

Regional Landscape Surveillance for New Weed Threats Project: A compilation of the annual reports on new plant naturalisations in South Australia 2010-2016

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2017







This document is a compilation of the Regional Landscape Surveillance reports by the State Herbarium of South Australia, covering the financial years 2009/10 to 2015/16.

The reports are republished unchanged. The original page numbering has been retained. Each report should be cited as originally published. The correct citation is indicated on the back of the cover page of each report.

This compilation should be cited as:

Brodie, C.J.¹, Vonow, H.P.¹, Canty, P.D.¹, Lang, P.J.¹, Kellermann, J.^{1,2} & Waycott, M.^{1,2} (2017). *Regional Landscape Surveillance for New Weed Threats Project: A compilation of the annual reports on new plant naturalisations in South Australia 2010-2016.* (State Herbarium of South Australia: Adelaide).

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ISBN 978-1-922027-51-1 (PDF) Published and available on *Enviro Data SA* data.environment.sa.gov.au



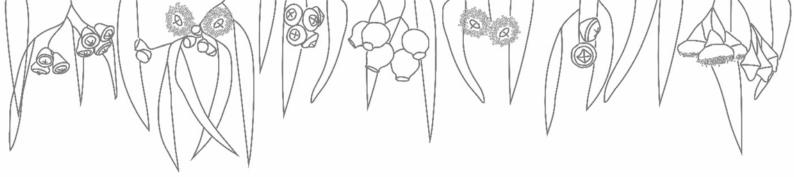
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Regional Landscape Surveillance for New Weed Threats Project Report 2009-2010





This report should be cited as:

Brodie, C.J. & Vonow, H.P. (2010). *Milestone: Annual report on new naturalisation records. Subproject 2.3: Regional landscape surveillance for new weed threats (RC095360 Priority capacity, surveillance and control needs for SA's NRM biosecurity, State NRM Program Competitive Regional Investment 2009-10*), 3 pp. (State Herbarium of South Australia: Adelaide).

Milestone report

State Herbarium of South Australia Science Resource Centre Information, Science & Technology Department for Environment & Heritage

Subproject 2.3: Regional landscape surveillance for new weed threats (RC095360 Priority capacity, surveillance and control needs for SA's NRM biosecurity, State NRM Program Competitive Regional Investment 2009-10)

Milestone: Annual report on new naturalisation records 1 June 2010

1. New records of plants collected and entered into to the Census of South Australian Plants, Algae and Fungi recorded as <u>naturalised</u> or <u>questionably naturalised</u>

There have been 19 new records of plants collected for the first time in the state of South Australia, deposited in the State Herbarium and recorded as naturalised or questionably naturalised in the *Census of South Australian Plants, Algae and Fungi* ¹between the dates of July 1st 2009 – May 31st 2010 (Table 1).

New Taxa	Naturalised	Date entered into Census
Banksia undata A.R.Mast & K.R.Thiele var. undata	Υ	6/08/2009
Bellis perennis L.	Υ	2/03/2010
Campsis radicans (L.)Seem.	Y?	11/05/2010
Crassula ericoides Haw. ssp. ericoides	Y?	9/09/2009
Darwinia citriodora (Endl.)Benth.	Υ	16/09/2009
Eucalyptus cinerea F.Muell. ex Benth.	Υ	10/05/2010
Fraxinus angustifolia Vahl ssp. oxycarpa (M.Bieb. ex Willd.) Franco & Rocha Afonso	Y?	31/03/2010
Fumaria parviflora Lam. var. indicoides Pugsley	Υ?	26/08/2009
Galium propinquum A.Cunn.	Y?	6/07/2009
Gunnera tinctoria (Molina) Mirbel	Υ	10/05/2010
Isopogon dubius (R.Br.)Druce	Y?	6/08/2009
Ixia dubia Vent.	Y?	26/11/2009
Jasminum mesnyi Hance	Υ	31/03/2010
Juglans regia L.	Υ	5/05/2010
Koelreuteria paniculata Laxm.	Y?	5/08/2009
Melaleuca microphylla Sm.	Υ	11/03/2010
Ruta chalepensis L.	Y?	31/12/2009
Salix matsudana Koidz. cv. Tortuosa	Υ?	16/09/2009
Wachendorfia thyrsiflora Burm.	Y?	13/07/2009

Table 1. New records of plants collected for the first time in the state of South Australia and deposited in the State Herbarium and recorded as <u>naturalised</u> or <u>questionably naturalised</u>

There are an additional 5 taxa that have been collected for the first time in the state of South Australia and deposited in the State Herbarium that are thought to be naturalised or potentially naturalised and are currently going through the process to be included in the Census (Table2.).

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Y = Naturalised Y? = Questionably naturalised

¹ accessible via http://www.flora.sa.gov.au/census.shtml

New taxa (not yet added to census)	Naturalised	Collection Number	Date collected
Acacia elata A.Cunn. ex Benth.	Y?	CJB 1434	9/2/10
Buddleja dysophylla (Benth.) Radlk.	Υ	CJB 531	24/09/09
Malus cultivar	Y?	CJB 1454	9/2/10
Scrophularia nodosa L.	Υ	CJB unknown	Unknown
Tecoma capensis (Thunb.) Lindl.	Y?	RJB 81131	4/4/09

Table 2. New taxa collected in South Australia that are thought to be naturalised or potentially naturalised but have not yet been added to the census. Y = Naturalised Y? = Questionably naturalised

2. New Taxa recognised as the result of examination of herbarium collections and recognition of previous misapplications of names.

A new name is now used by botanist making determinations, where a different name was previously misapplied to some or all specimens.

Salix collections in the State Herbarium of SA were examined by Geoff Carr and a number of taxa were recognised that had previously had other names applied (Table 3).

Cortaderia specimens were examined in the collection and additional field collections were made by Chris Brodie, Phil Crammond and David Symon, resulting in the recognition of the naturalised status of two species, rather than one (Table 4).

		Date edited in	Previous name used in SA Flora / CENSUS
New Name	Naturalised	Census	
			Puccinellia stricta auct. non (Hook.f.)
Puccinellia ciliata Bor	Υ	8/04/2010	C.H.Blom: Jessop(1986), partly
			Salix x rubens auct.non Schrank:
Salix fragilis L.	Υ	16/09/2009	Jessop(1986), partly
			Salix cinerea auct.non L.:
Salix X calodendron Wimm.	Υ?	16/09/2009	Jessop(1986), partly
Salix X pendulina Winder	Y?	16/09/2009	Salix babylonica L., partly
			Salix cinerea auct.non L.:
Salix X reichardtii A.Kern.	Υ	16/09/2009	Jessop(1986), partly
Salix X sepulcralis Simonk. var.			Salix babylonica L., partly
chrysocoma (Dode) Meikle	Υ	16/09/2009	
Salix X sepulcralis Simonk. var.			Salix babylonica L., partly
sepulcralis	Υ	16/09/2009	
Taxa with reduced application in the C	ensus		
Salix babylonica L.	Υ	16/09/2009	Salix babylonica L., partly
Salix cinerea L.	Υ	16/09/2009	Salix cinerea L., partly
Salix X rubens Schrank	Υ	16/09/2009	Salix x rubens Schrank, partly

Table 3. Redefined taxonomic application of a misapplied name for material already in the collections that have been changed in the Census Y = Naturalised Y? = Questionably naturalised

New Name	Naturalised	Date of determination	Collection #	Previous name used in SA Flora / CENSUS
Cortaderia jubata		C.Brodie 5/5/10	CJB 1518,	Cortaderia selloana (Schult. &
(Lem.) Stapf	Y?	J.Jessop 11/5/10	1519, 1522	Schult.f.) Asch. & Graebn., partly

Table 4. Redefined taxonomic application of a misapplied name that has not yet changed in the Census **Y** = Naturalised **Y?** = Questionably naturalised

3. Changes in nomenclature of Naturalised plant taxa

There are eight taxa that have had new names applied in the *Census of South Australian Plants*, *Algae and Fungi*. This has occurred as due to changes in taxonomic concepts or because of misapplications of names (Table 5.)

New Names (Renames of taxa already in Census)	Naturalised	Date changed in Census	Original Date entered into the Census	Previous name used in SA Flora / CENSUS
Eucalyptus conferruminata D.J.Carr & S.G.M.Carr ssp. recherche D.Nicolle & M.E.French	Y	10/03/2010	9/01/2009	Eucalyptus conferruminata ssp. conferruminata auct.non D.J.Carr & S.G.M.Carr
Banksia formosa (R.Br.) A.R.Mast & K.R.Thiele	Y	6/08/2009	2/10/1990	Dryandra formosa R.Br.
Conyza sumatrensis (Retz.) E.Walker	Y	18/03/2010	2/10/1990	Conyza albida Willd. ex Spreng
Eucalyptus globulus Maiden, Blakely & J.Simm.	Y	13/08/2009	2/10/1990	Eucalyptus globulus Maiden, Blakely & J.Simm. ssp. globulus
Fraxinus angustifolia Vahl ssp. angustifolia	Y	31/03/2010	2/10/1990	Fraxinus angustifolia Vahl.
Soliva sessilis Ruiz & Pav.	Υ	25/11/2009	2/10/1990	Soliva pterosperma (Juss.) Less.
Tecoma guarume DC.	Υ	16/04/2010	2/10/1990	Tecoma alata
Tritonia gladiolaris (Lam.) Goldblatt & J.C.Manning	Y	26/11/2009	2/10/1990	Tritonia lineata (Salisb.) Ker Gawl.

Table 5. New names of taxa which previously had other names applied for material already in the collections **Y** = Naturalised **Y**? = Questionably naturalised

Chris Brodie and Helen Vonow

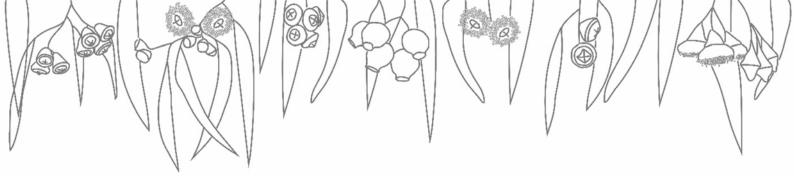
for

Ms Sandy Carruthers Manager Science Resource Centre Information, Science & Technology Department for Environment & Heritage

1 June 2010

Regional Landscape Surveillance for New Weed Threats Project Report 2010-2011





This report should be cited as:

Brodie, C.J., Vonow, H.P. & Canty, P.D. (2011). *Milestone: Annual report on new naturalisation records. Subproject 2.3: Regional landscape surveillance for new weed threats (RC095360/10 Priority capacity, surveillance and control needs for SA's NRM Biosecurity, State NRM Program 2010-11)*, 12 pp. (State Herbarium of South Australia: Adelaide).

State Herbarium of South Australia Science Resource Centre, Client Services Department of Environment & Natural Resources

Milestone report

Subproject 2.3: Regional landscape surveillance for new weed threats (RC095360/10 Priority capacity, surveillance and control needs for SA's NRM Biosecurity, State NRM Program 2010-11)

Milestone: Annual report on new naturalisation records 1 June 2011

Helen Vonow, Chris Brodie and Peter Canty

for

Ms Sandy Carruthers
Manager Science Resource Centre,
Client Services
Department of Environment & Natural Resources

1 June 2011

1. New records of plants collected and entered into to the *Census of South Australian Plants*, *Algae and Fungi* recorded as <u>naturalised</u> or <u>questionably naturalised</u>

There have been 11 new records of plants collected for the first time in the state of South Australia, deposited in the State Herbarium and recorded as naturalised or questionably naturalised in the *Census of South Australian Plants, Algae and Fungi* ¹ (hereafter referred to as the 'Census') between the dates of June 1st 2010 – May 16th 2011 (Table 1).

New Taxa	Family	Naturalised	Regional Distribution	Date entered into Census
Anthemis tinctoria L.	COMPOSITAE / ASTERACEAE	Y?	SL	24/12/2010
Artemisia pontica L.	COMPOSITAE / ASTERACEAE	Y?	SL	3/03/2011
Ceratopetalum gummiferum Sm.	CUNONIACEAE	Υ	SL	2/09/2010
Digitaria divaricatissima (R.Br.)	GRAMINEAE / POACEAE	Y?	FR	16/06/2010
Hughes				
Eriobotrya japonica (Thunb.) Lindl.	ROSACEAE	Y?	SL	15/07/2010
Escallonia macrantha Hook. & Arn.	ESCALLONIACEAE	Y?	SL (+ SE)	2/03/2011
Hovea pungens Benth.	LEGUMINOSAE / FABACEAE	Υ	SL	15/12/2010
Kniphofia uvaria (L.) Oken	LILIACEAE	Y?	FR, SL (+ SE)	16/07/2010
Leonotis leonurus (L.) R.Br.	LABIATAE / LAMIACEAE	Y?	SL	16/07/2010
Pinus pinea L.	PINACEAE	Y?	SL	14/07/2010
Thlaspi arvense L.	CRUCIFERAE / BRASSICACEAE	Y?	SE	15/07/2010

Table 1. New records of plants collected for the first time in the state of South Australia and deposited in the State Herbarium and recorded as <u>naturalised</u> or <u>questionably naturalised</u> **Y** = Naturalised **Y?** = Questionably naturalised

Some species that may be of future concern as weeds in SA based on the number of references in the online data base the "Global Compendium of Weeds" (http://www.hear.org/gcw/), the updated data set of Randall (2002) ² and from regions similar in climate to an area in SA are as follows:

- Eriobotrya japonica http://www.hear.org/gcw/species/eriobotrya_japonica/
- Kniphofia uvaria http://www.hear.org/gcw/species/kniphofia_uvaria/
- *Thlaspi arvense* http://agspsrv95.agric.wa.gov.au/dps/version02/01_plantview.asp?page=6&contentID=49&

An Australian native not in the noted in the Global Compendium of Weeds is:

Hovea pungens. This is widespread native plant in WA
 http://florabase.calm.wa.gov.au/browse/profile/3966, but has established in SA after being
 grown as an ornamental, probably after bushfires and may become a problem weed. This is
 based on observations when it was collected, and the known potential for Australian plants
 from similar environments to become weeds elsewhere in Australia.

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¹ accessible via http://www.flora.sa.gov.au/census.shtml

² Randall, R. (2002). *A Global Compendium of Weeds*. R.G. & F.J. Richardson. Meredith, Victoria, Australia <u>and</u> Randall, R. (2007-). *A Global Compendium of Weeds*. Published on the Internet http://www.hear.org/gcw/ [Accessed 31st May 2011].

There are an additional 15 plant taxa that have been collected for the first time in the state of South Australia and deposited in the State Herbarium. These are thought to be naturalised or potentially naturalised and are currently going through the process to be included in the Census (Table 2.).

New taxa (not yet added to Census)	Family	Naturalised	Region	Collection Number	Date collected
Acer monspessulanum L.	ACERACEAE	Y?	SL	CJB ³ 1914	16/12/2010
Aloe humilis Mill.	LILIACEAE / ALOACEAE	Y?	EP	CJB 2463	7/2/2011
Corymbia calophylla (Lindl.) K.D.Hill & L.A.S.Johnson	MYRTACEAE	Y? Y	NL SL	CJB 2378 CJB 1841	21/01/2011 5/08/2010
Corymbia maculata (Hook.) K.D.Hill & L.A.S.Johnson	MYRTACEAE	Y	SL	CJB 1835	5/08/2010
Crassula sarmentosa ssp. sarmentosa	CRASSULACEAE	Y?	SE	CJB 2788	17/02/2011
Cupressus sempervirens L.	CUPRESSACEAE	Y?	SE	CJB 2234	13/01/2011
Cyperus esculentus L.	CYPERACEAE	Y?	FR	K Teague AD226651	12/02/2009
Echium candicans L.f.	BORAGINACEAE	Y?	SE	CJB 766	28/10/2009
Echinopsis schickendantzii Web.	CACTACEAE	Y?	NL	RJ Chinnock 10157	18/12/2008
Juglans nigra L.	JUGLANDACEAE	Y?	SE NL	CJB 2166, 2340	11/01/2011, 20/01/2011
Liquidambar styraciflua L.	HAMAMELIDACEAE	Y?	SE	CJB 1269	28/01/2010
Melaleuca nesophila F.Muell.	MYRTACEAE	Y?	SL SE	CJB 2406 CJB 2034	25/01/2011 8/01/2011
Opuntia engelmannii var. cuija	CACTACEAE	Y	MU	B Hurford AD225128	Jan 2010
Nassella tenuissima (Trin.) Barkworth	GRAMINEAE	Y?	SE	A Kurray AD234870	1/12/2009
Vicia faba L.	LEGUMINOSAE / FABACEAE	Y?	NL	CJB 2265	19/01/2011

Table 2. New taxa collected in South Australia that are thought to be naturalised or potentially naturalised but have not yet been added to the Census. **Y** = Naturalised **Y**? = Questionably naturalised

Some species that may be of future concern as weeds in SA based on the number of references in the online data base, the "Global Compendium of Weeds" (http://www.hear.org/gcw/) the updated data set of Randall (2002) and from regions similar in climate to an area in SA are as follows:

- *Echium candicans* http://www.hear.org/gcw/species/echium_candicans/Of particular concern are:
 - Cyperus esculentus http://www.hear.org/gcw/species/cyperus_esculentus/
 A localised patch in a garden of a property on the Orroroo Carrington road that the owners cannot eradicate. Although collected in February 2009 this is persisting. (Kevin Teague pers. comm. May 2011)
 - In WA *Cyperus esculentus* has been identified as an exotic threat http://www.agric.wa.gov.au/objtwr/imported_assets/content/pw/weed/fs007_2002.pdf
 - Nassella tenuissima http://www.hear.org/gcw/species/nassella_tenuissima/ was collected by local SE NRM officers.
 - This was growing in a cultivated garden and seedlings appear each year but these are eradicated by the NRM (Deb Lang *pers. comm.* May 2011)

Other species may be of future concern as weeds in SA based on co-generic records are the succulents plants (*Aloe humilis & Crassula sarmentosa* ssp. *sarmentosa*) and cacti (*Echinopsis schickendantzii & Opuntia engelmannii* var. *cuija*).

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³ CJB = sequential collecting number of C.J. Brodie, Weeds Botanist and associated collectors.

2. New Regional records of plants collected and lodged in the State Herbarium.

There have been 37 plant taxa recorded for one or more additional Herbarium Regions⁴ as naturalised or questionably naturalised in the *Census of South Australian Plants*, *Algae and Fungi* ⁵between the dates of May 2010 – May 16th 2011.

There are an additional 100 plant taxa recorded for one or more additional Herbarium Regions that are thought to be naturalised or potentially naturalised and are currently going through the process to be included in the Census⁶.

The data is listed as separate pairs of tables for each of the Herbarium Regions (Tables 3a & b-15 a&b). All records are based on specimens deposited in the State Herbarium.

(1) North-Western Herbarium Region:

Taxa	Family	Naturalised	Date entered into Census
Centaurea melitensis L.	COMPOSITAE / ASTERACEAE	Y	6/01/2011
Spergularia diandra (Guss.) Heldr. & Sartori	CARYOPHYLLACEAE	Y	6/04/2011

Table 3a. Additional Plant taxa recorded in the Census for the North-Western (1) Herbarium Region as naturalised (Y).

Taxa (not yet added to Census)	Family	Naturalised	Collection Number	Date collected
Citrullus lanatus (Thunb.) Matsum. & Nakai	CUCURBITACEAE	Y	PK Latz 24172	24/03/2009
Melinis repens (Willd.) Zizka	GRAMINEAE	Υ	PK Latz 24751	2/09/2009
Pennisetum clandestinum Hochst. ex Chiov.	GRAMINEAE	Y	CJ Brodie 1581	21/04/2010
Schinus molle L.	ANACARDIACEAE	Y?	PK Latz 24135	19/03/2009

Table 3b. Plant taxa recorded for the **North-Western** (1) Herbarium Region as <u>naturalised</u> or <u>questionably naturalised</u> but have not yet been added to the Census. **Y** = Naturalised **Y**? = Questionably naturalised

⁴ Map of SA Herbarium Regions: http://flora.qa.deh.sa.gov.au/images/AD_regions.jpg

⁵ accessible via http://www.flora.sa.gov.au/census.shtml

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⁶ The data is derived from analysis of a data file of all vascular taxa entered (or edited) in the State Herbarium of SA Plant Information System (ADHERB) during 2010 and 2011. Additional information was added from very recent, yet unprocessed collections made by Weeds Botanist Chris Brodie, and from some miscellaneous searches conducted while compiling this report. There may be one to many records of a taxon from these added regions – only one collection is cited as a representative sample.

(2) Lake Eyre Herbarium Region:

Taxa	Family	Naturalised	Date entered into Census
Carthamus lanatus L.	COMPOSITAE / ASTERACEAE	Y	6/01/2011
Lactuca serriola L. f. serriola	COMPOSITAE / ASTERACEAE	Υ	19/01/2011

Table 4a. Additional Plant taxa recorded in the Census for the Lake Eyre (2) Herbarium Region as naturalised (Y).

Taxa (not yet added to Census)	Family	Naturalised	Collection Number	Date collected
Agave americana L.	LILIACEAE / ASPARAGACEAE	Y	CJB 1668	22/04/2010
Alternanthera pungens Kunth	AMARANTHACEAE	Υ	D Jardine 310	22/04/2010
Casuarina glauca	CASUARINACEAE	Y?	CJB 1672	22/04/2010
Conyza bonariensis	COMPOSITAE / ASTERACEAE	Y	CJB 1685	22/04/2010
Cylindropuntia fulgida var. mamillata	CACTACEAE	Υ?	CJB 1666	22/04/2010
Cylindropuntia imbricata	CACTACEAE	Y?	CJB 1667	22/04/2010
Cylindropuntia prolifera	CACTACEAE	Y?	CJB 1664	22/04/2010
Opuntia puberula	CACTACEAE	Y?	CJB 1665	22/04/2010
Pennisetum clandestinum Hochst. ex Chiov.	GRAMINEAE	Y	D Jardine 308	22/04/2010
Pennisetum setaceum (Forssk.) Chiov.	GRAMINEAE	Y	D Jardine 307	22/04/2010
Schinus molle L.	ANACARDIACEAE	Y	CJB 1677	22/04/2010
Sorghum bicolor (L.) Moench	GRAMINEAE	Y	CJB 1582	22/04/2010

Table 4b.Plant taxa recorded for the Lake Eyre (2) Herbarium Region as naturalised or questionably naturalised but have not yet been added to the Census.Y = NaturalisedY? = Questionably naturalised

(3) Nullarbor Herbarium Region:

Taxa	Family	Naturalised	Date entered into Census
Reichardia tingitana (L.)Roth	COMPOSITAE / ASTERACEAE	Υ	19/01/2011

Table 5a Additional Plant taxa recorded in the Census for the Nullarbor (3) Herbarium Region as naturalised (Y).

Taxa (not yet added to Census)	Family	Naturalised	Collection Number	Date collected
NIL				

Table 5b. Plant taxa recorded for the **Nullarbor** (3) Herbarium Region as <u>naturalised</u> or <u>questionably naturalised</u> but have not yet been added to the Census.

(4) Gairdner-Torrens Herbarium Region:

Taxa	Family	Naturalised	Date entered into Census
Carthamus lanatus L.	COMPOSITAE / ASTERACEAE	Y	6/01/2011
Onopordum acanthium L.	COMPOSITAE / ASTERACEAE	Y	6/01/2011

Table 6a. Additional Plant taxa recorded in the Census for the Gairdner-Torrens (4) Herbarium Region as naturalised (Y).

Taxa (not yet added to Census)	Family	Naturalised	Collection Number	Date collected
Alternanthera pungens Kunth	AMARANTHACEAE	Υ	CJB 1732	23/04/2010
Hibiscus trionum var. vesicarius (Cav.)	MALVACEAE	Y?	HP Vonow BS72-	26/10/2010
Hochr.			229	

Table 6b. Plant taxa recorded for the **Gairdner-Torrens** (4) Herbarium Region as <u>naturalised</u> or <u>questionably naturalised</u> but have not yet been added to the Census. **Y** = Naturalised **Y**? = Questionably naturalised

(5) Flinders Ranges Herbarium Region:

Taxa	Family	Naturalised	Date entered into Census
Batrachium trichophyllum (Chaix) Bosch	RANUNCULACEAE	Y	7/02/2011
Carduus pycnocephalus L.	COMPOSITAE / ASTERACEAE	Y	6/01/2011
Crepis foetida L. ssp. foetida	COMPOSITAE / ASTERACEAE	Y	14/01/2011
Cynara cardunculus L. ssp. flavescens Wiklund	COMPOSITAE / ASTERACEAE	Y	6/01/2011
Hypochaeris radicata L.	COMPOSITAE / ASTERACEAE	Y	19/01/2011

Table 7a. Additional Plant taxa recorded in the Census for the Flinders Ranges (5) Herbarium Region as naturalised (Y).

Taxa (not yet added to Census)	Family	Naturalised	Collection Number	Date collected
Cestrum parqui L'Hér.	SOLANACEAE	Y	CJB 1041	9/12/2009

Table 7b. Plant taxa recorded for the **Flinders Ranges** (5) Herbarium Region as $\underline{\text{naturalised}}$ but have not yet been added to the Census. $\mathbf{Y} = \text{Naturalised}$

(6) Eastern Herbarium Region:

Taxa	Family	Naturalised	Date entered into Census
Spergularia media (L.) C.Presl	CARYOPHYLLACEAE	Y	6/04/2011

Table 8a. Additional Plant taxa recorded in the Census for the Eastern (6) Herbarium Region as <u>naturalised</u> (Y).

Taxa (not yet added to Census)	Family	Naturalised	Collection Number	Date collected
Cenchrus pennisetiformis Hochst. & Steud. ex Steud.	GRAMINEAE	Υ	B Shepherd 4	8/05/2010
Fumaria indica (Hausskn.) Pugsley	FUMARIACEAE	Y	P Foreman BOOL 50	29/08/2008
Gazania linearis	COMPOSITAE / ASTERACEAE	Υ	DE Symon 17448	4/07/2010
Nerium oleander	APOCYNACEAE	Y?	DE Symon 17449	4/07/2010
Opuntia ficus-indica	CACTACEAE	Y?	DE Symon 17458	7/07/2010
Parkinsonia aculeata L.	LEGUMINOSAE / FABACEAE	Y?	K Tschirner AD231665	10/09/2009

Table 8b. Plant taxa recorded for the **Eastern** (6) Herbarium Region as <u>naturalised</u> or <u>questionably naturalised</u> but have not yet been added to the Census. **Y** = Naturalised **Y**? = Questionably naturalised

(7) Eyre Peninsula Herbarium Region:

Taxa	Family	Naturalised	Date entered into Census
Medicago laciniata (L.) Mill.	LEGUMINOSAE / FABACEAE	Y	May 2011
Peganum harmala L.	ZYGOPHYLLACEAE	Y	May 2011

Table 9a. Additional Plant taxa recorded in the Census for the Eyre Peninsula (7) Herbarium Region as naturalised (Y).

Taxa (not yet added to Census)	Family	Naturalised	Collection Number	Date
				collected
Aeonium haworthii Webb & Berthelot	CRASSULACEAE	Υ	CJB 2527	8/02/2011
Agave americana L.	LILIACEAE /	Y	CJB 2457	7/02/2011
	ASPARAGACEAE			
Allium vineale L.	LILIACEAE / ALLIACEAE	Υ	CJB 2606	9/02/2011
Amaranthus albus L.	AMARANTHACEAE	Υ?	P Sheridan	27/03/2009
			AD226655	
Brassica X napus L.	CRUCIFERAE /	Υ	CJB 2641	10/02/2011
·	BRASSICACEAE			
Caesalpinia gilliesii (Wall. ex Hook.)	LEGUMINOSAE /	Y?	B Shepherd 3	8/05/2010
Benth.	FABACEAE			
Cotoneaster pannosus Franch.	ROSACEAE	Y	CJB 2562	8/02/2011
Cotyledon orbiculata L. var. orbiculata	CRASSULACEAE	Y	CJB 2455	7/02/2011
Dovyalis caffra (Hook.f. & Harv.)	FLACOURTIACEAE	Y?	CJB 2664	10/02/2011
Hook.f.				
Eragrostis barrelieri Daveau	GRAMINEAE	Y	R Taylor 1319	18/04/2010
Eragrostis minor Host	GRAMINEAE	Y	CJB 2536	8/02/2011
Lantana camara L. var. camara	VERBENACEAE	Y?	CJB 2553	8/02/2011
Osteospermum fruticosum (L.) Norl.	COMPOSITAE /	Y	CJB 2557	8/02/2011
, ,	ASTERACEAE			
Panicum hillmanii Chase	GRAMINEAE	Υ	CJB 2572	9/02/2011
Parkinsonia aculeata L.	LEGUMINOSAE /	Y?	Nick Wilson 6	18/03/2010
	FABACEAE			
Suaeda baccifera	CHENOPODIACEAE	Y?	R Taylor 1313	2/05/2010
Torilis nodosa (L.) Gaertn.	UMBELLIFERAE	Y?	P Sheridan RM-	6/11/2009
` '			01-09	
Vitis vinifera L.	VITACEAE	Y?	CJB 2662	10/02/2011

Table 9b.Plant taxa recorded for the Eyre Peninsula (7) Herbarium Region as naturalised or questionably naturalised but have not yet been added to the Census.Y = NaturalisedY? = Questionably naturalised

(8) Northern Lofty Herbarium Region:

Taxa	Family	Naturalised	Date entered into Census
Acacia pendula A.Cunn. ex G.Don	LEGUMINOSAE / FABACEAE	Y?	8/04/2011
Filago pyramidata L.	COMPOSITAE / ASTERACEAE	Y	16/02/2011
Galium aparine L.	RUBIACEAE	Y	25/03/2011
Gossypium sturtianum J.H.Willis var. sturtianum	MALVACEAE	Y?	23/03/2011
Onopordum acanthium L.	COMPOSITAE / ASTERACEAE	Y	6/01/2011
Spergularia villosa (Pers.) Cambess.	CARYOPHYLLACEAE	Y	17/03/2011

Table 10a. Additional Plant taxa recorded in the Census for the **Northern Lofty** (8) Herbarium Region as <u>naturalised</u> or <u>questionably naturalised</u>. **Y** = Naturalised **Y**? = Questionably naturalised

Taxa (not yet added to Census)	Family	Naturalised	Collection Number	Date collected
Centaurea X moncktonii	COMPOSITAE / ASTERACEAE	Y?	WC Johnson AD97626180	Feb-34
Ceratonia siliqua L.	LEGUMINOSAE / FABACEAE	Y?	CJB 2383	21/01/2011
Cotoneaster pannosus Franch.	ROSACEAE	Υ	CJB 2287	19/01/2011
Eragrostis mexicana (Hornem.) Link	GRAMINEAE	Y	CJB 2276	19/01/2011
Gazania linearis	COMPOSITAE / ASTERACEAE	Y	CJB 2289	19/01/2011
Hedera helix L. ssp. helix	ARALIACEAE	Υ?	CJB 2318	20/01/2011
Ipomoea indica (Burm.) Merr.	CONVOLVULACEAE	Y	CJB 2314	20/01/2011
Juglans regia L.	JUGLANDACEAE	Υ	CJB 2352	21/01/2011
Myrtus communis L.	MYRTACEAE	Υ?	CJB 2322	20/01/2011
Paspalum dilatatum Poir.	GRAMINEAE	Υ	CJB 2308	20/01/2011
Phoenix canariensis Hort. ex Chabaud	PALMAE	Υ	CJB 1022	9/12/2009
Pinus canariensis C.Smith	PINACEAE	Υ?	CJB 2334	20/01/2011
Pinus halepensis Mill.	PINACEAE	Υ?	CJB 2285	19/01/2011
Rubus rubritinctus W.C.R.Watson	ROSACEAE	Y	CJB 2337	20/01/2011
Sedum sediforme (Jacq.) Pau	CRASSULACEAE	Y	CJB 2296	19/01/2011
Ulmus X hollandica Mill.	ULMACEAE	Y	CJB 2307	20/01/2011
Washingtonia filifera H.Wendl.	PALMAE	Y	CJB 2288	19/01/2011

Table 10b.Plant taxa recorded for the Northern Lofty (8) Herbarium Region as $\underline{\text{naturalised}}$ or $\underline{\text{questionably naturalised}}$ but have not yet been added to the Census.Y = NaturalisedY? = Questionably naturalised

(9) Murray Herbarium Region:

Taxa	Family	Naturalised	Date entered into Census
Coprosma repens A.Rich.	RUBIACEAE	Y	25/03/2011
Filago pygmaea L.	COMPOSITAE / ASTERACEAE	Y	16/02/2011
Filago pyramidata L.	COMPOSITAE / ASTERACEAE	Y	16/02/2011
Oxalis corniculata L. ssp. corniculata	OXALIDACEAE	Y?	8/07/2010
Vitis vinifera L.	VITACEAE	Y	8/12/2010

Table 11a. Additional Plant taxa recorded in the Census for the **Murray** (9) Herbarium Rregion as $\underline{\text{naturalised}}$ or $\underline{\text{questionably}}$ $\underline{\text{naturalised}}$. $\underline{\text{Y}} = \text{Naturalised}$ $\underline{\text{Y}} = \text{Questionably naturalised}$

Taxa (not yet added to Census)	Family	Naturalised	Collection Number	Date collected
Cylindropuntia prolifera	CACTACEAE	Y?	KS Haebich	29/05/2009
			AD228152	
Elodea canadensis Michx.	HYDROCHARITACEAE	Υ	CJB 1795	16/07/2010
Eragrostis mexicana (Hornem.) Link	GRAMINEAE	Y	CJB 2009	6/01/2011
Lepidium squamatum Forssk.	CRUCIFERAE / BRASSICACEAE	Y?	TS Te 688	5/12/2008
Osteospermum fruticosum (L.) Norl.	COMPOSITAE / ASTERACEAE	Y	CJB 1791	16/07/2010

Table 11b. . Plant taxa recorded for the **Murray** (9) Herbarium Region as <u>naturalised</u> or <u>questionably naturalised</u> but have not yet been added to the Census. **Y** = Naturalised **Y**? = Questionably naturalised

(10) Yorke Peninsula Herbarium Region:

Taxa	Family	Naturalised	Date entered into Census
Coprosma repens A.Rich.	RUBIACEAE	Υ	25/03/2011
Cyperus eragrostis Lam.	CYPERACEAE	Υ	3/08/2010
Lactuca saligna L.	COMPOSITAE / ASTERACEAE	Y?	19/01/2011
Lactuca serriola L. f. serriola	COMPOSITAE / ASTERACEAE	Y	19/01/2011
Pelargonium X domesticum L.H.Bailey	GERANIACEAE	Y	8/07/2010

Table 12a. Additional Plant taxa recorded in the Census for the **Yorke Peninsula** (10) Herbarium Region as <u>naturalised</u> or <u>questionably naturalised</u>. **Y** = Naturalised **Y**? = Questionably naturalised

Taxa (not yet added to Census)	Family	Naturalised	Collection Number	Date collected
Arctotheca populifolia	COMPOSITAE / ASTERACEAE	Y	T Jaques INP846	23/07/2010
Leptospermum laevigatum	MYRTACEAE	Y?	T Jaques INP 657	28/05/2008
(Gaertn.) F.Muell.				
Vellereophyton dealbatum	COMPOSITAE / ASTERACEAE	Y?	T Jaques INP 818	16/12/2009
Vicia monantha Retz. ssp.	LEGUMINOSAE / FABACEAE	Y	T Jaques INP 801	8/10/2009
monantha				

Table 12b.Plant taxa recorded for the Yorke Peninsula (10) Herbarium Region as $\underline{\text{naturalised}}$ or $\underline{\text{questionably naturalised}}$ but have not yet been added to the Census.Y = NaturalisedY? = Questionably naturalised

(11) Southern Lofty Herbarium Region:

Taxa	Family	Naturalised	Date entered into Census
Bellis perennis L.	COMPOSITAE / ASTERACEAE	Y	27/01/2011
Chamaemelum nobile (L.)All.	MYRTACEAE	Υ?	24/12/2010
Pomaderris aspera Sieber ex DC.	RHAMNACEAE	Y?	9/12/2010
Prunus mahaleb L.	ROSACEAE	Y	4/05/2010
Vitis vinifera L.	VITACEAE	Y	8/12/2010

Table 13a. Additional Plant taxa recorded in the Census for the **Southern Lofty** (11) Herbarium Region as <u>naturalised</u> or <u>questionably naturalised</u>. **Y** = Naturalised **Y**? = Questionably naturalised

Taxa (not yet added to Census)	Family	Naturalised	Collection Number	Date collected
Arctotheca populifolia	COMPOSITAE /	Υ	R Ferguson	2/11/2009
, ,	ASTERACEAE		AD234488	
Fraxinus angustifolia ssp. oxycarpa	OLEACEAE	Y?	CJB 321	2/04/2009
(M.Bieb. ex Willd.) Franco & Rocha Afonso				
Lepidium squamatum Forssk.	CRUCIFERAE /	Y	CR Alcock 4973	28/10/1974
, ,	BRASSICACEAE			
Pinus pinaster Aiton	PINACEAE	Y?	DD Cunningham	15/09/2010
•			1676	
Salix X reichardtii A.Kern.	SALICACEAE	Υ	CJB 942	27/11/2009
Sorghum almum X Parodi	GRAMINEAE	Y	CJB 1674	19/01/2011
Trifolium hirtum All.	LEGUMINOSAE	Y	RK Sandercock 6	27/10/2010
	/ FABACEAE			

Table 13b.Plant taxa recorded for the Southern Lofty (11) Herbarium Region as naturalised or questionably naturalised but have not yet been added to the Census.Y = NaturalisedY? = Questionably naturalised

(12) Kangaroo Island Herbarium Region:

Taxa	Family	Naturalised	Date entered into Census
Cyperus eragrostis Lam.	CYPERACEAE	Y	3/08/2010
Onopordum acaulon L.	COMPOSITAE / ASTERACEAE	Y	6/01/2011
Pelargonium X asperum Ehrh. ex Willd.	GERANIACEAE	Y	8/07/2010
Pelargonium X domesticum L.H.Bailey	GERANIACEAE	Y	8/07/2010

Table 14a Additional Plant taxa recorded in the Census for the Kangaroo Island (12) Herbarium Region as naturalised (Y).

