

# ACAENA PALLIDA (KIRK) ALLAN (ROSACEAE) IN TASMANIA AND NEW SOUTH WALES, AUSTRALIA

by B.H. Macmillan

(with one table and one plate)

The presence of *Acaena pallida* on the coasts of Tasmania and New South Wales is supported by a list of herbarium specimens. The characters which distinguish *A. pallida* from *A. novae-zelandiae* are presented.

**Key Words:** Rosaceae, *Acaena*, coastal, sand dune, Australian flora.

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## INTRODUCTION

*Acaena pallida* (Kirk) Allan, formerly considered endemic to New Zealand, was first recorded as indigenous in southeastern Australia by Macmillan (1988) without supporting evidence. This paper provides a list of specimens of *A. pallida* from Tasmania and New South Wales, and distinguishes the species from *A. novae-zelandiae* Kirk with which it has been confused in Australia.

A description of *A. novae-zelandiae*, which is widespread throughout Tasmania, was provided by Curtis & Morris (1975). As their description did not include the greater dimensions of *A. pallida*, it is clear that they did not have specimens of that species for comparison. Bitter (1911) described and named, as five subspecies or varieties of *A. sanguisorbae* Vahl sensu ampl. Bitter, robust garden plants with characters of *A. pallida*. These plants were of Australian origin. As I have not seen Bitter's type specimens I cannot comment further on his taxa.

## TAXONOMY

### *Acaena pallida* (Kirk) Allan

*Acaena pallida* is similar to *A. novae-zelandiae* but is easily recognised in the fresh state by its larger size and thicker leaflets with glossy wrinkled upper surfaces. At fruiting, the mature hypanthium bears 1–2 subsidiary, short, unbarbed spines below the four at the top (pl. 1). The two species are compared in table 1.

### Ecology

Records for both Australia and New Zealand indicate that *Acaena pallida* is restricted to unstable, coastal sand, usually growing on the foredune. The prostrate

stems, about 4 mm diameter, spread over the sand surface up to a length of 1.5 m, forming broad mats. The distal portions of these stems and their erect leafy branches bear dense hairs which trap blown sand. Cockayne (1916) described *A. pallida* on dunes at Lyall Bay, Wellington as follows:

“It is almost a true sand-binding plant in behaviour, its stems greatly lengthening when buried. But, even without any sand-advance to speak of, they frequently attain a length of more than 1 m. The older portions of the stem are strongly woody, and extremely stout, often reaching a diameter of more than 10 mm. Even towards the extremity, where, perfectly straight, the stem, unrooted, creeps over the sand with a length of about 50 cm, its diameter is 2–3 mm. The older part of the stem is covered with a fairly thick, cracked, dark-brown bark, tinged with red, while the youngest part is green and strongly hirsute. ... The plant does not owe its distinctive character to its special environment, for when growing upon a clay bank it can be recognised at once from neighbouring plants of more widely spread forms of *A. novae-zelandiae*.”

The foredunes on the New Zealand coast where *A. pallida* is known to grow are increasingly under pressure from weed invasion and recreational use. For this reason it is treated and illustrated by Wilson & Given (1989) as an endangered plant.

### Specimens Examined

New South Wales: s.n. Rodway 11343 F.A.R. (NSW); E.F. Constable 4383 (NSW 75208); Anderson & Harasymiw 50 (CANB 261719).  
Tasmania: *West Coast* (regions as Orchard 1988) — E.M. Canning 1848 (CBG 26473); *South West* — E.M. Canning 2484 (CBG 26474); A.M. Buchanan 3169



PLATE 1

*Mature hypanthia of Acaena pallida, showing subsidiary spines. HO, CHR 444433 Tasmania, east end of Prion Beach, south coast, A.M. Buchanan 11400 (Photo: R. Lamberts).*

TABLE 1  
Comparison of *Acaena pallida* and *A. novae-zelandiae*\*

Characters	<i>Acaena pallida</i>	<i>Acaena novae-zelandiae</i>
Length of leaves	(45)–80–100 mm	30–60 mm
Length of distal leaflet	12–20 mm	5–10–(15) mm
Upper surface of leaflet	Glossy, rugose	± shining, smooth
Lower surface of leaflet	Pilose with hairs ascending from multi-cellular bases, whitish with dense uneven epicuticular wax	Appressed pilose or almost glabrous, pale green or glaucescent, epicuticular wax less pronounced
Diameter of head at flowering	10–12 mm	7–9 mm
Diameter of head at fruiting	25–30 mm	25 mm
Length of hypanthium at maturity	c. 6 mm	c. 4 mm
Length of longest spine	12–13 mm	9–12 mm
Diameter of spine	c. 0.2 mm	c. 0.17 mm
No. of subsidiary spines	1–2	0

\* Based on three Tasmanian collections of *A. pallida*, and on three coastal Tasmanian collections and the description of *A. novae-zelandiae* in Curtis & Morris (1975).

(HO 78241); A.M. Buchanan 11400 (HO, CHR 444433); *East Coast* — W. Harris 111 & A. Moscal (CHR 416652); A.M. Buchanan 11097 (HO, CHR 444434). [Further details of specimens listed in this paper, e.g. collecting site and date, are available from the Herbaria noted or from the Royal Society of Tasmania Library (Archives), GPO Box 1166M, Hobart, Tasmania, Australia 7001. *Ed.*]

Further collections in NSW await study, and it is expected that specimens from the coastlines of Victoria and South Australia will be found in Melbourne and Adelaide.

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