



**State Herbarium of South Australia**

Botanic Gardens and State Herbarium

Department for Environment and Water

## **Milestone Report**

# **Regional Landscape Surveillance for New Weed Threats Project**

**2021–2022**

## **Milestone: Annual report on new plant naturalisations in South Australia**

Chris J. Brodie & Peter J. Lang

May 2024



**Government  
of South Australia**



**State Herbarium  
of South Australia**

## Contents

Summary .....	3
1. Activities and outcomes for 2021/2022 financial year .....	3
Funding .....	3
Activities .....	4
Outcomes and progress of weeds monitoring .....	5
2. New naturalised or questionably naturalised records of plants in South Australia. ....	7
3. Descriptions of newly recognised weeds in South Australia.....	9
4. Updates to weed distributions in South Australia, weed status and name changes.....	19
References.....	30
Appendix 1: Activities of the Weeds Botanist.....	32
Surveillance based on field observations and collections.....	32
Community engagement .....	34
Appendix 2: Herbarium regions.....	36



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## Summary

In 2021–22, **eight** new weeds were added to the *Census of South Australian Plants, Algae and Fungi* (Census) as naturalised or questionably naturalised in the State, mainly through the work of the State Herbarium of South Australia Weeds Botanist Chris Brodie and Senior Botanist Peter Lang.

The total comprises **two** taxa collected in South Australia for the first time, and **six** taxa for which herbarium collections had been made in previous years, but have now been more thoroughly investigated and assessed as naturalised (weedy) or questionably or sparingly naturalised (questionably weedy) in South Australia. Detailed descriptions are given for each of these plant species.

In addition, **87** weed species had updates applied to the Census, involving either a change to the scientific name, or a change to its regional distribution, or a change to its establishment status.

During the last year, the Weeds Botanist undertook **21** fieldwork trips totalling **29** full or partial field-days. **Three** of the State's nine Landscape SA regions were visited during these fieldtrips, with **466** specimens collected for the State Herbarium of South Australia. The Weeds Botanist also took part in **18** separate community engagement activities, and responded to **150** enquiries from regional staff and community members that required over **73** hours to address.

### 1. Activities and outcomes for 2021/2022 financial year

This report summarises the work carried out by the State Herbarium of South Australia for the project *Regional Landscape Surveillance for New Weed Threats*.

#### ***Funding***

Since 2020, the Department for Environment and Water, South Australia (DEW) has supported the program through base funding to the State Herbarium of South Australia (0.6 FTE to support the Weeds Botanist). Additional contributions have been received this financial year from Biosecurity SA in the Department of Primary Industries and Regions, South Australia (PIRSA) and Green Adelaide. In addition, the provision of plant identification services from Landscape SA Eyre Peninsula assisted in specific task cost recovery.

The State Herbarium of South Australia's staff and Honorary Research Associates provided considerable in-kind support for the project. They assisted with identifications, taxonomic and nomenclatural expertise, analysis and reporting, project management, plant sample processing, and data generation (on selected specimens and species, available online via eFloraSA<sup>1</sup>, the Census<sup>2</sup>, and the AVH<sup>3</sup>).

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<sup>1</sup> *Electronic Flora of South Australia* (available online at <http://www.flora.sa.gov.au>).

<sup>2</sup> *Census of South Australian Plants, Algae and Fungi* (current edition available online at <http://flora.sa.gov.au/census.shtml>).

<sup>3</sup> *Australasia's Virtual Herbarium* (available online at <https://avh.chah.org.au>).

## *Activities*

A major focus of the work of the Weeds Botanist was the identification and collection of new weed records within South Australia. Between 1 July 2021 and 30 June 2022, Weeds Botanist Chris Brodie undertook **21** fieldtrips totalling **29** full or partial field-days. Field trips were conducted in three of the nine Landscape SA regions: Green Adelaide, Hills & Fleurieu, with the majority of time spent in Kangaroo Island.

Most fieldwork was completed in partnership with staff from PIRSA and regional Landscape SA Boards, local government, or with other community members (see Appendix 1, Table 3). During these fieldtrips, **466** plant specimens were collected for the State Herbarium of South Australia.

The Weeds Botanist undertook **18** community and professional engagement activities during the year (see Appendix 1, Table 4). These events (e.g. Fig. 1) help to increase awareness of the weeds themselves, the value of their early detection and the processes required to secure scientifically valid specimens and records for the State Herbarium.

Support for the Weeds Botanist position also provided an essential point of contact for regional staff and community members to gain precise plant identifications and associated information, including distribution, taxonomic status and establishment status of weeds.

During this reporting period the Weeds Botanist received **150** enquires and spent over **73** hours to respond. The majority of enquires entailed two or more interactions and can be separated into the following categories:

- **110** enquires were requests for precise plant identifications of suspected weeds via photographs or specimens submitted with or without data
- **37** enquires were requests for associated information regarding weeds, including distribution, taxonomic status and establishment status of weeds
- **3** enquires were requests for images.

Of the 110 requests for precise plant identifications, over **42** specimens have been submitted and retained by the State Herbarium.



**Fig 1.** Weeds Botanist Chris Brodie (far left) and Kangaroo Island Landscape SA officer Jason Walter (second left), with community members at the Penneshaw Weeds Walk and Talk information session. Image: Suzanne Berry.

## ***Outcomes and progress of weeds monitoring***

The State Herbarium defines all **naturalised** (established, \*) and **questionably or sparingly naturalised** (questionably established, ?e) taxa as weeds or potential weeds. These are non-native species that have at some level established naturally in the wild, being either self-sustaining or showing some degree of self-propagation.

This year we have recorded **eight (8)** new weeds for the State (see Section 2 & 3). In addition **87** weed species had updates applied to the Census, involving either a change to the scientific name, a change to its regional distribution or a change to its establishment status (see Section 4). Census changes were made over the period 2 June 2021–3 June 2022.

Since the project began in 2009, a total of **252** new naturalised or questionably naturalised plants have been recorded through field collections and research at the State Herbarium. These records have subsequently been added to the online *Census of South Australian plants, algae and fungi* (Census).

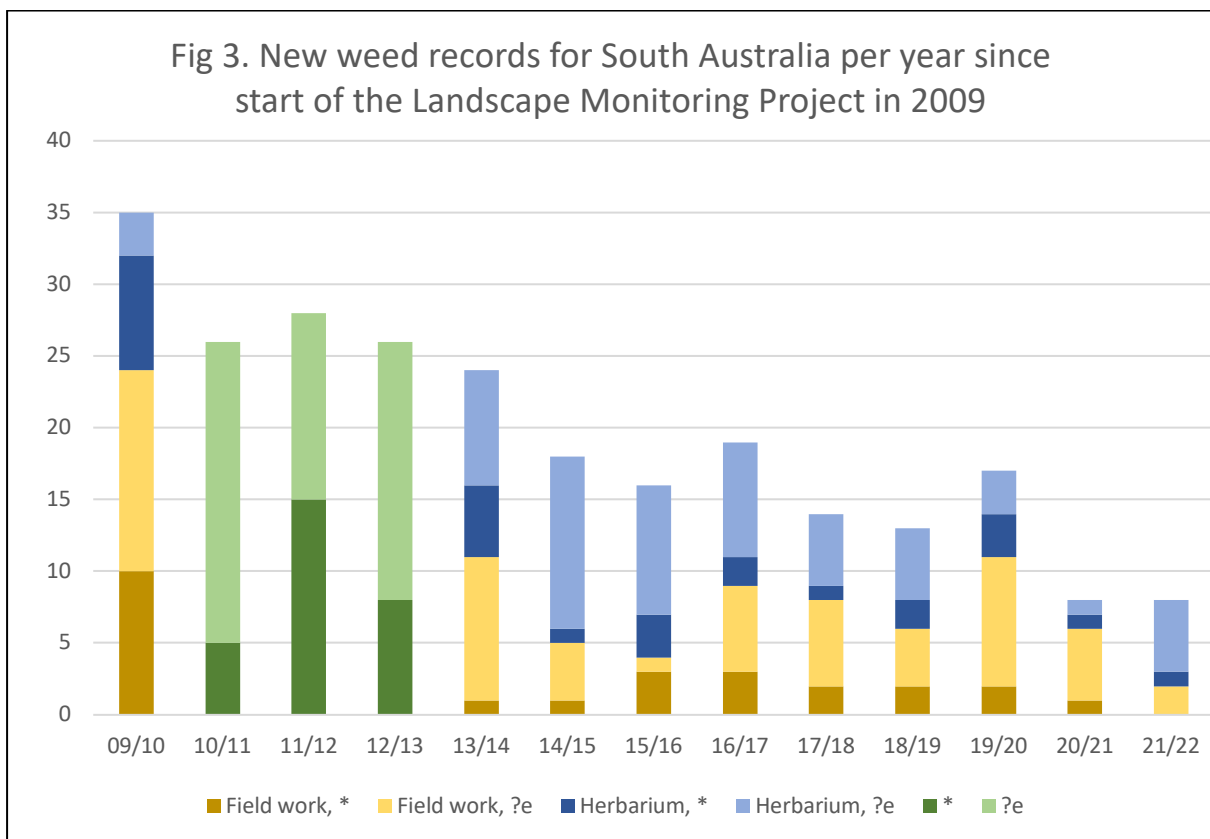
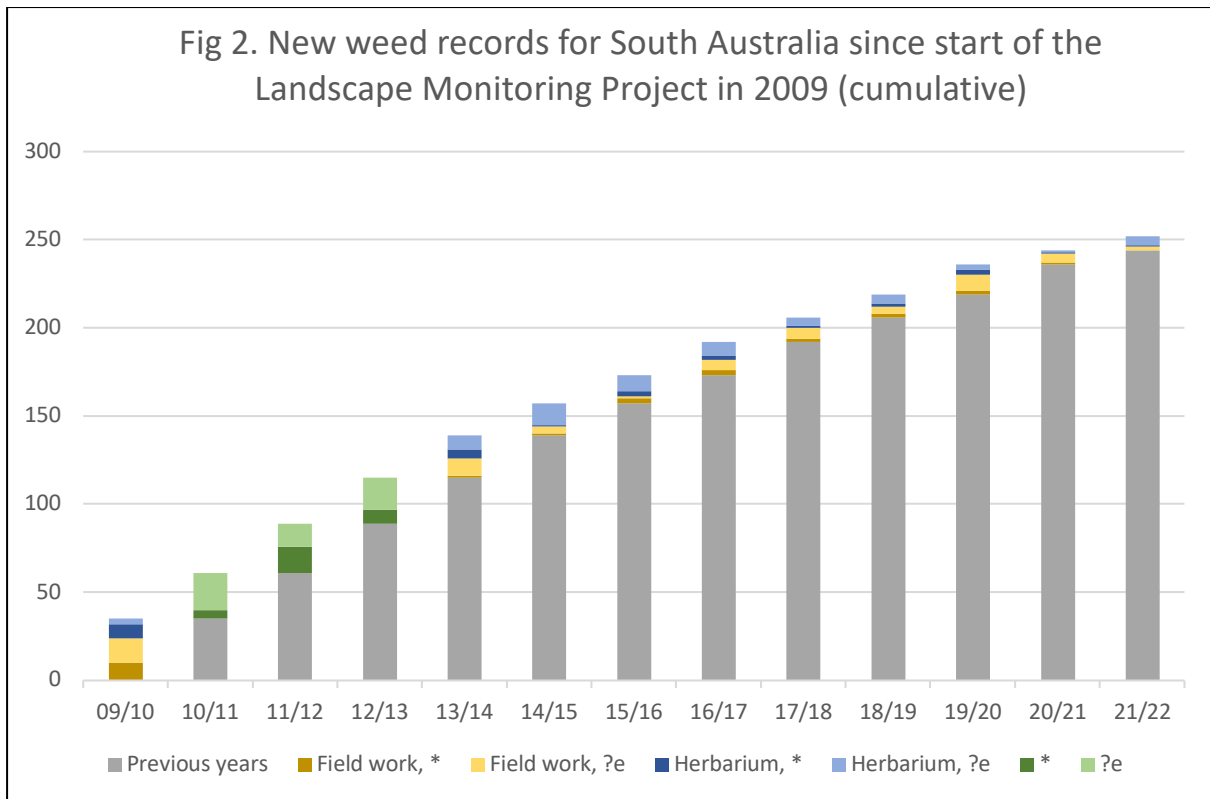
An overview of the numbers of weeds reported through this project (Figs 2 & 3) shows that, beyond the initial rapid detection of new weeds at the start of the program, significant numbers of new weeds still continue to be detected each year in South Australia.