Taxa (not yet added to Census)	Family	Naturalised	Collection Number	Date collected
Crassula multicava Lem. ssp. multicava	CRASSULACEAE	Y?	RJ Bates 61094	14/09/2003
Limonium hyblaeum Brullo	LIMONIACEAE	Υ	T Mooney SW10B	7/05/2010
Paspalum vaginatum Sw.	GRAMINEAE	Υ	BM Overton 3002	12/05/2010
Poa annua L.	GRAMINEAE	Υ	BM Overton 2891	3/04/2004
Solanum triflorum Nutt.	SOLANACEAE	Y?	R Wiadrowski	18/02/2010
			AD237480	

Table 14b.Plant taxa recorded for the Kangaroo Island (12) Herbarium Region as $\frac{\text{naturalised}}{\text{Y}}$ or $\frac{\text{questionably naturalised}}{\text{Y}}$ or $\frac{\text{questionably naturalised}}{\text{Y}}$ and $\frac{\text{questionably naturalised}}{\text{Y}}$

(13) South-Eastern Herbarium Region:

Таха	Family	Naturalised	Date entered into Census
Centaurea nigrescens Willd. ssp. nigrescens	COMPOSITAE / ASTERACEAE	Y	6/01/2011
Filago pyramidata L.	COMPOSITAE / ASTERACEAE	Y	16/02/2011
Glycyrrhiza glabra L.	LEGUMINOSAE / FABACEAE	Y	5/05/2011
Hakea sericea Schrad. & J.C.Wendl.	PROTEACEAE	Y?	31/08/2010
Lessertia frutescens (L.) Goldblatt & J.C.Manning	LEGUMINOSAE / FABACEAE	Y	5/05/2011
Oxalis corniculata L. ssp. corniculata	OXALIDACEAE	Y?	8/07/2010
Robinia pseudoacacia L.	LEGUMINOSAE / FABACEAE	Y	May 2011
Spergularia diandra (Guss.) Heldr. & Sartori	CARYOPHYLLACEAE	Y	6/04/2011

Table 15a. Additional Plant taxa recorded in the Census for the **South-Eastern** (13) Herbarium Region as <u>naturalised</u> or <u>questionably naturalised</u>. **Y** = Naturalised **Y**? = Questionably naturalised

Taxa (not yet added to Census)	Family	Naturalised	Collection Number	Date collected
Acacia cyclops A.Cunn. ex G.Don	LEGUMINOSAE /	Y?	CJB 890	16/11/2009
	FABACEAE			
Acer pseudoplatanus L.	ACERACEAE	Υ	CJB 1280	28/01/2010
Aeonium arboreum (L.) Webb & Berthel.	CRASSULACEAE	Υ	CJB 2171	11/01/2011
Aeonium haworthii Webb & Berthelot	CRASSULACEAE	Υ	CJB 596	7/10/2009
Agapanthus praecox ssp. orientalis	LILIACEAE /	Υ	CJB 2158	11/01/2011
(F.M.Leight.) F.M.Leight.	AGAPANTHACEAE			
Agave americana L.	LILIACEAE /	Υ	B Tiver AD244093	17/02/2011
	ASPARAGACEAE			
Asparagus scandens Thunb.	LILIACEAE/	Y?	RJ Bates 64315	29/10/2004
	ASPARAGACEAE			
Centaurea X moncktonii	COMPOSITAE /	Y?	RJ Bates 62408	Apr-04
	ASTERACEAE			
Centranthus ruber (L.) DC. ssp. ruber	VALERIANACEAE	Υ	CJB 2215	13/01/2011
Cordyline australis (G.Forst.) Endl.	LILIACEAE /	Υ	DJ Duval	13/01/2011
, ,	ASPARAGACEAE		AD243277	
Cotoneaster horizontalis Decne.	ROSACEAE	Y?	CJB 2785	17/2/2011
Crassula ciliata L.	CRASSULACEAE	Y?	CJB 2217	13/01/2011
Crassula multicava Lem. ssp. multicava	CRASSULACEAE	Y	CJB 2787	17/02/2011
Crassula tetragona L. ssp. robusta	CRASSULACEAE	Y	CJB 2789	17/02/2011
(Toelken) Toelken				

Ehrharta villosa (L.f.) Schult.f. ex Schult. & Schult.f. var. maxima Stapf	GRAMINEAE	Y	CJB 877	12/11/2009
Escallonia macrantha Hook. & Arn	ESCALLONIACEAE	Y?	CJB 2186	12/01/2011
Ficus carica L.	MORACEAE	Y	CJB 1288	28/01/2010
Gazania linearis	COMPOSITAE / ASTERACEAE	Ÿ	CJB 2082	9/01/2011
Gleditsia triacanthos L.	LEGUMINOSAE / FABACEAE	Y	CJB 2223	13/01/2011
Hedera helix L. ssp. helix	ARALIACEAE	Υ	CJB 1457	9/02/2010
Kniphofia uvaria (L.) Oken	LILIACEAE / ASPHODELACEAE	Y?	CJB 2157	11/01/2011
Lachenalia aloides (L.f.) Pers. ex Engl.	LILIACEAE/ ASPARAGACEAE	Y	B Schriever AD232051	14/08/2009
Lavandula dentata L. var. candicans Batt.	LABIATAE	Y	CJB 2227	13/01/2011
Lepidium draba L.	CRUCIFERAE / BRASSICACEAE	Y?	A Robins AD234867	8/10/2009
Melaleuca armillaris (Sol. ex Gaertn.) Sm. ssp. armillaris	MYRTACEAE	Y	CJB 2139	11/01/2011
Oenothera lindheimeri (Engelm. & A.Gray) W.L.Wagner & Hoch	ONAGRACEAE	Y	CJB 1508	10/02/2010
Osteospermum fruticosum (L.) Norl.	COMPOSITAE / ASTERACEAE	Y	CJB 863	11-Nov-09
Parietaria judaica L.	URTICACEAE	Υ	CJB 2134	11/01/2011
Phyla canescens (Kunth) Greene	VERBENACEAE	Y	P Tucker AD238993	29/07/2010
Pinus halepensis Mill.	PINACEAE	Y?	CJB 2018	6/01/2011
Pittosporum undulatum Vent.	PITTOSPORACEAE	Y	CJB 1243	28/01/2010
Populus nigra L.	SALICACEAE	Y	CJB 2063	8/01/2011
Prunus armeniaca L.	ROSACEAE	Y?	CJB 1426	8/02/2010
Prunus persica (L.) Batsch var. nectarina (R.Br.) Maxim.	ROSACEAE	Y?	CJB 1333	29/01/2010
Pyracantha koidzumii (Hayata) Rehder	ROSACEAE	Y	CJB 1319	29/01/2010
Rubus leucostachys Schleich. ex Sm.	ROSACEAE	Υ	CJB 1139	18/12/2009
Rubus ulmifolius Schott var. ulmifolius	ROSACEAE	Υ	CJB 1514	10/02/2010
Salix matsudana Koidz. cv. "Tortuosa"	SALICACEAE	Υ	CJB 1274	28/01/2010
Sambucus nigra	CAPRIFOLIACEAE	Υ	CJB 2137	11/01/2011
Ulmus X hollandica Mill.	ULMACEAE	Υ	CJB 1464	9/02/2010
Vicia sativa L ssp. nigra (L.) Ehrh.	LEGUMINOSAE / FABACEAE	Y	CJB 2122	10/01/2011

Table 15b.Plant taxa recorded for the South-Eastern (13) Herbarium Region as naturalised but have not yet been added to the Census.Y = NaturalisedY? = Questionably naturalised

3. Changes in nomenclature of naturalised plant taxa

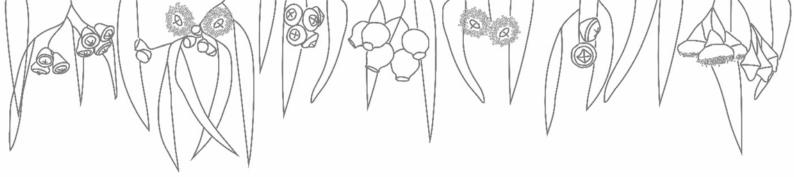
There are 23 taxa that have had new names applied in the *Census of South Australian Plants, Algae and Fungi*. This has occurred as due to changes in taxonomic concepts or because of misapplications of names (Table 5.)

New Names (Renames of taxa already in Census)	Naturalised	Date changed in Census	Original Date entered into the Census	Previous name used in SA Flora / CENSUS
Acacia nilotica (L.) Delile ssp. indica (Benth.) Brenan	Y	8/04/2011	2/10/1990	Acacia nilotica (L.) Delile
Bassia scoparia (L.) A.J.Scott	Y	12/10/2010	2/10/1990	Kochia scoparia (L.) Schrad.
Cenchrus spinifex Cav.	Y	15/04/2011	2/10/1990	Cenchrus incertus M.A.Curtis.
Centaurea X moncktonii C.E.Britton	Y?	6/01/2011		was Centaurea nigra L., partly
Chloris barbata Sw.	Y	21/06/2010	25/07/2005	Chloris inflata Link.
Cotoneaster symondsii T.Moore	Y	15/04/2011	2/10/1990	Cotoneaster simonsii Baker.
Epilobium ciliatum Raf. ssp. ciliatum	Υ	5/05/2010	2/10/1990	Epilobium ciliatum Raf.
Fuchsia magellanica Lam.	Y	5/05/2010	2/10/1990	Fuchsia magellanica Lam. ssp. macrostemma
Hypochaeris radicata L.	Y	19/01/2011	2/10/1990	Hypochoeris radicata L.
Lactuca serriola L. f. integrifolia (S.F.Gray) S.D.Prince & R.N.Carter	Y	19/01/2011		was partly Lactuca serriola L.
Lactuca serriola L. f. serriola	Y	19/01/2011		was partly Lactuca serriola L.
Lavandula dentata L. var. candicans Batt.	Y	15/10/2010	2/10/1990	Lavandula dentata L.
Lavandula stoechas L. ssp. stoechas	Y	26/10/2010	2/10/1990	Lavandula stoechas L.
Lessertia frutescens (L.) Goldblatt & J.C.Manning	Y	5/05/2011	2/10/1990	Sutherlandia frutescens (L.) R.Br.
Monoculus monstrosus (Burm.f.) B.Nord.	Y	6/01/2011	2/10/1990	Osteospermum clandestinum (Less.) Norl. &/or Tripteris clandestina Less.
Spergularia bocconei (Scheele) Graebn.	Y	16/03/2011	28/12/2005	Spergularia bocconii (Scheele) Graebn., orthographic variant.
Oenothera drummondii Hook. ssp. drummondii	Y	5/05/2010	3/08/2005	Oenothera drummondii Hook.
Oenothera lindheimeri (Engelm. & A.Gray) W.L.Wagner & Hoch	Y	5/05/2010	2/10/1990	Gaura lindheimeri Engelm. & A.Gray
Ornithopus sativus L.	Y?	9/05/2011		was previously included in: Ornithopus compressus L
Taraxacum hepaticolor Soest	Y	10/12/2010		was a minor part of Taraxacum officinale Weber ex F.H.Wigg.
Taraxacum khatoonae Abedin	Y	10/12/2010		was a minor part of Taraxacum officinale Weber ex F.H.Wigg.
Veronica parviflora Vahl	Y?	25/02/2011	2/10/1990	Hebe parviflora (Vahl) Andersen.
Veronica speciosa R.Cunn. ex A.Cunn.	Y	25/02/2011	2/10/1990	Hebe speciosa (R.Cunn. ex A.Cunn.) Andersen.

Table 16. New names of taxa which previously had other names applied for material already in the collections **Y** = Naturalised **Y?** = Questionably naturalised

Regional Landscape Surveillance for New Weed Threats Project Report 2011-2012





The full report should be cited as:

Brodie, C.J., Lang, P.J., Vonow, H.P., Calladine, A. & Waycott, M. (2012). *Milestone report.* Subproject 2.3: Regional landscape surveillance for new weed threats (RC095360/10 Priority capacity, surveillance and control needs for SA's NRM biosecurity, State NRM Program Program 2011-12), 25 pp. (State Herbarium of South Australia: Adelaide).

Individual chapters have different authors and should be cited as follows:

Brodie, C.J., Lang, P.J., Vonow, H.P., & Waycott, M. (2012). Annual report on new plant naturalisations in SA. In: Brodie, C.J., Lang, P.J., Vonow, H.P., Calladine, A. & Waycott, M., Milestone report. Subproject 2.3: Regional landscape surveillance for new weed threats (RC095360/10 Priority capacity, surveillance and control needs for SA's NRM biosecurity, State NRM Program Program 2011-12), pp. 2–12. (State Herbarium of South Australia: Adelaide)

Waycott, M., Calladine, A. & Vonow, H.P. (2012). Western Australian Weeds not present in South Australia. In: Brodie, C.J., Lang, P.J., Vonow, H.P., Calladine, A. & Waycott, M., *Milestone report. Subproject 2.3: Regional landscape surveillance for new weed threats* (RC095360/10 Priority capacity, surveillance and control needs for SA's NRM biosecurity, State NRM Program Program 2011-12), pp. 13–25. (State Herbarium of South Australia: Adelaide).

State Herbarium of South Australia Science Resource Centre, Client and Corporate Services Department of Environment & Natural Resources

Milestone report

Subproject 2.3: Regional landscape surveillance for new weed threats (RC095360/10 Priority capacity, surveillance and control needs for SA's NRM biosecurity, State NRM Program Program 2011-12)

Milestone: Annual report on new plant naturalisations in SA Chris Brodie, Peter Lang, Helen Vonow and Michelle Waycott

Western Australian Weeds not present in South Australia Michelle Waycott, Ainsley Calladine and Helen Vonow

1 June 2012

for

Ms Sandy Carruthers
Manager Science Resource Centre,
Client and Corporate Services
Department of Environment & Natural Resources

1 June 2012

1. New naturalised or questionably naturalised records of plants in South Australia.

There have been 26 new records of plants collected for the first time in the state of South Australia, deposited in the State Herbarium and recorded as naturalised or questionably naturalised in the *Census of South Australian Plants*, *Algae and Fungi* ¹ (hereafter referred to as the 'Census') between the dates of May 1st 2011 – May 25th 2012 (Table 1).

New Taxa	Common Name	Family	Naturalised	Regional Distribution	Date added to Census
Alisma lanceolatum With.	Narrow-leaved water-plantain	ALISMATACEAE	Y	SL	22/03/2012
Aloe brevifolia Haw.	Short leaf aloe	LILIACEAE / ALOACEAE	Y	EP	5/07/2011
Anigozanthos flavidus DC.	Evergreen kangaroo paw	HAEMODORACEAE	Υ	SL	2/02/2012
Carex pendula Huds.	Drooping sedge	CYPERACEAE	Y?	SL	8/02/2012
Eucalyptus gomphocephala DC.		MYRTACEAE	Υ	KI, EP, SL, YP	7/02/2012
Felicia echinata (Thunb.)Nees	Prickly felicia	COMPOSITAE / ASTERACEAE	Y?	EP	12/08/2011
Felicia fruticosa (L.)G.Nicholson	Bush felicia	COMPOSITAE / ASTERACEAE	Y?	SL	19/01/2012
Freesia laxa (Thunb.)Goldblatt & J.C.Manning	False freesia	IRIDACEAE	Υ	SL	29/12/2011
Genista X spachiana Webb	Hedge broom	LEGUMINOSAE / FABACEAE	Y	SE	22/06/2011
Helianthus tuberosus L.	Jerusalem artichoke	COMPOSITAE / ASTERACEAE	Y	SL	17/10/2011
Heteropogon contortus (L.)P.Beauv. ex Roem. & Schult.	Bunch speargrass	GRAMINEAE / POACEAE	Υ	GT	21/09/2011
Hypericum androsaemum L.	Tutsan	GUTTIFERAE / CLUSIACEAE	Y?	SL	21/09/2011
Jacaranda mimosifolia D.Don	Jacaranda	BIGNONIACEAE	Υ?	MU	8/02/2012
Kunzea ambigua (Sm.)Druce	Tick bush	MYRTACEAE	Υ	SL	9/02/2012
Mesembryanthemum guerichianum Pax	Large Guerichy ice plant	AIZOACEAE	Υ	MU	23/05/2012
Pelargonium capitatum (L.)L'Her. ex Aiton	Rose-scented pelargonium	GERANIACEAE	Υ	KI, SE, SL	13/01/2012
Pelargonium crispum (P.J.Bergius)L'Her.	Lemon-scented pelargonium	GERANIACEAE	Y?	MU, SL	13/01/2012
Pelargonium fragrans Willd.	Nutmeg pelargonium	GERANIACEAE	Υ?	SL	17/01/2012
Pelargonium peltatum (L.)L'Her. ex Aiton	lvy-leaf pelargonium	GERANIACEAE	Υ?	EP, SL	13/01/2012
Pelargonium quercifolium (L.f.)L'Her.	Oak-leaved pelargonium	GERANIACEAE	Υ	SL, NL	13/01/2012
Pelargonium tomentosum Jacq.	Peppermint-scented pelargonium	GERANIACEAE	Y?	SE	13/01/2012
Pelargonium X hortorum L.H.Bailey	Zonal pelargonium	GERANIACEAE	Υ?	MU, FR, NL, SL	13/01/2012
Pomaderris lanigera (Andrews)Sims	Woolly pomaderris	RHAMNACEAE	Y	SL	10/05/2012
Scrophularia auriculata L.	Water figwort	SCROPHULARIACEAE	Υ	SL	23/05/2012
Scrophularia nodosa L.	Figwort	SCROPHULARIACEAE	Υ?	SL	23/05/2012
Vicia villosa Roth ssp. eriocarpa (Hausskn.)P.W.Ball	Hairy vetch	LEGUMINOSAE / FABACEAE	Y	SE	8/06/2011

Table 1a. Records of plants collected for the first time in the state of South Australia, deposited in the State Herbarium and recorded as <u>naturalised</u> or <u>questionably naturalised</u> **Y** = Naturalised **Y** = Questionably naturalised

¹ accessible via http://www.flora.sa.gov.au/census.shtml

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1.1 Species of particular concern are:

- Mesembryanthemum guerichianum http://www.southernafricanplants.net/plantdata_sub.php?Mspec_ID=4184&PHPSESSID=nvn060m6ham4c14qjv4vb5tdv4 First collected in SA in January 2012 by Chris Brodie (CJB) and Bob Chinnock (RJC), State Herbarium of SA. Subsequently observed and collected in the border areas of Victoria and New South Wales by RJC and Val Stajsic of the Victorian Herbarium. There it was observed forming mono-cultures on roadsides and invading in intact mallee vegetation.
 It is a close relative of Mesembryanthemum crystallinum, the Ice plant, which has spread through out Australia and has become a common weed. However, it has been observed by CJB & RJC that M. guerichianum occupies different ecological niches than M. crystallinum, occurring in drier regions on sandy plains.
 - No data exists on the potential weediness of this plant outside it native Southern African range but personal observations by CJB and RJC indicate that this plant could be come a serious environmental weed.
- 1.2 Some species that **may be** of future concern as weeds in SA based on the number of references in the online data base the "Global Compendium of Weeds" (http://www.hear.org/gcw/), the updated data set of Randall (2002) ² and from regions similar in climate to an area in SA are as follows:
 - Alisma lanceolatum http://www.hear.org/gcw/species/alisma_lanceolatum/
 A serious weed of rice in New South Wales. Thrives in shallow, slow-moving or stationary, nutrient rich water. (http://www.weeds.org.au/cgi-bin/weedident.cgi?tpl=plant.tpl&state=&s=&ibra=all&card=W06).
 A weed in WA south of Perth on damp ground or shallow water (http://florabase.dec.wa.gov.au)
 In Victoria it is a commonly recorded weed near creeks, lakes and swamps. Walsh & Entwisle (1994).
 Listed as an invasive aquatic in South Africa and as a weed in the USA.
 - Helianthus tuberosus L. http://www.iewf.org/weedid/Helianthus_tuberosus.htm
 A known weed in NSW, VIC, WA and over 50 weed records in the Global Compendium of Weeds.
- 1.3 Other species may be of future concern as weeds in SA based on weediness of close relatives are:
 - Brooms ~ *Genista X spachiana*. This is listed as a weed in Victoria and Tasmania. *Genista monspessulana* is a weed of National Significance (WoNS).
 - Compositae (daisies) ~ Felicia echinata and Felicia fruticosa.
 Widely cultivated, and originating from areas with a similar climate to South Australia
 - Iridaceae, the iris family ~ many of which have become serious environmental weeds in SA and throughout Australia ~ Freesia laxa is recorded as a weed in NSW, VIC, WA, QLD. Richardson et al. (2007).
 Found in the USA on disturbed sites, abandoned gardens; (http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=242101612).
 Several collections of Freesia laxa have been added to the collection in the last year. It is possible that, unless controlled, it could become a serious environmental weed.

² Randall, R. (2002). A Global Compendium of Weeds. R.G. & F.J. Richardson. Meredith, Victoria, Australia and Randall, R. (2007-). A Global Compendium of Weeds. Published on the Internet http://www.hear.org/gcw/ [Accessed 31st May 2011].

- Succulent plants ~ Aloe brevifolia is a drought tolerant, stemless perennial succulent endemic to South Africa.
 Aloe arborescens and A. maculata are recorded as naturalised in SA.
- Weedy sedges ~ Carex pendula Several plants have escaped from cultivation along creeklines in Burnside area, close to the Adelaide hills.
 Recorded as a Weed in Canterbury, New Zealand (http://www.caws.org.au/awc/2010/awc201011701.pdf). This has a similar climate to the Mount Lofty Ranges.

A weed of NSW - John Hosking, NSW Department of Agriculture, Weed Database 30 April 2003.

Recorded as weedy in the USA, where it has a propensity to self-sow and is beginning to appear outside of cultivation on roadsides and stream banks. Its potential as an invasive species is unknown. (http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=242357395).

- **1.4** Australian plants which are not native to South Australia or some of it's regions, but appear to be in the early stages of establishment in one or more locations. These have not been noted previously in the Global Compendium of Weeds:
 - Anigozanthos flavidus Native to Western Australia (http://www.anbg.gov.au/gnp/interns-2006/anigozanthos-flavidus.html) Naturalised in NSW, Richardson *et al.* (2007).
 - Eucalyptus gomphocephala Native to Western Australia.
 - Heteropogon contortus
 A northern Australian species, that has also been recorded as naturalised in sub-tropical areas in the Americas and east Asia.
 - Kunzea ambigua Native to New South Wales, Victoria and Tasmania
 - Pomaderris lanigera Native to Quennsland, New South Wales, Victoria.

Australian plants can be serious weeds as they may be adapted to the same or similar environmental conditions. They can be overlooked as weeds as they may be similar in appearance to indigenous local plants. Examples of known 'weedy natives' are *Pittosporum undulatum* and *Acacia saligna* from the eastern states.

1.5 Questionably native records of plants that may be established and recorded in the Census

Australian plants which <u>may</u> or <u>may not</u> be native to South Australia, and have been recently recorded in the state. The status of these species should be investigated further, by other means, such as further field work and population genetics studies.

There are other species, eg *Indigofera*, which have recently been recorded in regions where they had not been previously noted – this may be a result of recent climatic events or as a result of human interaction.

New Taxa	Common Name	Family	Naturalised	Regional Distribution	Date entered into Census
Solanum linearifolium Geras. ex Symon	-	SOLANACEAE	N?	SL	19/03/2012
Streptoglossa decurrens (DC.)Dunlop	-	COMPOSITAE / ASTERACEAE	N?	LE	1/09/2011

Table 1b. Questionably native records of plants that may be established and recorded in the Census

2. New Regional records of plants collected and lodged in the State Herbarium.

There have been 92 new plant taxa recorded for one or more additional Herbarium Regions as *naturalised* or *questionably naturalised* in the Census between the dates of May 1st 2011 – May 25th 2012.

The data is listed as a table for each of the Herbarium Regions (Tables 2 -14). All records are based on specimens deposited in the State Herbarium. Species we considered of particular concern are listed for the regions as applicable.

(1) North-Western Herbarium Region:

This region falls in the AW and SAAL NRM regions

Taxa	Common Name	Family	Naturalised	Date entered into Census

Table 2. Additional Plant taxa recorded in the Census for the **North-Western** (1) Herbarium Region as Y = Naturalised Y? = Questionably naturalised

(2) Lake Eyre Herbarium Region:

This region falls in the SAAL NRM regions

Taxa	Common Name	Family	Naturalised	Date entered into Census
Echinochloa colona (L.)Link	Awnless barnyard grass	GRAMINEAE / POACEAE	Υ	16/05/2012
Eragrostis minor Host	Annual love grass	GRAMINEAE / POACEAE	Υ	8/06/2011
Oenothera stricta Ledeb. ex Link ssp. stricta	Rose evening primrose	ONAGRACEAE	Υ	29/02/2012

Table 3. Additional Plant taxa recorded in the Census for the Lake Eyre (2) Herbarium Region as Y = Naturalised Y? = Questionably naturalised

(3) Nullabor Herbarium Region:

This region falls in the AW and EP NRM regions

Taxa	Common Name	Family	Naturalised	Date entered into Census
Bromus catharticus Vahl	Prairie grass	GRAMINEAE / POACEAE	Y	22/03/2012
Lolium perenne L.	Perennial ryegrass	GRAMINEAE / POACEAE	Y	22/03/2012
Nerium oleander L.	Oleander	APOCYNACEAE	Y?	9/02/2012

Table 4. Additional Plant taxa recorded in the Census for the Nullarbor (3) Herbarium Region as Y = Naturalised Y? = Questionably naturalised

Species of particular concern are: Nerium oleander L.

(4) Gairdner-Torrens Herbarium Region:

This region falls in the SAAL and AW NRM regions

Taxa	Common Name	Family	Naturalised	Date entered into Census
Bupleurum semicompositum L.	Hare's ear	UMBELLIFERAE / APIACEAE	Y?	9/06/2011
Nerium oleander L.	Oleander	APOCYNACEAE	Υ?	9/02/2012
Oenothera stricta Ledeb. ex Link ssp. stricta	Rose evening primrose	ONAGRACEAE	Y	29/02/2012

Table 5. Additional Plant taxa recorded in the Census for the Gairdner-Torrens (4) Herbarium Region as Y = Naturalised Y? = Questionably naturalised

Species of particular concern are: Nerium oleander L.

(5) Flinders Ranges Herbarium Region:

This region falls mainly in the SAAL and also in N&Y NRM regions

Taxa	Common Name	Family	Naturalised	Date entered into Census
Bupleurum semicompositum L.	Hare's ear	UMBELLIFERAE / APIACEAE	Υ	9/06/2011
Chloris gayana Kunth	Rhodes grass	GRAMINEAE / POACEAE	Y	22/03/2012
Hedera helix L. ssp. helix	lvy	ARALIACEAE	Y	24/06/2011
Lantana camara L. var. camara	Lantana	VERBENACEAE	Y?	8/06/2011
Malva nicaeensis All.	Mallow of Nice	MALVACEAE	Υ	20/01/2012
Populus nigra L.	Lombardy poplar	SALICACEAE	Υ	24/05/2012
Retama raetam (Forssk.)Webb	White weeping broom	LEGUMINOSAE / FABACEAE	Y?	17/10/2011
Trifolium dubium Sibth.	Suckling clover	LEGUMINOSAE / FABACEAE	Υ	27/05/2011
Trifolium ornithopodioides L.	Bird's-foot trefoil	LEGUMINOSAE / FABACEAE	Υ	8/06/2011
Trifolium scabrum L.	Rough clover	LEGUMINOSAE / FABACEAE	Y?	2/06/2011
Verbascum thapsus L. ssp. thapsus	Great mullein	SCROPHULARIACEAE	Y	7/12/2011
Verbena aristigera S.Moore	Mayne's pest	VERBENACEAE	Υ	29/02/2012
Vicia hirsuta (L.)Gray	Hairy vetch	LEGUMINOSAE / FABACEAE	Υ	8/06/2011

 Table 6. Additional Plant taxa recorded in the Census for the Flinders Ranges (5) Herbarium Region as
 Y = Naturalised
 Y? = Questionably naturalised

Species of particular concern are: Lantana camara var. camara, Retama raetam

(6) Eastern Herbarium Region:

This region falls in the SAAL, SAMDB and N&Y NRM regions

Taxa	Common Name	Family	Naturalised	Date entered into Census
Alternanthera pungens Kunth	Khaki weed	AMARANTHACEAE	Υ	9/09/2011
Melilotus indicus (L.)All.	King Island melilot	LEGUMINOSAE / FABACEAE	Υ	17/10/2011

Table 7. Additional Plant taxa recorded in the Census for the **Eastern** (6) Herbarium Region as **Y** = Naturalised

Species of particular concern are: Alternanthera pungens

(7) Eyre Peninsula Herbarium Region:

This region falls in the EP and SAAL NRM region

Taxa	Common Name	Family	Naturalised	Date entered into Census
Blackstonia perfoliata (L.)Huds.	Yellow-wort	GENTIANACEAE	Y	22/12/2011
Casuarina glauca Sieber ex Spreng.	Grey buloak	CASUARINACEAE	Y	24/05/2012
Chamaecytisus palmensis (H.Christ)F.A.Bisby & K.Nicholls	Tree lucerne	LEGUMINOSAE / FABACEAE	Υ	17/10/2011
Chloris gayana Kunth	Rhodes grass	GRAMINEAE / POACEAE	Y	22/03/2012
Crassula multicava Lem. ssp. multicava	Crassula	CRASSULACEAE	Υ	1/06/2011
Eragrostis mexicana (Hornem.)Link	Mexican love grass	GRAMINEAE / POACEAE	Υ	8/06/2011
Euphorbia exigua L.	Dwarf spurge	EUPHORBIACEAE	Υ	22/12/2011
Fraxinus angustifolia Vahl ssp. angustifolia	Desert ash	OLEACEAE	Y?	8/06/2011
Leptospermum laevigatum (Gaertn.)F.Muell.	Coast tea-tree	MYRTACEAE	Y?	8/06/2011
Lolium perenne L.	Perennial ryegrass	GRAMINEAE / POACEAE	Υ	22/03/2012
Medicago laciniata (L.)Mill.	Cut-leaf medic	LEGUMINOSAE / FABACEAE	Υ	26/05/2011
Peganum harmala L.	African rue	ZYGOPHYLLACEAE	Υ	25/05/2011
Petroselinum crispum (Mill.)Fuss	Parsley	UMBELLIFERAE / APIACEAE	Υ	22/06/2011
Phyla canescens (Kunth)Greene	Lippia	VERBENACEAE	Y?	8/06/2011
Pinus canariensis C.Smith	Canery island pine	PINACEAE	Υ	24/05/2012
Populus nigra L.	Lombardy poplar	SALICACEAE	Y	8/06/2011
Tribolium acutiflorum (Nees)Renvoize	Desmazeria	GRAMINEAE / POACEAE	Y	22/12/2011
Tribolium obliterum (Hemsl.)Renvoize	Capetown grass	GRAMINEAE / POACEAE	Y	22/12/2011
Trifolium pratense L. var. pratense	Red clover	LEGUMINOSAE / FABACEAE	Y	2/06/2011
Ursinia anthemoides (L.)Poir.	common parachute daisy	COMPOSITAE / ASTERACEAE	Y	22/02/2012

Table 8. Additional Plant taxa recorded in the Census for the **Eyre Peninsula** (7) Herbarium Region as **Y** = Naturalised **Y?** = Questionably naturalised

Species of particular concern are: Casuarina glauca, Leptospermum laevigatum, Peganum harmala, Ursinia anthemoides

(8) Northern Lofty Herbarium Region:

This region falls in the NY, AMLR and SAMDB NRM regions

Taxa	Common Name	Family	Naturalised	Date entered into Census
Anethum graveolens L.	Dill	UMBELLIFERAE / APIACEAE	Y?	9/06/2011
Apium graveolens L.	Celery	UMBELLIFERAE / APIACEAE	Y	9/06/2011
Crassula tetragona L. ssp. robusta				
(Toelken)Toelken	Crassula	CRASSULACEAE	Υ	1/06/2011
Holcus setosus Trin.	Annual fog	GRAMINEAE / POACEAE	Υ	22/03/2012
Medicago arabica (L.)Huds.	Spotted medic	LEGUMINOSAE / FABACEAE	Υ	26/05/2011
Medicago rugosa Desr.	Gamma medic	LEGUMINOSAE / FABACEAE	Υ	27/05/2011
Oenothera glazioviana Micheli	evening primrose	ONAGRACEAE	Y?	29/02/2012
Oenothera lindheimeri (Engelm. &				
A.Gray)W.L.Wagner & Hoch	Clock weed	ONAGRACEAE	Υ	29/02/2012
Pelargonium X asperum Ehrh. ex Willd.	Rose-oil geranium	GERANIACEAE	Υ	16/01/2012
Plantago major L.	Greater plantain	PLANTAGINACEAE	Y?	26/10/2011
Retama raetam (Forssk.)Webb	White weeping broom	LEGUMINOSAE / FABACEAE	Υ	16/05/2011
Spartium junceum L.	Spanish broom	LEGUMINOSAE / FABACEAE	Υ	16/05/2011
Trifolium dubium Sibth.	Suckling clover	LEGUMINOSAE / FABACEAE	Y	27/05/2011
Trifolium ornithopodioides L.	Bird's-foot trefoil	LEGUMINOSAE / FABACEAE	Y	8/06/2011
Verbascum thapsus L. ssp. thapsus	Great mullein	VERBENACEAE	Y	7/12/2011
Verbena aristigera S.Moore	Mayne's pest	VERBENACEAE	Y?	29/02/2012
Vicia hirsuta (L.)Gray	Hairy vetch	LEGUMINOSAE / FABACEAE	Y	8/06/2011
Vicia sativa L. ssp. nigra (L.)Ehrh.	Narrow-leaf vetch	LEGUMINOSAE / FABACEAE	Y	8/06/2011

Table 9. Additional Plant taxa recorded in the Census for the Northern Lofty (8) Herbarium Region as

Y = Naturalised Y? = Questionably naturalised

Species of particular concern are: Retama raetam

(9) Murray Herbarium Region:

