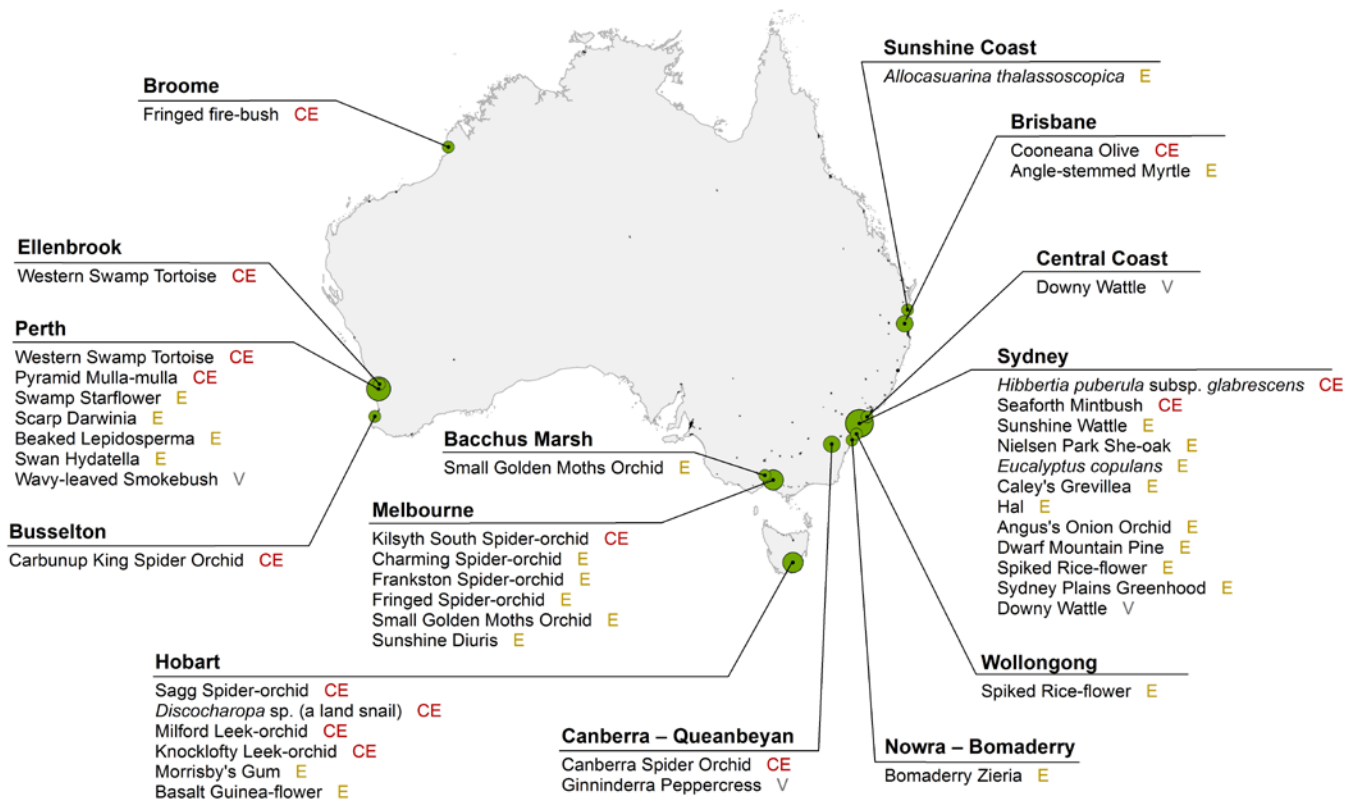


**39 urban-restricted threatened species in Australia.** Figures extracted from Soanes, K., & Lentini, P. E. (2019). When cities are the last chance for saving species. *Frontiers in Ecology and the Environment*, 17, 225–231.