Two of the new weed records are discoveries resulting from recent collections that were made for the first time by the Weeds Botanist or regional staff and collaborators.

Six of the new weeds records were of species that had existing (historical) herbarium collections. Five of these newly identified questionably naturalised and naturalised species records were discovered when existing State Herbarium collections were re-identified during the past year, resulting in their addition to the Census. One of the newly identified questionably naturalised species had existing State Herbarium collections. Based on recent field observations and collections this was subsequently identified as questionably naturalised, enabling its addition to the Census.

The Census provides the South Australian community with information on the State's native and naturalised (weedy) plants occurring in the wild, listing their current name and synonyms (previous names), as well as their regional distribution and conservation status. This information underpins our knowledge on plant species identity and occurrence, and as such forms an official reference point for any legislative action relating to native and naturalised plants growing wild.

Data obtained from researchers and botanists throughout Australia and globally, new collections, and ongoing taxonomic research in the Herbarium all contribute to assessments included in the Census. Maintaining the Census involves monitoring and reviewing work published by botanists worldwide that affects the taxonomy and/or nomenclature of species occurring in South Australia.



Data in **Figs 2 & 3** from the yearly *Regional Landscape Surveillance* reports, specifying new weeds recorded as established (\*) or questionably established (?e) through **Field work** or existing **Herbarium** collections. The distinction between Fieldwork and Herbarium sources was not reported in the years 2010/11 to 2012/13 (green bars).

## 2. New naturalised or questionably naturalised records of plants in South Australia.

Currently, there are **5155** naturally occurring vascular plant taxa recognised in South Australia, and of these **1699** have occurrences as alien plants that are considered to have become either established or questionably established in the wild. In other words, about one third of South Australia's plant taxa occur as alien weeds. For this year's reporting period (2 June 2021–3 June 2022) a total of eight (**8**) new species that are naturalised or questionably naturalised plants in SA were added to the Census, based on collections deposited and accessioned in the State Herbarium (see Table 1 and Section 3 of this report).

These fall into three categories:

- Two (**2**) fieldwork-detected species, collected recently for the first time from the wild and added to the Census in the past year. There is evidence of these being questionably established, as wild (non-planted) occurrences:
  - ?e *Alstroemeria psittacina* Parrot Lily
  - ?e *Nassella trichotoma* Serrated Tussock
  
- Five (**5**) new species records were added when existing State Herbarium collections were re-examined and re-identified. There is evidence of these being established, or questionably established, as wild (non-planted) occurrences:
  - ?e *Cortaderia selloana* subsp. *jubata* Pink Pampas Grass
  - ?e *Cosmos bipinnatus* Cosmos
  - ?e *Cosmos sulphureus* Sulphur Cosmos
  - ?e *Myosotis arvensis* Common Forget-me-not
  - \* *Opuntia leoglossa* Lion's Tongue
  
- One (**1**) fieldwork-recorded species had existing State Herbarium collections but the recent field observations and collection from a new region led to a re-assessment of its indigenous status, resulting in its recognition in the Census as a new alien species for the State within two regions of its range:
  - n?e *Senna planitiicola* Yellow Pea or Arsenic Bush

**Table 1:** The eight (8) new South Australian weed records added to the Census, based on recent collections and newly generated knowledge.

**Naturalised/established**

\* = naturalised (i.e. established in the wild)

?e = questionably established/naturalised in the wild

n?e = both native and questionably established/naturalised in the wild

?id = questionably identification.

**Regional distribution**

See map and key to Herbarium regions in Appendix 2 (Fig. 12).

<b>New Taxon</b>	<b>Common Name</b>	<b>Family</b>	<b>Naturalised /established</b>	<b>Regional distribution</b>
<i>Alstroemeria psittacina</i>	Parrot lily	Liliaceae	?e	SL
<i>Cortaderia selloana</i> subsp. <i>jubata</i>	Pink Pampas Grass	Poaceae	?e	SL <sup>?id?e</sup> , SE
<i>Cosmos bipinnatus</i>	Cosmos	Asteraceae	?e	EP, SL, SE
<i>Cosmos sulphureus</i>	Sulphur Cosmos	Asteraceae	?e	MU
<i>Myosotis arvensis</i>	Common Forget-me-not	Boraginaceae	?e	SE
<i>Nassella trichotoma</i>	Serrated Tussock	Poaceae	?e	SE
<i>Opuntia leoglossa</i>	Lion's Tongue	Cactaceae	*	SL, EP <sup>?e</sup>
<i>Senna planitiicola</i>	Yellow Pea or Arsenic Bush	Fabaceae	n?e	FR <sup>?e</sup> , EP <sup>?e</sup> (native in NW, LE, GT)



### 3. Descriptions of newly recognised weeds in South Australia

Taxa are listed here in alphabetical order. See also Table 2 for existing weeds that are newly recognised for particular regions of South Australia (SA).

Family: **Alstroemeriaceae**

*Alstroemeria psittacina* Lehm.

**Common name:** Parrot lily

**Description:** A tuberous perennial with attractive flowers. The plant re-grows each winter from long-lived fleshy white tuberous roots and the above ground growth dies back in autumn. Stems are 0.5–1 m tall with numerous soft-textured, often slightly glaucous leaves, 3–10 cm long, 1–3.5 cm wide, on leaf stalks, 1–6 cm long. Flowers are produced at the top of the stems in clusters of 5–9, each on a flower stalk, 1–1.5 cm long. The showy, mostly red and multi-coloured, speckled flowers consist of 6 spoon-shaped (spathulate) petals (actually tepals). These are dark red below, pale yellowish green near the apex, with green stripes and dark purplish blotches. Petals overlap to form a narrow tube, 4–7 cm long, with three longer outer tepals, and slightly shorter inner ones. There are six stamens nearly as long as the petals, and a slightly shorter style. The fruit is a globular, conspicuously ribbed capsule to 1–1.5 cm in diameter, which when mature contains many reddish brown seeds, 2.5–3 mm across. Flowers in summer to autumn. **Fig 4.**

**Native to:** Argentina, Brazil and Paraguay.

**Worldwide:** Used in temperate to sub-tropical and tropical areas as a garden plant. Introduced and weedy in Mexico, the southern USA and New Zealand.

**Distribution in Australia:** Used as a garden plant around Australia, now naturalised in Western Australia (WA), Queensland, New South Wales (NSW), and doubtfully naturalised in Victoria.

**Collections in SA:** There are two recent collections from separate locations. The first collection, *P.J. Lang 3486*, was made on 23 Dec. 2019 from a single patch, 3 m wide, with about 20 fertile stems and many more vegetative ones. It was growing under dense shade in an unmanaged drainage depression, linked to a creek and subject to intermittent flooding, and overgrown with weedy deciduous trees. The site, which has subsequently been developed as a wetland, is in the Adelaide East Parklands, at the southern end of Victoria Park Racecourse. The second collection, *R. Taylor 3379*, was made on 5 Jan. 2021 from an occurrence of more than 50 stems spread over 100 square metres, on the southern end of Signal Flat Road near Finnis.

**Status in SA:** A new questionably naturalised record for SA, based on small, sparingly established populations. The two collections were made in different Landscape SA regions: the first in Green Adelaide, and the second in Hills & Fleurieu, but both Landscape SA regions fall with the Southern Lofty (SL) State Herbarium region (see Fig. 12). Added to the Census for SA (and SL), based on collection *P.J. Lang 3486*.

**References:** VicFlora (2022).



Fig. 4. *Alstroemeria psittacina* at Adelaide East Parklands (P.J. Lang 3486). Images: P.J.L.



*Cortaderia selloana* (Schult. & Schult.f.) Asch. & Graebn.  
subsp. *jubata* (Lemoine) Testoni & Villamil

**Common name:** Pink Pampas Grass

**Description:** A large tussock grass with flowering stems to 4.5 m high, normally at least twice as high as the leafy basal tussock. Leaves bright green, flat, keeled beneath, and coarsely scabrous (rough) to touch on the margins. The large flowering spikes (inflorescences) are purplish (–pink), but fade to cream or white with age. Their purplish colour comes from veins of the spikelets. Each spikelet is made up of 3–5 small flowers. Flowers: Jan.–Mar. **Fig. 5.**

**Native to:** Argentina, Bolivia, Colombia, Ecuador and Peru.

**Worldwide:** Grown in gardens and parks worldwide in areas with a temperate to Mediterranean climate. Known to have naturalised in the USA, South Africa, New Zealand and Australia.

**Distribution in Australia:** Used in gardens from cool to warm temperate and even sub-tropical areas and recorded as naturalised in WA, Queensland, NSW, Victoria and Tasmania.

**Collections in SA:** There are a number of historical collections from the Hills & Fleurieu and the Limestone Coast Landscape SA regions.

**Status in SA:** This taxon was not previously recognised in the Census, although its possible occurrence in SA (as *C. jubata*) had been noted by Jessop *et al.* (2006). It is now recognised as a distinct subspecies from the more commonly planted and naturalised *C. selloana* subsp. *selloana* in accordance with treatment by Testoni & Villamil (2014).

A new naturalised record for South Australia and the Limestone Coast Landscape SA region. Added as such to the Census for SA and for the South-Eastern (SE) Herbarium region, based on two collections, *D. Lang 10 & 11*. A new questionably naturalised record for the Hills & Fleurieu, Landscape SA region. Added to the Census for the Southern Lofty (SL) Herbarium region as questionably naturalised (for establishment status uncertain) and with identification uncertain, based on *C.J. Brodie (CJB) 1522*. It is likely that at least some SA material may be derived from hybrids of the two subspecies. All specimen identifications were by the authors in Aug. 2021.

**References:** Jessop *et al.* (2006); Testoni & Villamil (2014).



**Fig. 5.** *Cortaderia selloana* subsp. *jubata*. Images: LHS illustration by M. Moir (VicFlora 2022, CC BY-NC-SA4.0); middle & LHS by I. Clarke (VicFlora 2022, CC BY-NC-SA4.0).

*Cosmos bipinnatus* Cav.