This region falls in the SAMDB, SAAL and AMLR NRM regions

Taxa	Common Name	Family	Naturalised	Date entered into Census
Cyperus brevifolius (Rottb.)Hassk.	Globe kyllinga	CYPERACEAE	Y?	19/10/2011
Egeria densa Planch.	Large-flowered waterweed	HYDROCHARITACEAE	Y?	3/11/2011
Grevillea aquifolium Lindl.	Prickly grevillea	PROTEACEAE	Y?	9/02/2012
Juglans regia L.	Walnut	JUGLANDACEAE	Υ	8/02/2012
Nerium oleander L.	Oleander	APOCYNACEAE	Υ	9/02/2012
Oenothera speciosa Nutt.	Rose evening primrose	ONAGRACEAE	Υ	2/02/2012
Verbena aristigera S.Moore	Mayne's pest	VERBENACEAE	Υ	29/02/2012
Vicia hirsuta (L.)Gray	Hairy vetch	LEGUMINOSAE / FABACEAE	Y	8/06/2011

Table 10. Additional Plant taxa recorded in the Census for the Murray (9) Herbarium Region as Y = Naturalised Y? = Questionably naturalised

Species of particular concern are: Arundo donax, Nerium oleander

(10) Yorke Peninsula Herbarium Region:

This region falls in the N&Y NRM regions

Taxa	Common Name	Family	Naturalised	Date entered into Census
Crassula multicava Lem. ssp. multicava	Crassula	CRASSULACEAE	Y	1/06/2011
Euphorbia falcata L.	Sickle-leaf spurge	EUPHORBACEAE	Υ?	31/08/2011
Lantana camara L. var. camara	Lantana	VERBENACEAE	Υ?	8/06/2011
Spartium junceum L.	Spanish broom	LEGUMINOSAE / FABACEAE	Y	16/05/2011
Trifolium tomentosum L.	Woolly clover	LEGUMINOSAE / FABACEAE	Y	8/06/2011
Vicia cracca L.	Tufted vetch	LEGUMINOSAE / FABACEAE	Y	8/06/2011

Table 11. Additional Plant taxa recorded in the Census for the Yorke Peninsula (10) Herbarium Region as

Y = Naturalised Y? = Questionably naturalised

Species of particular concern are: Lantana camara var. camara, Spartium junceum

(11) Southern Lofty Herbarium Region:

This region falls in the AMLR and SAMDB NRM region

Taxa	Common Name	Family	Naturalised	Date entered into Census
Aeonium haworthii Webb & Berthelot	Aeonium CRASSULACEAE Y		8/06/2011	
Coriandrum sativum L.	Coriander	UMBELLIFERAE / APIACEAE	Y	10/06/2011
Cyperus bulbosus Vahl	Bulbous flat-sedge	CYPERACEAE	Υ?	19/10/2011
Passiflora tarminiana Coppens & V.Barney	Banana passionfruit.	PASSIFLORACEAE	Y	25/08/2011
Pisum sativum L.	Field pea	LEGUMINOSAE / FABACEAE	Y	27/05/2011
Sagittaria platyphylla (Engelm.)J.G.Sm.	Arrowhead	ALISMATACEAE	Y	3/11/2011

Table 12. Additional Plant taxa recorded in the Census for the Southern Lofty (11) Region as

Species of particular concern are: Cyperus bulbosus, Sagittaria platyphylla

(12) Kangaroo Island Herbarium Region:

This region falls in the KI NRM region

Taxa	Common Name	Family	Naturalised	Date entered into Census
Cupressus macrocarpa Hartw. ex Gordon	Monterey cypress	CUPRESSACEAE	Y?	8/12/2011
Echium plantagineum L.	Salvation Jane BORAGINACEAE Y		25/08/2011	
Lagunaria patersonii (Andrews)G.Don	Pyramid tree	MALVACEAE	Y?	19/01/2012
Pinus halepensis Mill.	Aleppo pine	PINACEAE	Υ	24/05/2012
Pinus nigra J.F.Arnold	Corsican pine	PINACEAE	Y	24/05/2012
Pisum sativum L.	Field pea	LEGUMINOSAE / FABACEAE	Υ	27/05/2011
Trifolium ornithopodioides L.	Bird's-foot trefoil	LEGUMINOSAE / FABACEAE	Υ	8/06/2011
Vicia sativa L. ssp. cordata (Wulfen ex				
Hoppe)Batt.	Narrow-leaf vetch	LEGUMINOSAE / FABACEAE	Υ	8/06/2011

 Table 13
 Additional Plant taxa recorded in the Census for the Kangaroo Island (12) Herbarium Region as Y = Naturalised
 Y? = Questionably naturalised

Species of particular concern are: Cupressus macrocarpa, Pinus halepensis

Y = Naturalised Y? = Questionably naturalised

(13) South-Eastern Herbarium Region:
This region falls in the SE and SAMDB NRM region

Taxa	Common Name	Family	Naturalised	Date entered into Census
Brachychiton populneus (Schott &				
Endl.)R.Br. ssp. populneus	Kurrajong	STERCULIACEAE	Υ	18/01/2012
Euphorbia lathyris L.	Caper spurge	Caper spurge EUPHORBIACEAE		1/06/2011
Glycyrrhiza glabra L.	Liquorice	LEGUMINOSAE / FABACEAE	Y	5/05/2011
Holcus setosus Trin.	Annual fog	GRAMINEAE / POACEAE	Υ	22/03/2012
Lessertia frutescens (L.)Goldblatt &				
J.C.Manning	Bladder senna	LEGUMINOSAE / FABACEAE	Υ	5/05/2011
Medicago italica (Mill.)Fiori	Strand medic	LEGUMINOSAE / FABACEAE	Υ	27/05/2011
Retama raetam (Forssk.)Webb	White weeping broom	LEGUMINOSAE / FABACEAE	Υ	16/05/2011
Robinia pseudoacacia L.	Black locust	LEGUMINOSAE / FABACEAE	Υ	26/05/2011
Silene apetala Willd.	Sand catchfly	CARYOPHYLLACEAE	Y?	9/02/2012
Solidago canadensis L.	Golden rod	COMPOSITAE / ASTERACEAE	Y	16/08/2011
Spartium junceum L.	Spanish broom	LEGUMINOSAE / FABACEAE	Υ	16/05/2011

Table 14. Additional Plant taxa recorded in the Census for the **South-Eastern** (13) Herbarium Region as **Y** = Naturalised **Y?** = Questionably naturalised

Species of particular concern are: Euphorbia lathyris, Lessertia frutescens, Retama raetam, Robinia pseudoacacia, Spartium junceum

3. Changes in nomenclature of naturalised plant taxa

There are 20 taxa that have had new / altered names applied in the Census between the dates of May 1st 2011 – May 25th 2012 (Table 15). This has occurred due to changes in taxonomic concepts or because of misapplications of names.

New Names (Renames of taxa already in Census)	Naturalised	Date changed in Census	Original Date entered into the Census	Previous name used in SA Flora / CENSUS
Alisma lanceolatum With.	Υ	22/03/2012	22/03/2012	was partly included in Alisma plantago-aquatica
Aristida vagans Cav.	Υ	25/01/2012	25/01/2012	Aristida caput-medusae
Cyclospermum leptophyllum				Ciclospermum leptophyllum (Pers.) Sprague, orthographic
(Pers.)Sprague ex Britton & P. Wilson	Υ	10/06/2011	2/10/1990	variant
Euphorbia hyssopifolia L.	Υ	10/08/2011	19/10/2004	Chamaesyce hyssopifolia (L.) Small.
Euphorbia maculata (L.)Small	Υ	10/08/2011	2/10/1990	Chamaesyce maculata (L.) Small.
Hovea trisperma Benth.	Υ	15/03/2012	15/03/2012	was partly included in Hovea linearis
Ipomoea carnea Jacq. ssp. fistulosa (Choisy)D.F.Austin	Υ	25/01/2012	2/10/1990	Ipomoea carnea Jacq.
Kunzea ericoides (A.Rich.)Joy Thomps.	Y	7/02/2012	2/10/1990	Name added to cover introduced specimens of this complex which are closest to <i>K. leptospermoides</i> - but thought to probably be hybrids.
Lotus corniculatus L. var. tenuifolius L.	Υ	17/05/2011	27/07/2005	Lotus corniculatus L. var. tenuifolia L. ~ corrected spelling of varietal epithet
Malva arborea (L.)Webb & Berthel.	Y	20/01/2012	2/10/1990	Lavatera arborea L.
Ornithopus sativus L.	Υ?	9/05/2011	9/05/2011	Ornithopus compressus L. partly
Pelargonium capitatum (L.)L'Her. ex Aiton	Υ	13/01/2012		Specimens of <i>Pelargonium</i> have been in the collection for many
Pelargonium crispum (P.J.Bergius)L'Her.	Y?	13/01/2012		years.
Pelargonium fragrans Willd.	Y?	13/01/2012		Some specimens now recognised as Pelargonium X hortorum
Pelargonium peltatum (L.)L'Her. ex Aiton	Y?	13/01/2012		had the name <i>Pelargonium</i> X <i>domesticum</i> L.H.Bailey incorrectly
Pelargonium quercifolium (L.f.)L'Her.	Υ	13/01/2012		applied.
Pelargonium tomentosum Jacq.	Υ?	13/01/2012		The remainder of the specimens were not identified to species
Pelargonium X hortorum L.H.Bailey	Y?	13/01/2012		until January 2012 when some time was invested and these were subsequently identified to species level as listed here.
Torilis arvensis (Huds.)Link	Υ	16/12/2011	8/02/2006	Torilis arvensis (Huds.) Link ssp. purpurea (Ten.) Hayek.

Table 14. New names of taxa which previously had other names applied for material already in the collections

Y = Naturalised Y? = Questionably naturalised

4. Analysis of difference in weed species occurrence between SA and Western Australia

Western Australian Weeds not present in South Australia

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There are numerous potential approaches to evaluating the risk of new plant species introductions from Western Australia to South Australia. Detailed analysis of both the presence of non-native species and current distributions, rate of population expansion and other measures of relative 'weediness' and identification of effective methods of transport all contribute to understanding potential risk. Initially, however, identification of taxa that need to be assessed must be undertaken.

In this analysis we explore the number, taxonomic groups, and species of Western Australian naturalised species currently not recognized as existing in South Australia. To do this, a comparison of naturalised taxa recognized in Western Australia with all species found in South Australia was conducted based on each states plant census data. The Western Australian data was provided by the Western Australian herbarium (data provision courtesy of Kevin Thiele and Ben Richardson of the WA Herbarium) as a list of all naturalised taxa and included individual assignment to the three main bioregions in the state, North-West, Eremean, and South-West. Exploration of the number of taxa in each region of WA indicated that less than 20% of taxa occurred outside the SW region and so we used all data for comparisons. Each taxon was categorized as being a native species (State level), non-native and therefore naturalised (i.e. considered to be not native to the area and thus an introduction).

Summary of results

Total number of species in SA (2011 SA Plant Census October)	4898
Total number of species recognized as native in SA	3442
Total number naturalised species in SA	1506
Number of SA native species found outside their	
recognized range and thus viewed as naturalised	50
Total number of naturalised species in WA	1257
Number of species in South West	1100
Number of species in South West and Eremean	1148
Total number of naturalised WA species not in South Australia	415
Number of these which are potential synonyms with SA taxa	9
Accepted number of species that are in WA not in SA	406
Number of WA naturalised species that match	
SA native species	44
Number of these species that are also recognized	
as naturalised in SA	8
Number of South West WA species found in SA	722
Number of South West WA species not in SA	280

A direction comparison of these results is presented graphically in Figure 1. The lower red area of the graph for WA taxa represents the 406 species that are not found in South Australia. We group these taxa by family and identify these as groups commonly recognized as being 'weedy' (Figure 2.), the most common being grasses, legumes and daisies. Other families are iridaceous It should be noted that the synonomy of species in the different data sets from SA and WA recorded

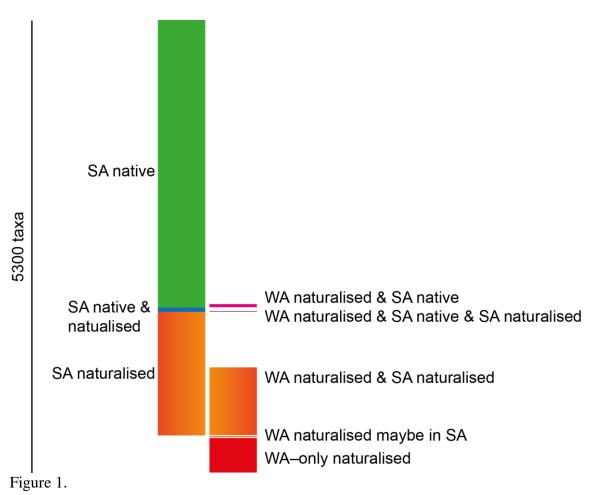
It should be noted that the synonomy of species in the different data sets from SA and WA recorded hybrids needs to be resolved in future analyses due to differences in database entry notation of these taxa.

It should also be noted that sub-specific taxonomy may not have been applied to all specimens of each species which is why all comparisions were made at the species level.

Summary

More than 400 species of plants classified as naturalised in Western Australia are not recorded in the South Australian Plant Census (October 2011). A large proposition of these species belong to plant families which are commonly weedy, grasses, legumes and daisies. Further exploration of the data along with other information should lead to greater information regarding the potential risk of these species to become naturalised in South Australia.

Figures and Tables



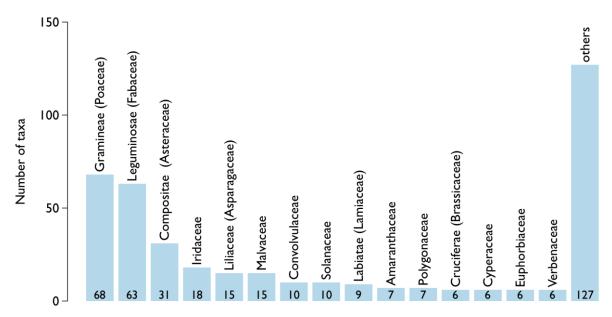


Figure 2: Western Australian naturalised species not found in South Australia grouped by Family.

Table 1. List of Western Australian taxa not as yet recorded in the Census of South Australian plants (October 2011).

Western Australian taxon name	Comparison name	Family	
Abutilon grandifolium (Willd.) Sweet	Abutilon grandifolium	Malvaceae	
Acacia elata Benth.	Acacia elata	Leguminosae	
Acanthospermum hispidum DC.	Acanthospermum hispidum	Compositae / Asteraceae	
Adenocarpus complicatus (L.) J.Gay	Adenocarpus complicatus	Leguminosae / Fabaceae	
Aeschynomene americana L.	Aeschynomene americana	Leguminosae / Fabaceae	
Aeschynomene villosa Poir.	Aeschynomene villosa	Leguminosae / Fabaceae	
Ageratum conyzoides L.	Ageratum conyzoides	Compositae / Asteraceae	
Ageratum conyzoides L. subsp. conyzoides	Ageratum conyzoides	Compositae / Asteraceae	
Agrostis castellana Boiss. & Reut.	Agrostis castellana	Gramineae / Poaceae	
Albuca canadensis (L.) F.M.Leight.	Albuca canadensis	Liliaceae / Asparagaceae	
Allamanda cathartica L.	Allamanda cathartica	Apocynaceae	
Allium orientale Boiss.	Allium orientale	Liliaceae / Amaryllidaceae	
Allium porrum L.	Allium porrum	Liliaceae / Amaryllidaceae	
Alocasia brisbanensis (F.M.Bailey) Domin	Alocasia brisbanensis	Araceae	
Aloe variegata L.	Aloe variegata	Liliaceae / Xanthorrhoeaceae	
Aloe vera var. officinalis (Forssk.) Baker	Aloe vera^	Liliaceae / Xanthorrhoeaceae	
Alstroemeria psittacina Lehm.	Alstroemeria psittacina^	Liliaceae / Alstroemeriaceae	
Alternanthera brasiliana (L.) Kuntze	Alternanthera brasiliana	Amaranthaceae	
Alternanthera brasiliana var. villosa (Moq.) Kuntze	Alternanthera brasiliana	Amaranthaceae	
Alysicarpus ovalifolius (Schumach.) J.Leonard Alysicarpus vaginalia (L.) A DC	Alysicarpus vaginalis	Leguminosae / Fabaceae	
Alysicarpus vaginalis (L.) A.DC.	Alysicarpus vaginalis	Leguminosae / Fabaceae	
Amaranthus blitum L.	Amaranthus blitum Amaranthus tricolor	Amaranthaceae	
Amaranthus tricolor L.		Amaranthaceae	
Andropogon distachyos L. Andropogon gayanus Kunth.	Andropogon distachyos	Gramineae / Poaceae Gramineae / Poaceae	
Annona reticulata L.	Andropogon gayanus Annona reticulata		
	Annona reticulata Anoda cristata	Annonaceae	
Anoda cristata (L.) Schltdl. Anthriscus caucalis M.Bieb.		Malvaceae	
Antigonon leptopus Hook. & Arn.	Anthriscus caucalis	Umbelliferae / Apiaceae Polygonaceae	
Arabidopsis thaliana (L.) Heynh.	Antigonon leptopus	Cruciferae / Brassicaceae	
Argemone mexicana L.	Arabidopsis thaliana Argemone mexicana	Papaveraceae	
Aristida ramosa R.Br.	Aristida ramosa	Gramineae / Poaceae	
	Aristolochia grandiflora	Aristolochiaceae	
Aristolochia grandiflora Sw. Asparagus aethiopicus L.	Anstolochia grandillora Asparagus aethiopicus^	Liliaceae / Asparagaceae	
Asystasia gangetica (L.) T.Anderson	Asystasia gangetica	Acanthaceae	
Atriplex hortensis L.	Atriplex hortensis	Chenopodiaceae	
Atriplex lentiformis (Torr.) S.Watson	Atriplex lentiformis	Chenopodiaceae	
Atriplex undulata (Moq.) D.Dietr.	Atriplex undulata	Chenopodiaceae	
Avena abyssinica Hochst.	Avena abyssinica	Gramineae / Poaceae	
Avena strigosa Schreb.	Avena strigosa	Gramineae / Poaceae	
Azadirachta indica A.Juss.	Azadirachta indica	Meliaceae	
Babiana angustifolia Sweet	Babiana angustifolia	Iridaceae	
Babiana nana (Andr.) Spreng.	Babiana nana	Iridaceae	

Western Australian taxon name	Comparison name	Family	
Babiana tubulosa var. tubiflora (L.f.) G.J.Lewis	Babiana tubulosa	Iridaceae	
Bacopa monnieri (L.) Pennell	Bacopa monnieri	Scrophulariaceae / Plantaginaceae	
Baeometra uniflora (Jacq.) G.J.Lewis	Baeometra uniflora	Liliaceae / Colchicaceae	
Banksia canei J.H.Willis	Banksia canei	Proteaceae	
Bidens bipinnata L.	Bidens bipinnata	Compositae / Asteraceae	
Biserrula pelecinus L.	Biserrula pelecinus	Leguminosae / Fabaceae	
Bothriochloa pertusa (L.) A.Camus	Bothriochloa pertusa	Gramineae / Poaceae	
Brassica barrelieri subsp. oxyrrhina (Coss.) P.W.Ball. & Heywood	Brassica barrelieri	Cruciferae / Brassicaceae	
Bupleurum lancifolium Hornem.	Bupleurum lancifolium	Umbelliferae / Apiaceae	
Cajanus cajan (L.) Huth	Cajanus cajan	Leguminosae / Fabaceae	
Calotropis gigantea (L.) W.T.Aiton	Calotropis gigantea	Asclepiadaceae / Apocynaceae	
Canavalia ensiformis (L.) DC.	Canavalia ensiformis	Leguminosae / Fabaceae	
Canna x generalis L.H.Bailey	Canna x generalis	Cannaceae	
Canna x orchiodes L.H.Bailey	Canna x orchiodes	Cannaceae	
Cardamine sp. Jandakot (P. Luff s.n. 4/7/1969)	Cardamine sp	Cruciferae / Brassicaceae	
Cardiospermum grandiflorum Sw.	Cardiospermum grandiflorum	Sapindaceae	
Cardiospermum halicacabum L.	Cardiospermum halicacabum	Sapindaceae	
Cardiospermum halicacabum L. var. halicacabum	Cardiospermum halicacabum	Sapindaceae	
Carduus nutans L.	Carduus nutans	Compositae / Asteraceae	
Carpobrotus aequilaterus (Haw.) N.E.Br. Cascabela thevetia (L.) Lippold	Carpobrotus aequilaterus Cascabela thevetia	Anacyraacaa	
, ,		Apocynaceae	
Casuarina cunninghamiana Miq. subsp. cunninghamiana Casuarina equisetifolia L.	Casuarina cunninghamiana Casuarina equisetifolia	Casuarinaceae Casuarinaceae	
Casuarina equisetifolia L. subsp.	Casuarina equisetifolia	Casuarinaceae	
equisetifolia Celosia argentea L.	Celosia argentea	Amaranthaceae	
Cenchrus biflorus Roxb.	Cenchrus biflorus	Gramineae / Poaceae	
Cenchrus incertus M.A.Curtis	Cenchrus incertus	Gramineae / Poaceae	
Cenchrus setigerus Vahl	Cenchrus setigerus	Gramineae / Poaceae	
Centrosema pascuorum Benth.	Centrosema pascuorum	Leguminosae / Fabaceae	
Cerastium comatum Desv.	Cerastium comatum	Caryophyllaceae	
Cerastium vulgare Hartm.	Cerastium vulgare	Caryophyllaceae	
Cerastium vuigare riaitin. Chamaecrista rotundifolia (Pers.) Greene	Chamaecrista rotundifolia	Leguminosae / Fabaceae	
Chenopodium macrospermum Hook.f.	Chenopodium macrospermum	Chenopodiaceae	
Chlorophytum comosum (Thunb.) Jacques	Chlorophytum comosum	Liliaceae / Asparagaceae	
Chrysanthemum segetum L.	Chrysanthemum segetum	Compositae / Asteraceae	
Chrysocoma coma-aurea L.	Chrysocoma coma-aurea	Compositae / Asteraceae	
Chrysopogon aciculatus (Retz.) Trin.	Chrysopogon aciculatus	Gramineae / Poaceae	
Cinnamomum camphora (L.) T.Nees & C.H.Eberm.	Cinnamomum camphora	Lauraceae	
Clitoria ternatea L.	Clitoria ternatea	Leguminosae / Fabaceae	
Coccinia grandis (L.) Voigt	Coccinia grandis	Cucurbitaceae	
Coix lacryma-jobi L.	Coix lacryma-jobi	Gramineae / Poaceae	
Coleonema album (Thunb.) Bartl. & H.L.Wendl.	Coleonema album	Rutaceae	
Colocasia esculenta (L.) Schott var. esculenta	Colocasia esculenta	Araceae	
Commelina benghalensis L.	Commelina benghalensis	Commelinaceae	

Western Australian taxon name	Comparison name	Family	
Convolvulus sabatius subsp. mauritanicus (Boiss.) Mirb.	Convolvulus sabatius Convolvulaceae		
Conyza parva Cronquist	Conyza parva	Asteraceae	
Corchorus olitorius L.	Corchorus olitorius	Tiliaceae	
Coreopsis grandiflora Sweet	Coreopsis grandiflora	Compositae / Asteraceae	
Corrigiola litoralis L.	Corrigiola litoralis	Caryophyllaceae	
Cortaderia jubata (Lemoine) Stapf	Cortaderia jubata^	Gramineae / Poaceae	
Corynephorus fasciculatus Boiss. & Reut.	Corynephorus fasciculatus	Gramineae / Poaceae	
Cotula turbinata L.	Cotula turbinata	Compositae / Asteraceae	
Crassula thunbergiana Schult.	Crassula thunbergiana	Crassulaceae	
Crassula thunbergiana Schult. subsp. thunbergiana	Crassula thunbergiana	Crassulaceae	
Crotalaria agatiflora Schweinf. subsp. agatiflora	Crotalaria agatiflora	Leguminosae / Fabaceae	
Crotalaria goreensis Guill. & Perr.	Crotalaria goreensis	Leguminosae / Fabaceae	
Crotalaria incana L. subsp. incana	Crotalaria incana	Leguminosae / Fabaceae	
Crotalaria juncea L.	Crotalaria juncea	Leguminosae / Fabaceae	
Crotalaria laburnifolia L.	Crotalaria laburnifolia	Leguminosae / Fabaceae	
Crotalaria laburnifolia L. subsp. laburnifolia	Crotalaria laburnifolia	Leguminosae / Fabaceae	
Crotalaria pallida Aiton	Crotalaria pallida	Leguminosae / Fabaceae	
Crotalaria prostrata Willd.	Crotalaria prostrata	Leguminosae / Fabaceae	
Croton setigerus Hook.	Croton setigerus	Euphorbiaceae	
Crypsis schoenoides (L.) Lam.	Crypsis schoenoides	Gramineae / Poaceae	
Cryptostegia grandiflora R.Br.	Cryptostegia grandiflora	Asclepiadaceae / Apocynaceae	
Cryptostegia madagascariensis Decne	Cryptostegia madagascariensis	Asclepiadaceae / Apocynaceae	
Cryptostegia madagascariensis var. glaberrima (Hochr.) J.Marohasy & P.I.Forst.	Cryptostegia madagascariensis	Asclepiadaceae / Apocynaceae	
Cucumis anguria L. var. anguria	Cucumis anguria	Cucurbitaceae	
Cucumis sp. Bunbury (G. Brayshaw s.n. 26/2/91)	Cucumis sp	Cucurbitaceae	
Cyanella hyacinthoides L.	Cyanella hyacinthoides	Tecophilaeaceae	
Cyperus compressus L.	Cyperus compressus	Cyperaceae	
Cyperus papyrus L.	Cyperus papyrus	Cyperaceae	
Cyperus polystachyos Rottb.	Cyperus polystachyos	Cyperaceae	
Cyperus tenuiflorus Rottb.	Cyperus tenuiflorus	Cyperaceae	
Cyperus vorsteri K.L.Wilson	Cyperus vorsteri	Cyperaceae	
Dactyloctenium aegyptium (L.) Willd.	Dactyloctenium aegyptium	Gramineae / Poaceae	
Datura metel L.	Datura metel	Solanaceae	
Delonix regia (Hook.) Raf.	Delonix regia	Leguminosae / Fabaceae	
Desmodium scorpiurus (Sw.) Desv.	Desmodium scorpiurus	Leguminosae / Fabaceae	
Desmodium tortuosum (Sw.) DC.	Desmodium tortuosum	Leguminosae / Fabaceae	
Desmodium triflorum (L.) DC.	Desmodium triflorum	Leguminosae / Fabaceae	
Dichanthium aristatum (Poir.) C.E.Hubb.	Dichanthium aristatum	Gramineae / Poaceae	
Dichondra micrantha Urb.	Dichondra micrantha	Convolvulaceae	
Dierama pulcherrimum (Hook.f.) Baker	Dierama pulcherrimum	Iridaceae	
Digitaria didactyla Willd.	Digitaria didactyla	Gramineae / Poaceae	
Digitaria eriantha Steud.	Digitaria eriantha	Gramineae / Poaceae	
Digitaria radicosa (J.Presl) Miq.	Digitaria radicosa	Gramineae / Poaceae	

Western Australian taxon name	Comparison name	Family	
Dimorphotheca ecklonis DC.	Dimorphotheca ecklonis [^]	Compositae / Asteraceae	
Dittrichia viscosa (L.) Greuter	Dittrichia viscosa	Compositae / Asteraceae	
Dorotheanthus bellidiformis (Burm.f.) N.E.Br.	Dorotheanthus bellidiformis	Aizoaceae	
Echinochloa frumentacea Link	Echinochloa frumentacea	Gramineae / Poaceae	
Echinochloa oryzoides (Ard.) Fritsch	Echinochloa oryzoides	Gramineae / Poaceae	
Echinochloa telmatophila P.W.Michael & Vickery	Echinochloa telmatophila	Gramineae / Poaceae	
Eclipta prostrata (L.) L.	Eclipta prostrata	Compositae / Asteraceae	
Eclipta sp. Perth (S. Lloyd s.n. 3/4/1998)	Eclipta sp	Compositae / Asteraceae	
Ehrharta brevifolia Schrad.	Ehrharta brevifolia	Gramineae / Poaceae	
Ehrharta brevifolia Schrad. var. brevifolia	Ehrharta brevifolia	Gramineae / Poaceae	
Ehrharta brevifolia var. cuspidata Nees	Ehrharta brevifolia	Gramineae / Poaceae	
Ehrharta pusilla Trin.	Ehrharta pusilla	Gramineae / Poaceae	
Eleusine coracan (L.) Gaertn.	Eleusine coracan	Gramineae / Poaceae	
Emilia sonchifolia (L.) DC.	Emilia sonchifolia	Compositae / Asteraceae	
Emilia sonchifolia (L.) DC. var. sonchifolia	Emilia sonchifolia	Compositae / Asteraceae	
Epilobium tetragonum L. subsp. tetragonum	Epilobium tetragonum	Onagraceae	
Eragrostis amabilis (L.) Nees var. amabilis	Eragrostis amabilis	Gramineae / Poaceae	
Eragrostis tenuifolia (A.Rich.) Steud.	Eragrostis tenuifolia	Gramineae / Poaceae	
Erythrina x sykesii Barneby & Krukoff	Erythrina x sykesii	Leguminosae / Fabaceae	
Eucalyptus botryoides Sm.	Eucalyptus botryoides	Myrtaceae	
Eucalyptus microcorys F.Muell.	Eucalyptus microcorys	Myrtaceae	
Euphorbia hirta L.	Euphorbia hirta	Euphorbiaceae	
Euphorbia prostrata W.T.Aiton	Euphorbia prostrata	Euphorbiaceae	
Euphorbia tirucalli L.	Euphorbia tirucalli	Euphorbiaceae	
Evolvulus nummularius (L.) L.	Evolvulus nummularius	Convolvulaceae	
Fagopyrum esculentum Moench	Fagopyrum esculentum	Polygonaceae	
Filago gallica L.	Filago gallica	Compositae / Asteraceae	
Freesia alba x leichtlinii	Freesia alba x leichtlinii ⁿ	Iridaceae	
Furcraea foetida (L.) Haw.	Furcraea foetida	Liliaceae / Asparagaceae	
Furcraea selloa K.Koch	Furcraea selloa	Liliaceae / Asparagaceae	
Gamochaeta coarctata (Willd.) Kerguelen	Gamochaeta coarctata^	Compositae / Asteraceae	
Gladiolus alatus L.	Gladiolus alatus	Iridaceae	
Gladiolus cardinalis Curtis	Gladiolus cardinalis	Iridaceae	
Gladiolus caryophyllaceus (Burm.f.) Poir.	Gladiolus caryophyllaceus	Iridaceae	
Glandularia aristigera (S.Moore) Tronc.	Glandularia aristigera	Verbenaceae	
Gliricidia sepium (Jacq.) Walp.	Gliricidia sepium	Leguminosae / Fabaceae	
Gorteria personata L.	Gorteria personata	Compositae / Asteraceae	
Gossypium hirsutum L.	Gossypium hirsutum	Malvaceae	
Grammatotheca bergiana (Cham.) C.Presl var. bergiana Gratelounia impriretta Holmas	Grammatotheca bergiana	Campanulaceae	
Grateloupia imbricata Holmes	Grateloupia imbricata	Halymeniaceae	
Grewia asiatica L.	Grewia asiatica	Tiliaceae / Malvaceae	
Grindelia camporum Greene	Grindelia camporum	Compositae / Asteraceae	
Helianthus debilis subsp.	Helianthus debilis	Compositae / Asteraceae	

Western Australian taxon name	Comparison name	Family
cucumerifolius (Torr. & A.Gray) Heiser		
Heliotropium indicum L.	Heliotropium indicum	Boraginaceae
Hibiscus diversifolius Jacq.	Hibiscus diversifolius	Malvaceae
Hibiscus sabdariffa L.	Hibiscus sabdariffa	Malvaceae
Holcus setiger Nees	Holcus setiger	Gramineae / Poaceae
Hydrocotyle ranunculoides L.f.	Hydrocotyle ranunculoides	Umbelliferae / Apiaceae
Hylocereus undatus (Haw.) Britton & Rose	Hylocereus undatus	Cactaceae
Hypericum canariense L.	Hypericum canariense	Guttiferae
Hyptis suaveolens (L.) Poit.	Hyptis suaveolens	Labiatae / Lamiaceae
Illecebrum verticillatum L.	Illecebrum verticillatum	Caryophyllaceae
Impatiens sodenii Engl.	Impatiens sodenii	Balsaminaceae
Indigofera hochstetteri Baker	Indigofera hochstetteri	Leguminosae / Fabaceae
Indigofera oblongifolia Forssk.	Indigofera oblongifolia	Leguminosae / Fabaceae
Indigofera sessiliflora DC.	Indigofera sessiliflora	Leguminosae / Fabaceae
Ipomoea batatas (L.) Lam.	Ipomoea batatas	Convolvulaceae
Ipomoea hederifolia L.	Ipomoea hederifolia	Convolvulaceae
Ipomoea pes-tigridis L.	Ipomoea pes-tigridis	Convolvulaceae
Ipomoea quamoclit L.	Ipomoea quamoclit	Convolvulaceae
Ipomoea triloba L.	lpomoea triloba	Convolvulaceae
Iris laevigata Fisch.	Iris laevigata	Iridaceae
Isachne minutula (Gaudich.) Kunth	Isachne minutula	Gramineae / Poaceae
Isolepis prolifera (Rottb.) R.Br.	Isolepis prolifera	Cyperaceae
Jatropha gossypiifolia L.	Jatropha gossypiifolia	Leguminosae / Fabaceae
Juncus hybridus Brot.	Juncus hybridus	Juncaceae
Juncus imbricatus Laharpe	Juncus imbricatus	Juncaceae
Juncus microcephalus Kunth	Juncus microcephalus	Juncaceae
Juncus oxycarpus Kunth	Juncus oxycarpus	Juncaceae
Juncus polyanthemus Buchenau	Juncus polyanthemus	Juncaceae
Lablab purpureus (L.) Sweet	Lablab purpureus	Leguminosae / Fabaceae
Lachenalia mutabilis Sweet	Lachenalia mutabilis	Liliaceae / Asparagaceae
Lachenalia reflexa Thunb.	Lachenalia reflexa	Liliaceae / Asparagaceae
Lagunaria patersonia (Andrews) G.Don	Lagunaria patersonia	Malvaceae Masparagaceae
Lagunaria patersonia (Andrews) G.Don subsp. patersonia	Lagunaria patersonia	Malvaceae
Lapeirousia anceps (L.f.) Ker Gawl.	Lapeirousia anceps	Iridaceae
Lavatera trimestris L.	Lavatera trimestris	Malvaceae
Leonotis nepetifolia (L.) R.Br.	Leonotis nepetifolia	Labiatae / Lamiaceae
Leontodon hispidus L. subsp. hispidus	Leontodon hispidus^	Compositae / Asteraceae
Leontodon saxatilis Lam.	Leontodon saxatilis	Compositae / Asteraceae
Leptospermum rotundifolium (Maiden & Betche) F.A.Rodway	Leptospermum rotundifolium	Myrtaceae
Leucaena leucocephala (Lam.) de Wit	Leucaena leucocephala	Leguminosae / Fabaceae
Leucaena leucocephala (Lam.) de Wit subsp. leucocephala	Leucaena leucocephala	Leguminosae / Fabaceae
Ligustrum ovalifolium Hassk.	Ligustrum ovalifolium	Oleaceae
Linaria maroccana Hook.f. Lindernia ciliata (Colsm.) Pennell	Linaria maroccana Lindernia ciliata	Scrophulariaceae / Linderniaceae Scrophulariaceae /
Emacinia cinata (OOISIII.) FEIIITEII	Enlucinia ciliata	Linderniaceae
Lindernia crustacea L.	Lindernia crustacea	Scrophulariaceae / Linderniaceae
Lolium perenne x rigidum	Lolium x rigidum^	Gramineae / Poaceae