**WebFigure 1.** The cities and towns across Australia in which the 39 urban-restricted threatened species are located. Australian national (EPBC) threat categories are listed next to each species: CE = critically endangered, E = endangered, and V = vulnerable. Common names are used except in cases where no common name has been assigned; a complete list of species' common names, scientific names, and urban locations is presented in WebTable 1.

## K Soanes and PE Lentini – Supporting Information

**WebTable 1. National recovery documents reviewed for each of the 39 urban-restricted threatened species in Australia**

<i>Species name</i>	<i>Common name</i>	<i>Cities present</i>	<i>Document types reviewed</i>
<i>Acacia pubescens</i>	Downy wattle	Sydney	Conservation Advice (TSSC 2016) Recovery Plan (NSW National Parks and Wildlife Service 2003)
<i>Acacia terminalis terminalis</i> MS	Sunshine wattle	Sydney	Recovery Plan (Department of Environment, Climate Change and Water [NSW] 2010)
<i>Allocasuarina portuensis</i>	Nielsen Park she-oak	Sydney	Conservation Advice (TSSC 2016); Recovery Plan (NSW National Parks and Wildlife Service 2000)
<i>Allocasuarina thalassoscopica</i>	(None allocated)	Sunshine Coast	Conservation Advice (TSSC 2008)
<i>Caladenia actensis</i>	Canberra spider-orchid	Canberra	Listing Advice (2005); Recovery Plan (Frawley 2010)
<i>Caladenia amoena</i>	Charming spider-orchid	Melbourne	Conservation Advice (TSSC 2016); Recovery Plan (Todd 2000)
<i>Caladenia procera</i>	Carbunup king spider-orchid	Bussleton	Conservation Advice (TSSC 2008); Listing Advice (2009); Recovery Plan (Department of Environment and Conservation 2011)
<i>Caladenia robinsonii</i>	Frankston spider-orchid	Melbourne	Conservation Advice (TSSC 2016); Recovery Plan (Backhouse <i>et al.</i> 1999)
<i>Caladenia saggicola</i>	Sagg spider-orchid	Hobart	Listing Advice (2001); Recovery Plan (Threatened Species Section 2017)
<i>Caladenia</i> sp Kilsyth South (G.S.Lorimer 1253)	Kilsyth South spider-orchid	Melbourne	Conservation Advice (TSSC 2016); Listing Advice (2001); Recovery Plan (Coates <i>et al.</i> 2002)
<i>Caladenia thysanochila</i>	Fringed spider-orchid	Melbourne	Conservation Advice (TSSC 2016); Recovery Plan (Todd 2000)
<i>Calytrix breviseta breviseta</i>	Swamp starflower	Perth	Conservation Advice (TSSC 2015); Recovery Plan (Luu and English 2004)
<i>Conospermum undulatum</i>	Wavy-leaved smokebush	Perth	Recovery Plan (Department of Environment and Conservation 2009)
<i>Darwinia apiculata</i>	Scarp darwinia	Perth	Recovery Plan (Department of Environment and Conservation 2009)
<i>Discocharopa vigens</i>	Unnamed land snail	Hobart	Conservation Advice (TSSC 2014); Listing Advice (2014)
<i>Diuris basaltica</i>	Small golden moths orchid	Bacchus Marsh, Melbourne	Recovery Plan (Backhouse and Lester 2010)
<i>Diuris fragrantissima</i>	Sunshine diuris	Melbourne	Recovery Plan (Murphy <i>et al.</i> 2008)
<i>Eucalyptus copulans</i>	(None allocated)	Sydney	Conservation Advice (TSSC 2014)
<i>Eucalyptus morrisbyi</i>	Morrisby's gum	Hobart	Conservation Advice (TSSC 2016); Recovery Plan (Threatened Species Section 2006)
<i>Gossia gonoclada</i>	Angle-stemmed myrtle	Brisbane	Conservation Advice (TSSC 2016); Recovery Plan ( <i>Austromyrtus gonoclada</i> Recovery Team 2001)
<i>Grevillea caleyi</i>	Caley's grevillea	Sydney	Conservation Advice (TSSC 2015); Recovery Plan (Department of Environment and Conservation 2004)