**Common name:** Cosmos

**Description:** An annual herb to about 1 m high, usually with a single weak stem and a taproot. It has much divided (bipinnatifid) leaves, 6–12 cm long, 2–7 cm wide, composed of fine thread-like leaf-segments that are only 0.5–1 (rarely to 1.7) mm wide. The showy daisy-like flowers are borne on long flower stalks and have yellow centre of dense tubular disc florets, and ray florets which form 4–9 large outer ‘petals’, 2–4 cm long, that are white, pink to purple, red, dark brown-red or even multi-coloured. The seeds are thin, dark achenes, 7–8 (rarely to 16) mm long, with a beak, 1–6 mm long, and a pappus of two stiff bristle-like tips (aristae), 1–1.5 mm long. Flowers recorded in Jan., Mar.–July, Nov. **Fig 6.**

**Native to:** Mexico.

**Worldwide:** Used as a garden plant in tropical to cool temperate areas around the world. Also naturalised to varying degrees in many countries in North, Central and South America, Europe, Africa, Asia and in Australia.

**Distribution in Australia:** Grown as a garden plant around Australia and naturalised in WA, Queensland, NSW and the Australian Capital Territory (ACT).

**Collections in SA:** Represented only by three historical collections, each from a different Landscape SA regions and Herbarium regions. The earliest collection, *R.J. Bates 35859*, made on 7 Jan. 1994, is from Donovans Landing rubbish tip; *R.J. Bates 36171* was collected on 21 Jan. 1994 from the Golden Grove outdoor education centre; and *A. Stefanovic s.n.* was collected in July 1995 from Port Augusta Railway station yards to Hospital Creek, part of which is known as Back Beach.

**Status in SA:** A new questionably naturalised record for South Australia and for the Limestone Coast, Hills & Fleurieu and Eyre Peninsula Landscape SA regions. Added to the Census for SA, for the South-Eastern (SE), Southern Lofty (SL) and Eyre Peninsula (EP) Herbarium regions, as questionably naturalised (for possibly adventive/casual) based on *R.J. Bates 35859*, *R.J. Bates 36171* and *A. Stefanovic s.n.*, respectively. Specimen identifications were confirmed by the authors.

**References:** Orchard (2015).



**Fig. 6.** *Cosmos bipinnatus*. Images: LHS by ClaudioRomeo (Pixabay); RHS by Prens (CC BY-SA 3.0).



*Cosmos sulphureus* Cav.

**Common name:** Sulphur Cosmos

**Description:** An annual herb to 0.5–2 m tall with erect, branched stems, and either smooth, with or without a few soft to stiff hairs, or hispid. The leaves are 5–25 cm long, with a 1–7 cm long leaf stalk sometimes clasping the stem, and are deeply divided into lobes, 2–5 mm wide, tapering to a terminal point. The showy golden-yellow to red-orange flowers are borne on hairy stalks, 10–20 cm long, and the numerous central disc florets, 6–7 mm long, are similar in colour to the about 8 ray florets, which are 1.8–3 cm long with blunt wavy tips. The abundant light brown seeds are thin achenes, 1.5–3 cm long, and either lack a pappus or have two or three widely divergent stiff bristle-like tips (aristae), 1–7 mm long. Flowers and fruits: Jan.–May. **Fig 7.**

**Native to:** Mexico and the following Central America countries: Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama.

**Worldwide:** Used as a garden plant from tropical to cool temperate areas around the world. Also naturalised to a varying degree in many countries of North and South America, Europe, Africa, Asia and in Australia.

**Distribution in Australia:** An introduced species in Australia with limited collections from the Northern Territory (NT), Queensland and WA. The most convincingly established occurrences are in Queensland, represented by collections from around Brisbane and by about 15 collections from south-west of Cairns.

**Collections in SA:** A single historical collection from Murray Bridge representing a probable garden escape, *R.J. Bates 42898* (AD99843114), made on 31 Mar. 1996 and described as: “Local footpath weed. Footpath, in limey soil”. Two other collections from the Adelaide area with evidence of self-establishment are described as being in a garden setting and are thus treated as cultivated occurrences.

**Status in SA:** A new questionably naturalised record for South Australia and the Murraylands and Riverland Landscape SA region. Added to the Census for SA and the Murray (MU) Herbarium region as questionably naturalised (for sparingly naturalised and probably casual/adventive), based on the above specimen identifications, which were confirmed by the authors.

**References:** Orchard (2015); Puttock (2017).



**Fig. 7.** *Cosmos sulphureus*. Images: LHS by Prens (CC BY-SA 3.0); RHS by Alejandro Bayer Tamayo (CC BY-SA 2.0).

***Myosotis arvensis*** (L.) Hill

**Common name:** Common Forget-me-not

**Description:** An annual to short-lived hairy perennial herb to about 40 cm tall. The flat leaves, arranged alternately on the stem, are oval to elliptic or ovate in outline, 2–10 cm long, 8–20 mm wide. Leaves and stems are softly hairy with hairs at  $\pm$  right angles. It can form an over-wintering rosette of greyish-green hairy leaves. Flowers are produced on an erect arching flowering stalk that unfurls and flowers in succession. Its small 5-petaled flowers, 3–5 mm wide, are bright fresh blue to pale blue or grey-blue with a pale to white or yellow centre (throat). The fruitlets, known as mericarps, are about 1.5 mm long and dark brown. Flowering is mainly in spring, but may extend into summer. **Fig 8.**

**Native to:** Europe, Asia. North Africa and the Middle East.

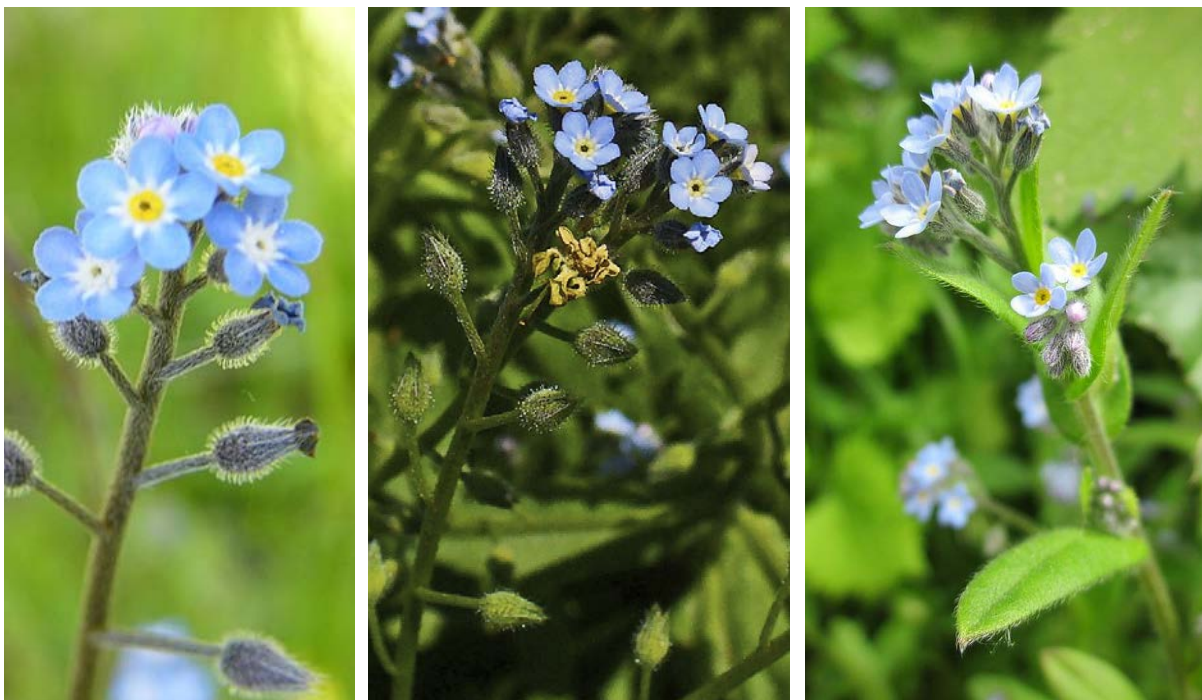
**Worldwide:** Grown in cool temperate to sub-tropical areas and used as a garden plant in woodlands, wild gardens and in wildflower meadows. Naturalised in New Zealand, the USA and southern Africa.

**Distribution in Australia:** Used as a garden plant in temperate to subtropical areas of Australia. Escaped and recorded as a weed in Victoria, WA and NSW.

**Collections in SA:** A single historical collection, *T. Nevin s.n.*, made in Jan. 1895 near Mount Gambier.

**Status in SA:** A new questionably naturalised record for South Australia and the Limestone Coast Landscape SA region. Added to the Census for SA and the South-Eastern (SE) Herbarium region as questionably naturalised (for uncertain establishment - data deficient), based on the historical collection *T. Nevin s.n.* The specimen was previously identified as *Myosotis discolor*, but this was updated following the receipt of a recent loan return, in which it had been re-identified as *Myosotis arvensis* by H.M. Meudt (WELT).

**References:** VicFlora (2022).



**Fig. 8. *Myosotis arvensis*.** Images: RHS by Robert Matthews (CC BY-SA 3.0); middle by H. Zell (CC BY-SA 3.0); LHS by WikimediaImages.

*Nassella trichotoma* (Nees) Hack. ex Arechav.

**Common name:** Serrated Tussock

**Description:** A tussock-forming perennial grass to 20–70 cm tall, with very fine and highly in-rolled (involute) leaves, less than 0.5 mm wide. The leaf margins are very finely toothed (hence the common name ‘serrated tussock’). Hundreds of leaves are produced per tussock, and are erect at first, but becoming drooping or sprawling as they age. Flower-heads are open-branched panicles, 8–25 cm long, with many spikelets, and with each spikelet composed of a single fertile floret (flower). The flower spikelets are elongate, 4–9 mm long, and topped with a long awn, 15–35 mm long. The mature seed is 1.5–2.5 mm long and has an obscure ring of tiny hairs where the bent and twisted awn attaches to the top of the seed, which is characteristic of this genus. **Fig 9.**

**Native to:** Argentina, Brazil and Uruguay.

**Worldwide:** Introduced to South Africa, New Zealand, the USA and Europe, including France, the UK, Italy and Madeira (Portugal).

**Distribution in Australia:** Naturalised in NSW, the ACT, Victoria and Tasmania. *Nassella trichotoma* is a major weed of grasslands and pastures in south-eastern Australia, but is not yet properly established in SA.

**Collections in SA:** A recent collection (*CJB 8959*) was made on 5 Dec. 2020 from a Naracoorte Caves garden bed outside the Rangers office and Caves Café, in an area where *Nassella* was previously cultivated. The parent plants had been present for at least 10 years, as they were thought to be a native species but were removed in 2018 after being identified as *N. trichotoma*. The area is sporadically monitored for seedlings which continue to emerge from time to time. A single population of *Nassella trichotoma* was reported in 2002 in a suburban garden in the northern suburbs of Adelaide; how it came to be there is unknown and it may have been successfully eradicated (Jessop *et al.* 2006). As no 2002 collection from this garden can be located at the State Herbarium of South Australia (SHSA), and no subsequent collections have been made, this occurrence of *Nassella trichotoma* is treated as cultivated and has not and cannot be added to the Census for this region.