Western Australian taxon name	Comparison name	Family	
Lolium remotum Schrank	Lolium remotum	Gramineae / Poaceae	
Lonicera x italica Tausch	Lonicera x italica	Caprifoliaceae	
Lupinus albus L.	Lupinus albus	Leguminosae / Fabaceae	
Lupinus angustifolius L.	Lupinus angustifolius	Leguminosae / Fabaceae	
Lysimachia arvensis (L.) U.Manns & Anderb.	Lysimachia arvensis	Primulaceae	
Lysimachia minima (L.) U.Manns & Anderb.	Lysimachia minima	Primulaceae	
Macroptilium atropurpureum (Moc. & Sesse) Urb.	Macroptilium atropurpureum	Leguminosae / Fabaceae	
Macroptilium lathyroides (L.) Urb.	Macroptilium lathyroides	Leguminosae / Fabaceae	
Macroptilium lathyroides var. semierectum (L.) Urb.	Macroptilium lathyroides	Leguminosae / Fabaceae	
Malva pseudolavatera Webb & Berthel.	Malva pseudolavatera	Malvaceae	
Malvastrum coromandelianum (L.) Garcke	Malvastrum coromandelianum	Malvaceae	
Mangifera indica L.	Mangifera indica	Anacardiaceae	
Medicago intertexta (L.) Mill. var. intertexta	Medicago intertexta	Leguminosae / Fabaceae	
Megathyrsus maximus (Jacq.) B.K.Simon & S.W.L.Jacobs	Megathyrsus maximus	Gramineae / Poaceae	
Megathyrsus maximus (Jacq.) B.K.Simon & S.W.L.Jacobs var. maximus	Megathyrsus maximus	Gramineae / Poaceae	
Melaleuca linariifolia Sm.	Melaleuca linariifolia	Myrtaceae	
Melinis minutiflora P.Beauv.	Melinis minutiflora	Gramineae / Poaceae	
Melochia pyramidata L.	Melochia pyramidata	Sterculiaceae / Malvaceae	
Mentha aquatica L.	Mentha aquatica	Labiatae / Lamiaceae	
Mentha suaveolens Ehrh.	Mentha suaveolens	Labiatae / Lamiaceae	
Mentha x piperita L.	Mentha x piperita	Labiatae / Lamiaceae	
Mentha x piperita var. citrata (Ehrh.) Briq.	Mentha x piperita	Labiatae / Lamiaceae	
Mentha x piperita var. piperita	Mentha x piperita	Labiatae / Lamiaceae	
Merremia aegyptia (L.) Urb.	Merremia aegyptia	Convolvulaceae	
Mimosa pigra L.	Mimosa pigra	Leguminosae / Fabaceae	
Molineriella minuta (L.) Rouy	Molineriella minuta	Gramineae / Poaceae	
Moraea lewisiae (Goldblatt) Goldblatt	Moraea lewisiae	Iridaceae	
Moringa oleifera Lam.	Moringa oleifera	Moringaceae	
Morus alba L.	Morus alba	Moraceae	
Muehlenbeckia complexa (A.Cunn.) Meisn.	Muehlenbeckia complexa	Polygonaceae	
Murdannia nudiflora (L.) Brenan	Murdannia nudiflora	Commelinaceae	
Musa acuminata Colla	Musa acuminata	Musaceae	
Narcissus papyraceus Ker Gawl.	Narcissus papyraceus	Liliaceae / Amaryllidaceae	
Nephrolepis cordifolia (L.) C.Presl	Nephrolepis cordifolia	Lomariopsidaceae	
Nerine bowdenii W.Watson	Nerine bowdenii	Liliaceae / Amaryllidaceae	
Nothoscordum gracile (Aiton) Stearn	Nothoscordum gracile	Liliaceae / Amaryllidaceae	
Nymphaea mexicana Zucc.	Nymphaea mexicana	Nymphaeaceae	
Nymphaea odorata Aiton	Nymphaea odorata	Nymphaeaceae	
Ocimum tenuiflorum L.	Ocimum tenuiflorum	Labiatae / Lamiaceae	
Oenothera indecora subsp. bonariensis W.Dietr.	Oenothera indecora	Onagraceae	
Oenothera jamesii Torr. & A.Gray	Oenothera jamesii	Onagraceae	
Oenothera laciniata Hill	Oenothera laciniata	Onagraceae	
Oenothera mollissima L.	Oenothera mollissima	Onagraceae	
Oncosiphon piluliferum (L.f.) Kallersjo	Oncosiphon piluliferum	Compositae / Asteraceae	

Western Australian taxon name	Comparison name	Family	
Operculina turpethum (L.) Silva Manso			
Ornithogalum longebracteatum Jacq.	Ornithogalum longebracteatum	Liliaceae / Asparagaceae	
Ornithopus pinnatus (Mill.) Druce	Ornithopus pinnatus	Leguminosae / Fabaceae	
Oryza sativa L.	Oryza sativa	Gramineae / Poaceae	
Oxalis corymbosa DC.	Oxalis corymbosa	Oxalidaceae	
Oxalis depressa Eckl. & Zeyh.	Oxalis depressa	Oxalidaceae	
Oxalis glabra Thunb.	Oxalis glabra	Oxalidaceae	
Oxalis violacea L.	Oxalis violacea	Oxalidaceae	
Ozothamnus diosmifolius (Vent.) DC.	Ozothamnus diosmifolius	Compositae / Asteraceae	
Panicum repens L.	Panicum repens	Gramineae / Poaceae	
Parthenium hysterophorus L.	Parthenium hysterophorus	Compositae / Asteraceae	
Parthenocissus quinquefolia Planch.	Parthenocissus quinquefolia	Vitaceae	
Parthenocissus tricuspidata (Siebold	Parthenocissus tricuspidata	Vitaceae	
& Zucc.) Planch.	Pagalum conjugatum	Gramineae / Poaceae	
Paspalum conjugatum P.J.Bergius Paspalum fasciculatum Fluegge	Paspalum conjugatum	Gramineae / Poaceae Gramineae / Poaceae	
1 00	Paspalum fasciculatum		
Paspalum notatum Fluegge	Paspalum notatum	Gramineae / Poaceae Gramineae / Poaceae	
Paspalum urvillei Steud.	Paspalum urvillei		
Passiflora filamentosa Cav.	Passiflora filamentosa	Passifloraceae	
Passiflora foetida L.	Passiflora foetida	Passifloraceae	
Passiflora foetida var. hispida (Triana & Planch.) Killip	Passiflora foetida	Passifloraceae	
Pelargonium alchemilloides (L.) L'Her.	Pelargonium alchemilloides	Geraniaceae	
Pelargonium x asperum Willd.	Pelargonium x asperum	Geraniaceae	
Pelargonium x domesticum L.H.Bailey	Pelargonium x domesticum	Geraniaceae	
Peltophorum pterocarpum (DC.) K.Heyne	Peltophorum pterocarpum	Leguminosae / Fabaceae	
Pennisetum glaucum (L.) R.Br.	Pennisetum glaucum	Gramineae / Poaceae	
Pennisetum pedicellatum subsp. unispiculum Brunken	Pennisetum pedicellatum	Gramineae / Poaceae	
Pennisetum pedicellatum Trin.	Pennisetum pedicellatum	Gramineae / Poaceae	
Pennisetum pedicellatum Trin. subsp. pedicellatum	Pennisetum pedicellatum	Gramineae / Poaceae	
Pennisetum purpureum Schumach.	Pennisetum purpureum	Gramineae / Poaceae	
Pentameris airoides Nees	Pentameris airoides	Gramineae / Poaceae	
Pentameris airoides Nees subsp. airoides	Pentameris airoides	Gramineae / Poaceae	
Pentameris pallida (Thunb.) Galley & H.P.Linder	Pentameris pallida	Gramineae / Poaceae	
Peperomia pellucida (L.) Kunth	Peperomia pellucida	Piperaceae	
Petunia x hybrida Vilm.	Petunia x hybrida	Solanaceae	
Phalaris angusta Trin.	Phalaris angusta	Gramineae / Poaceae	
Phleum arenarium L.	Phleum arenarium	Gramineae / Poaceae	
Phyla nodiflora (L.) Greene	Phyla nodiflora	Verbenaceae	
Phyla nodiflora (L.) Greene var. nodiflora	Phyla nodiflora	Verbenaceae	
Phyllanthus amarus Schumach.	Phyllanthus amarus	Euphorbiaceae	
Phyllanthus tenellus Roxb.	Phyllanthus tenellus	Euphorbiaceae	
Physalis hederifolia A.Gray	Physalis hederifolia	Solanaceae	
Physalis philadelphica Lam.	Physalis philadelphica	Solanaceae	
Physalis pubescens L.	Physalis pubescens	Solanaceae	
Pistia stratiotes L.	Pistia stratiotes	Araceae	
Plantago cretica L.	Plantago cretica	Plantaginaceae	
Platanus x hispanica Muenchh.	Platanus x hispanica	Platanaceae	

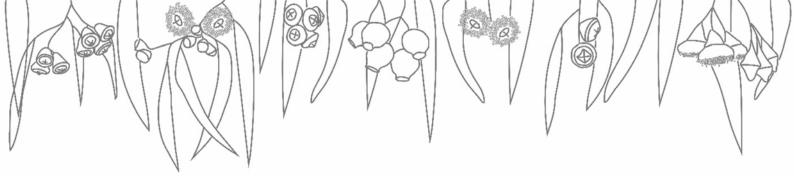
Western Australian taxon name	Comparison name	Family	
Portulacaria afra (L.) Jacq.	Portulacaria afra	Portulacaceae / Didiereaceae	
Prosopis glandulosa Torr. var. glandulosa	Prosopis glandulosa	Leguminosae / Fabaceae	
Prosopis glandulosa x velutina Torr. & Wooton	Prosopis glandulosa x velutina	Leguminosae / Fabaceae	
Prosopis pallida (Willd.) Kunth	Prosopis pallida	Leguminosae / Fabaceae	
Psoralea arborea Sims	Psoralea arborea	Leguminosae / Fabaceae	
Puccinellia gigantea (Grossh.) Grossh.	Puccinellia gigantea	Gramineae / Poaceae	
Pupalia lappacea (L.) Juss.	Pupalia lappacea	Amaranthaceae	
Pupalia micrantha Hauman	Pupalia micrantha	Amaranthaceae	
Reichardia picroides (L.) Roth	Reichardia picroides	Compositae / Asteraceae	
Richardia brasiliensis Gomes	Richardia brasiliensis	Rubiaceae	
Richardia scabra L.	Richardia scabra	Rubiaceae	
Romneya trichocalyx Eastw.	Romneya trichocalyx	Papaveraceae	
Romulea flava (Lam.) M.P.deVos	Romulea flava	Iridaceae	
Romulea flava var. minor (Beg.) M.P.deVos	Romulea flava	Iridaceae	
Romulea obscura Klatt	Romulea obscura	Iridaceae	
Rosa chinensis x moschata Herrm.	Rosa chinensis x moschata	Rosaceae	
Rosa chinensis x multiflora Murray	Rosa chinensis x multiflora	Rosaceae	
Rosa laevigata Michx.	Rosa laevigata	Rosaceae	
Rubus laudatus A.Berger	Rubus laudatus	Rosaceae	
Ruellia tuberosa L.	Ruellia tuberosa	Acanthaceae	
Rumex bucephalophorus L.	Rumex bucephalophorus	Polygonaceae	
Rumex frutescens Thouars	Rumex frutescens	Polygonaceae	
Rumex x muretii Hausskn.	Rumex x muretii	Polygonaceae	
Rumex x pseudopulcher Hausskn.	Rumex x pseudopulcher	Polygonaceae	
Samolus valerandi L.	Samolus valerandi	Primulaceae	
Schinus terebinthifolius Raddi	Schinus terebinthifolius	Anacardiaceae	
Scoparia dulcis L.	Scoparia dulcis	Celastraceae	
Senecio diaschides D.G.Drury	Senecio diaschides	Compositae / Asteraceae	
Senecio glastifolius L.f.	Senecio glastifolius	Compositae / Asteraceae	
Senna alata (L.) Roxb.	Senna alata	Leguminosae / Fabaceae	
Senna obtusifolia (L.) H.S.Irwin & Barneby	Senna obtusifolia	Leguminosae / Fabaceae	
Sequoia sempervirens (D.Don) Endl.	Sequoia sempervirens	Cupressaceae	
Setaria incrassata Hack.	Setaria incrassata	Gramineae / Poaceae	
Setaria sphacelata (Schumach.) Stapf & C.E.Hubb.	Setaria sphacelata	Gramineae / Poaceae	
Sida acuta Burm.f.	Sida acuta	Malvaceae	
Sida cordifolia L.	Sida cordifolia	Malvaceae	
Sida rhombifolia L.	Sida rhombifolia	Malvaceae	
Sida subcordata Span.	Sida subcordata	Malvaceae	
Sinapis alba L.	Sinapis alba	Cruciferae / Brassicaceae	
Sisymbrium runcinatum DC.	Sisymbrium runcinatum	Cruciferae / Brassicaceae	
Sisyrinchium exile E.P.Bicknell	Sisyrinchium exile	Iridaceae	
Solanum americanum Mill.	Solanum americanum	Solanaceae	
Solanum giganteum Jacq.	Solanum giganteum	Solanaceae	
Solanum seaforthianum Andrews	Solanum seaforthianum	Solanaceae	
Solanum sisymbriifolium Lam.	Solanum sisymbriifolium	Solanaceae	
Solanum tuberosum L.	Solanum tuberosum	Solanaceae	
Sorghastrum nutans (L.) Nash	Sorghastrum nutans	Gramineae / Poaceae	

Western Australian taxon name	Comparison name	Family
Sorghum x almum Parodi	Sorghum x almum	Gramineae / Poaceae
Sorghum x drummondii (Steud.) Millsp. & Chase	Sorghum x drummondii	Gramineae / Poaceae
Sparaxis pillansii L.Bolus	Sparaxis pillansii	Iridaceae
Spergula pentandra L.	Spergula pentandra	Caryophyllaceae
Sphagneticola trilobata (L.) Pruski	Sphagneticola trilobata	Compositae / Asteraceae
Spinifex sericeus R.Br.	Spinifex sericeus	Gramineae / Poaceae
Spirodela polyrhiza (L.) Schleid.	Spirodela polyrhiza	Lemnaceae
Sporobolus jacquemontii Kunth	Sporobolus jacquemontii	Gramineae / Poaceae
Stachytarpheta cayennensis (Rich.) Vahl	Stachytarpheta cayennensis	Verbenaceae
Stachytarpheta jamaicensis (L.) Vahl	Stachytarpheta jamaicensis	Verbenaceae
Stylosanthes guianensis (Aubl.) Sw.	Stylosanthes guianensis	Leguminosae / Fabaceae
Stylosanthes hamata (L.) Taub.	Stylosanthes hamata	Leguminosae / Fabaceae
Stylosanthes humilis Kunth	Stylosanthes humilis	Leguminosae / Fabaceae
Stylosanthes scabra Vogel	Stylosanthes scabra	Leguminosae / Fabaceae
Stylosanthes viscosa Sw.	Stylosanthes viscosa	Leguminosae / Fabaceae
Succowia balearica (L.) Medik.	Succowia balearica	Cruciferae / Brassicaceae
Symphyotrichum squamatum (Spreng.) G.L.Nesom	Symphyotrichum squamatum	Compositae / Asteraceae
Syringa vulgaris L.	Syringa vulgaris	Oleaceae
Tagetes erecta L.	Tagetes erecta	Compositae / Asteraceae
Tamarindus indica L.	Tamarindus indica	Leguminosae / Fabaceae
Tamarix gallica L.	Tamarix gallica	Tamaricaceae
Tecoma stans (L.) Kunth. var. stans	Tecoma stans	Bignoniaceae
Tetragonia nigrescens Eckl. & Zeyh.	Tetragonia nigrescens	Aizoaceae
Tetrapanax papyrifer (Hook.) K.Koch	Tetrapanax papyrifer	Araliaceae
Themeda quadrivalvis (L.) Kuntze	Themeda quadrivalvis	Gramineae / Poaceae
Thinopyrum distichum (Thunb.) A.Love	Thinopyrum distichum	Gramineae / Poaceae Acanthaceae
Thunbergia alata Sims Tolpis virgata (Desf.) Bertol.	Thunbergia alata	Compositae / Asteraceae
. • ,	Tolpis virgata	
Trianthema portulacastrum L.	Trianthema portulacastrum	Aizoaceae
Tribolium uniolae (L.f.) Renvoize	Tribolium uniolae	Gramineae / Poaceae
Tridax procumbens L.	Tridax procumbens	Compositae / Asteraceae
Trifolium hybridum L. var. hybridum	Trifolium hybridum	Leguminosae / Fabaceae
Trifolium ligusticum Loisel.	Trifolium ligusticum	Leguminosae / Fabaceae
Trifolium michelianum Savi	Trifolium michelianum	Leguminosae / Fabaceae
Trifolium spumosum L.	Trifolium spumosum	Leguminosae / Fabaceae
Triglochin bulbosa L.	Triglochin bulbosa	Juncaginaceae
Triumfetta pentandra A.Rich.	Triumfetta pentandra	Tiliaceae / Malvaceae
Turnera ulmifolia L.	Turnera ulmifolia	Turneraceae
Urena lobata L.	Urena lobata	Malvaceae
Urochloa decumbens (Stapf) R.D.Webster Urochloa humidicola (Rendle)	Urochloa decumbens Urochloa humidicola	Gramineae / Poaceae Gramineae / Poaceae
Morrone & Zuloaga	Orochioa numiulcola	Grammede / Fuacede
Urochloa mosambicensis (Hack.) Dandy	Urochloa mosambicensis	Gramineae / Poaceae
Urochloa mutica (Forssk.) T.Q.Nguyen	Urochloa mutica	Gramineae / Poaceae
Urochloa ramosa (L.) R.D.Webster	Urochloa ramosa	Gramineae / Poaceae
Ursinia speciosa DC.	Ursinia speciosa	Compositae / Asteraceae
Vachellia farnesiana (L.) Wight & Arn.	Vachellia farnesiana	Leguminosae / Fabaceae

Western Australian taxon name	Comparison name	Family
Vachellia karroo (Hayne) Banfi & Galasso	Vachellia karroo	Leguminosae / Fabaceae
Verbena incompta P.W.Michael	Verbena incompta	Verbenaceae
Vicia benghalensis L.	Vicia benghalensis	Leguminosae / Fabaceae
Vigna radiata var. setulosa (Dalziel) Ohwi & Ohashi	Vigna radiata	Leguminosae / Fabaceae
Vigna trilobata (L.) Verdc.	Vigna trilobata	Leguminosae / Fabaceae
Vitex trifolia L.	Vitex trifolia	Labiatae / Lamiaceae
Wachendorfia paniculata L.	Wachendorfia paniculata	Haemodoraceae
Wahlenbergia capensis (L.) A.DC.	Wahlenbergia capensis	Campanulaceae
Watsonia aletroides (Burm.f.) Ker Gawl.	Watsonia aletroides	Iridaceae
Watsonia knysnana L.Bolus	Watsonia knysnana	Iridaceae
Watsonia versfeldii J.W.Mathews & L.Bolus	Watsonia versfeldii	Iridaceae
Yucca aloifolia L.	Yucca aloifolia	Liliaceae / Asparagaceae
Ziziphus mauritiana Lam.	Ziziphus mauritiana	Rhamnaceae

Regional Landscape Surveillance for New Weed Threats Project Report 2012-2013





This report should be cited as:

Brodie, C.J., Vonow, H.P. & Lang, P.J. (2013). *Milestone: Annual report on new plant naturalisations in SA. Subproject 2.3: Regional landscape surveillance for new weed threats. (RC095360/10 Priority capacity, surveillance and control needs for SA's NRM Biosecurity, State NRM Program 2012-13*), 15 pp. (State Herbarium of South Australia: Adelaide).

State Herbarium of South Australia Science, Monitoring and Knowledge Strategy & Advice Department of Environment, Water & Natural Resources

Milestone Report

Subproject 2.3: Regional landscape surveillance for new weed threats (RC095360/10 Priority capacity, surveillance and control needs for SA's NRM biosecurity, State NRM Program Program 2012-13)

Milestone: Annual report on new plant naturalisations in SA

Chris Brodie, Helen Vonow and Peter Lang.

for

Ms Sandy Carruthers
Director
Science, Monitoring and Knowledge
Strategy & Advice
Department of Environment, Water & Natural Resources

1 June 2013

1. New naturalised or questionably naturalised records of plants in South Australia.

There have been 26 new records of plants collected for the first time in the state of South Australia, deposited in the State Herbarium and recorded as naturalised or questionably naturalised in the *Census of South Australian Plants*, *Algae and Fungi* ¹ (hereafter referred to as the 'Census') between the dates of May 1st 2012 – May 24th 2013 (Table 1).

New Taxa	Common Name	Family	Naturalised	Regional Distribution	Date added to Census
Alnus cordata (Loisel.) Duby	Italian Alder	BETULACEAE	Y?	SL	18/09/2012
Angophora costata (Gaertn.)Britten ssp. costata	Smooth-barked Apple	MYRTACEAE	Υ	SL	26/10/2012
Angophora floribunda (Sm.)Sweet	Rough-barked Apple	MYRTACEAE	Y?	SL	26/10/2012
Anthoxanthum aristatum Boiss.	Annual Vernal Grass	GRAMINEAE	Y	MU	15/05/2013
Atriplex undulata (Moq.)D.Dietr.	Wavy-leaved Saltbush	CHENOPODIACEAE	Y?	SL	15/05/2013
Bacopa monnieri (L.)Wettst.	Pennell	SCROPHULARIACEAE	Y	SE	22/06/2012
Berberis thunbergii DC. var. atropurpurea Chenault	Red Barberry	BERBERIDACEAE	Y?	SL	11/02/2013
Corymbia citriodora (Hook.)K.D.Hill & L.A.S.Johnson	Lemon-scented Gum	MYRTACEAE	Y?	SL	26/10/2012
Corymbia ficifolia (F.Muell.)K.D.Hill & L.A.S.Johnson	Red-flowering Gum	MYRTACEAE	Y	SL	26/10/2012
Cyperus papyrus L.	Papyrus	CYPERACEAE	Y?	YP	11/01/2013
Dahlia imperialis Roezl ex Ortgies	Tree Dahlia	COMPOSITAE	Y?	SL	27/11/2012
Digitalis purpurea L.	Foxglove	SCROPHULARIACEAE	Y?	SL	17/01/2013
Eragrostis trichophora Coss. & Durieu	Hairyflower Lovegrass	GRAMINEAE	Y	EA, EP, SL	18/09/2012
Erythrina X sykesii Barneby & Krukoff	Thorny Coral Tree	LEGUMINOSAE	Y?	SL	3/09/2012
Eucalyptus botryoides Sm.	Southern Mahogany	MYRTACEAE	Y?	SL	29/10/2012
Eucalyptus saligna Sm.	Sydney Blue Gum	MYRTACEAE	Y	SL	29/10/2012
Fraxinus ornus L.	Manna Ash	OLEACEAE	Y?	SL	5/11/2012
Leptospermum grandifolium Sm.	Mountain Tea-tree	MYRTACEAE	Y	SL	13/03/2013
Nymphaea mexicana Zucc.	Mexican Water-lily	NYMPHAEACEAE	Y	MU	11/02/2013
Oenothera biennis L.	Evening-Primrose	ONAGRACEAE	Y?	SL	9/05/2013
Ozothamnus diosmifolius (Vent.)DC.	Rice flower	COMPOSITAE	Y?	SL	15/08/2012
Pseudotsuga menziesii (Mirb.)Franco	Douglas Fir	PINACEAE	Y?	SL	15/04/2013
Rhododendron ponticum L.	Common Rhododendron	ERICACEAE	Υ?	SL	11/02/2013
Solanum scabrum Mill.	Garden Huckleberry	SOLANACEAE	Y?	SL	11/02/2013
Symphoricarpos albus (L.)S.F.Blake	Common Snowberry	CAPRIFOLIACEAE	Y?	SL	25/2/2013.
Symphoricarpos orbiculatus Moench.	Coralberry	CAPRIFOLIACEAE	Y?	SL	25/2/2013.

Table 1. Records of plants collected for the first time in the state of South Australia, deposited in the State Herbarium and recorded as <u>naturalised</u> or <u>questionably naturalised</u> Y? = Questionably naturalised

¹ accessible via http://www.flora.sa.gov.au/census.shtml

1.1 Taxa of particular concern are:

• Nymphaea mexicana Zucc. http://www.hear.org/gcw/species/nymphaea_mexicana/

A native plant of Florida, USA and Mexico.

Known as an invasive weed in other states in Australia (WA, NSW, Qld and Vic).

Also listed as an environmental and noxious weed in California and other areas in the USA: India; Spain; New Zealand and Puerto Rico.

An Aquatic perennial herb, spreading by vegetative means forming dense floating mats completely covering the water surface. Grown as a water-feature plant and also known to block water-ways.

Dies back in winter in New South Wales. Although seed is rarely set in Australia, Yellow Waterlily has the potential to spread into coastal lagoons, especially where waters are nutrient rich http://www.weeds.org.au/cgi-bin/weedident.cgi?tpl=plant.tpl&state=&s=&ibra=all&card=W16

Collection Notes:

Plant specimen collected and sent to the herbarium by Kym Haebich, SAMDB NRM.

<u>Collector's Notes</u>: 150 to 200 m square, Swamp and river's edge, boat moorings. Water cover. Leaf margins undulate. Flowers yellow. Sepals greenish – pale red/brown when in bud. No fruit.

<u>Summary</u> by CJ Brodie (CJB) from photos provided to the State Herbarium: A single, large, flowering, vegetative patch in the edge of the River Murray and in several water holes in the immediate area. Forming mats in the local area and causing a physical barrier to access to the water from the bank and access to the river via the boat ramp.

1.2 Taxa that may be of future concern as weeds in SA - based on personal observations (of CJB) from the collection site

Fraxinus ornus L. http://www.hear.org/gcw/species/fraxinus_ornus/

A native plant of to southern Europe and southwestern Asia

This is reported as a weed in Victoria, New Zealand, and several places in Europe.

A close relative of Desert Ash *Fraxinus angustifolia* Vahl ssp. *angustifolia* is a serious weed of creek lines and damp places in the Adelaide Hills, and in such situations is the only or dominant tree.

Fraxinus ornus (Manna Ash) seems to be as weedy as Desert Ash. It is thought that this tree is in the early stages of colonisation as an invasive weed. It is said to be "Adaptable to a wide range of conditions, including exposed windy sites, coastal conditions and has been found to be fairly drought tolerant", http://www.advancedtrees.com.au/advanced-tree-list/advanced-ornamental-trees/172-fraxinus-ornus.html However F. ornus seems to thrive away from creek lines in drier areas in the higher rainfall area of the Adelaide Hills.

It is unknown if *F. ornus* would survive in the drier areas of the state. It is highly unlikely it would pose a threat to Arid South Australia.

Observations:

Several collection sites around and in Stirling are reasonably dense some with 1000s and 1000s of plants:

Mature ornamental garden plants are aggressively self-seeding (R.J Bates 42569, CJB 4859 & CJB 4848). There are 1000s of feral plants close to parent trees along residential road verges and neglected areas in Stirling, with weedy plants attaining heights of up to about 10 meters.

A population (CJB 2855) opposite the Old Mount Lofty Railway Station, in an old unmanaged scruffy park, has formed a dense almost impenetrable thicket of twiggy saplings to 5 -8 meters tall and 40-50 meters wide consisting of 1000s and 1000s of plants. Of the land yet to be colonised, and close to the main infestation, a carpet of thousands of small seedlings mostly 5-10cm tall can be seen. It is also being dispersed up to 100 meters or more away from the thicket with plants here up to 2.5 meter tall and bearing fruit.

Based on these observations it appears that this species this could become serious weed in the local area if not controlled.

- 1.3 Some taxa that may be of future concern as weeds in SA based on the number of references in the online data base the "Global Compendium of Weeds" (http://www.hear.org/gcw/), the updated data set of Randall (2002) ² and from regions similar in climate to an area in SA are as follows:
 - Anthoxanthum aristatum Boiss. http://www.hear.org/gcw/species/anthoxanthum_aristatum/

A native plant of North Africa and southern Europe North Africa and southern Europe

This is reported as a weed in Victoria. A known weed in New Zealand, also weedy in North Africa, large parts of Europe, the US and Canada.

Berberis thunbergii DC. var. atropurpurea Chenault http://www.hear.org/gcw/species/berberis_thunbergii/

A native plant of Japan and eastern Asia

Widely cultivated as an ornamental in temperate areas of the world.

Sparingly naturalised NSW. Naturalised in many parts of Europe, the USA and Canada.

A purple-coloured shrub and with woody prickles. It produces numerous flowers, and subsequently fruit. Its seeds are dispersed by birds. When it escapes into natural areas its highly shade-tolerant nature helps it to form dense stands in a variety of habitats, including closed canopy forests and open woodlands, wetlands, pastures, meadows and wastelands and displace native herb and shrub species

Digitalis purpurea L http://www.hear.org/gcw/species/digitalis_purpurea/

A native plant of Europe.

Naturalised in NSW, Vic and Tas.

This species would probably only persist in higher rainfall areas in South Australia (near / by creeks or moist shady areas in the Adelaide Hills & the South East).

A biennual herb with many large attractive flowers. Produces masses of seeds and this is how it reproduces.

Rhododendron ponticum L. http://www.hear.org/gcw/species/rhododendron_ponticum/

A native plant of Europe and Asia.

Naturalised in NSW and Tas. Also a weed in Northern Europe and the USA.

Suited to higher rainfall areas so may only just survive a few locations in South Australia, most likely near / by creeks or moist shady areas in the Adelaide Hills or the South East.

A large shrub with many large attractive purple flowers. This large woody plant is known for releasing chemicals in to the soil that inhibits the germination of other plants (a process is known as alleopathy).

Collectors Notes:

At old garden site, at base of fence by Carminow property just off Heysen track in old garden.

On Carminow site in terraced area now degraded and wild - single location only. However, several other plants were seen within 20-40 meters of the larger parent plant that is also layering.

Observed producing fruit on a return visit to the site in February 2013.

² Randall, R. (2002). A Global Compendium of Weeds. R.G. & F.J. Richardson. Meredith, Victoria, Australia and Randall, R. (2007-). A Global Compendium of Weeds. Published on the Internet http://www.hear.org/gcw/ [Accessed 30st May 2013].

1.4 Other taxa may be of future concern as weeds in SA based on weediness of close relatives:

Sedges ~ Cyperus papyrus L. http://www.hear.org/gcw/species/cyperus_papyrus/

A native plant of Eastern Africa and the Nile Valley. and supposedly many other parts of Africa

Culiivated widely worldwide and known as a weed throughout temperate and tropical Asia, Southern Europe, Florida and Hawaii in the USA, Puerto Rico, Costa Rica and Chile.

Listed as a weed by Richardson et al. (2011) although not recorded as a weed according to the Australian Plant census (APC ~ http://www.chah.gov.au/chah/apc/index.html).

This species is regarded as a minor environmental weed or potential environmental weed in Queensland and New South Wales.

It has escaped cultivation and invaded the margins of permanent water bodies in south-eastern Queensland and northern New South Wales. For example, infestations were recently targeted for removal from Seaham Swamp Nature Reserve at Port Stephens on the mid-north coast of New South Wales. This rapidly growing species can spread to cover areas of open water, preventing other aquatic species from growing, and reducing light levels to submerged native plants (http://keyserver.lucidcentral.org/weeds/data/03030800-0b07-490a-8d04-0605030c0f01/media/Html/Cyperus_papyrus.htm).

Sedges are weedy world wide and this has the potential to become weedy in riparian situations.

Saltbush ~ Atriplex undulata (Moq.)D.Dietr. http://www.hear.org/gcw/species/atriplex_undulata/

A native plant of. Argentina & Bolivia in South America.

Naturalised in WA only. Not known elsewhere in the world as a weed.

Chenopodiaceae have many genera or species that are weedy world-wide and this species has the potential to become weedy in SA.

• Weedy Eragrostis species ~ Eragrostis trichophora Coss. & Durieu http://www.hear.org/gcw/species/eragrostis_trichophora/

Native to North and southern Africa.

It is now recognised as naturalised in NT, Qld, NSW Vic and recently SA.

This species is part of a species complex, with the taxonomy yet to be clarified, see Pope G.V. (1999). Flora Zambesiaca Volume ten Part 2. RBG Kew, Surrey, UK

This was originally considered by the State Herbarium of South Australia to be a possible threat to native vegetation types.

However, further observations and collections from EP to AMLR and the Barrier Highway seem to suggest that this species is confined to the road margins, growing in gravel, but spreading fast. It can be seen in the millions along the Barrier Highway on the road strip just off the bitumen and before the native vegetation.

Current observations indicate that *E. trichophora* does not appear to invade native vegetation types. However it will need monitoring as it is yet unknown if would invade cultivated land that could impact on agriculture and horticulture. The current collection sites are not adjacent to any cultivated lands.

A close relative, African Lovegrass Eragrostis curvula, is a known invasive weed.

1.5 Australian plants which are not native to South Australia or some of it's regions, and appear to be in the early stages of establishment in one or more locations.

Australian plants can be serious weeds as they may be adapted to the same or similar environmental conditions. They can be overlooked as weeds as they may be similar in appearance to indigenous local plants. Examples of known 'weedy natives' are *Pittosporum undulatum* and *Acacia saligna* from the eastern states.

NB. Some of the taxa listed below have not been noted previously in the Global Compendium of Weeds:

• Angophora costata (Gaertn.)Britten ssp. costata http://www.hear.org/gcw/species/angophora_costata/

Native to NSW and Qld, and not recorded as a weed elsewhere in Australia.

• Angophora floribunda (Sm.)Sweet. Not listed in Randall, R. (2002).

A native plant to Qld, NSW, Vic and not recorded as a weed in other states in Australia.

Bacopa monnieri (L.)Wettst. http://www.hear.org/gcw/species/bacopa monnieri/

A native of NWS and Qld but recorded as a weed in WA and now in SA.

Also native in many parts of the world both temperate to tropical http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?102292
It is possible that this taxa could have arrived here by natural means so may not be a weed. However, it is likely that it was introduced as this plant is widely known in the aquarium trade.

• Corymbia citriodora (Hook.)K.D.Hill & L.A.S.Johnson http://www.hear.org/gcw/species/corymbia_citriodora/

A native plant to Qld and NSW. Also a weed in parts of NSW as well as in WA, Vic. Also recorded as naturalised in the USA.

• Corymbia ficifolia (F.Muell.)K.D.Hill & L.A.S.Johnson http://www.hear.org/gcw/species/corymbia_ficifolia/

Native to WA and not naturalised in any other states. Introduced to the USA.

• Eucalyptus botryoides Sm. http://www.hear.org/gcw/species/eucalyptus_botryoides/

Native to NSW and parts of Vic, but also weedy in other parts of Vic and weedy in WA. Known as a weed in New Zealand

• Eucalyptus saligna Sm. http://www.hear.org/gcw/species/eucalyptus_saligna/

Native to Qld and NSW and sparingly naturalised in Vic.

It is possible that the plant is naturalised in WA but no specimen is lodged as a voucher

• Leptospermum grandifolium Sm. Not listed in Randall, R. (2002).

Native to NSW, ACT, Vic.

Ozothamnus diosmifolius (Vent.)DC. http://www.hear.org/gcw/species/ozothamnus_diosmifolius/

Native to Qld, NSW but naturalised in WA.

1.6 Other species that are most likely NOT of future concern in native vegetation as weeds in SA but should be monitored:

Alnus cordata (Loisel.) Duby http://www.hear.org/gcw/species/alnus_cordata/

Native to south West Europe and naturalised in Tas.

A single specimens was found in Aldgate Creek but could not be seen the following year.

Most likely a casual escape not surviving to reproductive age.

• Dahlia imperialis Roezl ex Ortgies Not listed in Randall, R. (2002).

Widely distributed in South America and Mexico.

Weedy in New Zealand and Qld.

In SA most likely a casual escape reproducing from dumped garden waste, most likely only surviving brief periods.

• Erythrina × sykesii Barneby & Krukoffc http://www.hear.org/gcw/species/erythrina_sykesii/

A hybrid garden plant of unknown origin.

Naturalised in WA, Qld and NSW and also in New Zealand. Reported as an environmental weed in NSW (http://keyserver.lucidcentral.org/weeds/data/03030800-0b07-490a-8d04-0605030c0f01/media/Html/Erythrina x sykesii.htm)

• Solanum scabrum Mill. http://www.hear.org/gcw/species/solanum_scabrum/

A plant with its origins unknown. Used to be grown in gardens for edible fruit.

Closely related to *Solanum nigrum* group of species and is somewhat difficult to distinguish from *S. nigrum*. *S. scabrum* has a larger leaf, 7-16 cm long and *S. nigrum* with a smaller leaf, 4-7cm long. Some specimens have small leaves less than 7cm long and on the same plant leaves larger than 7cm long. Further work is required to sort out this taxonomic confusion. Found in suburban gardens and cultivated areas.

