni/2920663)
[NSL \[legitimate\] \(https://biodiversity.org.au/nsl/services/apni-format/display/191090\)](https://biodiversity.org.au/nsl/services/apni-format/display/191090)

Options

– Trudgen, M.E. & Rye, B.L. (16 December 2005), *Astus*, a new Western Australian genus of Myrtaceae with heterocarpidic fruits. *Nuytsia* 15(3): 502-503

PROFILE

DISTRIBUTION

LITERATURE & LINKS

KEY



Top

### Nomenclature

Trudgen, M.E. & Rye, B.L. (16 December 2005), *Astus*, a new Western Australian genus of Myrtaceae with heterocarpidic fruits. *Nuytsia* 15(3): 502-503

### Etymology

From the Latin *astus* (cleverness or cunning), referring to the strategy of having two kinds of diaspores.

### Description

Small or moderate-sized shrubs, glabrous, often multi-branched at the base. Leaves opposite, decussate, shortly petiolate; blade small, concolorous,  $\pm$  entire. Peduncles solitary in the axils, 1-flowered. Pedicels usually as long as or longer than the peduncles. Flowers actinomorphic. Hypanthium 5-angled, usually obconic in outline, adnate to ovary for most of its length. Sepals 5, much shorter than to equalling the petals, sometimes of very differing lengths within a single flower, if large then widely spreading in flower, entire, persistent in fruit. Petals 5, widely spreading in flower, shed in fruit,  $\pm$  circular or broadly obovate, 1.3–3.5 mm long, white to medium pink; antipetalous colleters absent or minute. Staminodes absent. Stamens inflexed in bud, 8–12, usually 10, either in groups opposite the sepals or with 1 opposite each sepal and petal, those closest to centre of petals largest, much shorter than the petals. Filaments free, narrow. Anthers dorsifixed, versatile; thecae parallel, longitudinally dehiscent; connective gland free, dorsal-subterminal. Ovary inferior, 3-locular but with 1 locus hidden; ovary summit shallowly convex, with a cylindrical depression at centre; placentas  $\pm$  sessile; ovules 2–7 per upper locus, when more than 2 then arranged in an arch or in 2

rows. Style base deeply inset in the cylindrical depression. Fruits largely inferior, heterocarpidic. with 2 valvate loculi and a hidden indehiscent loculus, few-seeded. Seeds reniform, 1–1.6 mm long, without an aril; testa crustaceous, colliculate, brown.

## Diagnostic Features

Almost unique in having a heterocarpidic fruit with loculi at two overlapping levels, the lower level with an indehiscent loculus and the upper level with 2 dehiscent loculi. Other important characters: flowers stalked; hypanthium 5-angled; anthers dorsifixed, versatile; thecae parallel, longitudinally dehiscent; connective gland free, dorsal-subterminal; ovary loculi with up to 7 ovules, most with more than 2 ovules.

## Chromosome Numbers

Unknown.

## Biostatus

Native.

## Distribution

A genus of 4 species restricted to southern Western Australia.



## Ecology

Flowers have open insect-pollination. An unusual kind of heterocarpidic fruit, which distinguishes this genus from almost all other members of the Myrtaceae, results in two kinds of diaspore: the naked seeds shed from the upper loculi and the indehiscent part of the fruit with its enclosed seeds. Two species have petal-like inner sepals as well as petals attracting the pollinators, the persistent sepals perhaps assisting with the dispersal of the indehiscent part of the fruit. Seeds are quite commonly galled and then of an atypical broadly obovoid shape rather than the normal reniform shape.



## Nomenclature and Typification

*Astus* Trudgen & Rye, *Nuytsia* 15(3): 495–512 (2005). Type: *Astus tetragonus* (F.Muell. ex Benth.) Trudgen & Rye.

## Taxonomic Notes

Flowers of two species appear to be up to 8-merous because of the inner sepals resembling petals. Those two species are also unusual in commonly having antisepalous colleteres.