**Status in SA:** A new questionably naturalised record for SA and the Limestone Coast Landscape SA region. Added as questionably naturalised (for adventive) to the Census for SA and the South-Eastern (SE) Herbarium region, based on *CJB 8959*, which was identified by the collector.

**References:** Jessop *et al.* (2006); Osmond *et al.* (2008).



**Fig. 9.** *Nassella trichotoma*. Images: Harry Rose (CC BY 2.0).



***Opuntia leoglossa*** Font & M.Köhler**Common name:** Lion's Tongue

**Description:** A succulent, spiny, shrubby branching cactus, 1–2 m tall, sometimes with a trunk 15–18 cm in diameter. Stem segments (cladodes) are light green to green-yellow and flattened, 25–35 cm long, 3.5–6 cm wide and 5–10 mm thick. There are normally 40–70 areoles (from which spines and glochids arise) per cladode face. Spines are 0.5–1 cm long, with 0–1 (–3) spines per areole. The glochids are small hair-like spines, 1–2 mm long. Flower buds are borne on pads and are light green or green-yellow to pale pink. Flowers are bright yellow, sometimes turning light orange with age, 4–5 cm in diameter. They have many cream to pale yellow stamens and a white style, 1.6–1.8 cm long, with a 5–7-lobed stigma. Fruits are obovoid to obconic, green when immature, turning purple-red when ripe, 2.5–3.5 cm long and 1.5–2.0 cm in diameter. **Fig. 10.**

**Native to:** The origin of this taxon is currently unknown. There are no records of it from natural habitats on the American continent, nor any records of it naturalising in the Americas to which the genus *Opuntia* is endemic. Considering that it has only been found in cultivation or as a naturalised plant, an artificial or hybrid origin is plausible (Köhler & Font 2021).

**Worldwide:** *Opuntia leoglossa* has an unknown origin, but is recorded as naturalised in Spain and Australia. It usually grows along roadsides, degraded areas, railway embankments, and open disturbed woodlands. It is an exclusively ornamental plant, with no other economic uses reported. Previously “Lion’s Tongue” has been widely and incorrectly cited as *O. schickendantzii* (Köhler & Font 2021).

**Distribution in Australia:** Known to have naturalised in WA, NSW, the ACT and Victoria.

**Collections in SA:** There are three historical collections, from three different Landscape SA regions, and two Herbarium regions. These collections were renamed from *Opuntia schickendantzii*, a taxon not projected in the Census, to *O. leoglossa*, after being brought to the attention of R.J. Chinnock, who re-determined them on 14 July 2021, following Köhler & Font (2021). The first SA collection was made on 7 Aug. 2010 (*R.J. Chinnock 10264*) from a patch in woodland at Yaninee on western Eyre Peninsula. Two other occurrences, at Campbelltown and near Woodside, are documented by collections *CJB 5262* (10 Dec. 2013) and *CJB 5307* (16 Dec. 2013), respectively.

**Status in SA:** A new naturalised record for SA and for the Green Adelaide and the Hills & Fleurieu Landscape SA regions, both in the Southern Lofty (SL) herbarium region. Added to the Census for SA and the SL herbarium region as naturalised, based on collections *CJB 5262* & *5307*. A new questionably naturalised record for the Eyre Peninsula Landscape SA region. Added to the Census for the EP Herbarium region as questionably naturalised (for sparingly established), based on *R.J. Chinnock 10264*.

**References:** Köhler & Font (2021).



**Fig. 10.** *Opuntia leoglossa* on the banks of a creek in Completown (*CJB 5262*). Images: CJB.



***Senna planitiicola*** (Domin) Randell**Common name:** Yellow Pea

**Description:** A slender, erect, hairless shrub, 0.6–2.5 m high. The smooth green leaves are divided into 4–7 pairs of oval to ovate or ovate-lanceolate leaflets. The yellow flowers are loosely clustered at the top of the plant in corymbose racemes. The fruit is a long, straight to curved, brown pod, 6–8 cm long and about 1 cm wide, that is cylindrical when mature. Numerous flattish, dull olive-brown seeds are crowded inside the pod and lie at right angles to the valve with their flattened faces parallel to membranous partitions. Flowers: Feb.–July. **Fig. 11.**

**Native to:** Australia.

**Worldwide:** Several websites offer seeds for sale and distribute them worldwide. Introduced and naturalised in India, most likely via the ornamental plant trade.

**Distribution in Australia:** Not known to have naturalised elsewhere in Australia. Native in WA, NT, SA and Queensland.

**Collections in SA:** A native plant in the NW, LE and GT herbarium regions. Three recent collections were made in the FR Herbarium region from introduced and self-propagating occurrences. They were made in abandoned gardens and from the roadside in Leigh Creek township. At its peak, the town had a population of over 2,500, but following the closure of the Leigh Creek Coal Mine in 2016, only about 150 residents remain. A plan to significantly reduce the footprint of the town is being implemented and involves removing of most of the houses and fences. The most significant collection, *CJB 9412* (16 June 2021), is from a population of 250–300 plants (including about 100 seedlings) in an abandoned house site and garden waiting to be demolished and returned to bush. It is supported by earlier collections *CJB 9078* (28 Oct. 2020) and *CJB 9420* (also 16 June 2021).

The Eyre Peninsula region is represented by two historical collections from the Port Augusta area, both re-assessed as alien: *R.M. Kain 673* (13 June 1962, data deficient) and *R.J. Bates 32342* (14 Apr. 1993) from 20 km S of Port Augusta and described as: “3 plants only. On roadside. Weed herb, c. 1 m high”.

**Status in SA:** The recent field observations and collections from a new region (FR) led to a re-assessment of this species’ indigenous status, resulting in its recognition as new alien taxon for the State within two regions of its range. It is a new questionably naturalised species record for SA and for the SA Arid Lands Landscape SA region. Added to the Census for SA and the Flinders Ranges (FR) Herbarium regions as questionably naturalised (for well self-established, but treated as questionable due to habitat still in transition from garden to wild) based on *CJB 9078*.

Also a new questionably naturalised record the Eyre Peninsula Landscape SA region. Added to the Census for the Eyre Peninsula (EP) Herbarium region as questionably naturalised (for adventive or sparingly established) based on *R.J.Bates 32342*. Specimen identifications were confirmed by the authors.

**References:** Randell & Barlow (1998).





**Fig. 11.** *Senna planitiicola* plants at Leigh Creek (CJB 9412). Images: CJB.



## 4. Updates to weed distributions in South Australia, weed status and name changes

In addition to the new State species records, 87 weed taxa had updates made in the Census during the last year (reporting period 2 June 2021–3 June 2022). These are changes to **distribution, names** or **weed / establishment status** (Table 2) for plants already listed in the Census. Some taxa have multiple changes listed for one or more herbarium regions within SA.

A change in **distribution** includes:

- addition of regions due to new collections, corrected or updated identifications, or reassignment of recorded locations to their correct regions
- deletions of regions due to corrected or updated identifications, or reassignment of recorded locations to their correct regions.

A **name change** could be:

- a change in genus, species or infra-specific name (subspecies, variety, form or cultivar)
- adding or removing an infra-specific name.

These changes may result from the application of new or recently accepted taxonomic classifications adopted in South Australia, or merely through application of the rules of botanical nomenclature to existing taxonomy.

A change of **weed / establishment status** in one or more regions; this can be change from one of the following to another:

- naturalised / established in the wild (\*)
- questionably established (?e)
- native (n)
- questionably native (?n).

**Table 2:** Updates to weed distribution, weed status, and name changes`

**Update type:**

- **‘Distribution’** indicates a change in the regional distribution (new regions shown in **bold**, deleted regions with ~~strike through~~)
- **‘Name’** indicates a name change only
- **‘Status’** indicates a change in the weed / establishment status applied to each region: \* = naturalised (i.e. established in the wild), <sup>?e</sup> = questionably naturalised / established\*\*, <sup>n</sup> = native, <sup>?n</sup> = questionably native, <sup>?id</sup> = questionable identification.

**Update / comment: Herbarium regions:** A key to the two-letter codes is provided in Appendix 2 (Fig. 12).

**Collector abbreviations:** *CJB* = C.J. Brodie; *PJL* = P.J. Lang. The collection date is given in brackets.

\*\* Note: the questionably naturalised / established category (?e) as applied in the Census is used very broadly, but is here subdivided into the following three major categories by the addition of further qualifications:

- (1) questionably naturalised (for establishment status uncertain): usually due to lack of data or ambiguity
- (2) questionably naturalised (for sparingly established): only a very limited extent or small numbers of self-established plants
- (3) questionably naturalised (for becoming established, or adventive): presumed temporary/transient establishment where longer term persistence or viability of population occurrence is not apparent or likely.

Taxon	Update type	Update / comment
<i>Acacia spilleriana</i> J.E.Br. Spiller’s Wattle	Distribution	EP <sup>?e</sup> , NL, MU <b>SE</b> <sup>?e, ?id</sup> Added SE as questionably naturalised (limited details on number of individuals) and flagged identification as questionable (possible hybrid), based on <i>CJB 9210</i> (6 Dec. 2020).
<i>Agrostis capillaris</i> L. Brown-top Bent	Distribution	NL*, MU*, <sup>?id</sup> , SL*, <b>KI</b> *, SE* Added KI as naturalised, based on <i>CJB 9362</i> (18 Mar. 2021).
<i>Ailanthus altissima</i> (Mill.) Swingle	Distribution	NU*, MU*, SL*, <b>KI</b> *, SE <sup>?e</sup> Added KI as naturalised, based on <i>CJB 9608</i> (27 Oct. 2021).
<i>Aizoon secundum</i> L.f. Galenia	Distribution	<b>NU</b> *, <del>FR</del> * EP*, NL*, MU*, YP*, SL*, <b>SE</b> * Added NU as naturalised, based on re-determination from <i>Aizoon pubescens</i> for <i>C.R. Alcock 7904</i> (16 Aug. 1980). Removed FR (naturalised), based on re-determination of <i>C.R. Alcock 8425</i> as <i>Aizoon pubescens</i> . Removed SE (naturalised), based on the only collection being reassigned to MU and re-determined as <i>Aizoon pubescens</i> .
<i>Amaranthus albus</i> L. Stiff Tumbleweed.	Distribution	GT*, FR*, <b>EP</b> *, NL*, MU* YP, SL*, EP* Added EP as naturalised, based on <i>P. Sheridan s.n.</i> (27 Mar. 2009).
<i>Anigozanthos flavidus</i> DC. Tall Kangaroo Paw	Distribution	SL*, <b>KI</b> <sup>?e</sup> Added KI as questionably naturalised (uncertainty at the time of collection in determining extent of spread from presumed plantings) based on <i>CJB 9776</i> (6 Apr. 2022).
<i>Arundo donax</i> L. Giant Reed	Distribution	NW <sup>?e</sup> , <b>LE</b> *, FR*, EA*, NL*, MU*, SL*, <b>KI</b> *, SE* Added LE as questionably naturalised (limited information on extent) based on <i>F.J. Badman 10204</i> (18 Nov. 1998). Added KI as naturalised, based on <i>CJB 9368</i> (18 Mar. 2021).