• Symphoricarpos albus (L.)S.F.Blake http://www.hear.org/gcw/species/symphoricarpos_albus/

Native to the northern United and StatesCanada

This specimen could not be found on a repeat visit to the sites in 2013

• Symphoricarpos orbiculatus Moench. &

Native to the Eastern United States and Canada

This specimen could not be found on a repeat visit to the sites in 2013

2. New Regional records of plants collected and lodged in the State Herbarium.

There have been 20 new plant taxa recorded for one or more additional Herbarium Regions as naturalised or questionably naturalised in the Census between the dates of May 1st 2012 – May 24th 2013 that have been collected recently or are considered significant.

The data is listed as a table for each of the Herbarium Regions (Tables 2 -14). All records are based on specimens deposited in the State Herbarium. Species we considered of particular concern are listed for the regions as applicable. Other records not yet data based that have been collected recently or are considered significant are included in a separate table.

(1) North-Western Herbarium Region:

This region falls in the AW and SAAL NRM regions

Taxa	Common Name	Family	Naturalised	Date entered into Census
NIL				

Table 1. Additional Plant taxa recorded in the Census for the North-Western (1) Herbarium Region as

Y = Naturalised Y? = Questionably naturalised

(2) Lake Eyre Herbarium Region:

This region falls in the SAAL NRM regions

Taxa	Common Name	Family	Naturalised	Date entered into Census
NIL				

Table 2. Additional Plant taxa recorded in the Census for the **Lake Eyre** (2) Herbarium Region as **Y** = Naturalised **Y?** = Questionably naturalised

(3) Nullabor Herbarium Region:

This region falls in the AW and EP NRM regions

Taxa	Common Name	Family	Naturalised	Date entered into Census
Capsella bursa-pastoris (L.)Medik	Shepherd's Purse	CRUCIFERAE	Υ	18/07/2012

Table 3a. Additional Plant taxa recorded in the Census for the Nullarbor (3) Herbarium Region as Y = Naturalised Y? = Questionably naturalised

Capsella bursa-pastoris (Shepherd's Purse) is an annual weed normally of wetter areas like AMLR.

Taxa (not yet added to the	Common Name	Family	Collection	Date	Comments
census)			number	collected	
Aster subulatus	Wild aster	Compositae	CJB 4620	12/11/2012	Collected at SA/WA boarder on Eyre Hwy with AW NRM staff. Mapped and specimens collected
Atriplex suberecta	Lagoon saltbush	Chenopodiaceae	CJB 4651	14/11/2012	
Cakile maritima ssp. maritima	Two-horned sea-rocket	Cruciferae	CJB 4669	14/11/2012	
Cenchrus ciliaris	Buffel grass	Gramineae	CJB 4597	11-13/11/2012	Collected at 7 sites across the Nullarbor on Eyre Hwy with AW NRM staff. Mapped and specimens collected
Centaurea calcitrapa	Star thistle	Compositae	CJB 4616	12/11/2012	
Chloris gayana	Rhodes grass	Gramineae	CJB 4603	12-13/11/2012	Collected at 3 sites on Eyre Hwy with AW NRM staff.
Citrullus lanatus	Bitter melon	Cucurbitaceae	CJB 4634	13/11/2012	
Dittrichia graveolens	Stinkwort	Compositae	CJB 4613	12/11/2012	
Eragrostis trichophora	Love grass	Gramineae	CJB 4637	13/11/2012	
Scabiosa atropurpurea	Scabious	Dipsacaceae	CJB 4573	10/11/2012	
Solanum elaeagnifolium	Silver-leaved nightshade	Solanaceae	CJB 4579	10/11/2012	
Verbascum virgatum	Twiggy mullein	Scrophulariaceae	CJB 4601	11/11/2012	

Table 3b. Additional Plant taxa to be added to the Census for the Nullarbor (3) Herbarium Region as

Y = Naturalised Y? = Questionably naturalised

Species of particular concern are: Cenchrus cilaris (buffel grass), Chloris gayana (Rhodes grass) and Solanum elaeagnifolium. Other taxa that are widespread along roadside and may or may not spread into native vegetation or agricultural lands are Dittrichia graveolens (Stinkwort), Eragrostis trichophora (Love grass), Scabiosa atropurpurea (Scabious) and Verbascum virgatum (Twiggy mullein). Centaurea calcitrapa (Star thistle) line roadsides in places and could impact on agriculture

(4) Gairdner-Torrens Herbarium Region:

This region falls in the SAAL and AW NRM regions

Taxa	Common Name	Family	Naturalised	Date entered into Census
Cirsium vulgare (Savi)Ten.	Spear Thistle	COMPOSITAE / ASTERACEAE	Υ?	2/05/2013

Table 4. Additional Plant taxa recorded in the Census for the Gairdner-Torrens (4) Herbarium Region as Y = Naturalised Y? = Questionably naturalised

(5) Flinders Ranges Herbarium Region:

This region falls mainly in the SAAL and also in N&Y NRM regions

Taxa	Common Name	Family	Naturalised	Date entered into Census
Cenchrus spinifex Cav.	Spiny Burr-grass	GRAMINEAE / POACEAE	Υ	1/05/2013

Table 5. Additional Plant taxa recorded in the Census for the Flinders Ranges (5) Herbarium Region as Y = Naturalised Y? = Questionably naturalised

Taxa (not yet added to the	Common Name	Family	Collection	Date	Comments
census)			number	collected	
Cenchrus setiger Vahl	Birdwood-grass / Buffel	GRAMINEAE / POACEAE	CJB 4918	20/04/2013	

Table 5b. Additional Plant taxa to be added to the Census for the the **Flinders Ranges** (5) Herbarium Region as **Y** = Naturalised **Y?** = Questionably naturalised Species of **particular concern** are: *Cenchrus setiger* Vahl & *Cenchrus spinifex* Cav.

(6) Eastern Herbarium Region:

This region falls in the SAAL, SAMDB and N&Y NRM regions

Taxa	Common Name	Family	Naturalised	Date entered into Census
Cenchrus pennisetiformis Hochst. & Steud. ex Steud.	Buffel Grass	GRAMINEAE / POACEAE	Y	9/05/2013

Table 6. Additional Plant taxa recorded in the Census for the **Eastern** (6) Herbarium Region as **Y** = Naturalised

Species of particular concern are:

Cenchrus pennisetiformis (buffel grass) is of particular concern in arid areas of SA.

(7) Eyre Peninsula Herbarium Region:

This region falls in the EP and SAAL NRM region

Taxa	Common Name	Family	Naturalised	Date entered into Census
Cenchrus pennisetiformis Hochst. & Steud. ex Steud.	Buffel Grass	GRAMINEAE / POACEAE	Υ	9/05/2013
Bassia scoparia (L.)A.J.Scott	N/A	CHENOPODIACEAE	Υ	20/09/2012

 Table 7. Additional Plant taxa recorded in the Census for the Eyre Peninsula (7) Herbarium Region as
 Y = Naturalised
 Y? = Questionably naturalised

Species of particular concern are: Cenchrus pennisetiformis (buffel grass) is of particular concern in arid areas of SA

Таха	Common Name	Family	Collection number	Date collected	Comments
Glycyrrhiza glabra L.	Liquorice.	Leguminosae	Hannah short s/n	28/3/13	large patch 260m squared, growing by roadside amongst grasses in a disturbed area along the edge of a dirt road that is graded

(8) Northern Lofty Herbarium Region:

This region falls in the NY, AMLR and SAMDB NRM regions

Taxa	Common Name	Family	Naturalised	Date entered into Census
Clematis vitalba L.	Traveller's Joy	RANUNCULACEAE	Y?	18/04/2013
Juglans regia L.		JUGLANDACEAE	Y?	24/05/2012
Nassella neesiana (Trin. & Rupr.) Barkworth		GRAMINEAE / POACEAE	Y	1/05/2013

Table 8. Additional Plant taxa recorded in the Census for the Northern Lofty (8) Herbarium Region as

Y = Naturalised Y? = Questionably naturalised

Species of particular concern are: Nassella neesiana

(9) Murray Herbarium Region:

This region falls in the SAMDB, SAAL and AMLR NRM regions

Таха	Common Name	Family	Naturalised	Date entered into Census
Hyparrhenia hirta (L.)Stapf	Giant reed	GRAMINEAE / POACEAE	Y	8/02/2012

Table 9. Additional Plant taxa recorded in the Census for the Murray (9) Herbarium Region as

Y = Naturalised Y? = Questionably naturalised

Species of particular concern are: Hyparrhenia hirta (L.)Stapf

(10) Yorke Peninsula Herbarium Region:

This region falls in the N&Y NRM regions

Таха	Common Name	Family	Naturalised	Date entered into Census
NIL				

Table 10. Additional Plant taxa recorded in the Census for the Yorke Peninsula (10) Herbarium Region as

Y = Naturalised Y? = Questionably naturalised

(11) Southern Lofty Herbarium Region:

This region falls in the AMLR and SAMDB NRM region

Таха	Common Name	Family	Naturalised	Date entered into Census
NIL				

Table 11. Additional Plant taxa recorded in the Census for the Southern Lofty (11) Region as

Y = Naturalised Y? = Questionably naturalised

(12) Kangaroo Island Herbarium Region:

This region falls in the KI NRM region

Taxa	Common Name	Family	Naturalised	Date entered into Census
Amaranthus muricatus (Moq.)Hieron.	Rough-fruit Amaranth	AMARANTHACEAE	Y	22/03/2013
Amsinckia calycina (Moris)Chater	Hairy Fiddle-neck	BORAGINACEAE	Y	1/05/2013
Juncus acutus L.	Sharp Rush	JUNCACEAE	Y?	9/05/2013
Lachenalia aloides (L.f.)Pers. ex Engl.		LILIACEAE	Y?	9/05/2013
Picnomon acarna (L.)Cass.	Soldier Thistle	COMPOSITAE / ASTERACEAE	Y	1/05/2013

Table 12 Additional Plant taxa recorded in the Census for the **Kangaroo Island** (12) Herbarium Region as **Y** = Naturalised **Y?** = Questionably naturalised

Species of particular concern are: Juncus acutus

(13) South-Eastern Herbarium Region:

This region falls in the SE and SAMDB NRM region

Taxa	Common Name	Family	Naturalised	Date entered into Census
Cenchrus longispinus (Hack.)Fernald	Spiny Burr-grass	GRAMINEAE	Y?	1/05/2013
Festuca rubra L.	Red Fescue	GRAMINEAE	Y?	21/02/2013
Lachenalia aloides (L.f.)Pers. ex Engl.		LILIACEAE	Y?	9/05/2013
Passiflora tarminiana Coppens & V.Barney		PASSIFLORACEAE	Y?	17/04/2013
Populus nigra L.	Lombardy Poplar	SALICACEAE	Υ	24/05/2012

 Table 13.
 Additional Plant taxa recorded in the Census for the South-Eastern (13) Herbarium Region as
 Y = Naturalised
 Y? = Questionably naturalised

Species of particular concern are: Cenchrus longispinus

3. Changes in nomenclature of naturalised plant taxa

There are 16 taxa that have had new / altered names applied in the Census between the dates of May 1st 2012 – May 24th 2013 (Table 15). This has occurred due to changes in taxonomic concepts or because of misapplications of names.

New Names (Renames of taxa already in Census)	Naturalised	Date changed in Census	Original Date entered into the Census	Previous name used in SA Flora / CENSUS with comments
Alnus acuminata Kunth ssp. glabrata (Fernald) Furlow	Υ?	22/01/2013	4/05/2006	Renamed from <i>Alnus jorullensis</i> Kunth following Spencer 1997 as cited by Brodie in Fl SA treatment, a misapplied name used for this taxon in the nursery trade in Australia.
Berberis aquifolium Pursh	Υ	3/04/2013	21/12/1992	Mahonia now treated as part of Berberis. See FSA (5th Ed treatment)
Callistemon viminalis (Sol. ex Gaertn.)G.Don ssp. viminalis	Y?	22/02/2013	21/02/2005	Callistemon viminalis (Sol. ex Gaertn.)G.Don - Typical subsp. created, as there is a new subsp. <i>rhododendron</i> for a taxon in Qld. APC
Cota tinctoria (L.)J.Gray	Y?	12/03/2013	24/12/2010	Change of genus from <i>Anthemis</i> to <i>Cota.</i> .
Cyperus rotundus L.	Y	11/01/2013	2/10/1990	Renamed from <i>Cyperus rotundus</i> L. ssp. <i>rotundus</i> to species without ssp., in line with APC and other states
Dimorphotheca fruticosa (L.)DC.	Y	12/03/2013	2/10/1990	Change of genus from Osteospermum to Dimorphotheca
Escallonia rubra Hook. & Arn.	Y?	26/03/2013	2/03/2011	Changed from <i>Escallonia rubra</i> (Ruiz & Pav.) Pers. var. <i>macrantha</i> to <i>E. rubra</i> Hook. & Arn.
Eucalyptus utilis Brooker & Hopper	Y?	22/01/2013	15/09/1992	Replacing misapplied name E. platypus var. heterophylla
Lepidium coronopus (L.)Al-Shehbaz	Y	12/03/2013	2/10/1990	Changed from Lepidium squamatum Forssk Lepidium coronopus as this epithet takes priority
Liquidambar styraciflua L.	Y?	10/04/2013	4/05/2006	Correct spelling of <i>Liquidamber styraciflua</i> replacing the e in <i>Liquidamber</i> with an A, <i>Liquidambar</i> .
Pentameris airoides Nees ssp. airoides	Y	14/03/2013	2/10/1990	Pentaschistis transferred to Pentameris.
Pentameris pallida (Thunb.)Galley & H.P.Linder	Y	14/03/2013	2/10/1990	Pentaschistis transferred to Pentameris.
Ranunculus trichophyllus Chaix	Y	14/03/2013	2/10/1990	Batrachium is now included in Ranunculus following Emadzade et al., Taxon 59: 824 (2010) as Batrachium is nested within Ranunculus. Batrachium trichophyllum (Chaix)Bosch is renamed Ranunculus trichophyllus Chaix
Silene coronaria (L.)Clairv.	Υ?	12/03/2013	2/10/1990	Name change from <i>Lychnis coronaria</i> to <i>Silene coronaria</i> . APC list 89.

Table 14. New names of taxa which previously had other names applied for material already in the collections

Y = Naturalised Y? = Questionably naturalised

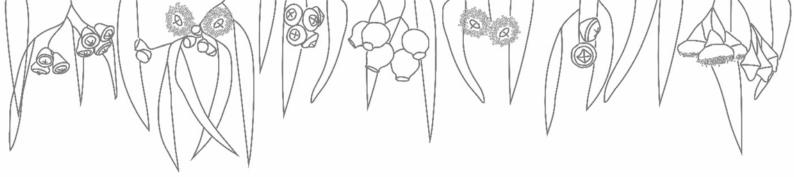
Replacing misapplied name (Renames of taxa already in Census)	Naturalised	Date changed in Census	Original Date entered into the Census	Previous name used in SA Flora / CENSUS with comments
Celtis australis L.	Y?	3/04/2013	22/05/2003	Renamed from <i>Celtis occidentalis</i> based on non-vouchered record of adventive seedlings and saplings in Waite Conservation Reserve and elsewhere; by P.Lang
Geranium yeoi Aedo & Munoz Garm.	Y	15/04/2013	2/10/1990	Renamed from <i>Geranium robertianum</i> to <i>G. yeoi</i> following redetermination by C.J. Brodie of all SA specimens to <i>G. yeoi</i> (and in agreement with subsequent determinations of duplicate material sent to geranium specialist, Carlos Aedo Perez, based in Madrid, Spain).

Table 14. Replacing misapplied names of taxa which previously had other names applied for material already in the collections naturalised

Y = Naturalised Y? = Questionably

Regional Landscape Surveillance for New Weed Threats Project Report 2013-2014





This report should be cited as:

Brodie, C.J., Lang, P.J. & Vonow, H.P. (2014). *Regional Landscape Surveillance for New Weed Threats Project (2013-2014). Milestone: Annual report on new plant naturalisations in South Australia*, 23 pp. (State Herbarium of South Australia: Adelaide).

State Herbarium of South Australia Science, Monitoring and Knowledge Strategy and Advice Department of Environment, Water and Natural Resources

Milestone Report

Regional Landscape Surveillance for New Weed Threats Project (2013-2014)

Milestone: Annual report on new plant naturalisations in South Australia

Chris Brodie, Peter Lang and Helen Vonow.

for

Director
Science, Monitoring and Knowledge
Strategy and Advice
Department of Environment, Water and Natural Resources

1 June 2014

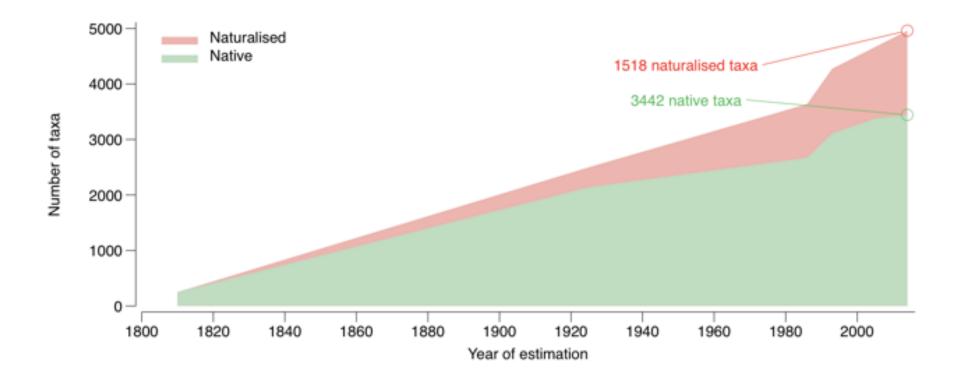
This report summarises the work carried out by the State Herbarium of SA for the project, *Regional Landscape Surveillance for New Weed Threats* for the 2013/14 financial year. Funding for the project was received from a number of sources namely PIRSA Biosecurity SA, the State NRM Program, Adelaide and Mt Lofty Ranges NRM, SA Murray-Darling Basin NRM, South East NRM and Eyre Peninsula NRM, and their support is gratefully acknowledged.

Funding covered the salary of a Weeds Botanist (Chris Brodie), based at the State Herbarium, some associated on-costs and contributed to the salary of the Herbarium's data capture officer. A significant amount of in-kind support was provided by Herbarium staff, Honorary Researchers and volunteers for associated activities such as plant identification, specimen processing and reporting.

The majority of the Weeds Botanist's activities occurred in those regions providing funding with the exception of a regional Buffel Grass Survey of areas of the Yorke-Mid-North NRM region funded by Biosecurity SA through Rural Solutions. Weeds Botanist activities centred on the discovery and collection of new weed records with the majority of field work occurring in the AMLR Region. In addition, regional visits were often used as an opportunity for the Weeds Botanist to provide workshops and field days for regional staff and NGOs to increase awareness of weeds, the value of early detection and the processes required to contribute scientifically valid specimens and records to the State Herbarium.

This year the project has resulted in the discovery of 24 new weed species records. The project has been running since 2009 and has resulted in the recognition of 208 new weed species (117 new records, 28 from taxonomic splits or recombinations, 63 renames of existing taxa,) with 416 additional edits of weedy data. The project has also helped identify and quantify emerging threats, such as the spread of Buffel Grass. In addition, the continuity of funding has provided an invaluable opportunity for the State Herbarium to strengthen its capacity and expertise in weed-related discovery and research and to update the *Census of South Australian Vascular Plants* with a more accurate representation of the current status of the State's weeds. The Weeds Botanist position has also provided a reliable point of contact for regional staff and communities as well as training and support.

Figure 1 below is a compilation of State Herbarium of South Australia records showing the relative proportions of indigenous native to naturalised plant species occurring in the State with the totals shown as of June 2014. The steep climb starting in the late 1980s reflects the impact of the Biological Survey of South Australia program.



1. New naturalised or questionably naturalised records of plants in South Australia.

In the previous year (May 2013 – May 2014), 24 new records of **naturalised** or **questionably naturalised** plants were added to the *Census of South Australian Plants, Algae and Fungi*¹ (hereafter referred to as the 'Census'), based on plants deposited and accessioned in the State Herbarium of South Australia (hereafter referred to as the 'Herbarium').

These have been sorted into three categories:

- (a) Those **eleven** plant species collected for the first time in the past year (May 2013 May 2014), such that there is definitive evidence that they are established or are likely to become established 'in the wild' (Table 1.).
- (b) Those **five** plant species for which there were previous collections from South Australia with vouchers lodged at the Herbarium, but these taxa previously lacked sufficient taxonomic or geographical data to add to the Census. Only when observed and collected during the past year was there sufficient evidence to add them to the Census (Table 2.).
- (c) Those **eight** plant species for which there were previous collections from South Australia with vouchers lodged at the Herbarium which have only been identified or re-examined within the past year and thus added to the Census (Table 3.).

The data is gathered and reported using Herbarium Regions – the map of the regions has been included as Appendix 1.

Table 1. Details of eleven plant species collected for the first time between May 2013 – May 2014 in South Australia, deposited in the State Herbarium and recorded as naturalised or questionably naturalised.

Y = Naturalised Y? = Questionably naturalised.

New Taxa	Common Name	Date First Collected	Family	Naturalised	Regional Distribution	Date Added To Census
Acer campestre L.	Field maple	31/10/13	ACERACEAE	Y?	SL	22/01/14
Bidens bipinnata L.	Bipinnate beggartick	25/10/12	ASTERACEAE / COMPOSITAE	Y?	MU	16/05/14
Cedrus deodara (Roxb. ex D.Don) G.Don	Deodar	4/09/13	PINACEAE	Y?	SL	20/01/14
Celtis occidentalis L.	Common hackberry	10/06/13	ULMACEAE	Y?	SL	17/07/13
Dracunculus vulgaris Schott	Dragon lily	19/09/13	ARACEAE	Y?	SL	20/01/14
Jasminum polyanthum Franch.	Pink jasmine	31/10/13	OLEACEAE	Y?	SL	22/01/14
Phytolacca americana L.	Pokeweed	21/02/14	PHYTOLACCACEAE	Y?	SL	21/03/14
Pimelea ferruginea Labill.	Pink rice-flower	31/10/13	THYMELAEACEAE	Y?	EP	20/01/14
Quercus canariensis Willd.	Algerian oak	4/09/13	FAGACEAE	Y	SL	20/01/14
Sequoia sempervirens (D.Don) Endl.	Californian redwood	4/09/13	TAXODIACEAE	Y?	SL	20/01/14
Tecoma stans (L.) Juss. ex Kunth	Yellow trumpet bush	2/13/13	BIGNONIACEAE	Y?	MU	21/03/14

¹ accessible via http://www.flora.sa.gov.au/census.shtml

Table 2. Records of five plant species collected between May 2013 – May 2014, also with one or more collections made before April 2013 in South Australia, deposited in the State Herbarium and recorded as naturalised or questionably naturalised Y = Naturalised Y? = Questionably naturalised

New Taxa	Common Name	Date First Collected	Date Last Collected	Family	Naturalised	Regional Distribution	Date Added To Census
Acacia elata A.Cunn. ex Benth.	Cedar wattle	03/03/90	10/06/13	LEGUMINOSAE	Y	SL	17/07/13
Chamelaucium uncinatum Schauer	Geraldton wax	21/08/68	09/10/13	MYRTACEAE	Y	EP	20/12/13
Dahlia imperialis Roezl ex Ortgies	Tree dahlia	1/06/96		ASTERACEAE / COMPOSITAE	Y?	SL	27/11/12
Grevillea robusta A.Cunn. ex R.Br.	Silky oak	17/03/09	05/11/13	PROTEACEAE	Y?	SL & SE	12/12/13
Hypericum grandifolium Choisy	Large-leaf Canary Island St John's wort	24/11/91	3/11/13	GUTTIFERAE	Y	SE	11/03/14
Lupinus angustifolius L	Narrow-leafed lupin	21/09/91	19/09/13	LEGUMINOSAE	Y?	FR, EP, SL, EP	21/01/14

Table 3. Records of eight plant species have been identified and a name added to the Census for the first time between May 2013 – May 2014 in South Australia, deposited in the State Herbarium and recorded as naturalised or questionably naturalised.

Y = Naturalised

Y? = Questionably naturalised

New Taxa	Common Name	Date First	Date Last	Family	Naturalised	Regional	Date Added
		Collected	Collected			Distribution	To Census
Caesalpinia spinosa (Molina) Kuntze	Tara	7/11/11	07/11/11	LEGUMINOSAE	Y	EP	4/09/13
Commelina benghalensis L.	Benghal dayflower	20/04/94	20/04/94	COMMELINACEAE	Y?	SL	11/03/14
Dahlia imperialis Roezl ex Ortgies	Tree dahlia	1/06/96	21/09/12	ASTERACEAE / COMPOSITAE	Y?	SL	25/07/13
Eucalyptus cornuta Labill.	Yate	3/11/94	16/11/09	MYRTACEAE	Y	NL & SE	13/06/13
Eucalyptus stricklandii Maiden	Strickland's yellow flowering gum	Nov 1993	30/08/07	MYRTACEAE	Y?	FR, NL & SL	26/06/13
Lonicera fragrantissima Lindl. & Paxton	Fragrant honeysuckle	18/08/12	6//01/13	CAPRIFOLIACEAE	Y?	SL	17/07/13
Oncosiphon piluliferum (L.f.) Källersjö	Globe chamomile	25/10/12	25/10/12	ASTERACEAE / COMPOSITAE	Y	EP	14/05/14
Portulacaria afra (L.)Jacq.	Dwarf jade plant	1/07/91	16/11/12	PORTULACACEAE	Y?	EA, EP, NL, SL	11/03/14

1.1 Taxa of particular concern are:

Oncosiphon piluliferum (L. f.) Källersjö Globe chamomile http://www.hear.org/gcw/species/oncosiphon_piluliferum/

Native: to Southern Africa.

Distribution: In Australia this is known as a weed in Western Australia, and recorded as formerly naturalised New South Wales & Victoria.

Worldwide: Also known as a weed in California and Arizona in the USA.

Likes to grow in: A variety of soils including sand and gravel. Valleys, near salt lakes, along track edges, in disturbed woodlands & agricultural sites.

Description: A small herb in the daisy family that produces masses of yellow flowers that in turn produce hundreds of seeds that are wind-dispersed.

A close relative of the Calomba daisy *Oncosiphon suffruticosum*, an annual daisy which is a major weed of pasture. *Oncosiphon suffruticosum* is most abundant in the mallee area of the northern Adelaide Plains and is declared under the NRM Act.

Collection details: Plant specimen collected by Ian Abbott along Bore Track at the entrance to Lincoln National Park on limestone mallee. He stated that there was no chance this population of about 10 plants was planted.

Recommendation: This new weed record of *Oncosiphon piluliferum* could potentially be as invasive as the other species, and it is recommended that it is eradicated if it is still localised and in low numbers.

1.2 Taxa that may be of future concern as weeds in SA - based on observations of Chris Brodie (CJB) from the collection site

Quercus canariensisWilld.Algerian oakhttp://www.hear.org/gcw/species/quercus_canariensis/

Native to: Northern Africa (Algeria, Morocco & Tunisia) and south-western Europe (Portugal & Spain).

Distribution: In Australia it is not recorded as growing wild in any other states.

Worldwide: Not known as a weed but sometimes recorded as a casual escape in the UK.

Likes to grow in: Higher rainfall areas of the State.

Description: A large tree that is close relative of the English oak *Quercus robur* L., which is weedy in the Adelaide Hills around Stirling.

Collection details: This is the only actively established population of *Quercus canariensis* known in S.A., and appears to be growing at a higher density than *Q. robur*.

It was growing by the train track close to the old Mount Lofty Railway Station, in Stirling. The suspected parent plant (CJB 5106) is most likely 100 plus years old, and is producing a mass of fruit (acorns) from which seedlings germinate. Several larger plants were growing in a garden by the railway and these were most likely second generation plants (~30 plus years old) and were producing acorns. Smaller plants, sapling and seedlings (CJB 4965) were forming thickets along on both side of the track and seemed to be at high density. However, as dispersal is limited these plants were close to the parent tree.

Recommendation: As trees are slow growing and the heavy acorns have limited dispersal it is unlike to spread far. Its spread will also be slow. However, over many decades dense thickets could form. Without control the existing thicket of *Q. canariensis* it will only grow taller and thicker and will increase the area of land it is occupying.

Jasminum polyanthum Franch.

Pink jasmine

http://www.hear.org/gcw/species/jasminum_polyanthum/

Native to: China

Distribution: In Australia this is recorded as naturalised in New South Wales around Sydney; in south-east Queensland; and in Victoria sparingly naturalised in eastern Melbourne.

Worldwide: Widely cultivated in temperate gardens around the world. Also recorded as a weed in New Zealand.

Likes to grow in: Higher rainfall and cooler areas and used to adorn a trellis, fence or other support on which it can climb.

Description: Evergreen vigorous woody-stemmed twining climber with shiny fern-like leaves with 5-7 leaflets. Pink buds flower bud develop in to highly perfumed tubular white flowers sometimes tinged pinkish in spring. Suckers readily.

Collection details: Stirling, in Adelaide Hills, opposite old Mount Lofty Railway Station on car-park edge. Escaping from a garden under the fence, covering a 20 x 20 m area and out-competing English Ivy *Hedra helix*.

Recommendation: Some sources report that the plant requires annual pruning to keep under control. Known to be a hardy tough and difficult weed around Sydney. This should be targeted for control based on how the wild plant populations in and around Sydney have spread.

1.3 Some taxa that may be of future concern as weeds in SA

- based on the number of references in the online data base the *Global Compendium of Weeds* http://www.hear.org/gcw/, the updated data set of Randall (2002) ² and from regions similar in climate to an area in SA are as follows:

Bidens bipinnata L.

Bipinnate beggartick

http://www.hear.org/species/bidens bipinnata/

Native to: Tropical America.

Distribution: In Australia it is commonly recorded in in Queensland, throughout Northern Territory, western and northern Western Australia and scattered around New South Wales. This was the first collection made in South Australia.

Worldwide: Common throughout tropics and subtropics.

Likes to grow in: It is reported that is likes moist to fairly dry, disturbed habitats (Gleason & Cronquist, 1963; p. 541).

Description: A soft erect annual herb in the daisy family with yellow flowers.

Collection details: Collected near Berri in the Riverlands in S.A. Only one plant in native pine area in floodplain.

Recommendation: This should be targeted for control and the site monitored.

Tecoma stans (L.) Juss. ex Kunth Yellow trumpet bush

http://www.hear.org/species/tecoma_stans/

Native to: Tropical America including the southern USA, parts of South America & the Caribbean.

Distribution: In Australia: this is commonly recorded in Queensland, mostly in the eastern parts of the State; in tropical and arid Northern Territory; and around Sydney.

Worldwide: It is recorded as naturalised in in tropical and southern Africa where it is not native; in many parts of South America; and on many Pacific islands.

Likes to grow in: Tropical and sub-tropical areas but also and found in some warmer temperate areas.

Description: This is a shrub or small tree to 5 metres tall with large green pinnate leaves, impressive yellow trumpet flowers and long pods full of seed with light seeds with fluffy pappus that is carried by wind or water.

Collection details: Collected by D. Robertson on private land near / in an orange plantation at Paringa.

Recommendation: Remove and monitor site.

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² Randall, R. (2002). A Global Compendium of Weeds. R.G. & F.J. Richardson. Meredith, Victoria, Australia and Randall, R. (2007-). A Global Compendium of Weeds. Published on the Internet http://www.hear.org/gcw/ [Accessed 30stMay 2013].

Phytolacca americana L. American Pokeweed

http://www.hear.org/gcw/species/phytolacca_americana/

Native to: North America from New Mexico, Texas and California to eastern Canada

Distribution: In Australia a common weed in New South Wales and Queensland, from around the Sydney area to around the Brisbane area.

Worldwide: Recorded as a weed in both North and South America; in Europe; China; and New Zealand.

Likes to grow in: Course or fine soil in higher rainfall areas of the State.

Description: An herbaceous perennial to about 2-3 metres tall with leaves to about 15 cm long. Flower spike about 25 cm long, with flower and stem red; producing red fruit, soon turning black.

Collection details: Collected by a concerned member of the public from Alberton in Adelaide who was worried about this vigorous plant that was growing in his back garden bed after they had dug it over.

Recommendation: Resident is controlling. No action required by the NRM at this stage.

1.4 Other taxa may be of future concern as weeds in SA, based on weediness of close relatives:

Caesalpinia spinosa (Molina) Kuntze

Tara http://www.hear.org/gcw/species/caesalpinia_spinosa/

Native to: Southern America including Venezuela to Peru, Argentina and Chile.

Distribution: In Australia this is the only collection of wild material.

Worldwide: Known to be cultivated around the world as a source of tannins but very few records relating to this taxa becoming a weed. Could also be a fodder plant?

Likes to grow in: Drier semi-arid areas.

Description: A small tree that may have been originally introduced for fodder. It has tough pinnate leave and larger leathery pods.

Collection details: Several plants were seen by the roadside on EP by CJB and David Symon. However, since road work has occurred these plants cannot be located, and these may have been destroyed by the roadwork.

Recommendation: Relocate the collection site so that it can be monitored ~fruiting pods were present so if viable seed had been produced it may germinate, as the seeds could persist for decades.

Dracunculus vulgaris Schott

Dragon arum

http://www.hear.org/gcw/species/dracunculus vulgaris/

Native to: East Mediterranean, from Greece, the Balkans, all the way to south-west Turkey.

Distribution: In Australia, this is the only record of the plant growing in the wild.

Worldwide: In cultivation as ornamental plants in temperate areas of the world including Australia.

Likes to grow in: Fertile moist soil and can be found in and waste land. Will grow around the Adelaide Plains but could do well in drier areas.

Description: Tuberous perennials with a purple-spotted stem; attractive leaves divided into several narrow, finger-like segments 30cm wide or more. The flower is an arum-type, hooded, deep purple, foul-smelling, and flowers in spring or summer dying down after flowering.

Collection details: Only three patches seen at Sturt Valley Creek, above the waterline on a weed infested creek bank dominated by Kikuyu grass *Cenchrus clandestinus*.

Recommendation: The NRM have been notified and employed a contractor to control this small infestation. However, it is known to be difficult to eradicate from gardens in South Australia so should be monitored.

Hypericum grandifolium Choisy Large-leaf Canary Island St John's wort

http://www.hear.org/gcw/species/hypericum_grandifolium/

Native to: The Madeira Islands and Canary Islands, both off the north-west of Africa.

Distribution: In Australia it has only been recorded in Victoria.

Worldwide: In cultivation as ornamental plants in temperate areas of the world including Australia. This is recorded as a weed in a few areas including California.

Likes to grow in: Temperate areas with above 600 mm of rainfall.

Description: A small shrub to about 1.5 metres tall. It has bright yellow flowers to 4 cm wide.

Collection details: Recently collected by D.E. Murfet in the South-East at Telford Scrub Conservation Park.

Recommendation: Remove and monitor site.

Lupinus angustifolius L

Narrow-Leafed lupin

http://www.hear.org/species/lupinus_angustifolius/

Native to: North Africa, temperate Asia and south-eastern and south-western Europe.

Distribution: In Australia found in the temperate to subtropical areas in Victoria, New South Wales and Tasmania, and sparingly naturalised in south-eastern Queensland.

Worldwide: Cultivated in many temperate areas of the world and used a nitrogen fixer in agricultural and horticultural industries. Also naturalised in parts of North America.

Likes to grow in: Cool areas with higher rainfalls.

Description: An annual legume herb to about 1 metre tall with blue flowers.

Collection details: Recently collected by Chris Brodie in the Barossa Valley. It was observed growing in a paddock by grape vines; and several plants were growing by the roadside. On identifying this specimen it was realised that several earlier collections in the Herbarium, called *Lupinus cosentinii* Guss. were misidentified and were this species.

Recommendation Monitor site.

1.5 Australian plants which are not native to South Australia or some of its regions, and appear to be in the early stages of establishment in one or more locations.

Australian plants can be serious weeds as they may be adapted to the same or similar environmental conditions. They can be overlooked as weeds as they may be similar in appearance to indigenous local plants. Examples of known 'weedy natives' are *Pittosporum undulatum* and *Acacia saligna* from the eastern states.

NB. Some of the taxa listed below have not been noted previously in the Global Compendium of Weeds:

Acacia elata A.Cunn. ex Benth. Cedar wattle

http://www.hear.org/species/acacia elata/

Native to: Eastern New South Wales.

