

JOURNAL of the ADELAIDE BOTANIC GARDENS

AN OPEN ACCESS JOURNAL FOR AUSTRALIAN SYSTEMATIC BOTANY

flora.sa.gov.au/jabg

Published by the

STATE HERBARIUM OF SOUTH AUSTRALIA

on behalf of the

BOARD OF THE BOTANIC GARDENS AND STATE HERBARIUM

© Board of the Botanic Gardens and State Herbarium,
Adelaide, South Australia

© Department of Environment, Water and Natural Resources,
Government of South Australia

All rights reserved

State Herbarium of South Australia
PO Box 2732
Kent Town SA 5071
Australia



Board of the
Botanic Gardens and
State Herbarium



A NEW SPECIES OF *SAMOLUS* (PRIMULACEAE)

S. W. L. Jacobs

Royal Botanic Gardens, Sydney, New South Wales 2000

Abstract

A new species of *Samolus*, *S. eremaeus*, is described from Central Australia. A key to the Australian species is provided.

Introduction

While I was examining material of *Samolus valerandii* for a treatment in the Central Australian Flora it became obvious that the Central Australian specimens differed markedly from the numerous more coastal specimens which, in turn, seemed to differ little from the European *S. valerandii* L. A new species, *Samolus eremaeus*, is described here for the Central Australian specimens. A key is provided to distinguish the new species from other Australian species of *Samolus*.

Key to Australian species of *Samolus*

- 1a. Mature plants with few or no leaves. If leaves present these either normal sized and basal or very reduced and cauline *S. junceus* R.Br.
- b. Mature plants with basal and/or cauline leaves well developed 2
- 2a. Stoloniferous or rhizomatous perennials with erect lateral branches and mainly cauline leaves; plants in or near saline swamps or marshes near the coast, or around mound springs in arid areas *S. repens* (Forst. et Forst. f.)Pers.
- b. Erect annual or perennial tufted herbs with basal and/or cauline leaves; plants of either fresh water areas or of dry habitats in arid regions 3
- 3a. Calyx lobes acute, approximately twice as long as entire part; anthers narrower than long, about 1 mm long with a terminal appendage of about the same length *S. eremaeus* S.W.L. Jacobs
- b. Calyx lobes obtuse (rarely acute?), much shorter than the entire portion; anthers globose, less than 0.5 mm long, without a terminal appendage *S. valerandii* L.

***Samolus eremaeus* S.W.L. Jacobs, sp. nov.**

S. valerandii L. affinis sed floribus majoribus, lobis calycis quam tubo longioribus, appendicula apicalis antherae aequanti differt.

Holotype: NORTHERN TERRITORY: Finke R., Glen Helen Valley, G. Chippendale NT784, 4.ii.1955 (NSW).

Glabrous erect perennial or annual tufted *herb* up to 60 cm tall (usually 30-50 cm). *Leaves* basal and/or cauline, alternate; basal leaves spatulate, mucronate to obtuse, up to 11 cm long and 3 cm wide; cauline leaves spatulate to ovate, mucronate to obtuse, up to 5 cm long and 2.5 cm wide. *Inflorescence* a simple raceme or occasionally the racemes forming a panicle, with flowers on pedicels up to 2 cm long with a bract approximately half way along. Flowers 5-6 merous. *Calyx* lobes acute, approximately 2 mm long, about twice the length of the tube. *Corolla* almost white, pale pink or blue; tube 3-4 mm long; lobes 3-4 mm long. *Stamens* opposite and equal in number to corolla lobes, alternating with staminodes which may not be all developed. Filaments fused to the full length of the corolla tube. Anthers 2-locular, approximately 1 mm long with a terminal appendage of about the same length. *Fruit* a capsule with obtuse valves.

This species has similar leaves, inflorescence and habit to *S. valerandii* but differs in having larger flowers, acute calyx lobes (although, judging by some published diagrams, *S. valerandii* may occasionally have acute lobes) and a staminal appendage. The flowers are very similar to *S. repens* but *S. eremaeus* has a much longer inflorescence, the plants



Fig. 1. *Samolus ermaeus* S.W.L. Jacobs. A, habit (portion of plant only); B, intact flower showing acute calyx lobes and staminodes (x6); C, dissected flower showing stamens, staminal appendages and staminodes (x6). (Chippendale NT 784: NSW holotype).

are tufted and erect whereas *S. repens* is stoloniferous with erect lateral branches. Leaf width varies on any one plant in both species, becoming narrower, shorter and less ovate up the stem but leaves from comparable parts of the plant are always much broader and more spatulate in *S. eremaeus*. Even though *S. repens* is a very variable species and it is possible to find occasional specimens with broad leaves and inadequate specimens or poor collection notes not indicating the habit, I have not seen any specimens of *S. repens* which combine the inflorescence, leaf, habit and habitat characteristics of *S. eremaeus*.

Distribution

Known only from the Ranges of Central Australia, and from near Adelaide. Apparently occurring near creek and river banks in those ranges. I have not seen any Victorian material of *S. valerandii* but the grids cited by Willis are near areas where only true *S. valerandii* occurs in N.S.W. Any of the wetter coastal areas would be more likely to have *S. valerandii*. If *S. eremaeus* were present in Victoria it could be expected in areas like the Otway Ranges.

Selection of specimens examined

WESTERN AUSTRALIA: Fort Mueller, Cavenagh Range, 24.vi.1956, *R.L. Crocker & D. Adamson 157* (SYD).

NORTHERN TERRITORY: Simpsons Gap, Alice Springs district, 27.ii.1961, *H.S. Mc Kee 8648* (NSW). Palm Valley, Central Australia, 17.viii.1929, *J.B. Cleland s.n.*, (AD, 966042187). Palm Valley, 14.xii.1968, *P.K. Latz 393* (AD).

SOUTH AUSTRALIA: Rocky Hill, Ernabella, 24.ix.1945 and 25.ix.1945, *J.B. Cleland s.n.* (AD97207257). Ernabella Station, ? vii.1936, *E.H. Ising s.n.* (AD 966040429). Onkaparinga Gorge, 25 km S. of Adelaide, 8.ii.1959, *E.N.S. Jackson 43* (AD 96051134).

Acknowledgements

I would like to thank Karen Wilson for supplying the Latin diagnosis and K. David MacKay for the diagrams.