Taxon	Update type	Update / comment
<i>Asteriscus spinosus</i> (L.) Sch.Bip. Golden Pallensis	Distribution	NU*, FR*, EP*, NL*, MU* YP*, SL*, KI*, SE* Added NU as naturalised, based on <i>CJB 3507</i> (8 Oct. 2011). Added FR as naturalised, based on <i>K.H. Brewer 314</i> (22 Nov. 2009).
<i>Bellardia trixago</i> (L.) All. Trixago Bartsia	Distribution	EP*, MU*, YP*, SL*, KI*, SE* Added KI as naturalised, based on <i>S.E. Berry 001</i> (12 Nov. 2020).
<i>Brachychiton populneus</i> (Schott & Endl.) R.Br. subsp. <i>populneus</i> Kurrajong	Distribution	GT <sup>?e</sup> , FR <sup>?e</sup> , EP*, MU <sup>?e</sup> Added FR as questionably naturalised (for adventive/becoming established – young age and only six plants), based on <i>CJB 9446</i> (17 June 2021).
<i>Bryophyllum delagoense</i> (Eckl. & Zeyh.) Schinz Mother of Millions	Distribution	GT <sup>?e</sup> , FR <sup>?e</sup> , EP*, MU <sup>?e</sup> Added FR as questionably naturalised (although an established small population of over 100 plants, it is in a habitat transitioning from garden to wild), based on <i>CJB 9479</i> (17 June 2021), and supported by small population of 10 plants from different sites in identical habitat for <i>CJB 9442</i> (16 June 2021).
<i>Cakile maritima</i> Scop. subsp. <i>maritima</i> Two-horned Sea Rocket	Distribution	NU*, EP*, NL*, MU*, YP*, SL*, KI*, SE* Added NU as naturalised based on <i>CJB 4669</i> (14 Nov. 2012).
<i>Calotis hispidula</i> (F.Muell.) F.Muell. Bogan Flea	Status	NW <sup>n</sup> , LE <sup>n</sup> , NU <sup>n</sup> , GT <sup>n</sup> , FR <sup>n</sup> , EA <sup>n</sup> , EP <sup>n</sup> , N <sup>n</sup> , MU <sup>n</sup> , YP <sup>n</sup> , SL <sup>n</sup> , KI <sup>?e</sup> Changed status for KI region from native to questionably naturalised, after reassessment of the single existing KI collection <i>R. Bates 29468</i> (Oct. 1992).
<i>Calotis plumulifera</i> F.Muell. Woolly-headed burr-daisy	Status	NW, LE, GT, FR, EA, NL <sup>?e</sup> , SL <sup>?e</sup> Changed status for NL region from native to questionably naturalised, after reassessment of two existing collections.
<i>Chloris gayana</i> Kunth Rhodes Grass	Distribution	LE*, NU*, GT*, FR*, EA*, EP*, NL*, MU*, YP*, SL*, KI*, SE* Added KI as naturalised, based on <i>CJB 9755</i> (5 Apr. 2021).
<i>Chloris truncata</i> R.Br. Windmill Grass	Distribution	LE*, NU*, GT*, FR*, EA*, EP*, NL*, MU*, YP*, SL*, KI*, SE* Added NU as naturalised, based on <i>CJB 4644</i> (13 Nov. 2012), and supported by 3 other collections. Added KI as naturalised based on <i>CJB 9755</i> (5 Apr. 2021).
<i>Cortaderia selloana</i> (Schult. & Schult.f.) Asch. & Graebn. subsp. <i>selloana</i> Pampus Grass	Distribution Name	EP*, NL*, MU*, SL* Removed from EP as naturalised, as no specimen record from this region found in the State Herbarium (AD), nor seen on the Australasian Virtual Herbarium (2022). Name change from <i>Cortaderia selloana</i> (Schult. & Schult.f.) Asch. & Graebn. to include nominate subsp. <i>selloana</i> , following the Australian Plant Census (2022).

Taxon	Update type	Update / comment
<i>Cotoneaster coriaceus</i> Franch. Cotoneaster	Distribution Status	SL <sup>?e</sup> , SE <sup>?e</sup> Added SE as questionably naturalised (single plant with uncertain evidence of self-establishment), based on <i>CJB 9201A</i> (25 Oct. 2021). Changed status for SA from naturalised to questionably naturalised, as a consequence of reassessing status in SL region from naturalised to questionably naturalised (for sparingly established).
<i>Cotoneaster frigidus</i> Wall. ex Lindl. Tree Cotoneaster	Distribution	SL <sup>?e</sup> , SE <sup>?e</sup> Added SL as questionably naturalised (for establishing and adventive – self-sown seedlings with no flowers), based on <i>CJB 4693</i> (5 Dec. 2021).
<i>Crassula alata</i> (Viv.) A.Berger var. <i>alata</i> Three-part Crassula	Distribution	NL*, MU*, SL*, KI*, SE* Added MU as naturalised, based on <i>R.J. Bates 29419</i> (Sep. 1992). Added KI as naturalised, based on <i>CJB 9564</i> (25 Oct. 2021), confirming earlier collection with imprecise location and lacking population details by <i>R.J. Bates 48240</i> (1 Oct. 1997).
<i>Crassula natans</i> Thunb. var. <i>minor</i> (Eckl. & Zeyh.) G.D.Rowley Floating Crassula	Name	EP*, NL*, MU*, YP*, SL*, KI*, SE* Name change from var. <i>minus</i> to var. <i>minor</i> , a correction to spelling of variety epithet, following Australian Plant Census (2022).
<i>Crassula tetragona</i> L. subsp. <i>robusta</i> (Toelken) Toelken Crassula	Distribution	EP*, NL*, MU*, YP <sup>2c</sup> , SL*, KI*, SE* Added YP as questionably naturalised (for sparingly established – a small much localised occurrence), based on <i>D.E. Symon 17256</i> (13 Sep. 2006). Added KI as naturalised, based on <i>CJB 9591</i> (26 Oct. 2021).
<i>Cylindropuntia fulgida</i> (Engelm.) F.M.Knuth var. <i>mamillata</i> (A.Schott) Backeb. Coral Cactus	Distribution	LE*, GT*, FR*, EA*, EP*, YP <sup>2e</sup> Added LE as naturalised based on <i>J. Walton 28</i> (2 June 2006), supported by <i>CJB 1666</i> (22 Apr. 2010). Added YP as questionably naturalised (for sparingly established – a small occurrence), based on <i>CJB 8763</i> (17 Oct. 2019).
<i>Cylindropuntia imbricata</i> (Haw.) F.M.Knuth Devil's Rope	Distribution	LE*, GT*, FR*, EP*, NL*, MU*, YP <sup>2e</sup> , SL* Added LE as naturalised, based on <i>CJB 1667</i> (22 Apr. 2010). Added YP as questionably naturalised (for sparingly established), based on <i>CJB 8762</i> (17 Oct. 2019).
<i>Cylindropuntia pallida</i> (Rose) F.M.Knuth White-spined Hudson Pear	Distribution	NU <sup>?e</sup> , FR*, EP*, MU*, SL <sup>?e</sup> Added NU as questionably naturalised (for sparingly established), based on <i>B.J. Blaylock 3254</i> (2 Apr. 2006).
<i>Dactyloctenium australe</i> Steud. Coast Button-grass	Status	NL <sup>?e</sup> , SL <sup>?e</sup> Changed status for NL region from native to questionably naturalised (lack of information on level of establishment and possible lack of persistence), based on two records collected over 50 years ago: <i>R.C. Scott s.n.</i> (Mar. 1936 & Apr. 1936).

Taxon	Update type	Update / comment
<i>Dactyloctenium radulans</i> (R.Br.) P.Beauv. Button-grass	Status	<p>NW<sup>n</sup>, LE<sup>n</sup>, GT<sup>n</sup>, FR<sup>n</sup>, EA<sup>n</sup>, EP<sup>n</sup> <sup>2e</sup>, NL<sup>n</sup> <sup>2e</sup>, MU, SL<sup>n</sup> <sup>2e</sup>, SE<sup>2e</sup></p> <p>Added (to the existing native status) for EP, questionably naturalised status (for sparingly &amp; transiently established/ adventive), based on <i>J. Resleigh s.n.</i> (7 Mar. 2016), and possibly also <i>C.R. Alcock 2687</i> (and two other of the more southerly EP occurrences), while maintaining native status for most of the remainder including <i>D.J. Michael 276</i> from Carriewerloo Station and other records from near Pt Augusta.</p> <p>Added (to the existing native status) for NL, questionably naturalised status (for sparingly &amp; transiently established/ adventive), based on <i>B. Copley 1847</i> (13 Feb. 1968) and supported by <i>B. Copley 3908</i> (25 Jan. 1971).</p> <p>Added (to the existing native status) for SL, as a questionably naturalised status (for sparingly &amp; transiently established/ adventive), based on <i>R. Taylor 1027</i> (4 Feb. 2007), while maintaining native status for other collections, including <i>T.J. Smith 1265</i>.</p> <p>Changed status for SE region from native to questionably naturalised (for sparingly &amp; transiently established), and collected over 50 years ago, based on the only collection, <i>W.C.J. s.n.</i> (29 Mar. 1946).</p>
<i>Digitaria ciliaris</i> (Retz.) Koeler Crab Grass	Status	<p>GT*, EP*, NL<sup>id</sup>*, MU*, SL*, KI*, SE*</p> <p>Updated KI status from identification questionable to identification certain, based on specimen <i>Dept. Agric. s.n.</i> (10 Apr. 1908), which has a 2008 determination for the <i>Flora of Australia</i> and confirmation of determination by PJJ on 12 May 2022.</p>
<i>Eragrostis barrelieri</i> Daveau Pitted Lovegrass	Status	<p>NW*, LE*, GT*, FR*, EA*, EP*, NL*, MU*, YP*, SL*, KI*, SE*</p> <p>Changed status for KI from questionably naturalised to naturalised, based on <i>CJB 9745</i> (5 Apr. 2021).</p>
<i>Eragrostis tef</i> (Zuccagni) Trotter Teff	Distribution Name	<p>SL*, KI*, SE*</p> <p>Added KI as naturalised based on <i>CJB 9796</i> (6 Apr. 2022). Corrected author citation from '(Zucc.) Trotter' to '(Zuccagni) Trotter'.</p>
<i>Eragrostis trichophora</i> Coss. & Durieu Hairyflower Lovegrass	Distribution	<p>LE*, NU, GT*, FR*, EA*, EP*, NL*, MU*, YP*, SL*, KI*</p> <p>Added KI as naturalised, based on <i>CJB 9742</i> (5 Apr. 2022).</p>
<i>Euphorbia prostrata</i> Aiton Red Caustic Weed	Distribution	<p>EP*, SL*</p> <p>Added SL as naturalised, based on <i>CJB 9254</i> (23 Feb. 2021).</p>
<i>Fraxinus ornus</i> L. Mana Ash	Distribution	<p>SL*, KI<sup>2e</sup></p> <p>Added KI as questionably naturalised (single self-sown established plant, not yet at reproductive maturity), based on <i>CJB 9295</i> (17 Mar. 2021).</p>
<i>Freesia laxa</i> (Thunb.) Goldblatt & J.C.Manning subsp. <i>laxa</i> False Freesia	Name Distribution	<p>SL*, KI<sup>2e</sup></p> <p>Name change from <i>Freesia laxa</i> (Thunb.) Goldblatt &amp; J.C.Manning, to include nominate subspecies <i>laxa</i>. Added KI as questionably naturalised, based on only two plants which were removed for the collection, <i>CJB 9636</i> (28 Oct. 2021).</p>