Distribution: In Australia it is naturalised in Queensland, Victoria & south-west Western Australia.

Worldwide: Recorded as naturalised in tropical east and southern Africa, tropical Asia, California and New Zealand.

Likes to grow in: Higher rainfall areas or / and moist sites, along waterways and disturbed land in South Australia.

Description: A fast growing tree with shiny pinnate leaves and masses of round yellow flowers.

Collection details: First collected in 1990 at Mt Bold Reservoir. The most recent in Aldgate in the Adelaide Hills.

Chamelaucium uncinatum Schauer

Geraldton wax

http://www.hear.org/gcw/species/chamelaucium uncinatum/

Native to: Western Australia.

Distribution: In Australia recorded as naturalised in those parts of Western Australia where it is not native. It is noted to be seriously invasive in some situations in south-western Western Australia, and can cause major structural changes to the plant communities that it invades.

Worldwide: Know to be cultivated in temperate areas of the world, naturalised in New Zealand & Hawaii but not widely recorded as a weed.

Likes to grow in: Coastal areas, sandy soil or on the edges of swamps in drier environments or, hillsides.

Description: Erect shrub to 3-4 metres with white or pink flowers and small hard fruit similar to tea-tree.

Collection details: Found on the Kimba-Cleve Road, about 1.1 km S of Whitwell Road junction, at drain on W side of road. This population was by a drain and was originally planted. However, it is clearly reproducing and expanding into native vegetation.

Recommendation: Remove this weedy infestation and monitor site.

Eucalyptus cornuta Labill. Yate

Native to: Western Australia.

Distribution: In Australia this is cultivated throughout the south-east of Australia but only in South Australia has it been collected growing wild.

Worldwide: Know as a weed in Hawaii.

Likes to grow in: Coastal sites and sandy soil. Sand, loam, rocky outcrops, moist valleys, winter-wet flats.

Description: Erect tree to about 20 m tall.

Collection details: First collected in Jamestown; but most recently collected in 2009 as a single tree at Kingston S.E., on the track at the entrance

gate of the dump.

Recommendation: Monitor.

Eucalyptus stricklandii Maiden Strickland's yellow flowering gum

Native to: Western Australia.

Distribution: In Australia recorded as sparingly naturalised in Victoria and now in South Australia.

Worldwide: Unknown

Likes to grow in: Sandy or loamy soils, and is tolerant of salt-affected soils. A drought and frost tolerant species and flourishing in arid climates with rainfall of 180 to 250 mm annually.

Description: An erect tree to about 10 metres tall with yellow flowers. It is a robust species, fast growing and shapely.

Collection details: First collected around Hawker in 1993, most recently two collections from around Tarlee in 1997 and 2007.

Grevillea robusta A.Cunn. ex R.Br. Silky oak http://www.hear.org/gcw/species/grevillea_robusta/

Native to: New South Wales and Queensland.

Distribution: In Australia it is also a weed in Victoria and now South Australia, both its native states of New South Wales and Queensland. It is also cultivated in the temperate to sub-tropical to tropical areas of Australia.

Worldwide: Cultivated in many areas of the world and has been recorded as a weed in New Zealand, southern Africa, in some places in North and South America, Hawaii, the Caribbean and the UK.

Likes to grow in: Higher rainfall areas of S.A. on hillsides in woodland or by creeks in other areas.

Description: This is a single stemmed tree to 20-25 metres tall with showy orange flowers and distinctive fern-like foliage that is green on the upper surface and pale and silky below.

Collection details: First collected in several locations around the Adelaide Hill in 2009. Most recently collected in this South East in November 2013. Normally one or few self-sown trees.

Recommendation: Remove plant if possible and monitor.

Pimelea ferruginea Labill. Pink rice-flower http://www.hear.org/gcw/species/pimelea_ferruginea/

Native to: Western Australia.

Distribution: In Australia only recorded as naturalised in South Australia.

Worldwide: Not known to be naturalised outside Australia.

Likes to grow in: Coastal sand dunes & rocky areas.

Description: Erect shrub to just over 1 metre tall with pink heads of flowers.

Collection details: Mary Ellis Wreck Beach Road, south of Port Lincoln. Collected by G. Marshall (EP NRM).

Recommendation: Remove this weedy infestation and monitor site.

1.6 Other species that are most likely NOT of future concern as weeds in SA but should be monitored:

Acer campestre L.

Field maple

http://www.hear.org/gcw/species/acer_campestre/

Native to: Large parts of cool-temperate Europe, temperate Asia and north Africa.

Distribution: In Australia recorded as naturalised in NSW and South Australia. A second collection is listed for Stirling West in South Australia but this is most likely a cultivated record.

Worldwide: Naturalised in many cool temperate parts of the world where it was introduced mainly as an ornamental.

Likes to grow in: In cool climates and is most likely on the edge of it ecological range in the higher rainfall areas of South Australia.

Description: Small winter deciduous tree to 5-10 metres tall. Similar looking leaves to the maple and sycamore but with smaller leaves.

Collection details: Collected by C.J. Brodie in the Adelaide Hills in Stirling opposite the old Mt Lofty Railway Station on car park edge. Three saplings.

Cedrus deodara (Roxb. ex D.Don) G.Don

Deodar

http://www.hear.org/gcw/species/cedrus_deodara/

Native to: Afghanistan, China, India, Nepal and Pakistan.

Distribution: In Australia this is recorded in Victoria as sparingly naturalised and now in South Australia.

Worldwide: Used in horticultural worldwide in temperate gardens and only recorded sparingly naturalised.

Likes to grow in: Higher rainfall areas.

Description: Large evergreen conifer trees.

Collection details: Collected by C.J. Brodie in the Adelaide Hills in Stirling along the train track near the old Mt Lofty Railway Station.

Celtis occidentalis L.

Common hackberry

http://www.hear.org/gcw/species/celtis_occidentalis/

Native to: North America in both Canada and the USA.

Distribution: In Australia naturalised in Queensland and New South Wales.

Worldwide: An ornamental tree used in horticulture.

Likes to grow in: Higher rainfall areas.

Description: Medium sized winter deciduous tree.

Collection details: Collected by P.J. Lang (State Herbarium) at Belair National Park near the south-east corner of State Flora Nursery, on the

outside fence, on northern edge of Queen's Jubilee Drive.

Commelina benghalensis L.

Benghal dayflower

http://www.hear.org/gcw/species/commelina bengalensis/

Native to: Tropical Asia and Africa.

Distribution: In Australia naturalised in Western Australia, Northern Territory, Queensland, New South Wales, and now South Australia. It is classed as an invasive plant in south-eastern Queensland and is a common weed of waterways and riparian areas in this region.

Worldwide: Widely naturalised in the warmer parts of the world and termed as an invasive plant in some states of the USA.

Likes to grow in: Higher rainfall areas, moist areas or by creeks.

Description: A spreading herbaceous perennial to about 50 cm with dark green somewhat fleshy stems and leaves. Blue flowers to 1.5 cm across with three obvious petals.

Collection details: A single specimen was collected in April 1994 in Chambers Gully. A return visit is required to determine if this taxa is still present in the area as it has been recorded as a serious weed in some parts of the world.

Dahlia imperialis Roezl ex Ortgies Tree Dahlia

Native to: Central America

Distribution: In Australia recorded as naturalised in Queensland only.

Worldwide: Cultivated around the world as a garden plant. Recorded as naturalised in New Zealand and possibly Hawaii.

Likes to grow in: Richer wetter soils in the higher rainfall areas of South Australia.

Description: Is a large herbaceous perennial that can reach four or more metres tall. It has large attractive pink pendulous flowers with many on a single branching stem.

Collection details: First collected in June 1996 and subsequently in September 2012 in the Adelaide Hills on Montacute Road, Montacute opposite Smith Gully Orchard. This plant was not present on a return visit in October 2013.

Lonicera fragrantissima Lindl. & Paxton Fragrant honeysuckle

http://www.hear.org/gcw/species/lonicera_fragrantissima/

Native to: China.

Distribution: In Australia it is recorded as naturalised in New South Wales and doubtfully naturalised in Queensland and now South Australia.

Worldwide: As well as recorded as naturalised in Australia it is also recorded as naturalised in the USA.

Likes to grow in: Open woodlands and disturbed sites. In the USA it is known to form dense thickets in the understorey vegetation which can restrict native plant growth and prevent overstorey regeneration. Its seeds are readily dispersed by birds and mammals.

Description: A bushy deciduous shrub to 2 m, leaves to 6 cm long, and pairs of very fragrant, two-lipped cream flowers.

Collection details: Originally collected in or before 2007 in the Adelaide Hills. A second population was collected by P.J. Lang in 2012 and again in flower in 2013 in Morialta Conservation Park.

Portulacaria afra (L.) Jacq. https://www.google.com.au/#cr=countryAU&q=Portulacaria+afra&tbs=ctr:countryAU

Native to: South Africa.

Distribution: In Australia recoded sparingly in Queensland and Western Australia.

Worldwide: Commonly cultivated but not widely naturalised.

Likes to grow in: In semi-arid landscapes.

Description: Soft-wooded, semi-evergreen upright shrub to a maximum of about 4 m tall and wide, with rounded semi-succulent leaves.

Collection details: First collected in 1991 at Port Augusta with several collections made around the State. Most recently collected in 2012.

Seguoia sempervirens (D.Don) Endl.

http://www.hear.org/gcw/species/sequoia sempervirens/

Native to: Oregon and California in the USA.

Distribution: In Australia only recorded as sparingly naturalised in Western Australia and Victoria.

Worldwide: Cultivated in temperate areas worldwide but also recorded as naturalising in the USA, UK and New Zealand.

Likes to grow in: Higher rainfall locations.

Description: Large evergreen specimen conifer. In the USA a Sequoia sempervirens tree is recorded as the tallest living tree in the world.

Collection details: Collected in Stirling by the railway track. Several saplings present.

2. New regional records of plants collected and lodged in the State Herbarium.

There have been 22 new plant taxa recorded for one or more additional Herbarium Regions as *naturalised* or *questionably naturalised* in the Census between the dates of May 1st 2013 – May 24th 2014 that have been collected or recognised recently or are considered significant.

The data is listed as a table for each of the Herbarium Regions (Tables 4-16). All records are based on specimens deposited in the State Herbarium. Species we considered of particular concern are listed for the regions as applicable.

(1) North-Western Herbarium Region:

This region falls in the AW and SAAL NRM regions

Table 4. Additional plant taxa recorded in the Census for the North-Western (1) Herbarium Region as Y = Naturalised Y? = Questionably naturalised

Taxa	Common Name	Family	Naturalised	Date entered into Census
NIL				

(2) Lake Eyre Herbarium Region:

This region falls in the SAAL NRM regions

Table 5. Additional plant taxa recorded in the Census for the Lake Eyre (2) Herbarium Region as

Y = Naturalised Y? = Questionably	naturalised
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Таха	Common Name	Family	Naturalised	Date entered into Census
NIL				

(3) Nullarbor Herbarium Region:

This region falls in the AW and EP NRM regions

Table 6. Additional plant taxa recorded in the Census for the Nullarbor (3) Herbarium Region as

Y = Naturalised Y? = Questionably naturalis	Y = Naturalised	Y? = Questionably naturalised
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Taxa	Common Name	Family	Naturalised	Date entered into Census
NIL				

(4) Gairdner-Torrens Herbarium Region:

This region falls in the SAAL and AW NRM regions

Table 7. Additional plant taxa recorded in the Census for the Gairdner-Torrens (4) Herbarium Region as

Y = Naturalised	Y? = Questionably naturalised
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Taxa	Common Name	Family	Naturalised	Date entered into Census
NIL				

(5) Flinders Ranges Herbarium Region:

This region falls mainly in the SAAL and also in N&Y NRM regions

Table 8. Additional plant taxa recorded in the Census for the Flinders Ranges (5) Herbarium Region as

Y = Naturalised Y? = Questionably naturalised

Таха	Common Name	Family	Naturalised	Date entered into Census
Lupinus angustifolius L.	Narrow-leaf lupin	LEGUMINOSAE	Y?	21/01/2014

(6) Eastern Herbarium Region:

This region falls in the SAAL, SAMDB and N&Y NRM regions

Table 9. Additional plant taxa recorded in the Census for the Eastern (6) Herbarium Region as

Y = Naturalised Y? = Questionably naturalised

Таха	Common Name	Family	Naturalised	Date entered into Census
Centaurea calcitrapa L.	Star thistle	COMPOSITAE	Υ	13/08/2013

(7) Eyre Peninsula Herbarium Region:

This region falls in the EP and SAAL NRM region

Table 10. Additional plant taxa recorded in the Census for the Eyre Peninsula (7) Herbarium Region as

Y = Naturalised Y? = Questionably naturalised

Taxa	Common Name	ommon Name Family		Date entered into Census	
Cenchrus echinatus L.	Buffel grass / Mossman River grass	POACEAE	Y?	26/05/2014	
Ficus carica L.	Edible fig	MORACEAE	Y	27/09/2013	
Lupinus angustifolius L.	Narrow-leaf lupin	LEGUMINOSAE	Y?	22/01/2014	

(8) Northern Lofty Herbarium Region:

This region falls in the N&Y, AMLR and SAMDB NRM regions

Table 11. Additional plant taxa recorded in the Census for the Northern Lofty (8) Herbarium Region as

Taxa	Common Name	Family	Naturalised	Date entered into Census	
Centaurea X moncktonii C.E.Britton	Black knapweed	COMPOSITAE	Y?	22/08/2013	
Gypsophila paniculata L.	Baby's breath	CARYOPHYLLACEAE	Y?	30/05/2013	
Sedum praealtum A.DC.	Green cockscomb	CRASSULACEAE	Y	20/11/2013	
Tagetes minuta L.	Stinking roger	COMPOSITAE	Y	14/08/2013	

(9) Murray Herbarium Region:

This region falls in the SAMDB, SAAL and AMLR NRM regions

Table 12. Additional plant taxa recorded in the Census for the Murray (9) Herbarium Region as

Y = Naturalised Y? = Questionably naturalised

Taxa	Common Name	Family	Naturalised	Date entered into Census	
Lobelia erinus L.	Lobelia	CAMPANULACEAE	Y?	19/07/2013	
Sedum praealtum A.DC.	Green cockscomb	CRASSULACEAE	Y	20/11/2013	

(10) Yorke Peninsula Herbarium Region:

This region falls in the N&Y NRM regions

Table 13. Additional plant taxa recorded in the Census for the Yorke Peninsula (10) Herbarium Region as

Y = Naturalised Y? = Questionably naturalised

Таха	Common Name	Family	Naturalised	Date entered into Census	
Ficus carica L.	Edible fig	MORACEAE	Υ	27/09/2013	
Glycyrrhiza glabra L.	Liquorice	LEGUMINOSAE	Y	03/06/2013	

(11) Southern Lofty Herbarium Region:

This region falls in the AMLR and SAMDB NRM regions

Table 14. Additional plant taxa recorded in the Census for the Southern Lofty (11) Region as

Таха	Common Name	Common Name Family		Date entered into Census
Bacopa monnieri (L.) Wettst.	Water hyssop	SCROPHULARIACEAE	Υ	13/11/2013
Eucalyptus bicostata Labill.	Southern blue gum	MYRTACEAE	Υ	12/06/2013
Lomandra longifolia Labill.	Spiny-headed mat-rush	LILIACEAE	Y?	11/03/2014
Lupinus angustifolius L.	Narrow-leaf lupin	LEGUMINOSAE	Y?	21/01/2014
Podalyria sericea (Andrews) R.Br.	Cape satin bush	LEGUMINOSAE	Y?	05/05/2014

(12) Kangaroo Island Herbarium Region:

This region falls in the KI NRM region

Table 15 Additional plant taxa recorded in the Census for the Kangaroo Island (12) Herbarium Region as

Y = Naturalised Y? = Questionably naturalised

Taxa	Common Name	Family	Naturalised	Date entered into Census
NIL				

(13) South-Eastern Herbarium Region:

This region falls in the SE and SAMDB NRM region

Table 16. Additional plant taxa recorded in the Census for the South-Eastern (13) Herbarium Region as

Taxa	Common Name	Family	Naturalised	Date entered into Census	
Centaurea X moncktonii C.E.Britton	Black knapweed	COMPOSITAE	Y?	22/08/2013	
Ficus carica L.	Edible fig	MORACEAE	Y	27/09/2013	
Lupinus angustifolius L.	Narrow-leaf lupin	LEGUMINOSAE	Y?	22/01/2014	
Melia azedarach L.	White cedar	MELIACEAE	Y?	30/01/2014	

3. Changes in nomenclature of naturalised plant taxa

There are 24 taxa that have had new / altered names applied in the Census between the dates of May 1st 2013 – May 24th 2014 (Table 17). This has occurred due to changes in taxonomic concepts or because of misapplications of names.

Table 17. New names of taxa which previously had other names applied for material already in the collections

New Names (Renames of taxa already in Census)	Naturalised	Date changed in Census	Original Date entered into the Census	Previous name used in SA Flora / CENSUS with comments
Cenchrus clandestinus (Hochst. ex Chiov.) Morrone	Υ	28/06/13	2/10/1990	Pennisetum species transferred to Cenchrus - see Chemisquy in Annals of Botany 106 (2010) and Simon, Austrobaileya 8 (2010).
Cenchrus longisetus M.C.Johnst.	Y	28/06/13	2/10/1990	As above
Cenchrus macrourus (Trin.) Morrone	Y	28/06/13	2/10/1990	As above
Cenchrus setaceus (Forssk.) Morrone	Y	28/06/13	2/10/1990	As above
Centaurea paniculata L.	Y	13/08/13	2/10/1990	A.R. Bean does not recognise subspecies in <i>Flora of Australia</i> and <i>Flora of South Australia</i> , in line with European treatments.
Crepis vesicaria L. ssp. taraxicifolia (Thuill.)Thell.	Y	5/09/13	2/10/1990	Crepis vesicaria L. ssp. haenseleri (Boiss. ex DC.) Sell replaced by this name, as it is earlier published. See new Fl.SA treatment and APC/APNI.
Leontodon saxatilis Lam.	Y	10/09/13	2/10/1990	Name change from to Leontodon taraxacoides ssp. taraxacoides to L. saxatilis Lam. according to APC. Leontodon taraxacoides is invalid.
Rytidosperma bipartitum (Link) A.M.Humphreys & H.P.Linder	N	23/04/14	16/02/2005	Renamed from Austrodanthonia to Rytidosperma following Linder et al. (2010), Ann. Miss. Bot. Gard. 97: 306-364.
Rytidosperma richardsonii (Cashmore) Connor & Edgar	N	1/07/13	2/10/1990	As above
Platanus X hispanica Mill. ex Munchh. cv. Acerifolia	Y?	22/08/13	22/08/2013	Added as new ?e for SA, SL & NL following investigation by RMB of correct name and synonymy, and decision to use name adopted by APC & Flora of Australia. The explanation, reasons and history behind the chosen usage also adopted by GRIN.
Leontodon rhagadioloides (L.) Enke & Zidorn	Y	22/04/14	22/04/2014	Combine of <i>Hedypnois rhagadioloides</i> ssp. <i>cretica</i> & <i>H. r.</i> ssp. <i>rhagadioloides</i> as <i>Leontodon rhagadioloides</i> following treatment by I.R. Thompson (2014) for <i>Fl.SA</i> edn 5.
Scorzonera laciniata L. var. calcitrapifolia (Vahl) Bisch. ex Boiss.	Y	21/10/13	21/10/2013	Species split into two varieties, see <i>APC</i> & <i>Flora SA</i> treatment (I.R. Thompson). Only 2 specimens of this var. from SE.
Scorzonera laciniata L. var. laciniata	Υ	21/10/13	21/10/2013	Species split into 2 vars in APC and new Flora SA treatment (Ian Thompson).

New Names (Renames of taxa already in Census)	Naturalised	Date changed in Census	Original Date entered into the Census	Previous name used in SA Flora / CENSUS with comments
Taraxacum gracilens Dahlst.	Y	21/08/13	21/08/2013	Split of <i>T. erythrosperma</i> into <i>T. gracilens, hepaticolor</i> and <i>multidentatum</i> . Implementation of Neville Scarlett's treatment for <i>Flora of South Australia</i> .
Taraxacum hepaticolor Soest	Υ	21/08/13	21/08/2013	As above
Taraxacum khatoonae	Y	21/08/13	21/08/2013	New name for specimen previously attributed to <i>Taraxacum officinale</i> . Implementation of new <i>Flora of South Australia</i> treatment (N. Scarlett).
Taraxacum multidentatum Soest	Y	21/08/13	21/08/2013	Split of <i>T. erythrosperma</i> into <i>T. gracilens, hepaticolor</i> & <i>multidentatum.</i> as above
Taraxacum sect. Hamata H.Ollg.	Y	21/08/13	21/08/2013	Implementation of new Flora of South Australia treatment (N. Scarlett).
Taraxacum sect. Taraxacum	Y	21/08/13	21/08/2013	Implementation of new <i>Flora of South Australia</i> treatment by N. Scarlett. Until recently this was called sect. <i>Ruderalia</i> .
Tagetes erecta L.	Y	14/08/13	14/08/2013	New species of <i>Tagetes</i> discovered during preparation of <i>Flora of South Australia</i> account by A.R. Bean (BRI).

Table 18. Replacing misapplied names of taxa which previously had other names applied for material already in the collections Y = Naturalised Y? = Questionably naturalised

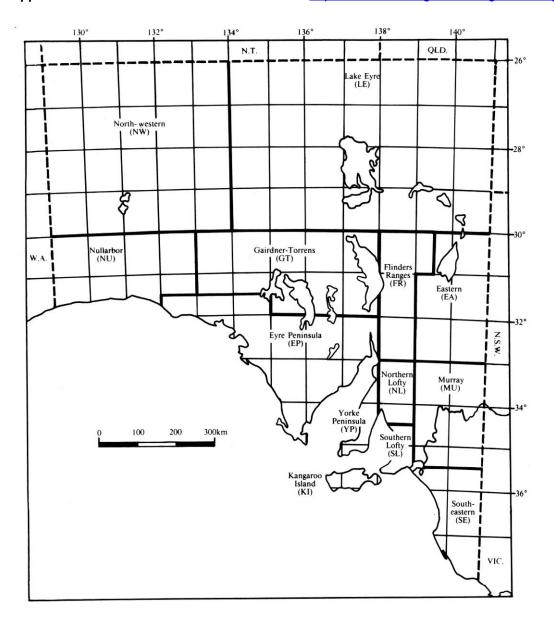
Replacing misapplied name (Renames of taxa already in Census)	Naturalised	Date changed in Census	Original Date entered into the Census	Previous name used in SA Flora / CENSUS with comments
Aloe brevifolia Mill.	Υ	4/09/13	5/07/2011	Author changed from Haw. to Mill. <i>A. brevifolia</i> (Aiton) Haw is a <i>nom. illeg.</i> and applies to another species, <i>A. perfoliata</i> L. This taxon, however, is <i>A. brevifolia</i> Mill. (ID by C. Brodie, according Carter <i>et al.</i> 2011).
Calystegia silvatica (Kit.) Griseb. ssp. silvatica	Υ	26/02/14	4/08/2006	Previously identified as <i>C. sepium</i> which is also still recognised for SA.
Cucurbita maxima Duchesne	Y?	13/05/14	13/05/2014	Added <i>Cucurbita maxima</i> as new SA and LE record, as ?e, based on C.R. Alcock 6663
Cotoneaster simonsi Baker	Y	9/05/14	2/10/1990	Renamed from <i>Cotoneaster symondsii</i> Moore to <i>C. simonsii</i> Baker, following the selection of a neotype for the former from material of <i>C. marginatus</i> by Fryer, J. & Zika, P.F., 2014, <i>Phytotaxa</i> 164 (2): 149-153

References

Gleason, Henry A. / Crohnquist, Arthur. 1963. Manual of vascular plants of north eastern United States and adjacent Canada. New York Botanical Garden. 910 pp. ISBN 0-89327-365-1.

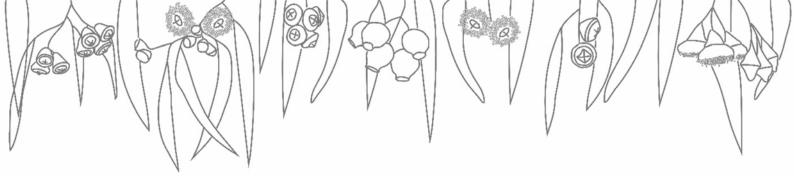
[Website] A GLOBAL COMPENDIUM OF WEEDS, http://www.hear.org/[accessed May 2014]

Appendix 1 MAP OF HERBARIUM REGIONS http://www.flora.sa.gov.au/images/AD regions.jpg



Regional Landscape Surveillance for New Weed Threats Project Report 2014-2015





This report should be cited as:

Brodie, C.J., Lang, P.J., Vonow, H.P. & Waycott, M. (2015). *Regional Landscape Surveillance for New Weed Threats Project (2014-2015). Milestone: Annual report on new plant naturalisations in South Australia*, 23 pp. (State Herbarium of South Australia: Adelaide).

State Herbarium of South Australia Science, Monitoring and Knowledge Strategy and Advice Department of Environment, Water and Natural Resources

Milestone Report

Regional Landscape Surveillance for New Weed Threats Project **2014-2015**

Milestone: Annual report on new plant naturalisations in South Australia

Chris Brodie, Peter Lang, Helen Vonow and Michelle Waycott.

for

Director
Science, Monitoring and Knowledge
Strategy and Advice
Department of Environment, Water and Natural Resources

1 June 2015

This report summarises the work carried out by the State Herbarium of South Australia (State Herbarium) for the project, *Regional Landscape Surveillance for New Weed Threats* for the 2014/15 financial year. Funding for the project was received from a number of sources namely PIRSA Biosecurity SA, the State NRM Program, Adelaide and Mt Lofty Ranges NRM, South East NRM and Eyre Peninsula NRM, and their support is gratefully acknowledged.

Funding covered the salary of a Weeds Botanist (Chris Brodie), based at the State Herbarium and some sample processing expenses. A significant amount of in-kind support was provided by Herbarium staff, Honorary Researchers and volunteers for associated activities such as plant identification, specimen processing, data entry and reporting.

The Weeds Botanist's activities were centred in those regions that provided funding support with the exception of a regional Buffel Grass Survey of areas of the South Australia Arid Lands Natural Resources region partially funded by Biosecurity SA through Rural Solutions.

The focus of the Weeds Botanist was on discovery and collection of new weed records with the majority of field work occurring in the AMLR Region. In addition, regional visits were used to provide workshops and field days for regional staff and NGOs to increase awareness of weeds, the value of early detection and the processes required to contribute scientifically valid specimens and records to the State Herbarium.

This year the project has resulted in the discovery of 17 new weed species records and one questionably native plant record. The project has been running since 2009 and has resulted in the recognition of 226 new weed species. The project has also helped identify and quantify emerging threats, such as the spread of buffel grass. In addition, the continuity of funding has provided an invaluable opportunity for the State Herbarium to strengthen its capacity and expertise in weed-related discovery and research and to update the *Census of South Australian Vascular Plants* with a more accurate representation of the current status of the State's weeds. The Weeds Botanist position has also provided a reliable point of contact for regional staff and communities as well as training and support.

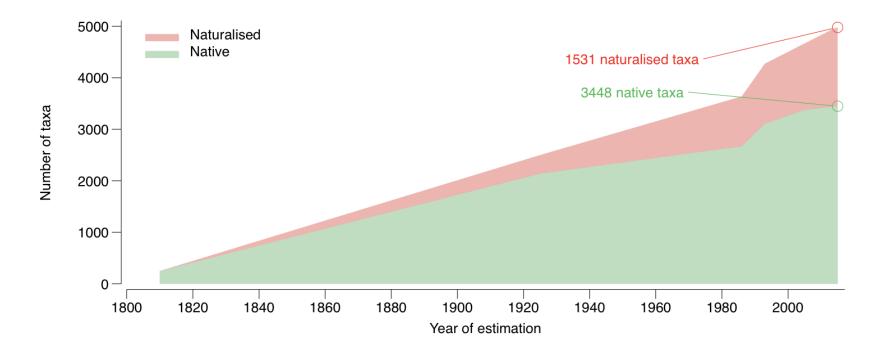


FIGURE 1 Proportion of Native and Naturalised Plant Species recognised in the Census of South Australian Vascular Plants over Time A compilation of State Herbarium of South Australia records showing the relative proportions of indigenous native to naturalised plant species occurring in the State with the totals shown as of June 2015. The steep climb starting in the late 1980s reflects the impact of the Biological Survey of South Australia program. The recent climb in naturalised taxa is a reflection of the effort the State Herbarium and it partner agencies are making with regard to early detection and identification of new and emerging naturalised plants.

1. New naturalised or questionably naturalised records of plants in South Australia.

In the previous year (May 2014 – May 2015), 17 new records of **naturalised** or **questionably naturalised** plants and one questionably native plant record were added to the *Census of South Australian Plants*, *Algae and Fungi*¹ (hereafter referred to as the 'Census'), based on plants deposited and accessioned in the State Herbarium of South Australia (hereafter referred to as the 'Herbarium').

These have been sorted into three categories:

- (a) Those **five** plant species collected for the first time in the past year (May 2014 May 2015), such that there is definitive evidence that they are established or are likely to become established 'in the wild' (Table 1.).
- (b) Those **six** plant species for which there were previous collections from South Australia with vouchers lodged at the Herbarium, but these taxa previously lacked sufficient taxonomic or geographical data to add to the Census. Only when observed and collected during the past year was there sufficient evidence to add them to the Census (Table 2.).
- (c) Those **seven** plant species for which there were previous collections from South Australia with vouchers lodged at the Herbarium which have only been identified or re-examined recently and thus added to the Census in the past year (Table 3.).

The data is gathered and reported using Herbarium Regions – the map of the regions has been included as Appendix 1.

Table 1. Details of five plant species collected and identified for the first time between May 2014 – May 2015 in South Australia, deposited in the State Herbarium and recorded as naturalised or questionably naturalised.

Y = Naturalised Y? = Questionably naturalised

New Taxa	Common Name	Date First Collected	Family	Naturalised	Regional	Date Added
					Distribution	To Census
Urochloa mosambicensis (Hack.) Dandy	Sabi grass	19/04/2014	GRAMINEAE	Υ	NL	20/11/2014
Callistemon pallidus (Bonpl.)DC.	Lemon bottlebrush	3/11/2014	MYRTACEAE	Y?	SE	15/01/2015
Abutilon pictum (Gillies ex Hook. & Arn.)Walp.	Chinese lantern	26/11/2014	MALVACEAE	Y?	SL	21/01/2015
Maclura pomifera (Raf.) C.K.Schneid.	Osage orange	1/04/2015	MORACEAE	Y?	SL	6/05/2015
Oenothera curtiflora Douglas ex Lehm	Clockweed	7/05/2015	ONAGRACEAE	Y?	NL	22/05/2015

¹ accessible via http://www.flora.sa.gov.au/census.shtml

Table 2. Records of six plant species collected between May 2014 – May 2015, also with one or more collections made before April 2014 in South Australia, deposited in the State Herbarium and recorded as naturalised or questionably naturalised Y = Naturalised Y? = Questionably naturalised

New Taxa	Common Name	Date First Collected	Date Last Collected	Family	Naturalised	Regional Distribution	Date Added To Census
Astroloma foliosum Sonder	Candle cranberry	5/08/2010	18/09/2014	EPACRIDACEAE	Y?	SL	12/01/2015
Leucopogon verticillatus R.Br.	Tassel flower	5/08/2010	18/09/2014	EPACRIDACEAE	Y?	SL	12/01/2015
Prostanthera ovalifolia R.Br.	Oval-leaf mintbush	5/01/2010	15/10/2014	LABIATAE	Y?	SL	12/01/2015
Syzygium australe (H.L.Wendl. ex Link) B.Hyland	Brush cherry	15/01/2010	30/09/2014	MYRTACEAE	Y?	SL	12/01/2015
Plectranthus fruticosus L'Her.		17/04/2009	3/12/2014	LABIATAE	Y?	SL	21/01/2015
Acacia schinoides Benth.	Green cedar wattle	12/02/1988	21/02/2014	LEGUMINOSAE	Υ?	SL	13/08/2014

Table 3. Records of seven plant species have been identified and a name added to the Census for the first time between May 2014 – May 2015 in South Australia, deposited in the State Herbarium and recorded as naturalised or questionably naturalised or questionably native.

Y = Naturalised Y? = Questionably naturalised N? = Questionably native

New Taxa	Common Name	Date First Collected	Date Last Collected	Family	Naturalised	Regional Distribution	Date Added To Census
Nemesia cultivar	Nemesia	27/07/2013	27/07/2013	SCROPHULARIACEAE	Y?	SL	10/04/2015
Gladiolus dalenii Van Geel		12/06/1995	22/06/2011	IRIDACEAE	Υ	NL, MU	21/10/2014
Geranium incanum Burm.f.		23/02/2015	30/11/1990	GERANIACEAE	Y?	SL	23/02/2015
Geranium pyrenaicum ssp. pyrenaicum	Hedgerow cranesbill	Aug 2003	Aug 2003	GERANIACEAE	Y?	SL	18/02/2015
Geranium homeanum Turcz.		10/10/1973	20/05/2005	GERANIACEAE	? N	MU, SL	17/02/2015
Geranium nepalense Sweet		8/11/1994	28/05/1995	GERANIACEAE	Y?	SL	19/02/2015
Cucurbita maxima Duchesne		6/101978	6/10/1978	CUCURBITACEAE	Y?	LE	3/05/2014

1.1 Taxa that may be of future concern as weeds in SA - based on observations of Chris Brodie (CJB) from the collection site

Plectranthus fruticosus L'Her Shrubby plectranthus http://www.hear.org/gcw/species/plectranthus_fruticosus/

Native to: Southern Africa to South Africa and Swaziland

Distribution: Known to grow wild in Victoria and possibly Tasmania

Worldwide: Grown as an ornamental around the world in temperate areas but not known as a weed.

Likes to grow in: Temperate areas in well-drained soil.

Description: Upright-growing, herbaceous shrub with sprays of pink flowers in autumn with green ovate leaves to 15-20 cm long and wide

Collection details: Originally collected in 2009 but re-collected in December 2014 in the Adelaide Hills at Pomona Road, Stirling, 'Service Women's War Memorial Reserve in NNE corner of reserve by main freeway, spreading from a garden plant along boundary to the park and road reserve

Recommendation: Remove seedlings along freeway verge by memorial park.

1.2 Some taxa that may be of future concern as weeds in SA

- based on the number of references in the online data base the *Global Compendium of Weeds* http://www.hear.org/gcw/, the updated data set of Randall (2002) ² and from regions similar in climate to an area in SA are as follows:

Urochloa mosambicensis (Hack.) Dandy Sabi grass or Herringbone grass http://www.hear.org/gcw/species/urochloa_mosambicensis/

Native to: Africa (Kenya; Tanzania; Uganda, Malawi; Mozambique; Zambia; Zimbabwe, Botswana; South Africa).

Distribution: In Australia over 450 Herbarium records concentrated in tropical and arid WA, NT and Qld, extending in northern NSW.

Worldwide: Known as a weed in North and South America, and as a weed of cultivation in native range.

Likes to grow in: From tropical to arid areas. Known as a weed of agricultural cultivation.

Description: A tufted erect to sprawling tufted grass. See: http://keyserver.lucidcentral.org/weeds/data/080c0106-040c-4508-8300-

0b0a06060e01/media/Html/Urochloa_mosambicensis.htm

Collection details: Main highway to Port Pirie, c. 22 km SSE of Port Pirie. Latitude 33° 18′ 09″ S Longitude 38° 10′ 25″ E.

This was a single plant that was growing on the roadside.

Recommendation: Remove or treat plant and remove any seedlings.

² Randall, R. (2002). A Global Compendium of Weeds. R.G. & F.J. Richardson. Meredith, Victoria, Australia and Randall, R. (2007-). A Global Compendium of Weeds. Published on the Internet http://www.hear.org/gcw/ [Accessed 30th May 2013].

1.3 Other taxa may be of future concern as weeds in SA, based on weediness of close relatives:

Gladiolus dalenii Van Geel (probably the pentaploid G. dalenii CV. 'Hookeri' *) http://www.hear.org/gcw/species/gladiolus_dalenii/

Native to: Large areas of Africa, not only southern Africa but also in tropical Africa.