## Illustrations

B.L. Rye & M.E. Trudgen, *Nuytsia* 15(3): 488, fig. 1A–G (2005), <https://www.biodiversitylibrary.org/page/61648184> (<https://www.biodiversitylibrary.org/page/61648184>); M.E. Trudgen & B.L. Rye, *Nuytsia* 15(3): 497, fig. 1, <https://www.biodiversitylibrary.org/page/61648193> (<https://www.biodiversitylibrary.org/page/61648193>) & 507, fig. 2 (2005), <https://www.biodiversitylibrary.org/page/61648203> (<https://www.biodiversitylibrary.org/page/61648203>).

## Bibliography

Bentham, G. (1867). Myrtaceae, in *Flora Australiensis: a description of the plants of the Australian territory* 3: 1–289. (Reeve and Co.: London). <https://www.biodiversitylibrary.org/page/11160188> (<https://www.biodiversitylibrary.org/page/11160188>)

Blackall, W.E. & Grieve, B.J. (1980). *How to know Western Australian wildflowers Part 3A*. Restructured and revised second edition by B.J. Grieve. (University of Western Australia Press: Nedlands, Western Australia). <https://www.biodiversitylibrary.org/page/60448011> (<https://www.biodiversitylibrary.org/page/60448011>)

Rye, B.L. & Trudgen, M.E. (2005). A new heterocarpidic fruit type for the Myrtaceae, with dehiscent and indehiscent loculi in two genera from Western Australian. *Nuytsia* 15(3): 485–493. <https://www.biodiversitylibrary.org/page/61648181> (<https://www.biodiversitylibrary.org/page/61648181>)

Rye, B.L. (2009). An interim key to the Western Australian tribes and genera of Myrtaceae. *Nuytsia* 19(2): 313–323. <https://www.biodiversitylibrary.org/page/62002065> (<https://www.biodiversitylibrary.org/page/62002065>)

Rye, B.L., Wilson, P.G., Heslewood, M.M., Perkins, A.J. & Thiele, K.R. (2020). A new subtribal classification of Myrtaceae tribe Chamelaucieae. *Australian Systematic Botany* 33: 191–206. <https://doi.org/10.1071/SB19009> (<https://doi.org/10.1071/SB19009>)





Trudgen, M.E. & Rye, B.L. (2005). *Astus*, a new Western Australian genus of Myrtaceae with heterocarpidic fruits. *Nuytsia* 15(3): 495–512. <https://www.biodiversitylibrary.org/page/61648191> (<https://www.biodiversitylibrary.org/page/61648191>)

Wilson, P.G., Heslewood, M., Lam, N. & Quinn, C. (2004). Progress towards a phylogeny of the *Chamelaucium* alliance (Myrtaceae). *Australian Biologist* 17: 28–33.

## Source

Published 21 December 2022.

## Taxonomy

- Kingdom: Plantae  ()
- Phylum: Charophyta
- Class: Equisetopsida
- Subclass: Magnoliidae
- Superorder: Rosanae  ()
- Order: Myrtales  ()
- Family: Myrtaceae (/opus/foa/profile/Myrtaceae)  ()

- Genus: Astus (/opus/foa/profile/Astus) ☰ ()

© Copyright Commonwealth of Australia, 2023  
(/opus/foa/about##copyright)

Last updated: Juliet Wege; Mar 1, 2022 2:05 Status:  
Partial

Author - B.L. Rye

Editor - J.A. Wege

Contributor - C.J. Ely provided technical support. P.G. Kodela provided editorial assistance.

Cite this profile as: B.L. Rye. Astus, in J.A. Wege (ed.), Flora of Australia. Australian Biological Resources Study, Department of Climate Change, the Environment and Water: Canberra.

<https://profiles.ala.org.au/opus/foa/profile/Astus> [Date Accessed: 27 February 2023]

---



(<https://www.environment.gov.au>) (<http://www.environment.gov.au/science/abrs>) (<https://www.ala.org.au>)

↑  
Top



# CHAH

## Council of Heads of Australasian Herbaria



### Flora of Australia

✉ [abrs@awe.gov.au](mailto:abrs@awe.gov.au) (mailto:abrs@awe.gov.au)  
ISSN 2207-7820

🏠 All material CC-BY  
unless otherwise stated.

🏠 Other collections (/)

↑  
Top