Taxon	Update type	Update / comment
<i>Freesia leichtlinii</i> Klatt Freesia	Name	FR*, EP*, NL <sup>?c</sup> , MU*, YP*, SL*, KI*, SE* Name change from ‘ <i>Freesia cultivar</i> ’ following the Australian Plant Census (2022), which treats this entity as “a complex of garden hybrids involving ‘ <i>F. leichtlinii</i> subsp. <i>leichtlinii</i> ’ and ‘ <i>F. leichtlinii</i> subsp. <i>alba</i> ’ “, noting the statement by Manning & Goldblatt, (2010): “Although some specimens are referable to either subsp. <i>alba</i> or subsp. <i>leichtlinii</i> , most fall within a continuum between the two colour forms and the Australian plants are thus treated as a single entity”.
<i>Grevillea robusta</i> A.Cunn. ex R.Br. Silky Oak	Distribution	FR <sup>?e</sup> , SL <sup>?e</sup> , SE <sup>?e</sup> Added FR as questionably naturalised (for adventive, in habitat transitioning from garden to wild), based on <i>CJB 9455</i> (17 June 2021).
<i>Hedera hibernica</i> (G.Kirchn.) Carrière Atlantic Ivy	Distribution	FR*, NL*, SL*, KI*, SE* Added KI as naturalised, based on <i>CJB 9585</i> (26 Oct. 2021), supported by <i>CJB7957</i> (15 June 2017).
<i>Hypericum grandifolium</i> Choisy Large-leaf Canary Island St John’s Wort	Distribution	KI <sup>?e</sup> , SE* Added KI as questionably naturalised (for adventive), based on <i>CJB 9593</i> (26 Oct. 2021).
<i>Iris germanica</i> L. German Iris	Distribution	NL <sup>?e</sup> , YP <sup>?e</sup> , SL*, KI*, SE* Added KI as naturalised, based on <i>CJB 9666</i> (29 Oct. 2021).
<i>Ixia maculata</i> L. Yellow Ixia	Distribution	EP*, NL*, SL*, KI* Added KI as naturalised, based on <i>CJB 9567</i> (25 Oct. 2021).
<i>Kniphofia uvaria</i> (L.) Oken Red Hot Poker	Distribution	FR <sup>?e</sup> , SL <sup>?e</sup> , SE <sup>?e</sup> Added SE as questionably naturalised, based (for sparingly established) based on <i>CJB 2157</i> (11 Jan. 2011).
<i>Linaria</i> sp.	Status	FR <sup>?e</sup> Changed status from naturalised to questionably naturalised, based on <i>S.A. White s.n.</i> (Oct. 1910). This is the only FR collection, and its establishment status remains unclear, as there is no label information to indicate a wild or cultivated occurrence, and no subsequent collections.
<i>Lolium arundinaceum</i> (Schreb.) Darbysh. Tall Meadow Ryegrass	Name	GT*, EP*, NL*, MU*, SL*, SE* Name change from <i>Festuca arundinacea</i> Schreb., following Banfi <i>et al.</i> (2017), based on Catalan <i>et al.</i> (2004), and in accordance with the Australian Plant Census (2022).
<i>Lolium pratense</i> (Huds.) Darbysh. Meadow Ryegrass	Name	NL*, MU*, SL*, SE* Name change from <i>Festuca pratensis</i> Huds, following Banfi <i>et al.</i> (2017), based on Catalan <i>et al.</i> (2004), and in accordance with the Australian Plant Census (2022).
<i>Lonicera japonica</i> Thunb. Japanese Honeysuckle	Distribution	FR <sup>?e</sup> , SL*, KI* Added FR as questionably naturalised (for possibly adventive or planted? – insufficient data), based on <i>D.E. Symon 15352</i> (27 Oct. 1996). Added KI as naturalised, based on <i>CJB 9733</i> (4 Apr. 2022).
<i>Lupinus cosentinii</i> Guss. Blue Lupin	Distribution	EP*, NL*, MU*, SL*, KI*, SE* Added KI as naturalised based on <i>CJB 9757</i> (5 Apr. 2022).



Taxon	Update type	Update / comment
<i>Melaleuca hypericifolia</i> Sm. Hillock Bush	Distribution	SL*, <b>KI</b> <sup>2e</sup> Added KI as questionably naturalised (for becoming established – seedlings not yet at reproductive stage), based on <i>CJB 9757</i> (17 Mar. 2021).
<i>Melaleuca nesophila</i> F.Muell. Showy Honey Myrtle	Distribution	EP*, SL*, <b>KI</b> <sup>2e</sup> , SE* Added KI as questionably naturalised (for becoming established – thousands of seedlings not yet at reproductive stage), based on <i>CJB 9267</i> (16 Mar. 2021).
<i>Molineriella minuta</i> (L.) Rouy Small Hair-grass	Name Distribution	FR*, <b>EP</b> *, NL*, MU*, YP*, SL*, SE* Name change from <i>Periballia minuta</i> (L.) Asch. & Graebn following Weiller <i>et al.</i> (2009), supported by Tkach <i>et al.</i> (2020) and in accordance with the Australian Plant Census (2022). Added EP as naturalised, based on <i>R. Bates 6878</i> (1 Sep. 1986), and one other collection.
<i>Myosotis discolor</i> Pers. Changing Forget-me-not	Name Distribution	NL*, <b>MU</b> *, SL*, SE* Name change from <i>Myosotis discolor</i> Pers. <b>subsp. discolor</b> , following an unsuccessful attempt by PJL & CJB to apply European subspecies concepts to SA material, and also following the Australian Plant Census (2022). Added NL as naturalised, based on <i>R. Bates 66145</i> (Oct. 2005). Added MU as naturalised, based on <i>R.J. Bates 64476</i> (Nov. 2004), supported by <i>R.J. Bates 30076</i> (13 Dec. 1992).
<i>Myosotis sylvatica</i> Hoffm. Wood forget-me-not	Name	SL*, SE* Name change from <i>Myosotis arvensis</i> (L.) Hill var. <i>sylvatica</i> (Hoffm.) Pers., following the Australian Plant Census (2022).
<i>Nerine sarniensis</i> (L.) Herb. Guernsey Lily	Distribution	SL <sup>2e</sup> , <b>KI</b> * Added KI as naturalised, based on <i>CJB 9761</i> (5 Apr. 2022), supported by <i>CJB 9738</i> & <i>9775</i> (4 Apr. & 6 Apr. 2022), respectively.
<i>Oligocarpus calendulaceus</i> (L.f.) Less. Oligocarpus	Distribution	NU*, GT*, <b>FR</b> <sup>2e</sup> , EA*, EP* Added FR as questionably naturalised (for sparingly established – a single mature reproductive plant in a habitat transitioning from garden to wild), based on <i>CJB 9757</i> (17 Mar. 2021).
<i>Opuntia elata</i> Salm-Dyck Riverina Pear	Distribution	<b>NW</b> <sup>2e</sup> , GT*, EP*, NL*, MU*, SL*, SE* Added NW as questionably naturalised (for sparingly established), based on <i>D. Blewett s.n.</i> (AD270697, not yet databased), collected on 7 May 2015. Added NL as naturalised, based on <i>R.J. Bates 65720</i> (Aug. 2005), supported by <i>CJB 8267</i> (23 Feb. 2018).
<i>Opuntia elatior</i> Mill. Red-flower Prickly-pear	Distribution	<b>LE</b> *, NU <sup>2e</sup> , GT*, FR*, EA*, EP*, MU*, YP*, <b>SL</b> <sup>2e</sup> Added LE as naturalised, based on <i>P. Hodges 1854</i> (10 May 2018). Added NU as questionably naturalised (for status uncertain – data deficient), based on <i>M. Michelmore s.n.</i> (28 Oct. 1984). Added SL as questionably naturalised (for sparingly established), based on <i>CJB 5234</i> & <i>CJB 5235</i> (22 Nov. 2013).

Taxon	Update type	Update / comment
<i>Opuntia ficus-indica</i> (L.) Mill. Indian Fig or Prickly-pear	Distribution	<b>NU<sup>2e</sup></b> , <b>GT*</b> , <b>FR*</b> , <b>EA<sup>2e</sup></b> , <b>EP*</b> , <b>NL*</b> , <b>MU*</b> , <b>YP<sup>2e</sup></b> , <b>SL*</b> Added NU as questionably naturalised (for status uncertain – data deficient), based on <i>M. Michelmores n.</i> (29 Oct. 1984). Added EA as questionably naturalised (for adventive), based on <i>D.E. Symon 17458</i> (7 July 2010). Added YP as questionably naturalised (for sparingly established), based on <i>D.E. Symon 17278</i> (14 Sep. 2006).
<i>Opuntia linguiformis</i> Griffiths Cow's Tongue Prickly-pear	Distribution	<b>FR<sup>2e</sup></b> , <b>MU*</b> Added FR as questionably naturalised (for sparingly established), based on <i>D.E. Symon 16753</i> (7 Mar. 2002).
<i>Opuntia puberula</i> Pfeiff. Blind Prickly-pear	Distribution	<b>LE<sup>2e</sup></b> , <b>FR*</b> , <b>EP*</b> , <b>NL*</b> , <b>MU*</b> , <b>YP*</b> , <b>SL*</b> , <b>SE*</b> Added LE as questionably naturalised (for adventive), based on <i>CJB 1665</i> (22 Apr. 2010).
<i>Opuntia robusta</i> H.L.Wendl. Wheel Cactus	Distribution	<b>FR*</b> , <b>EA*</b> , <b>EP*</b> , <b>NL*</b> , <b>MU*</b> , <b>YP*</b> , <b>SL<sup>2e</sup></b> Added SL as questionably naturalised (for sparingly established or possibly cultivated), based on <i>R.J.Chinnock 10097</i> (26 Dec. 2006).
<i>Opuntia</i> sp. A ( <i>C.Schrank s.n. AD98351226</i> ) Jessop (1993) Prickly-pear	Name	<b>MU*</b> Removed ' <i>Opuntia</i> spp.' from Census and replaced it with ' <i>Opuntia</i> sp. A ( <i>C. Schrank s.n. AD98351226</i> ) Jessop (1993)', which had been listed in synonymy under the former, following consultation with R.J. Chinnock.
<i>Oxalis corniculata</i> L. Creeping Oxalis	Name	<b>NW*<sup>?id</sup></b> , <b>EP*<sup>?id</sup></b> , <b>MU*</b> , <b>SL*</b> , <b>SE*</b> Name change from ' <i>Oxalis corniculata</i> L. subsp. <i>corniculata</i> ' following the Australian Plant Census (2022). Note that ' <i>Oxalis</i> sp. Mylor (R.Bates 3529) W.R.Barker' may be synonymous with <i>O. corniculata</i> var. <i>atropurpurea</i> , which is no longer recognised on VicFlora online (2022), being regarded as of uncertain status and possibly just a colour form.
<i>Papaver somniferum</i> L. Opium Poppy	Distribution	<b>LE*</b> , <b>NU*</b> , <b>FR*</b> , <b>EP*</b> , <b>MU*</b> , <b>YP*</b> , <b>SL*</b> , <b>SE*</b> Added LE as naturalised based on <i>D. Duval 1974</i> (10 Oct. 2010).
<i>Pelargonium peltatum</i> (L.) L'Her. ex Aiton Ivy-leaf Pelargonium	Distribution	<b>EP<sup>2e</sup></b> , <b>YP<sup>2e</sup></b> , <b>SL<sup>2e</sup></b> Added YP as questionably naturalised (for sparingly established), based on <i>R. Bates 61485</i> (Nov. 2003).
<i>Phoenix canariensis</i> Hort. ex Chabaud Canary Island Date-palm	Distribution	<b>FR<sup>2e</sup></b> , <b>NL*</b> , <b>MU*</b> , <b>YP*</b> , <b>SL*</b> Added FR as questionably naturalised (for sparingly established or adventive and in habitat transitioning from garden to wild), based on <i>CJB 9465</i> (17 June 2021).
<i>Polygonum arenastrum</i> Boreau Hogweed or Wireweed	Distribution	<b>FR*</b> , <b>NL*</b> , <b>SL*</b> , <b>KI*</b> , <b>SE*</b> Added KI as naturalised, based on <i>CJB 9315</i> (17 Mar. 2021).