Distribution: In Australia several weedy collections are known from NSW but is more widely cultivated.

Worldwide: Grown worldwide in the horticultural industry and naturalised in North America.

Likes to grow in: In most situations in higher rainfall areas. Not in Arid SA.

Description: A vigorous bulb-like plant with striking numerous red and orange-yellow marked flowers in a spike.

Collection details: First collected in June 1995 near Greenock but more recently in June 2011 in the Barossa Valley. On the outskirts of Keyneton on the south side on Eden Valley-Keyneton road, south east of Angaston.

Recommendation: Monitor, remove. Note: other taxa of *Gladiolus* are problematic weeds in SA in the higher rainfall areas.

* pers.comm. D. Cooke July 2015

Oenothera curtiflora Douglas ex Lehm. Clockweed No entry on Global Compendium of Weeds

Native to: North America, from the US and Mexico

Distribution: A common weed in south-east Queensland. Some collections from NSW where it is declared a noxious weed, and found around Mildura in Victoria.

Worldwide: Occasionally grown by gardeners. Documented as a weed in the US outside its native range, but not recorded as a weed elsewhere in the world.

Likes to grow in: In most situations along water courses or areas of higher rainfall.

Description: An herbaceous herb to about 1 m high with spike of small pink to red flowers.

Collection details: First collected on 7th May 2015 by Grant Roberts as a weed in a garden in the Northern and Yorke Natural Resources region at Leighton (9.5 km S of Booborowie).

Recommendation: Monitor and remove.

1.4 Australian plants which are not native to South Australia or some of its regions, and appear to be in the early stages of establishment in one or more locations.

Australian plants can be serious weeds as they may be adapted to the same or similar environmental conditions. They can be overlooked as weeds as they may be similar in appearance to indigenous local plants. Examples of known 'weedy natives' are *Pittosporum undulatum* and *Acacia saligna* from the eastern states.

NB. Some of the taxa listed below have not been noted previously in the *Global Compendium of Weeds*:

Callistemon pallidus (Bonpl.)DC.

Lemon bottlebrush

No entry on Global Compendium of Weeds

Note: The genus Callistemon will soon be officially transferred to Melaleuca.

Native to: Eastern States (Qld, NSW and Vic as well as Tasmania).

Distribution: In Australia it is native to the Eastern States; Qld, NSW and Vic as well as Tasmania.

Worldwide: Not known as a weed elsewhere and is used in the horticultural industry.

Likes to grow in: A frost-hardy plant will grow in moist situations in rocky sites in temperate to sub-temperate areas in full sun or part shade and will withstand moderate exposure to salt.

Description: An upright hardy shrub with slender spreading branches growing to a height of about 3 metres tall by 2 m across. Has fresh lemon-coloured flowers with grey-green foliage.

Collection details: First collected in November 2014 on the edge of parklands at Naracoorte. Looks like it was self-sown, and with others close by but it is not out of the question that it could have been planted.

Recommendation: Monitor.

Astroloma foliosum Sonder

Candle cranberry

No entry on Global Compendium of Weeds:

Native to: WA.

Distribution: In Western Australia in a small area just outside Perth. This species has a very limited native distribution.

Worldwide: Not known if this is used as a horticultural plant anywhere else.

Likes to grow in: Temperate / Mediterranean areas.

Description: Small shrub to c. 50 x 80 cm with small bright red tubular flowers.

Collection details: Collected CJ Brodie (State Herbarium) at Basket Range on edge of old Burdett's Garden on Burdett's Road, with only a few

plants seen in limited area.

Leucopogon verticillatus R.Br.

Tassel flower

No entry on Global Compendium of Weeds

Native to: WA.

Distribution: In Australia it is common in SW Western Australia from about Perth to Albany. Only other record from Vic from Bass Coast - Phillip Island. Rare in the horticultural trade.

Worldwide: Limited in the horticultural trade?

Likes to grow in: Temperate Mediterranean areas.

Description: The tallest epacrid (now in family Ericaceae) in WA, this is an erect, bamboo-like shrub, 0.8-4 m high, with whorls of pointed lanceolate leaves flowers pink-red in dropping panicles c. 10 cm long.

Collection details: Collected CJ Brodie (State Herbarium) at Basket Range on edge of old Burdett's Garden on Burdett's Road. Seems to be spreading unaided within the garden and is on the roadside. This could in time spread further beyond the boundaries.

Recommendation: Monitor.

Prostanthera ovalifolia R.Br.

Oval-leaf mintbush

http://www.hear.org/gcw/species/prostanthera_ovalifolia/

Native to: NSW & Qld.

Distribution: In its native range it is common in wet and dry sclerophyll forest on sandstone, widespread. Also naturalised in Victoria.

Worldwide: It is used in ornamental horticulture in warmer temperate areas. Several garden origin plants are also available that vary in leaf shape and colour, and flower colour.

Likes to grow in: Temperate Mediterranean areas in well drained soils.

Description: A fast growing shrub to small tree that has small oval shaped leaves and purple flowers. Reported to 2.5 m tall, but plants collected in the Adelaide Hills were far bigger.

Collection details: Collected CJ Brodie (State Herbarium) at Basket Range on edge of old Burdett's Garden on Burdett's Road. Seems to be spreading unaided within the garden and on the roadside. This could in time spread further beyond the boundaries.

Syzygium australe (H.L.Wendl. ex Link) B.Hyland

Brush cherry

http://www.hear.org/gcw/species/syzygium_australe/

Native to: NSW & Qld.

Distribution: In Australia grows warmer rainforests and by creeks and rivers.

Worldwide: Occasionally cultivated as an ornamental in temperate areas in Australia and around the world.

Likes to grow in: Full sun to part shade. It will grow in most soil types, but it prefers fertile, well drained soils.

Description: Shrub or small tree with flaky bark; young leafy twigs 4-angled to shortly 4-winged, wings joining above each node to produce a small pocket. See http://plantnet.rbgsyd.nsw.gov.au/cgi-bin/NSWfl.pl?page=nswfl&lvl=sp&name=Syzygium~australe

Collection details: Collected CJ Brodie (State Herbarium) at Basket Range on edge of old Burdett's Garden on Burdett's Road and Belair National Park in 2010 and 2014. Also regrowing from a stump at Carminow that was burnt in Ash Wednesday in 1983. These may be remnant plants that are slowly spreading, or plants of no concern?

Recommendation: Monitor.

Acacia schinoides Benth.

Green cedar wattle

http://www.hear.org/gcw/species/acacia_schinoides/

Native to: NSW & Vic.

Distribution: Native to NSW and Victoria, usually in wet sclerophyll forest, often in gullies or in sandy soils adjacent to creeks. Also found as a naturalised plant in Victoria.

Worldwide: Occasionally cultivated as an ornamental in temperate areas in Australia and around the world.

Likes to grow in: Temperate areas in full sun to part shade well drained soils.

Description: A fast growing small erect tree or shrub 2–10 m high; bark smooth or finely fissured, with pinnate leaves and light yellow globular flowers.

Collection details: Originally collected in February 1988 in Kuitpo Forest but more recently collected in February 2014 at Mount George Conservation Park.

1.5 Other species that are most likely NOT of future concern as weeds in SA, but should be monitored:

Abutilon picton (Gill. Ex Hook. & Arn) Walp. Chinese lantern http://www.hear.org/gcw/species/abutilon_pictum/

Native to: Southern America including Argentina, Brazil, Paraguay & Uruguay,.

Distribution: In Australia only known from a few locations / collection of wild material from Qld, NSW and Vic. This species has begun to escape cultivation in recent years and is an emerging or potential environmental weed in Queensland, New South Wales and Victoria.

Worldwide: Known to be cultivated around the world with numerous garden origin cultivars.

Likes to grow in: Grows in temperate to warmer higher rainfall areas.

Description: A small shrub to about 2.5 metres tall with attractive pendulous orange to red flowers. Spreading by suckering, forming clumps.

Collection details: Collection number CJB 6025. Collected November 2014. A clumping patch spreading by slowly suckering by a creek line in

Coromandel Valley at the walking bridge.

Recommendation: Monitor.

Maclura pomifera (Raf.) C.K.Schneid. Osage orange http://www.hear.org/gcw/species/maclura_pomifera/

Native to: North America; Oklahoma, Arkansas, Louisiana and Texas.

Distribution: In Australia this is recorded throughout NSW with a few records in in Victoria and Qld.

Worldwide: Used worldwide in horticulture in temperate gardens.

Likes to grow in: In riparian vegetation along water courses.

Description: A small deciduous tree or more commonly a large shrub to 8 metres tall, and spreading more widely.

Collection details: First collected by a member of the public in January 2015 growing by the River Torrens in Flinders Park. Confirmed that this is spreading by Weeds Botanist Chris Brodie, collection number CJB 6260, April 2015.

Nemesia cultivar Annual nemesia

No entry on Global Compendium of Weeds for cultivars, but several species listed

No entry on Global Compendium of Weeds

Questionably Native

http://www.hear.org/gcw/species/geranium_pyrenaicum/

http://www.hear.org/gcw/species/geranium_nepalense/

Native to: The genus *Nemesia* is native to Africa. However this is a garden origin plant developed by plant breeders by selecting forms of species and crossing these. Grown around the world.

Distribution: In Australia *Nemesia* are grown in gardens but have been recorded as a casual escapes in NSW, Vic, Tas and WA.

Worldwide: Grown worldwide in the horticultural industry mostly in semi-tropical warm to temperate areas. Not frost hardy.

Likes to grow in: In well-drained humus-rich soil. These plants are normally used as a bedding plant or in pots.

Description: A small semi-woody plant to about 30 cm tall and sprawling. Producing an abundance of flowers that create blocks of colour from red, yellow, blue, pink, orange.

Collection details: Collected once (July 2013) on side of street by Herbarium Botanist Peter Lang

Recommendation: Monitor.

Cucurbita maxima Duchesne

Pumpkin

http://www.hear.org/gcw/species/cucurbita maxima/

Native to: South America with numerous cultivated agricultural and garden varieties.

Distribution: Several collections are known from NSW. However, widely grown as an agricultural crop and in garden throughout Australia.

Worldwide: Grown worldwide in temperate to sub-tropical agricultural and popular in vegetable gardens the world over.

Likes to grow in: In well drained with ample water supply.

Description: A sprawling to climbing soft plant with large soft stem and leaves. Producing large pumpkin fruits that are edible.

Collection details: Collected once in 1978 in the arid zone - by Beresford Railway Siding and bore.

Recommendation: No action required.

Geranium incanum Burm.f.
Geranium pyrenaicum Burm.f. ssp. pyrenaicum
Geranium homeanum Turcz.
Geranium nepalense Sweet

Native to: Africa, temperate to tropical Asia and Europe.

Distribution: In Australia only very few collections are known. **Worldwide:** Grown worldwide in temperate to sub-tropical areas.

Likes to grow in: Temperate areas.

Description: Small soft herbs with pink to purple flowers.

Collection details: Only a few collections in the higher rainfall areas of SA, mainly associated with gardens.

Recommendation: Monitor.

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2. New regional records of plants collected and lodged in the State Herbarium.

There have been 95 new regional plant records identified as *naturalised* or *questionably naturalised* in the Census between the dates of May 1st 2014 – May 24th 2015 that have been collected or recognised recently or are considered significant.

The data is listed as a table for each of the Herbarium Regions (Tables 4-16). All records are based on specimens deposited in the State Herbarium. Species we considered of particular concern are listed for the regions as applicable.

(1) North-Western Herbarium Region:

This region falls in the AW and SAAL NRM regions

Table 4. Additional plant taxa recorded in the Census for the North-Western (1) Herbarium Region as Y = Naturalised Y? = Questionably naturalised

Таха	Common Name	Family	Naturalised	Date entered into Census
Lactuca serriola L. f. serriola	Prickly lettuce	COMPOSITAE	Υ	4/08/2014
Melinis repens (Willd.)Zizka	Red natal grass	GRAMINEAE	Y	4/08/2014

(2) Lake Eyre Herbarium Region:

This region falls in the SAAL NRM regions

Table 5. Additional plant taxa recorded in the Census for the Lake Eyre (2) Herbarium Region as

Y = Naturalised	Y? = Questionably	y naturalised
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Таха	Common Name	Family	Naturalised	Date entered into Census
Triticum aestivum L.	Wheat	GRAMINEAE	Y	18/08/2014

(3) Nullarbor Herbarium Region:

This region falls in the AW and EP NRM regions

Table 6. Additional plant taxa recorded in the Census for the Nullarbor (3) Herbarium Region as

Таха	Common Name	Family	Naturalised	Date entered into Census
Arctotheca calendula (L.)Levyns	Cape weed	COMPOSITAE	Υ	6/08/2014
Centaurea calcitrapa L.	Star thistle	COMPOSITAE	Y	27/05/2014
Dittrichia graveolens (L.)Greuter	Stinkweed	COMPOSITAE	Υ	6/08/2014
Piptatherum miliaceum (L.)Coss.	Rice millet	GRAMINEAE	Υ	11/08/2014
Verbascum virgatum Stokes	Twiggy mullein	SCROPHULARIACEAE	Υ	18/08/2014
Foeniculum vulgare Mill.	Fennel	UMBELLIFERAE	Y	6/08/2014

(4) Gairdner-Torrens Herbarium Region:

This region falls in the SAAL and AW NRM regions

Table 7. Additional plant taxa recorded in the Census for the Gairdner-Torrens (4) Herbarium Region as

Y = Naturalised	Y? = Questionably	naturalised

Таха	Common Name	Family	Naturalised	Date entered into Census
Agave americana L.	Century plant	AGAVACEAE	Y?	6/08/2014
Urospermum picroides (L.)Scop. ex F.W.Schmidt	False hawkbit	COMPOSITAE	Υ	2/06/2014
Cannabis sativa L.	Indian hemp	CANNABACEAE	Y?	6/08/2014

(5) Flinders Ranges Herbarium Region:

This region falls mainly in the SAAL and also in N&Y NRM regions

Table 8. Additional plant taxa recorded in the Census for the Flinders Ranges (5) Herbarium Region as

Y = Naturalised	Y? = Questionably	y naturalised
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Taxa	Common Name	Family	Naturalised	Date entered into Census
Narcissus tazetta L.	Polyanthus narcissus	AMARYLLIDACEAE	Y?	18/08/2014
Picris altissima Delile		COMPOSITAE	Y?	29/05/2014
Panicum hillmanii Chase	Witch-grass	GRAMINEAE	Υ	11/08/2014
Trifolium subterraneum L.	Subterranean clover	LEGUMINOSAE	Υ	15/08/2014
Reseda luteola L.	Wild mignonette	RESEDACEAE	Υ	15/08/2014
Tropaeolum majus L.	Nasturtium	TROPAEOLACEAE	Y	15/08/2014

(6) Eastern Herbarium Region:

This region falls in the SAAL, SAMDB and N&Y NRM regions

Table 9. Additional plant taxa recorded in the Census for the Eastern (6) Herbarium Region as

Y = Naturalised	Y? = Questionably naturalised
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Таха	Common Name	Family	Naturalised	Date entered into Census
Nil	Nil	Nil	Nil	Nil

(7) Eyre Peninsula Herbarium Region:

This region falls in the EP and SAAL NRM region

Table 10. Additional plant taxa recorded in the Census for the Eyre Peninsula (7) Herbarium Region as

Y = Naturalised Y? = Questionably naturalised

Таха	Common Name	Family	Naturalised	Date entered into Census
Agave americana L.	Century plant	AGAVACEAE	Υ	6/08/2014
Vinca major L.	Blue periwinkle	APOCYNACEAE	Y	15/08/2014
Cannabis sativa L.	Indian hemp	CANNABACEAE	Y?	6/08/2014
Lactuca serriola L. f. integrifolia (Gray)S.D.Prince & R.N.Carter	Prickly lettuce	COMPOSITAE	Y?	29/05/2014
Cotyledon orbiculata L. var. orbiculata	Pig's ear	CRASSULACEAE	Y	6/08/2014
Eragrostis barrelieri Daveau	Pitted love-grass	GRAMINEAE	Y	6/08/2014
Panicum hillmanii Chase	Witch-grass	GRAMINEAE	Y	11/08/2014
Melaleuca armillaris (Sol. ex Gaertn.)Sm. ssp. armillaris	Bracelet honey-myrtle	MYRTACEAE	Y?	18/08/2014
Prunus persica (L.)Batsch var. nectarina (R.Br.)Maxim.	Nectarine	ROSACEAE	Y?	11/08/2014
Prunus persica (L.)Batsch var. persica	Peach	ROSACEAE	Y?	11/08/2014
Solanum mauritianum Scop.	Wild tobacco tree	SOLANACEAE	Y?	15/08/2014
Foeniculum vulgare Mill.	Fennel	UMBELLIFERAE	Y	6/08/2014

(8) Northern Lofty Herbarium Region:

This region falls in the N&Y, AMLR and SAMDB NRM regions

Table 11. Additional plant taxa recorded in the Census for the Northern Lofty (8) Herbarium Region as

Таха	Common Name	Family	Naturalised	Date entered into Census
Chloris gayana Kunth	Rhodes grass	GRAMINEAE	Υ	6/08/2014
Centaurea cineraria L.	Dusty miller	COMPOSITAE	Y?	27/05/2014
Sedum sediforme (Jacq.)Pau	Stonecrop	CRASSULACEAE	Υ	15/08/2014
Cenchrus ciliaris L.	Buffel grass	GRAMINEAE	Υ	6/08/2014
Eragrostis trichophora Coss. & Durieu	Hairyflower lovegrass	GRAMINEAE	Υ	6/08/2014
Urochloa mosambicensis	Sabi grass	GRAMINEAE	Υ	20/11/2014
<i>Iris albicans</i> Lange	Flag iris	IRIDACEAE	Υ	6/08/2014
Ceratonia siliqua L.	Carob tree	LEGUMINOSAE	Y?	6/08/2014
Phoenix canariensis Hort. ex Chabaud	Canary Island palm	PALMAE	Υ	11/08/2014
Pittosporum undulatum Vent.	Sweet pittosporum	PITTOSPORACEAE	Y?	11/08/2014

(9) Murray Herbarium Region:

This region falls in the SAMDB, SAAL and AMLR NRM regions

Table 12. Additional plant taxa recorded in the Census for the Murray (9) Herbarium Region as

Y = Naturalised Y? = Questionably naturalised

Taxa	Common Name	Family	Naturalised	Date entered into Census
Narcissus tazetta L.	Polyanthus narcissus	AMARYLLIDACEAE	Υ?	18/08/2014
Hedera helix L. ssp. helix	lvy	ARALIACEAE	Y?	6/08/2014
Crepis capillaris (L.)Wallr.	Smooth hawksbeard	COMPOSITAE	Υ	29/05/2014
Aeonium arboreum (L.)Webb & Berthel.	Tree aeonium	CRASSULACEAE	Υ	6/08/2014
Cotyledon orbiculata L. var. orbiculata	Pig's ear	CRASSULACEAE	Υ	6/08/2014
Sedum sediforme (Jacq.)Pau	Stonecrop	CRASSULACEAE	Υ	15/08/2014
Geranium purpureum Vill.	Little-robin	GERANIACEAE	Υ	17/02/2015
Stenotaphrum secundatum (Walter)Kuntze	Buffalo grass	GRAMINEAE	Υ	15/08/2014
Rosmarinus officinalis L.	Rosemary	LABIATAE	Y	10/12/2014

(10) Yorke Peninsula Herbarium Region:

This region falls in the N&Y NRM regions

Table 13. Additional plant taxa recorded in the Census for the Yorke Peninsula (10) Herbarium Region as

Таха	Common Name	Family	Naturalised	Date entered into Census
Amaryllis belladonna L.	Belladonna lily	AMARYLLIDACEAE	Υ	6/08/2014
Arctotheca populifolia (P.J.Bergius)Norl.	Beach daisy	COMPOSITAE	Υ	6/08/2014
Aeonium arboreum (L.)Webb & Berthel.	Tree aeonium	CRASSULACEAE	Υ	6/08/2014
Eragrostis barrelieri Daveau	Pitted love-grass	GRAMINEAE	Υ	6/08/2014
Cenchrus ciliaris L.	Buffel grass	GRAMINEAE	Υ	6/08/2014
Eragrostis curvula (Schrad.)Nees	African love-grass	GRAMINEAE	Y	20/11/2014
Panicum hillmanii Chase	Witch-grass	GRAMINEAE	Υ	11/08/2014
Phoenix canariensis Hort. ex Chabaud	Canary Island palm	PALMAE	Y	11/08/2014
Foeniculum vulgare Mill.	Fennel	UMBELLIFERAE	Υ	6/08/2014

(11) Southern Lofty Herbarium Region:

This region falls in the AMLR and SAMDB NRM regions

Table 14. Additional plant taxa recorded in the Census for the Southern Lofty (11) Region as

Y = Naturalised Y? = Questionably naturalised

Таха	Common Name	Family	Naturalised	Date entered into Census
Ruschia tumidula (Haw.)Schwantes	Pigface	AIZOACEAE	Υ	15/08/2014
Bauera rubioides Andrews	Wiry bauera	BAUERACEAE	Y?	16/12/2014
Bauera sessiliflora F.Muell.		BAUERACEAE	Y?	16/12/2014
Arctotheca populifolia (P.J.Bergius)Norl.	Beach daisy	COMPOSITAE	Υ	6/08/2014
Astroloma foliosum Sonder	Candle cranberry	EPACRIDACEAE	Y?	12/01/2015
Leucopogon verticillatus R.Br.	Tassel flower	EPACRIDACEAE	Y?	12/01/2015
Geranium incanum Burm.f.		GERANIACEAE	Y?	23/02/2015
Geranium purpureum Vill.	Little-robin	GERANIACEAE	Y	17/02/2015
Geranium pyrenaicum ssp. pyrenaicum	Hedgerow cranesbill	GERANIACEAE	Y?	18/02/2015
Eragrostis pilosa (L.)P.Beauv.	Indian love-grass	GRAMINEAE	Υ	6/08/2014
Eragrostis trichophora Coss. & Durieu	Hairyflower lovegrass	GRAMINEAE	Υ	6/08/2014
Plectranthus fruticosus L'Her.		LABIATAE	Y?	21/01/2015
Acacia schinoides Benth.	Green cedar wattle	LEGUMINOSAE	Y?	13/08/2014
Abutilon pictum (Gillies ex Hook. & Arn.)Walp.	Chinese lantern	MALVACEAE	Y?	21/01/2015
Alyogyne huegelii (Endl.)Fryxell	Native hibiscus	MALVACEAE	Υ	6/08/2014
Maclura pomifera (Raf.) C.K.Schneid.	Osage orange	MORACEAE	Y?	6/05/2015
Syzygium australe (H.L.Wendl. ex Link)B.Hyland	Brush cherry	MYRTACEAE	Y?	12/01/2015
Chiloglottis trapeziformis Fitzg.	Dainty bird-orchid	ORCHIDACEAE	Y?	16/06/2014
Nemesia cultivar	Nemesia	SCROPHULARIACEAE	Y?	10/04/2015
Veronica plebeia R.Br.	Trailing speedwell	SCROPHULARIACEAE	Y?	12/01/2015

(12) Kangaroo Island Herbarium Region:

This region falls in the KI NRM region

Table 15. Additional plant taxa recorded in the Census for the Kangaroo Island (12) Herbarium Region as

Taxa	Common Name	Family	Naturalised	Date entered into Census
Thinopyrum junceiforme (A.Love & D.Love)A.Love	Sea wheat-grass	GRAMINEAE	Υ	15/08/2014
Disa bracteata Sw.	South African weed orchid	ORCHIDACEAE	Y	6/08/2014

(13) South-Eastern Herbarium Region:

This region falls in the SE and SAMDB NRM region

Table 16. Additional plant taxa recorded in the Census for the South-Eastern (13) Herbarium Region as

Y = Naturalised Y? = Questionably naturalised

Таха	Common Name	Family	Naturalised	Date entered into Census
Acer pseudoplatanus L.	Sycamore maple	ACERACEAE	Υ	6/08/2014
Agave americana L.	Century plant	AGAVACEAE	Y?	6/08/2014
Tetragonia decumbens Mill.	Sea spinach	AIZOACEAE	Υ	15/08/2014
Sambucus nigra L.	Common elder	CAPRIFOLIACEAE	Y?	21/01/2015
Aeonium arboreum (L.)Webb & Berthel.	Tree aeonium	CRASSULACEAE	Υ	6/08/2014
Ehrharta villosa (L.f.)Schult.f. ex Schult. & Schult.f. var. maxima Stapf	Pyp grass	GRAMINEAE	Υ	6/08/2014
Liquidambar styraciflua L.	American sweet-gum	HAMAMELIDACEAE	Y?	12/01/2015
Callistemon pallidus (Bonpl.)DC.	Lemon bottlebrush	MYRTACEAE	Y?	15/01/2015
Melaleuca armillaris (Sol. ex Gaertn.)Sm. ssp. armillaris	Bracelet honey-myrtle	MYRTACEAE	Y?	18/08/2014
Pittosporum undulatum Vent.	Sweet pittosporum	PITTOSPORACEAE	Y?	11/08/2014
Grevillea robusta A.Cunn. ex R.Br.	Silky oak	PROTEACEAE	Y?	6/08/2014
Prunus armeniaca L.	Apricot	ROSACEAE	Y?	11/08/2014
Prunus dulcis (Mill.)D.A. Webb	Almond	ROSACEAE	Y?	11/08/2014
Celtis occidentalis L.	Common hackberry	ULMACEAE	Y?	21/01/2015
Centranthus ruber (L.)DC. ssp. ruber	Red valerian	VALERIANACEAE	Y	6/08/2014

3. Changes in nomenclature of naturalised plant taxa

There are 16 taxa that have had new / altered names applied in the Census between the dates of May 1st 2014 – May 25th 2014 (Tables 17 and 18). This has occurred due to changes in taxonomic concepts or because of misapplications of names.

Table 17. New names of taxa which previously had other names applied for material already in the collections due to changes in taxonomic concepts Y = Naturalised Y? = Questionably naturalised

New Names (Renames of taxa already in Census)	Naturalised	Date changed in Census	Original Date entered into the Census	Previous name used in SA Flora / Census with comments
Centaurea paniculata L.	Y?	27/05/2014	2/10/1990	Subspecies not recognised in <i>Flora of Australia</i> and <i>Flora of South Australia</i> , in line with European treatments.
Chasmanthe floribunda (Salisb.)N.E.Br.	Y	1/07/2014	2/10/1990	Infra-specific taxa in Chasmanthe floribunda (var. floribunda & var. duckittii) no longer recognised
Lantana camara L.	Y?	5/02/2015	11 Collections 1904-2012	Removed all varieties of <i>Lantana camara</i> , as identification is not really possible. Recognised at species level throughout Australia.
Lapsana communis L. ssp. communis	Y	29/05/2014	2/10/1990	Updated name to include ssp. rank following Thompson 2014 in Flora of South Australia edition 5.
Matricaria chamomilla L.	Y	12/12/2014	2/10/1990	Revised synonymy and name change
Matricaria discoidea DC.	Y?	12/12/2014	2/10/1990	Revised synonymy and name change
Sisyrinchium micranthum Cav.	Y	15/01/2015	2/10/1990	Renamed Sisyrinchium iridifolium Kunth as S. micranthum Cav. in accordance with Karen Wilson treatment on NSW PlantNet and following advice from David Cooke.
Vachellia nilotica (L.)Delile ssp. indica (Benth.)Kyal. & Boatwr.	Y	16/01/2015	2/10/1990	Renamed from Acacia nilotica (L.)Delile ssp. nilotica as new combination published.
Erythranthe moschata (Douglas ex Lindl.)G.L.Nesom	Y	19/01/2015	2/10/1990	Mimulus split into several genera and renamed due to taxonomic changes, seen in Phytoneuron 2012-39 (2012).
Diplachne fusca (L.)P.Beauv. ex Roem. & Schult ssp. uninervia (J.Presl)P.M.Peterson & N.Snow	Y	19/01/2015	1996	Leptochloa split into five genera: Leptochloa fusca (L.)Kunth ssp. uninervia (J.Presl) N.Snow renamed due to new taxonomy
Pseudognaphalium luteoalbum (L.)Hilliard & B.L.Burtt.	N	5/02/2015	2/10/1990	Changed name back due to taxonomic work - from <i>Helichrysum</i> to <i>Pseudognaphalium</i> . At one time thought to be a weed, now considered native .
Picris altissima Delile	Y?	29/05/2014	?	Added as new SA record following new <i>Flora of South Australia</i> edition 5, based on a citation of a specimen in Melbourne Herbarium collected once in SA but not considered truly naturalised
Symphyotrichum subulatum (Michx.)G.L.Nesom	Y	11/02/2015	2/10/1990	Revised synonymy and name change

Table 18. Replacing misapplied names of taxa which previously had other names applied for material already in the collections Y = Naturalised Y? = Questionably naturalised

New names Replacing misapplied name (Renames of taxa already in Census)	Naturalised	Date changed in Census	Original Date entered into the Census	Previous name used in SA Flora / Census with comments
Calystegia silvatica (Kit.) Griseb. ssp. silvatica	Y	26/02/14	4/08/2006	Previously identified as <i>C. sepium</i> which is also still recognised for SA.
Cotoneaster simonsi Baker	Y	9/05/14	2/10/1990	Renamed from <i>Cotoneaster symondsii</i> Moore to <i>C. simonsii</i> Baker, following the selection of a neotype for the former from material of <i>C. marginatus</i> by Fryer, J. & Zika, P.F., 2014, <i>Phytotaxa</i> 164 (2): 149-153
Geranium nepalense Sweet	Y?	19/02/2015	28/05/1995	Material returned and re-named by Carlos Aedo, Geranium specialist based in Madrid. Previously identified as <i>Geranium sibiricum</i>

4. Changes in Status of naturalised plant taxa

There are taxa that have had new / altered names status applied in the Census between the dates of May 1st 2014 – May 25th 2014 (Table 19). This has occurred due to further research by State Herbarium staff.

Table 19. Change in Status (native, questionably native, naturalised questionably naturalised) or removal of taxa from Census which previously had a different status Y = Naturalised Y? = Questionably naturalised

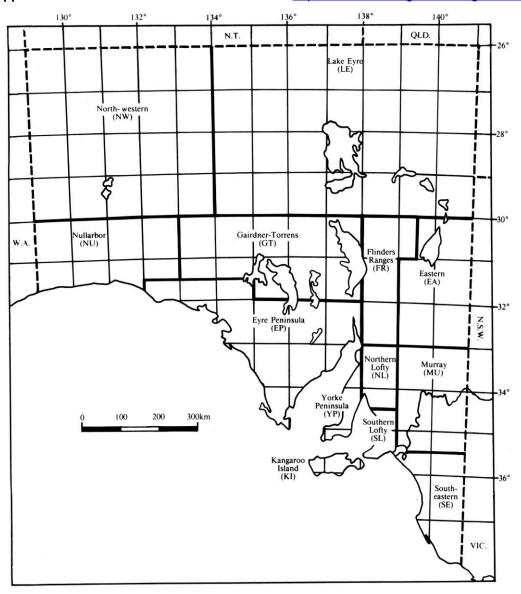
Таха	Common Name	Family	Naturalised	Date entered into Census	Region	Change
Arisarum vulgare	Monk's hood	ARACEAE	Y	27/05/2014	SL	Changed from Questionably naturalised to
O.Targ.Tozz.						Naturalised
Doodia australis		BLECHNACEAE	N	19/02/2015	SL	Changed from Native to Questionably Native
(Parris)Parris Arctotheca calendula	Cape weed	COMPOSITAE		6/08/2014	GT	Demoved as assuming in this region as as
(L.)Levyns	Cape weed	COMICOTAL		0/00/2014	GI	Removed as occurring in this region as no specimens found.
Carthamus tinctorius L.	Safflower	COMPOSITAE	Y?	27/05/2014	GT, EA, NL & YP	Changed from Naturalised to Questionably Naturalised.
Centaurea nigrescens Willd. ssp. nigrescens		COMPOSITAE	NO	27/05/2014	SE	Changed from Naturalised to NOT present (ONLY cultivated) not collected for 70 years!
Centaurea X moncktonii C.E.Britton	Black knapweed	COMPOSITAE	Y?	27/05/2014	NL, SL, SE	Changed from Questionably Naturalised to Naturalised.
Crepis pusilla (Sommier)Merxm.	Dandelion crepis	COMPOSITAE	Y	29/05/2014	KI, SL	Changed from Questionably Naturalised to Naturalised.
Flaveria trinervia (Spreng.)C.Mohr	Speedy weed	COMPOSITAE	Y	27/05/2014	EA, FR, GT, LE, NW	Changed from Native to Naturalised in accordance with Flora of S.A. Eds 5.
Tagetes erecta L.		COMPOSITAE	Y?	27/05/2014	EP, GT, NL, NW	Changed from Naturalised to Questionably Naturalised.
Bolboschoenus fluviatilis (Torr.)Sojak		CYPERACEAE	Y	15/04/2015	MU	Changed from Questionably Native to Naturalised.
Ehrharta villosa (L.f.)Schult.f. ex Schult. & Schult.f. var. maxima Stapf	Pyp grass	GRAMINEAE		6/08/2014	NL	Removed as occurring in NL as no specimen
Triticum aestivum L.	Wheat	GRAMINEAE	Y?	18/08/2014	GT	Changed from naturalised to Questionably Naturalised.
Romulea minutiflora Klatt	Small-flower onion-grass	IRIDACEAE	Y	15/08/2014	FR	Changed from Questionably Naturalised to Naturalised.
Melaleuca armillaris (Sol. ex Gaertn.)Sm. ssp. armillaris	Bracelet honey- myrtle	MYRTACEAE		18/08/2014	NL	Removed as occurring in NL region as collection most likely cultivated (Bates s.n. 4 Jul 1988.)

Таха	Common Name	Family	Naturalised	Date entered into Census	Region	Change
Prunus armeniaca L.	Apricot	ROSACEAE	Y?	11/08/2014	EP	Changed from Naturalised to Questionably Naturalised.
Prunus persica (L.)Batsch var. nectarina (R.Br.)Maxim.	Nectarine	ROSACEAE	Y?	11/08/2014	FR, MU, NL, SL, SE	Changed from Questionably Naturalised to Naturalised .
Prunus persica (L.)Batsch var. persica	Peach	ROSACEAE	Y?	11/08/2014	MU	Changed from Naturalised to Questionably Naturalised.
Cinnamomum camphora (L.)J.Presl	Camphor laurel	LAURACEAE		16/12/2014	SL	Removed. Incorrect identification. Specimen renamed. Not found as Questionably Naturalised or Naturalised in SA.
Vachellia farnesiana (L.)Wight & Arn.	Sweet acacia	LEGUMINOSAE	Y	11/02/2015		Changes status from Questionably Naturalised to Naturalised

References

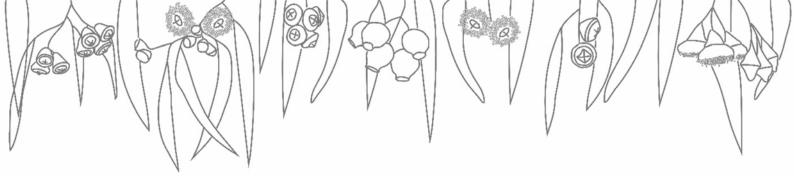
[Website] A GLOBAL COMPENDIUM OF WEEDS, http://www.hear.org/[accessed May 2014]

Appendix 1 MAP OF HERBARIUM REGIONS http://www.flora.sa.gov.au/images/AD regions.jpg



Regional Landscape Surveillance for New Weed Threats Project Report 2015-2016





This report should be cited as:

Brodie, C.J., Lang, P.J., Vonow, H.P. & Waycott, M. (2016). *Regional Landscape Surveillance for New Weed Threats Project (2015-2016). Milestone: Annual report on new plant naturalisations in South Australia*, 25 pp. (State Herbarium of South Australia: Adelaide).

State Herbarium of South Australia

Science, Monitoring and Knowledge
Strategy and Advice

Department of Environment, Water and Natural Resources

Milestone Report Regional Landscape Surveillance for New Weed Threats Project 2015-2016

Milestone: Annual report on new plant naturalisations in South Australia

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June 2016

Summary

This report summarises the work carried out by the State Herbarium of South Australia (the Herbarium) for the project, *Regional Landscape Surveillance for New Weed Threats* for the 2015/16 financial year. The Weeds Botanist's activities were principally supporting the NRM regions, and PIRSA Biosecurity SA, that provided funding for the project. A focus of the work of the Weeds Botanist was discovery and collection of new 'weed' records. To this end, 53 days of fieldwork was undertaken during the period. The Weeds Botanist, Chris Brodie, also provided a point of contact for weeds issues, and undertook 15 workshops and presentations involving community engagement, training and support for regional staff and communities throughout the year. In 2015/2016 there have been 16 new weed species recorded for the State. Since 2009, when this program began, 242 naturalised plant species have now been added to the *Census of South Australian plants, algae and fungi* (available on flora.sa.gov.au).

Activities and outcomes for 2015/2016 financial year

This report summarises the work carried out by the State Herbarium of South Australia (the Herbarium) for the project, *Regional Landscape Surveillance for New Weed Threats* for the 2015/16 financial year.

Overall funding for the project was received from a number of sources namely the State NRM Program, PIRSA Biosecurity SA, Adelaide and Mt Lofty Ranges NRM (NR AMLR), South East NRM (NR SE) and Eyre Peninsula NRM (NR SE), and their support is gratefully acknowledged.

Funding covered the salary of a Weeds Botanist (Chris Brodie), based at the State Herbarium. It also covered some of the fieldwork and plant sample processing expenses.

Further funding was provided from PIRSA Biosecurity SA for preliminary investigations relating to proposed introductions of Biological Control organisms for the Silverleaf Nightshade *Solanum eleagnifolium*. Much of this work was carried out by Herbarium Honorary Research Associate Laurie Haegi, who has extensive taxonomic knowledge of the Solanaceae.

A significant amount of in-kind support was provided by Herbarium staff, Honorary Researchers and volunteers for associated activities such as plant identification, specimen processing, data entry and reporting.

The Weeds Botanist's activities were centred in those regions that provided funding support. A focus of the work of the Weeds Botanist was discovery and collection of new 'weed' records, with the majority of field work occurring in the AMLR Region. The Weeds Botanist undertook 53 days of fieldwork during the period ~ in conjunction with Herbarium and Agency staff, Honoraries and volunteers ~ details of this fieldwork are listed in Appendix 1.

In addition, regional visits were used to provide workshops and field days for regional staff, NGOs and community members ~ to increase awareness of weeds, the value of early detection and the processes required to contribute scientifically valid specimens and records to the State Herbarium. The Weeds Botanist position has also provided a point of contact for regional staff and communities as well as training and support. The Weeds Botanist undertook 15 Community Engagement activities during the year, and these are listed in Appendix 2.



Photo: Chris Brodie presenting to workshop in SE Region 2015.

This year we have recognised 16 new weed species records for the State, outlined below in Section 1.

Since the project began in 2009, 242 new naturalised plant species records have been added to the online *Census of South Australian plants, algae and fungi* (available on <u>flora.sa.gov.au</u>).

The Census is the State's legal recognition of native and weedy plants occurring in the wild in the State, showing their past and current scientific name changes as well as their regional distribution and conservation status. It underpins our knowledge on plant species identity and occurrence and as such forms the legal basis for any legislation relating to plants in the wild. Data obtained from researchers and botanists within and outside SA, through ongoing taxonomic research and collection of new knowledge from field collections has been assessed and included in the Census. This work includes monitoring the work published by botanists anywhere in the world that affects a species occurring in South Australia, as these must be assessed for inclusion.

In addition, the project has also helped identify and quantify emerging threats, such as the spread of Buffel Grass, and the documented extensions of range of weeds already recorded in the Census (**Appendix 3**).

<u>Carpobrotus</u>: An associated project investigated the genetic variation and extent of native and weedy hybrid forms of the succulent ground-cover Pigface (*Carpobrotus* species) in the AMLR region. The weedy form has been unknowingly used in coastal revegetation projects throughout Australia. The project examined genetic as well as physical features and produced information that will guide on-ground work by land managers to ensure that they can identify between weed and native species, and their hybrids. This was undertaken in partnership with NR AMLR,

Birdlife Australia (responsible for managing the new International Bird Sanctuary on Gulf St Vincent) and The University of Adelaide.

Communication: The blog of the Friends of the State Herbarium (http://know.ourplants.org) is becoming increasingly popular resource for communicating to the wider community, people are able to subscribe directly to get updates and others follow through a Twitter notification service. The audience is Herbarium volunteers, contributors to the collections and the general public. A recent post (http://know.ourplants.org/news/new-water-weed-detected/) provided information on the finding the water weed http://know.ourplants.org/news/new-water-weed-detected/) provided information on the finding the water weed https://know.ourplants.org/news/new-water-weed-detected/) provided information on the finding the water weed https://know.ourplants.org/news/new-water-weed-detected/) provided information on the finding the water weed https://know.ourplants.org/news/new-water-weed-detected/) provided information on the finding the water weed https://www.ourplants.org/news/new-water-weed-detected/) provided information on the finding the water weed https://www.ourplants.org/news/new-water-weed-detected/) provided information on the finding the water weed https://www.ourplants.org/news/new-water-weed-detected/) provided information on the finding the water weed https://www.ourplants.org/news/new-water-weed-detected/) provided information to find the provided information on t

The continuity of funding has provided an invaluable opportunity for the State Herbarium to strengthen its capacity and expertise in weed-related discovery and research and to update the Census of South Australian Vascular Plants with a more accurate representation of the current status of the State's weeds.

1. New naturalised or questionably naturalised records of plants in South Australia.

In the previous year (May 2015 – May 2016), **16** new records of naturalised or questionably naturalised plants were added to the *Census of South Australian Plants*, *Algae and Fungi* (hereafter referred to as the 'Census'), based on plants deposited and accessioned in the State Herbarium of South Australia (hereafter referred to as the 'Herbarium').

These fall into three categories, and are listed in the Table below:

- (a) Those **four** plant species collected for the first time in the past year (May 2015 May 2016), such that there is definitive evidence that they are established or are likely to become established 'in the wild' ~ *Callitris drummondii*, *Chlorophytum comosum*, *Cleretum bellidiforme*, *Echinopsis huascha*.
- (b) Those **three** plant species for which there were previous collections from South Australia with vouchers lodged at the Herbarium, but these taxa previously lacked sufficient taxonomic or geographical data to add to the Census. Only when observed and collected during the past year was there sufficient evidence to add them to the Census ~ *Alyogyne* sp. Walkers Rocks (M.L.Evans 259), *Cistus salviifolius*, *Malvaviscus arboreus*.
- (c) Those **nine** plant species for which there were previous South Australian collections in the Herbarium which have only been identified or re-examined recently, and thus added to the Census in the past year ~ *Araucaria bidwillii, Euphorbia clandestina, Cistus salviifolius, Malva neglecta, Panicum simile, Taraxacum ohritense, Ulmus parvifolia, Urospermum dalechampii, Zinnia elegans.*

Table1: New State weed records included in the SA Census* based on recent collections and new knowledge generated

CENSUS = Census of South Australian Plants, Algae and Fungi, publicly accessible as eFloraSA Electronic Flora of South Australia http://www.flora.sa.gov.au/index.html

New Taxa	Common Name	Family	Naturalised	Regional Distribution
<i>Alyogyne</i> sp. Walkers	Native Hibiscus	MALVACEAE	Y	SL
Rocks (M.L.Evans 259)	Native Hibiscus	WIALVACEAE	?N	EP
Araucaria bidwillii Hook.	Bunya Pine	ARAUCARIACEAE	Y?	SL
Callitris drummondii (Parl.)F.Muell.	Drummond's Cypress Pine	CUPRESSACEAE	Y	SL
Chlorophytum comosum (Thunb.)Jacques	Spider Plant	LILIACEAE	Y	SL
Cistus salviifolius L.	Sage-leaved Rock-rose	CISTACEAE	Y	SL
Cleretum bellidiforme (Burm.f.)G.D.Rowley	Livingstone Daisy	AIZOACEAE	Y	SL
Echinopsis huascha (Web.)Friedrich & G.D.Rowley	Cob Cactus	CACTACEAE	Y?	EP
Euphorbia clandestina Jacq.	'Succulent' Euphorbia	EUPHORBIACEAE	Y?	EP
Euphorbia serpens Kunth	Matted Sandmat	EUPHORBIACEAE	Y	EP, YP, SL
Malva neglecta Wallr.	Round-leaf Mallow	MALVACEAE	Y?	SE
Malvaviscus arboreus Cav.	Wax-mallow	MALVACEAE	Y?	SL
Panicum simile Domin	Two-colour Panic	GRAMINEAE	Y?	FR
Taraxacum ohritense Sonck	Dandelion	COMPOSITAE	Y?	SL
Ulmus parvifolia Jacq.	Chinese Elm	ULMACEAE	Y?	SL, SE
<i>Urospermum dalechampii</i> (L.)Scop. ex F.W.Schmidt	Golden Fleece	COMPOSITAE	Y?	SL
Zinnia elegans Jacq.	Common Zinnia	COMPOSITAE	Y?	EP

Y = Naturalised Y? = Questionably naturalised N? = Questionably native

1.1 Taxa that may be of future concern as weeds in SA

Based on observations of Chris Brodie (CJB) from the collection site.

Name: Chlorophytum comosum (Thunb.) Jacques Spider Plant

http://www.hear.org/gcw/species/chlorophytum_comosum/

Native to: Widespread native distribution in Africa

Distribution: Naturalised in Queensland New South Wales and Victoria

Worldwide: Grown as an ornamental house plant around the world in temperate areas, and known to have naturalised overseas

Likes to grow in: Shaded areas in creek-lines

Description: A clumping tufted plant reaching about 1-2 m in diam. with leaves arising at the base and whippy flower spikes with white flowers

Collection details: Originally collected in 2016 on the roadside in Waterfall Gully but since collected at Morialta naturalising on creek bank and creek line in low numbers for several 100 metres. Doing well in relatively dry conditions, flowering and fruiting.

Recommendation: Remove plants and seedlings.

Name: Cleretum bellidiforme (Burm.f.)G.D.Rowley Livingstone Daisy

http://www.hear.org/gcw/species/cleretum_bellidiforme/

Native to: Southern Africa: South Africa - Northern Cape, - Western Cape

Distribution: Collected only once as a weed in WA \sim 40 km E of Albany, and recorded as common.

Worldwide: Widely cultivated in temperate regions of the world and within temperate to drier areas of Australia.

Likes to grow in: Sandy soil in sun or shade

Description: Prostrate succulent plant with attractive pink, orange or red flowers

Collection details: Collected in sandy soil in the fire break and within the pine plantation at Kuitpo Forest

Recommendation: Remove plants and contain spread by maintaining vehicle hygiene

1.2 Some taxa that may be of future concern as weeds in SA

Based on the number of references in the online data base the *Global Compendium of Weeds* http://www.hear.org/gcw/, the updated data set of Randall (2002) 1 and from regions similar in climate to an area in SA are as follows:

Name: Cistus salviifolius L. Sage-leaved Rock-rose

http://www.hear.org/gcw/species/cistus_salviifolius/

Native to: Mediterranean Europe, Africa and Turkey

Distribution: Known to have naturalised in NSW, ACT and Vic.

Worldwide: This shrub is grown worldwide for its profusion of flowers in summer and dense green foliage

Likes to grow in: Sunny well-drained soil in the Adelaide Hills and Plains

Description: An attractive low growing shrub to 1 m tall and several metres wide with masses of flowers in summer

Collection details: Collected from old garden sites around Mount Lofty and Scott Creek CP

Recommendation: Remove or treat plant and remove any seedlings.

Weeds milestone report, State Herbarium of South Australia 2015-2016

June 2016].

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¹ Randall, R. (2002). *A Global Compendium of Weeds*. R.G. & F.J. Richardson. Meredith, Victoria, Australia and Randall, R. (2007-). *A Global Compendium of Weeds*. Published on the Internet http://www.hear.org/gcw/ [Accessed

1.3 Other taxa may be of future concern as weeds in SA, based on weediness of close relatives:

Name: Echinopsis huascha (Web.)Friedrich & G.D.Rowley Cob Cactus

No reference at: http://www.hear.org/gcw/

Native to: The Americas

Distribution: Only known in cultivation in Australia until now

Worldwide: Cultivated worldwide by cacti enthusiasts

Likes to grow in: Hot, dry, well drained areas

Description: Spiny- cylindrical stemmed plant with bright red flowers

Collection details: Munyaroo Conservation Park (Lincoln Highway block) in quarry site

on S side of Plane Road, 1.8 km SW of Pine Hill, 7.4 km NNW of Midgee Rocks

Homestead, 10.6 km NW of Midgee

Recommendation: Monitor, remove if opportunity exists

Name: Euphorbia clandestina Jacq. 'Succulent' Euphorbia

No reference at: http://www.hear.org/gcw/

Native to: South Africa - Cape Province

Distribution: Not known as a weed in any other state in Australia

Worldwide: May be cultivated as an ornamental elsewhere by succulent enthusiasts

Likes to grow in: Dry well draining soil in sun

Description: A swollen stem plant with green leaves that fall in extreme weather

Collection details: Collected by G. Marshall (NR EP) on EP at Port Gibbon

Recommendation: Monitor, remove if opportunity exists

Name: *Ulmus parvifolia Jacq.* Chinese Elm

http://www.hear.org/gcw/species/ulmus_parvifolia/

Native to: Eastern Asia

Distribution: Also naturalised in WA, Qld, NSW, ACT and Vic

Worldwide: Widely cultivated in temperate area of the world and naturalised in

Southern Africa, India, North America and parts of Europe.

Likes to grow in: Sandy loam or clay loam soil in cold or temperate-warm areas.

Description: Medium size tough landscape street tree with small shinny green leaves, attaining a height of about 15 metres tall and wide. Deciduous in cooler climate but semi–evergreen in warner areas with a wide tolerance of climatic conditions

Collection details: Collected in the Adelaide suburbs where the abundance of seeds produced freely germinate.

Recommendation: Monitor, remove if opportunity exists

1.4 Australian plants which are not native to South Australia or some of its regions, and appear to be in the early stages of establishment in one or more locations.

Australian plants can be serious weeds as they may be adapted to the same or similar environmental conditions. They can be overlooked as weeds as they may be similar in appearance to indigenous local plants. Examples of known 'weedy natives' are *Pittosporum undulatum* and *Acacia saligna* from the eastern states.

NB. Some of the taxa listed below have not been noted previously in the Global Compendium of Weeds:

Name: Callitris drummondii (Parl.)F.Muell. Drummond's Cypress Pine

No reference at: http://www.hear.org/gcw/

Native to: South, south-west corner of Western Australia

Distribution: As above

Worldwide: Unknown

Likes to grow in: Temperate warm areas

Description: Erect coniferous tree similar in appearance to the native pines of South

Australia

Collection details: Belair National Park, c. 20 m SE of Lodge Track, just outside netting fence of the old 'Australian Native Plant' enclosure, c. 130 m NE of Lodge Track-

Carawatha Track junction

Recommendation: Monitor

Name: Alyogyne sp. Walkers Rocks (M.L.Evans 259) Native Hibiscus

No reference at: http://www.hear.org/gcw/

Native to: Probably WA, but otherwise unknown, taxonomy currently unclear

Distribution: Around Fleurieu Peninsula and a few locations on EP (Walkers Rocks near

Elliston and Port Lincoln NP, where it may be native)

Worldwide: Unknown

Likes to grow in: Sandy exposed areas especially coastal locations

Description: Small erect shrub to 1.5 m tall with bright purple showy flowers

Collection details: EP (Walkers Rocks near Elliston and Port Lincoln NP)

Recommendation: Work on taxonomy to clarify status (Weed or Native?)

Name: Araucaria bidwillii Hook. Bunya Pine

http://www.hear.org/gcw/species/araucaria_bidwillii/

Native to: Queensland in Australia

Distribution: Queensland and planted as an ornamental within Australia

Worldwide: Apparently cultivated overseas

Likes to grow in: Warmer temperate to tropical areas with higher rainfall than arid SA

Description: Tall ancient-looking coniferous evergreen tree to 30+ metres tall

Collection details: Collected in several locations in Belair NP

Recommendation: Monitor

2. New regional records of plants collected and lodged in the State Herbarium.

There have been 22 new regional plant records identified as naturalised or questionably naturalised in the Census between the dates of May 1 2015 – May 24 2016. These have been collected or recognised recently or are considered significant. The data is provided in the table below, with the additional Herbarium Region(s) listed along with the status. The map illustrating the Herbarium Regions is in Appendix 3.

Table 2: New regional records added to the SA Census*, of plants lodged in the State Herbarium.

*CENSUS = Census of South Australian Plants, Algae and Fungi, publicly accessible as eFloraSA Electronic Flora of South Australia http://www.flora.sa.gov.au/index.html

New Taxa	Common Name	Family	Naturalised	Regional Distribution
Acacia wattsiana F.Muell. ex Benth.	Dog Wattle	LEGUMINOSAE	Y?	SL
Alternanthera pungens Kunth	Khaki Weed	AMARANTHACEAE	Y	SE
Ambrosia tenuifolia Spreng.	Lacy Ragweed	COMPOSITAE	Y	MU
Asparagus officinalis L.	Asparagus	LILIACEAE	Y?	YP
Asparagus plumosus Baker	Ferny Asparagus	LILIACEAE	Y?	FR
Asparagus scandens Thunb.	Asparagus Fern	LILIACEAE	Y	SE
Astrebla lappacea (Lindl.)Domin	Curly Mitchell- grass	GRAMINEAE	Y?	EP
Echinopsis oxygona Pfeiff. & Otto	Easter Lily Cactus	CACTACEAE	Y?	NL
Echinopsis spachiana (Lem.)Friedrich & G.D.Rowley	Golden Torch Cactus	CACTACEAE	Y?	MU
Enneapogon avenaceus (Lindl.)C.E.Hubb.	Common Bottle- washers	GRAMINEAE	Y?	SL
Eragrostis curvula (Schrad.)Nees	African Love- grass	GRAMINEAE	Y	GT, FR
Eragrostis trichophora Coss. & Durieu	Hairyflower Lovegrass	GRAMINEAE	Y	NU, GT, FR, EA
Euphorbia dallachyana Baill.	Caustic Weed	EUPHORBIACEAE	Y?	NU
Euphorbia maculata L.	Eyebane	EUPHORBIACEAE	Y	NL, NW
Galenia pubescens (Eckl. & Zeyh.) Druce var. pubescens	Coastal Galenia	AIZOACEAE	Y?	SE, MU
Heteropogon contortus (L.)P.Beauv. ex Roem. & Schult.	Black Speargrass	GRAMINEAE	Y?	NW
Linum usitatissimum L.	Field Flax	LINACEAE	Y?	NL
Phalaris aquatica L.	Phalaris	GRAMINEAE	Y	FR, EP

New Taxa	Common Name	Family	Naturalised	Regional Distribution
Tragopogon brevirostris DC. ssp. longifolius (Heldr. & Sartori ex Boiss.)I.Richardson	Goat's Beard	COMPOSITAE	Y	NL
Ulmus X hollandica Mill.	Dutch Elm	ULMACEAE	Y	NL, SE
Urochloa mosambicensis (Hack.) Dandy	Sabi Grass	GRAMINEAE	Y	NW

Species considered of particular concern

Name: Alternanthera pungens Kunth Khaki Weed

Region of concern: SE, (South East). D.Provis s.n. collected on 2 Feb 2016 in the upper

South East.

Recommendation: Remove current population and monitor this and other high risk sites.

Name: Asparagus species, Asparagus Ferns

Region of concern: Temperate areas of SA. *Asparagus*, has been declared under the NRM Act 2004. Recently a number of older collections (1-10 years old) have been identified and added to the SA Census as this genus.

Recommendation: Remove any outliers or smaller populations colonising new geographical areas and monitor sites.

Name: Echinopsis species Cactus species

Region of concern: MU (SAAL), NL(N&Y)

Recommendation: Remove any wild plants

Name: Eragrostis trichophora Hairyflower Lovegrass

Region of concern: All regions but recent collections from NU (AW), GT (SAAL), FR (N&Y), EA (SAMDB). Spreading aggressively along roadside where it seems confined, but observed in a few locations moving on to agricultural land.

Recommendation: Remove and monitor populations that have jumped in agricultural land.

Name: Galenia pubescens var. pubescens Coastal Galenia

Region of concern: SE (South East).

Recommendation: Remove and monitor area

Name: Phalaris aquatica Phalaris

Region of concern: FR (Flinders Ranges in N&Y), EP in temperate areas or seasonally

wet places like swamps

Recommendation: Remove and monitor area

3. Changes in nomenclature of naturalised plant taxa

There are 16 taxa that have had new / altered names applied in the Census between the dates of May 1 2015 – May 24 2016, are listed in Table 3 below.

This has occurred due to changes in taxonomic concepts or because of misapplications of names.

Table 3: New names of taxa which previously had other names applied due to changes in

taxonomic concepts

New Name (Renames of taxa already in Census)	Common Name	Family	Reason for change	Natural- ised
Ambrosia artemisiifolia L	Ragweed	COMPOSITAE	Split <i>Ambrosia psilostachya</i> to <i>A. psilostachya & A. artemisiifolia</i>	Y
Ambrosia confertiflora DC	Burr Ragweed	COMPOSITAE	Was known as Ambrosia psilostachya	Y
Ambrosia psilostachya DC.	Perennial Ragweed	COMPOSITAE	Split <i>Ambrosia psilostachya</i> to <i>A. psilostachya</i> & <i>A. artemisiifolia</i>	Y
Argentina anserina (L.)Rydb.	Silverweed	ROSACEAE	Was previously known as Potentilla anserina L	Y?
Asparagus aethiopicus L.	Asparagus Fern	LILIACEAE	Renamed FROM Asparagus densiflorus in SA	Y
Bromus diandrus Roth	Jabbers	GRAMINEAE	Combined <i>Bromus rigidus</i> within <i>B. diandrus</i>	Y
Cylindropuntia pallida (Rose)F.M.Knuth	Hudson Pear	CACTACEAE	Renamed FROM Cylindropuntia rosea (DC.)Backeb.	Y
Fragaria X ananassa (Weston) Duchesne ex Rozier	Strawberry	ROSACEAE	Renamed FROM <i>Potentilla</i> ananassa (Duch. ex Rozier) Mabb	Y
Hibiscus tridactylites Lindl.	Bladder Ketmia	MALVACEAE	Renamed FROM the native species <i>Hibiscus trionum</i> var. <i>trionum</i>	Y
Hibiscus verdcourtii Craven	Bladder Ketmia	MALVACEAE	Renamed FROM the native species <i>Hibiscus trionum</i> var. <i>vesicarius</i>	N?
Iva axillaris Pursh ssp. robustior (Hook.)Bassett	Poverty Weed	COMPOSITAE	Renamed WITH ssp. robustior	?
<i>Malva pseudolavatera</i> Webb & Berthel.	Cretan Hollyhock	MALVACEAE	Renamed FROM Malva linnaei M.F.Ray	Y
Orobanche ramosa L. ssp. mutelii (F.W.Schultz)Cout	Branched Broomrape	OROBANCHA CEAE	Added sub-species name (spp. <i>mutelii</i>)	Y
Pascalia glauca Ortega	Pascalia Weed	COMPOSITAE	Renamed FROM Wedelia glauca (Ortega)S.F.Blake	Y?
Schoenoplectiella lateriflora (J.F.Gmel.)Lye		CYPERACEAE	Renamed FROM Schoenoplectus.	N?
Ulmus minor Mill.	Chinese Elm	ULMACEAE	Renamed FROM incorrect identification from <i>Ulmus</i> procera Mill.	Y?
Verbesina encelioides (Cav.)Benth. & Hook.f. ex A.Gray var. encelioides	Golden Crownbeard	COMPOSITAE	Renamed WITH var. encelioides	Y

Y = Naturalised Y? = Questionably naturalised N? = Questionably native

4. Changes in status of naturalised plant taxa

Taxa that have had new / altered names status applied in the Census between the dates of May 1 2015 – May 24 2016, are listed in Table 4 below. This has occurred due to further research by State Herbarium staff.

Table 4: Change in status (native, questionably native, naturalised questionably naturalised) or removal of taxa from Census which previously had a different status

Scientific Name	Common Name	Family	Reason for change	Current status
Cistus ladanifer L.	Gum Rock-rose	CISTACEAE	from naturalised to questionably naturalised in SL	Y?
Echinopsis oxygona Pfeiff. & Otto	Easter Lily Cactus	CACTACEAE	from naturalised to questionably naturalised in EP / MU	Y
Histiopteris incisa (Thunb.)J.Sm.	Bat's-wing Fern	DENNSTAEDTI ACEAE	from questionably naturalised to questionably native	N?
Malva assurgentiflora (Kellogg)M.F.Ray	Mallow	MALVACEAE	from naturalised to questionably naturalised in SE	Y?
Marsilea mutica Mett.	Nardoo	MARSILEACEA E	from Native to Questionably native in SA	N?
Pseudognaphalium luteoalbum (L.)Hilliard & B.L.Burtt.	Jersey Cudweed	COMPOSITAE	from naturalised to questionably native in SA	N?
Schoenoplectiella lateriflora (J.F.Gmel.)Lye		CYPERACEAE	from native to questionably native as the single SA record is a major outlier from the main Queensland populations	N?

Y = Naturalised Y? = Questionably naturalised N? = Questionably native

5. Resources

[Online database] A GLOBAL COMPENDIUM OF WEEDS, http://www.hear.org/[accessed 14 June 2016]

APPENDIX 1: Weeds Botanist's Activities

Surveillance based on field observations and collections

- staff & external

Summary of results from activities of the Weeds Botanist, Chris Brodie (CJB), State Herbarium of South Australia (SHSA), with other participants listed individually. * Number of collections.

Date(s)	State: Region	Participants	No.*	General Location	Significant weed collections
27 Aug 2015	SL (AMLR)	Chris Brodie (CJB)	29	Belair, Hawthorndene	Salix (willows), Prunus (plums and cherries), bulbs, general collections and 2 nd collection of a NEW WEED RECORD for South Australia Malvaviscus arboreus (AMLR) which was subsequently added to the South Australian Plant Census
1 Sept 2015	SL (AMLR)	СЈВ	24	McLaren Vale	Salix (Willows), Prunus (plums and cherries). Also general weed collection including: Medicago rugosa for which vouchers had not been collected in AMLR area for 38 years. Avena sterilis collected twice - vouchers had not been collected in the AMLR area for 37 years.
2 Sept 2015	SL (AMLR)	СЈВ	11	Anstey Hill	Prunus (cherries and plums) species and general collecting
9 Sept 2015	SL (AMLR, SAMDB	CJB & Gary Goland (volunteer)	29	McLaren Vale	General collections of bulbs and spring weeds. NEW WEED RECORD for South Australia of the succulent <i>Cleretum bellidiforme</i> in SAMDB.
14 Sept 2015	SL (AMLR)	CJB	23	Anstey Hill	General Collecting for bulbs and spring weeds
16 Sept 2015	SL (AMLR)	СЈВ	20	Adelaide Hills (Stirling Aldgate Bridgewater)	Willows, <i>Prunus</i> (cherries and plums) species, <i>Ulmus</i> (elm) & general collecting for bulbs and spring weeds
19 Sept 2015	SL (AMLR)	CJB	3	Morialta BioBlitz	General weeds
21 Sept 2015	SL (AMLR)	СЈВ	17	Adelaide Hills	<i>Hedera</i> species (ivy), bulbs, and general weed collections.
24 Sept 2015	SL (AMLR SAMDB	СЈВ	30	Southern Adelaide (Onkaparinga NP, Hallett Cove)	Bulbs and general weed collections.
28 Sept 2015	SL (AMLR)	CJB	21	Adelaide Foothills and Cleland NP	Bulbs, deciduous weed trees and general weed collections.
29 Sept 2015	SL (AMLR)	СЈВ	21	Gawler and surrounding area	Bulbs and general weed collections.
14 Oct 2015	SE (SE)	CJB, Korjent van Dijk (The	12	Coorong	Carpobrotus spp. and general weed collection.

Date(s)	State: Region	Participants	No.*	General Location	Significant weed collections
		University of Adelaide)			
20 Oct 2015	SL (AMLR	CJB, H. Toelken, E. Biffin; C. Jackson & E. Stephens (AMLR NRM)	29	Moana & Normanville Areas	Carpobrotus spp. and other succulents.
22 Oct 2015	SL (AMLR, & N&Y)	CJB, H. Toelken (SHSA), Nicole Foster (The University of Adelaide); J. Turner & A. Lamanna (Birdlife Australia); W. Barnes (AMLR NRM).	23	Dublin and surrounding coastal areas	Carpobrotus spp. collections.
26 – 29 Oct 2015	SE (SE)	CJB, A. Laslett (SE NRM)	48	Coorong, to Mt Gambier to Naracoorte	Carpobrotus spp., Hedera (ivy) and general weed collections.
3 Nov 2015	NL (N&Y)	CJB, H. Toelken, C. Tothill.	57	Winninowie C.P. (Near Pt Augusta)	Carpobrotus spp. collections.
4 Nov 2015	SL (AMLR)	CJB, C. Tothill.	3	Adelaide Botanic Gardens	Specimens that might be mis-identified as <i>Cannabis</i> for State Herbarium workshop with Forensic SA group.
3 Nov 2015	SL (AMLR)	CJB, H. Toelken, C. Tothill.	55	Moana	Carpobrotus spp. collections.
10 -14 Nov 2015	EP (EP)	СЈВ	9	EP South and West Coast	Carpobrotus spp. and general weed collections. Collection of new record Alyogyne sp. Walkers Rocks (M.L.Evans 259) specimen previously collected in EP and AMLR
26 Nov 2015	SL (AMLR)	СЈВ	14	Brownhill Creek & Belair area	Ulmus (elms), Jasminum (jasmine), & general weed collections.
3 Dec 2015	SL (AMLR)	CJB, H. Toelken.	24	Normanville Area	Carpobrotus and general weed collections.
14 Dec 2015	SL (AMLR)	СЈВ	18	Anstey Hill and Adelaide Hills	Salix (willows), Prunus (plums and cherries).
21 Dec 2015	SL (AMLR)	СЈВ	21	Adelaide Hills	Salix (willows), Prunus (plums and cherries).
23 Dec 2015	SL & NL (N&Y)	СЈВ	19	Adelaide Hills	Salix (willows), Prunus (plums and cherries).
14 Jan 2016	SL (AMLR)	СЈВ	4	Adelaide Botanic Gardens	Hedera (ivy)
21 Jan 2016	SL (AMLR)	СЈВ	8	Belair - Coromandel Valley	Hedera (ivy)
29 Jan 2016	SL (AMLR)	СЈВ	14	Adelaide Hills	Prunus (cherries and plum) & Hedera (ivy)
4 Feb 2016	SL (AMLR)	СЈВ	16	Waterfall Gully to Aldgate	Garden escapees and new State record for SA of Chlorophytum comosum (Thunb.) Jacques specimen in AMLR

Date(s)	State: Region	Participants	No.*	General Location	Significant weed collections
12 Feb 2016	SL (AMLR)	СЈВ	13	Waterfall Gully to Sturt Valley	Garden escapees & Hedera (ivy)
17 Feb 2016	SL (AMLR)	СЈВ	24	Crafers to Bridgewater	Garden escapees & Hedera (ivy)
23 Feb 2016	SL (AMLR)	CJB & Bec Gould (NR AMLR)	5	2 private properties Crafers and Sturt Valley	Weeds of concern
2 March 2016	SL (AMLR)	СЈВ	13	Teringie and Scott Creek	Urban weeds & Hedera (ivy) and Collection of new State record Cistus salviifolius L. specimen previously collected in AMLR
7 April 2016	SL (AMLR)	CJB, Scott Giacopini (DEWNR Graduate Ranger)	16	Waterfall Gully and Crafers	Hedera (ivy) species, first Jacaranda record for SL,
11 April 2016	SL (AMLR)	CJB & Graham Bell	4	Hackney road	Tribulus terrestris (caltrop) and weedy Euphorbia serpens 5 th collection from Southern Lofty
21 April 2016	SL (AMLR)	СЈВ	19	Morialta - Mt Bold	Hedera (ivy) species, 2 nd population of SA new record Chlorophytum comosum (Spider Plant) & general weed collection
6 May 2016	SL SL (AMLR)	СЈВ	16	Adelaide Foothills 7 Nairne	Hedera (ivy) and general wetland (creek) weeds
16 21 May 2016	FR, GT, LE (N&Y & SAAL)	John Heap (Biosecurity SA), L. Haegi (SHSA) & CJB	66	to Parachilna via Blinman Marree, Oodnadatta Track, William Creek, Birdsville Track.	General weed collection as part of a trip for the collection of Solanum species by Laurie Haegi and John Heap for bio- control experiments
31 May 2016	SL (AMLR)	CJB	4	West Beach	General weeds
1 June 2016	SL (AMLR)	CJB & Graham Bell	4	Darlington (suburb of Adelaide)	New weed record, <i>Cardiospermum</i> species and general weeds
9 June 2016	SL (AMLR)	СЈВ	4	Seaford Rise	Ulmus parvifolia due to weedy enquiry from AMLR NR regarding problem weed by a member of the public.

APPENDIX 2: Weeds Botanist's Activities

Community Engagement

- with staff & external

Weeds Botanist, Chris Brodie (CJB), State Herbarium of South Australia (SHSA), with other participants as listed.

Date(s)	DEWNR staff	Location	Presentation title / subject	Audience/Society/Conf erence	# of attende es
12 Aug 2015	Chris Brodie (CJB)	State Herbarium of South Australia, Old Tram Barn Building, Adelaide Botanic Gardens.	Tour of the State Herbarium, discussing its collections and work practices.	Adelaide Botanic Gardens Horticultural students / gardeners	c.15
19 Aug 2015	СЈВ	Goodman Building Lecture Theatre, Adelaide Botanic Gardens.	Talk title: The State Herbarium: Naturalised plants in South Australia.	Garden guides	c.50
1 Sept 2015	СЈВ	Old Noarlunga Institute, Patapinda Road, Old Noarlunga	Talk title: The State Herbarium: Naturalised plants in South Australia.	Friends group (Friends of Onkaparinga Park)	c. 55
26 -29 Oct 2015	СЈВ	South East x 3: Naracoorte Millicent Mundulla	Weed Busters Week Workshops. Talk title: The State Herbarium: Naturalised plants in South Australia. Included collection demonstration and observation walk.	General public and stakeholders	c. 25
19 Sept 2015	СЈВ	Morialta Conservation Park	BioBlitz weekend: 2 x guided weeds walks.	General public who booked into <i>BioBlitz</i> activities	20
17 Nov 2015	СЈВ	One Tree Hill Institute	Talk title: The State Herbarium: Naturalised plants in South Australia.	For general public organised by AMLR NRM region.	c.80- 100
17 -18 Nov 2015	Juergen Kellerman, CJB, Michelle Waycott, other SHSA staff	State Herbarium training room	Cannabis identification course for forensic scientists.	SA Government, Attorney-General's Department - Forensic Science SA group	c. 8
18 ⁻ 19 March 2016	Chris Brodie & select NR SE Staff	SE field days, Lucindale. Tent 270 (all day) & Main stage (Twice on Friday and Saturday)	NR SE tent – Identifying weeds and talking to members of the general public about weeds, the State Herbarium and NR SE. Main stage – Weeds and identification	SE field days General public.	100s

C U A	Vaite Campus, The Jniversity of Adelaide	Weeds threats to South Australia's botanical- geographical regions	5 th conf. of the WMSSA. Members comprising of Government staff, private business / consultants, NGOs,	c. 150
_			community	
C	Brukunga S.A. CFS training ite	The State Herbarium and Plant identification	Regulatory Compliance Training course made up of DEWNR and S.A. Government staff, RSPCA staff	25
tended) N	C	Samphire identification workshop	Samphire identification workshop - NRM Staff and general public	c. 15
ergen S Ellerman, B, Hellmut belken,	Squadron,	Carpobrotus workshop	Carpobrotus workshop	c. 50
l E ergell B	Biffin, Sgen Serman, Hellmut	Arts Centre Biffin, Sea Rescue gen Squadron, erman, West Beach , Hellmut ken, helle	nded) Noarlunga identification workshop Biffin, Sea Rescue Squadron, West Beach Hellmut ken, helle	nded) Noarlunga identification workshop - NRM Staff and general public Biffin, gen Squadron, workshop West Beach Hellmut ken, helle

APPENDIX 3: MAP OF HERBARIUM REGIONS

http://www.flora.sa.gov.au/images/AD_regions.jpg