Taxon	Update type	Update / comment
<i>Populus nigra</i> L. Black Poplar	Distribution	NU*, FR*, EP*, NL*, SL*, <b>KI</b> <sup>2e</sup> , SE* Added KI as questionably naturalised (for adventive – suckers from burnt plantings, not yet shown to be established), based on <i>CJB</i> 9352 (18 Mar. 2021), supported by <i>CJB</i> 9286 (16 Mar. 2021).
<i>Puccinellia ciliata</i> Bor Saltmarsh-grass	Distribution	EP*, NL*, MU*, <b>SL</b> *, KI*, SE* Added SL as naturalised, based on <i>R. Taylor</i> 2239 (15 Dec. 2016), supported by <i>R. Taylor</i> 2258 (21 Jan. 2017), following redetermination of these specimens from <i>P. perlaxa</i> by PJL & CJB on 21 Apr. 2022.
<sup>2n</sup> <i>Puccinellia perlaxa</i> (N.G.Walsh) N.G.Walsh & A.R.Williams Plains Saltmarsh Grass	Status	MU <sup>2n</sup> , SL <sup>2n</sup> , KI <sup>2n</sup> Changed indigenous status from native to questionably native, as the earliest SA collection was made in 1993, whereas there are three Victorian collections from the 1880's. Considered together with the expansion of salinised habitats due to dryland salinity and rising water tables, this suggests that <i>P. perlaxa</i> has colonised SA habitats only in recent times and may have arrived by natural means or by human agency, or a combination of both. The latter possibilities would make it an alien species.
<i>Ranunculus parviflorus</i> L. Small-flower Buttercup	Distribution	<del>NL</del> *, SL*, SE* Removed NL from the Census as no supporting specimen was found in the Herbarium under this name, probably as a result of a re-determination.
<i>Raphanus raphanistrum</i> L. Wild Radish	Distribution	LE*, GT*, FR*, EA*, EP*, NL*, MU*, YP*, SL*, <b>KI</b> *, SE* Added KI as naturalised, based on <i>CJB</i> 9339 (17 Mar. 2021) and supported by <i>CJB</i> 9553 (25 Oct. 2021). It was first collected on KI by <i>R.J. Bates</i> 49325 (3 Oct. 1997; data deficient for status assessment), and observed on roadsides there by R. Taylor in Sep. 1996.
<i>Rhodanthe corymbiflora</i> (Schltdl.) Paul G.Wilson Grey Sunray	Distribution	LE, NU, GT, FR, EA, EP, NL, MU, YP, <b>SL</b> <sup>n, 2e</sup> , SE Added SL as questionably naturalised (for adventive – occurrence likely to be short-lived), based on <i>CJB</i> 9028 (4 Sep. 2020).
<i>Roemeria hybrida</i> (L.) DC. var. <i>hybrida</i> Violet-horned Poppy	Status	NL <sup>2e</sup> Changed establishment status from naturalised to questionably naturalised (for possibly adventive/uncertain status) being based on only three collections all made in the 1930s.
<i>Salvia verbenaca</i> L. var. <i>verbenaca</i> Wild Sage	Distribution	NU*, FR*, EA*, EP*, NL*, MU*, YP*, SL*, KI*, SE* Added NU as naturalised based on <i>H.P. Vonow</i> 3690 (9 Sep. 2008), and supported by <i>CJB</i> 3518 (8 Oct. 2011).
<i>Salvia verbenaca</i> L. var. <i>vernalis</i> Boiss. Wild Sage	Distribution	NW*, LE*, NU*, GT*, FR*, <b>EA</b> *, EP*, NL*, MU*, YP*, SL*, SE* Added EA as naturalised, based on <i>L.R. Forward</i> BS24-5073 (15 Aug. 1991), supported by seven other collections from that region.

Taxon	Update type	Update / comment
<i>Scilla peruviana</i> L. Cuban Lily	Distribution Status	FR <sup>?e</sup> , EP <sup>?e</sup> , NL <sup>?e</sup> , YP <sup>?e</sup> , SL <sup>?e</sup> , <b>KI*</b> , SE <sup>?e</sup> Added KI as naturalised based on <i>CJB 9662</i> and supported by <i>CJB 9675</i> , both collected on 29 Oct. 2021. Status change for SA from questionably naturalised to naturalised, based on the above KI collections.
<i>Setaria parviflora</i> (Poir) Kerguelen Slender Pigeon-grass	Distribution	MU*, SL*, <b>KI*</b> , SE* Added KI as naturalised, based on <i>CJB 9732</i> (4 Apr. 2022), supported by <i>CJB 9783</i> (6 Apr. 2022).
<i>Silene gallica</i> L. var. <i>gallica</i> French Catchfly	Name	FR*, EP*, NL*, MU*, YP*, SL*, KI*, SE* Added synonym <i>Silene tridentata</i> Ramond ex DC. See POWO (2022) to avoid any confusion with the homonym <i>Silene tridentata</i> Desf., which is commonly known as Spanish Catchfly and is also present in SA.
<i>Solanum lycopersicum</i> L. Tomato	Distribution	LE <sup>?e</sup> , FR <sup>?e</sup> , EA <sup>?e</sup> , EP <sup>?e</sup> , SL <sup>?e</sup> , <b>KI<sup>?e</sup></b> , SE <sup>?e</sup> Added KI as questionably naturalised (for adventive), based on five plants growing in a drain collected by <i>L.K. Williams 065</i> (17 Feb. 2021).
<i>Styphelia foliosa</i> (Sond.) Hislop, Crayn & Puente-Lel. Candle Cranberry	Name	SL <sup>?e</sup> Name change from ' <i>Astroloma foliosum</i> Sonder', following Crayn, Hislop & Puente-Lelievre (2020).
<i>Tecoma capensis</i> (Thunb.) Lindl. Cape Honeysuckle	Distribution	<b>FR<sup>?e</sup></b> , YP <sup>?e</sup> , SL <sup>?e</sup> Added FR as questionably naturalised (for status uncertain – although a self-established population vegetatively spreading beyond original planting, it is in a habitat still transitioning from garden to wild), based on <i>CJB 9454</i> (16 June 2021).
<i>Tradescantia fluminensis</i> Vell. Wandering Trad	Distribution	SL*, <b>SE*</b> Added SE as naturalised based on <i>CJB 8931</i> (3 Dec. 2019).
<i>Viburnum tinus</i> L. Laurustinus	Distribution	SL <sup>?e</sup> , <b>KI<sup>?e</sup></b> Added KI as questionably naturalised (for adventive), based on a single seedling, removed for collection, as <i>CJB 9586</i> (26 Oct. 2021).
<i>Vicia villosa</i> Roth subsp. <i>eriocarpa</i> (Hauskn.) P.W.Ball Russian Vetch	Distribution	<b>MU*</b> , <b>SL*</b> , <b>KI*</b> , SE* Added MU as naturalised, based on <i>B.M. Grivell 189</i> (3 Oct. 1985). Added SL as naturalised, based on <i>D. Pearce 184</i> (26 Nov. 1981), supported by <i>R.J. Bates 3528</i> (14 Nov. 2012). Added KI as naturalised, based on <i>B.M. Overton 593</i> (16 Nov. 1985) and two other collections; further supported by two more recent collections: <i>CJB 9560</i> & <i>CJB 9646</i> , both collected in Oct. 2021.
<i>Vulpia muralis</i> (Kunth) Nees Silver Grass	Distribution	NU*, FR*, EP*, MU*, YP <sup>?id</sup> *, SL*, <b>KI*</b> , SE* Added KI as naturalised, based TERN collection <i>E. Lietch et al. SAA002163</i> (11 Oct. 2020).

Taxon	Update type	Update / comment
<p><i>Washingtonia filifera</i> H. Wendl. Desert Fan Palm</p>	<p>Distribution</p>	<p>NL<sup>?e</sup>, MU<sup>?e</sup>, SL*</p> <p>Added NL as questionably naturalised (for adventive), based on <i>CJB 2288</i> (19 Jan. 2011), and supported by a second location, <i>CJB 3196</i> (22 June 2011).</p> <p>Added MU as questionably naturalised (for adventive), based on <i>CJB 3921</i> (6 Dec. 2011), supported by <i>R.J. Bates 14528</i> (14 June 1988).</p>
<p><i>Xerochrysum bracteatum</i> (Vent.) Tzvelev Golden Everlasting</p>	<p>Distribution</p>	<p>NW, NU, GT, FR, EA, EP, NL, MU, YP, SL<sup>n, ?e</sup>, KI, SE</p> <p>Added SL as questionably naturalised (for adventive – occurrence likely to be short-lived), based on <i>CJB 9027</i> (4 Sep. 2020).</p>

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## Appendix 1: Activities of the Weeds Botanist

### *Surveillance based on field observations and collections*

**Table 3:** Summary of field surveys and collections

Activities of the Weeds Botanist, Chris Brodie (CJB), State Herbarium of South Australia (SHSA), with other participants listed individually. **No.** = Number of collections.

Date(s)	Landscape Region	Participants	No.	General Location	Significant weed collections
1 July 2021	Green Adelaide	CJB	1	Adelaide, Hackney	<i>Cestrum parqui</i> for Green Adelaide weed survey.
19 Aug. 2021	Hills & Fleurieu	CJB, Shannon Robertson (PIRSA)	3	Cudlee Creek / Lobethal fire scar area	Declared plants.
1 Sep. 2021	Hills & Fleurieu	CJB, Tim Hammer (SHSA)	7	Cox Scrub & Stipituris Conservation Parks	<i>Hovea pungens</i> and general weed collection.
2 Sep. 2021	Hills & Fleurieu	CJB, Shannon Robertson (PIRSA)	9	Cudlee Creek / Lobethal fire scar area	Declared plants and general weed collection.
9 Sep. 2021	Green Adelaide	CJB, Kat Ticli (SHSA), Craig Hughes (City of Port Adelaide & Enfield)	5	Semaphore Dunes	<i>Acacia longifolia</i> subspecies <i>sophorae</i> (native) and weeds for identification.
16 Sep. 2021	Green Adelaide	CJB, Renate Velzeboer (Green Adelaide)	0	Mile End Railway Station	Investigated a reported sighting of <i>Cenchrus ciliaris</i> (buffel grass). None found.
21 Sep. 2021	Hills & Fleurieu	CJB, Shannon Robertson (PIRSA)	9	Cudlee Creek / Lobethal fire scar area	Collection of weedy species to provide an identification for landholders.
6 Oct. 2021	Green Adelaide	CJB, Sam Buxton (City of Holdfast Bay) & local dunes care group	13	Seacliff Dunes	General weed collection.
25–29 Oct. 2021	Kangaroo Island	CJB, Jason Walter (Landscape SA), Laura Williams & Suzanna Berry (PIRSA)	147	Kangaroo Island Fire scar and surrounds	New regional records for Kangaroo island, plus collection of underrepresented and other weeds.
16 Nov. 2021	Hills & Fleurieu	CJB, David Blewett (Weed Management Society of SA)	18	Mount Lofty Ranges	WoNS species <i>Asparagus declinatus</i> , bulbs and general weed collections.
7 Feb. 2022	Green Adelaide	CJB, Shannon Robertson (PIRSA)	3	Adelaide Botanic Gardens	Self-sown gardens plant and <i>Conyza</i> sp.
11 Feb. 2022	Hills & Fleurieu	CJB, Shannon Robertson (PIRSA)	10	Cudlee Creek / Lobethal fire scar area	Several private properties visited with mostly grasses collected.



Date(s)	Landscape Region	Participants	No.	General Location	Significant weed collections
15 Feb. 2022	Hills & Fleurieu	CJB, Shannon Robertson (PIRSA)	14	Cudlee Creek / Lobethal fire scar area	Several private properties visited with grasses and herbs collected.
21 Feb. 2022	Hills & Fleurieu	CJB, Shannon Robertson (PIRSA)	2	Cudlee Creek scar area & Willunga	Several private properties visited with <i>Chenopodium desertorum</i> (native), and extension of known range for <i>Euphorbia prostrata</i> .
1 Mar. 2022	Green Adelaide	CJB, PJL (SHSA)	4	Adelaide Botanic Gardens in First Creek	Little collected and known grass <i>Eragrostis mexicana</i> , and underrepresented weeds .
3 Apr. 2022	Hills & Fleurieu	CJB	3	Cape Jervis ferry terminal area	<i>Euphorbia dendroides</i> and its self-sown seedlings.
4–8 Apr. 2022	Kangaroo Island	CJB, Jason Walters (Landscape SA), Suzanna Berry (PIRSA)	98	Kangaroo Island Fire scar and surrounds	New records for Kangaroo island plus underrepresented weeds and general weed collection.
9 May 2022	Hills & Fleurieu	CJB, Shannon Robertson (PIRSA)	5	Cudlee Creek scar area & Willunga	Several private properties visited.
3 June 2002	Hills & Fleurieu	CJB, Kat Hill (Green Adelaide )	2	Montacute and Summertown	yellow-stainer Mushrooms .
10 June 2022	Hills & Fleurieu	CJB, Henry Rutherford (Green Adelaide)	20	Field River area	Woody weeds used in street and ornamental and commercial plantings.
20-24 June 2022	Kangaroo Island	CJB, Jason Walters (Landscape SA), Laura Williams & Suzanna Berry (PIRSA)	93	Kangaroo Island Fire scar and surrounds	New records for Kangaroo island plus underrepresented weeds and general weed collection.

## Community engagement

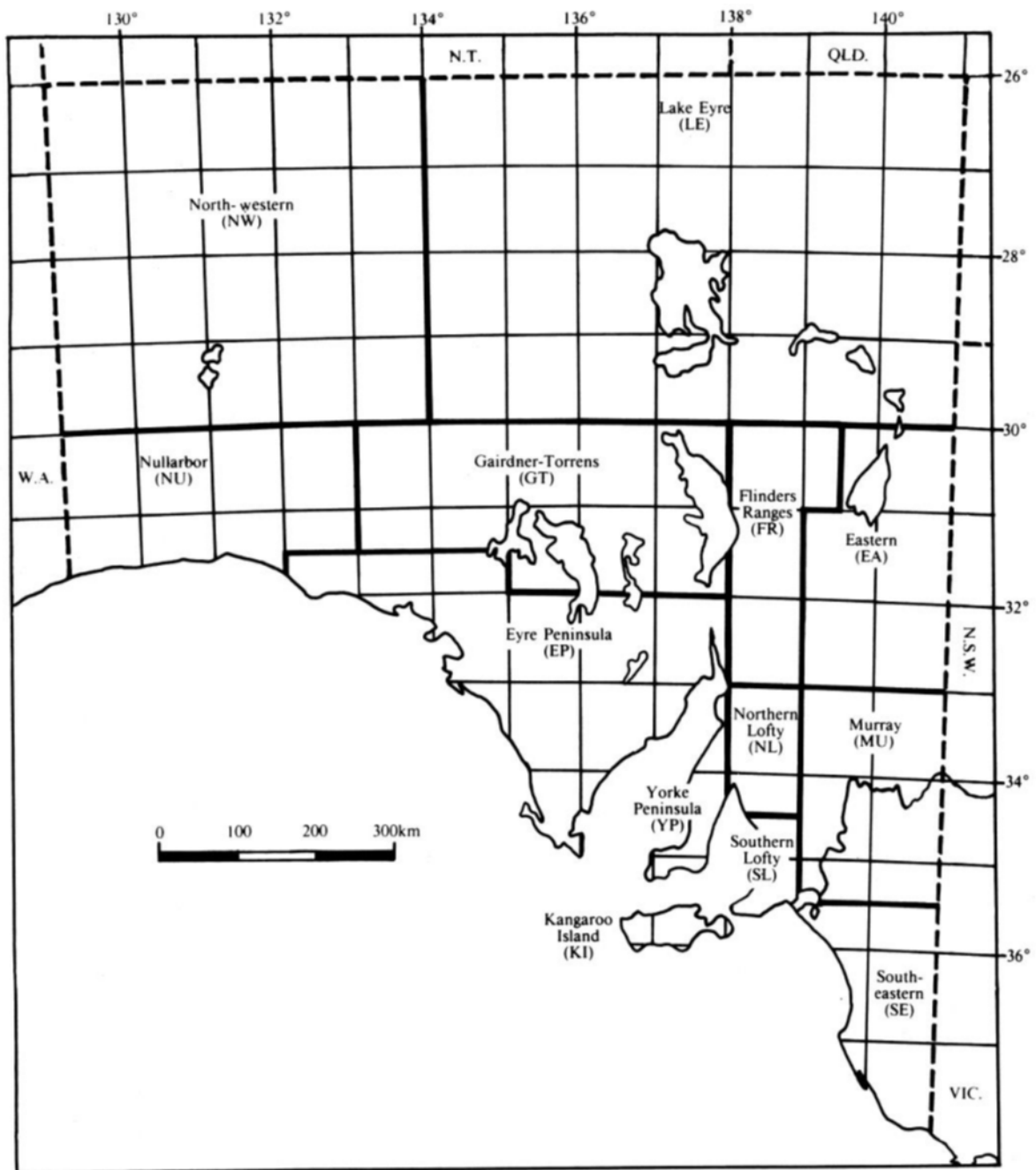
**Table 4:** Summary of community and professional engagement activities.

Weeds Botanist, Chris Brodie (CJB), State Herbarium of South Australia (SHSA), with other participants as listed; Primary Industries and Regions South Australia (PIRSA).

Date(s)	Other participants	Location	Presentation title / subject	Audience / Society	# of Att.
14 Aug. 2021	General public and University of Adelaide staff	Brownhill Creek	Blackberries and Bandicoot habitat.	Public registered via the National Science Week website	10
18 Aug. 2021	Weeds Working Group and the Wild Matters team	Online Zoom	Attended and scribed for an online workshop: Co-designing a National Established Weed Priorities Framework.	Weeds community	20
2 Sep. 2021	Shannon Robertson (PIRSA)	2019/20 Lobethal fire scar area	Identifying unknown plants not previously seen before in the area.	Property owners; on their rural properties in the fire scar	3
9 Sep. 2021	Kat Ticli (SHSA)	Semaphore dunes	Engagement regarding weeds in the dunes and identification and establishment status of <i>Acacia longifolia</i> subsp. <i>sophorae</i> along Adelaide beaches.	City of Port Adelaide & Enfield staff and members of Semaphore Largs Dunes Group	8
21 Sep. 2021	Shannon Robertson (PIRSA)	Cudlee Creek scar	Sites visit at two properties – identifying and discussing weeds with both landowners.	Local landowners	2
6 Oct. 2021	Sam Buxton (City of Holdfast Bay)	Seacliff Dunes	How to collect plants for identification by a botanist & basic plant identification.	City of Holdfast Bay staff & local dunes care group	10
27 Oct. 2022	Jason Walter (Landscape SA), Laura Williams (PIRSA)	Osmond St office meeting room	Weeds and native plants on Kangaroo Island after fire.	National Parks and Wildlife staff	4
28 Oct. 2022	Laura Williams & Suzanna Berry (PIRSA)	Parndana Primary school	An overview of weeds on Kangaroo Island.	School students	25
28 Oct. 2022	Laura Williams (PIRSA)	American River	An overview of weeds in American River and Kangaroo Island, and weed collection for identification.	Community members	15
23 Nov. 2022	Coastal Officers Network meeting	Largs Pier Hotel	Networking and discussion groups.	State and local government staff	25
11 Feb. 2022	Shannon Robertson (PIRSA)	Cudlee Creek scar	Sites visit at properties – identifying and discussing weeds with landowners.	Property owners / managers	3
15 Feb. 2022	Shannon Robertson (PIRSA)	Cudlee Creek scar	Sites visit at two properties – identifying and discussing weeds with both landowners.	Property owners / managers	2

<b>Date(s)</b>	<b>Other participants</b>	<b>Location</b>	<b>Presentation title / subject</b>	<b>Audience / Society</b>	<b># of Att.</b>
21 Feb. 2022	Shannon Robertson (PIRSA)	Cudlee Creek scar	Site visits to two properties – identifying and discussing weeds with both landowners.	Property owners / managers	2
4 Apr. 2022 AM	Landscape SA Kangaroo Island staff	Kingscote Boardroom	How to collect plants for identification by a botanist, & basic plant identification.	Landscape SA Kangaroo Island staff	15
4 Apr. 2022 PM	Darren Ray, climatologist (DEW), Jason Walter (Landscape SA)	Parndana Pub dining hall	An introduction to Chris Brodie and weeds of Kangaroo Island.	Community members	40
6 Apr. 2022	Suzanna Berry (PIRSA)	Parndana	Weeds walk and talk information session.	Community members	5
8 Apr. 2022	Jason Walter (Landscape SA), Suzanna Berry, (PIRSA)	Penneshaw	Weeds walk and talk information session.	Community members	15
9 May 2022	Shannon Robertson (PIRSA)	Cudlee Creek scar	Sites visit at two properties – identifying and discussing weeds with both landowners.	Local landowners	2

## Appendix 2: Herbarium regions



**Fig. 12.** State Herbarium regions for South Australia. Map from J.P. Jessop & H.R. Toelken, *Flora of South Australia*, vol. 4 (1986).