<i>Haloragodendron lucasii</i>	Hal	Sydney	Conservation Advice (TSSC 2008)
<i>Hibbertia basaltica</i>	Basalt guinea-flower	Hobart	Conservation Advice (TSSC 2008); Listing Advice (2008)
<i>Hibbertia puberula glabrescens</i>	(None allocated)	Sydney	Conservation Advice (TSSC 2008); Listing Advice (2009)
<i>Keraudrenia exastia</i>	Fringed keraudrenia	Broome	Conservation Advice (TSSC 2009); Listing Advice (2009)
<i>Lepidium ginninderrense</i>	Ginninderra peppercress	Canberra	Conservation Advice (TSSC 2015); Listing Advice (2005)
<i>Lepidosperma rostratum</i>	Beaked lepidosperma		Conservation Advice (TSSC 2008)
<i>Microtis angusii</i>	Angus's onion orchid	Sydney	Recovery Plan (Department of Environment, Climate Change and Water [NSW] 2010)
<i>Notelaea ipsviciensis</i>	Cooneana olive	Brisbane	Conservation Advice (TSSC 2009); Listing Advice (2009)
<i>Pherosphaera fitzgeraldii</i>	Dwarf mountain pine	Sydney	Conservation Advice (TSSC 2014)
<i>Pimelea spicata</i>	Spiked rice-flower	Sydney, Wollongong	Conservation Advice (TSSC 2016); Recovery Plan (Department of Environment and Conservation 2005)
<i>Prasophyllum milfordense</i>	Milford leek-orchid	Hobart	Conservation Advice (TSSC 2016); Listing Advice (2001); Recovery Plan (Threatened Species Section 2017)
<i>Prasophyllum perangustum</i>	Knocklofty leek-orchid	Hobart	Conservation Advice (TSSC 2016); Listing Advice (2001); Recovery Plan (Threatened Species Section 2017)
<i>Prostanthera marifolia</i>	Seaforth mintbush	Sydney	Conservation Advice (TSSC 2015)
<i>Pseudemydura umbrina</i>	Western swamp tortoise	Ellenbrook, Perth	Listing Advice (2004); Recovery Plan (Burbidge <i>et al.</i> 2010)
<i>Pterostylis saxicola</i>	Sydney Plains greenhood	Sydney	Conservation Advice (Department of the Environment, Water, Heritage and the Arts 2008)
<i>Ptilotus pyramidatus</i>	Pyramid mulla-mulla	Perth	Conservation Advice (TSSC 2016)
<i>Trithuria occidentalis</i>	Swan hydatella	Perth	Conservation Advice (Department of the Environment, Water, Heritage and the Arts 2008)
<i>Zieria baeuerlenii</i>	Bomaderry zieria	Nowra	Recovery Plan (Department of Environment, Climate Change and Water [NSW] 2010)

**Notes:** All documents were approved or adopted by the Office for the Minister of Environment, Department of the Environment and Energy of the Australian Government, at the time of review in 2016, and are maintained in the agency's Species Profile and Threats Database ([www.environment.gov.au/cgi-bin/sprat/public/sprat.pl](http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl)). The document types and the amount of information available varied among species, but included at least one of a species profile, a Listing Advice, a Conservation Advice, or a Recovery Plan.

## WebReferences

- Austromyrtus gonoclada* Recovery Team. 2001. Recovery plan for the angle-stemmed myrtle *Austromyrtus gonoclada* 2001–2005. Report to Environment Australia, Canberra. Brisbane, Australia: Queensland Parks and Wildlife Service.
- Backhouse G, Bramwells H, Musker R, *et al.* 1999. Frankston spider-orchid (*Caladenia robinsonii* GW Carr) recovery plan 1999–2003. Canberra, Australia: Department of Natural Resources and Environment.
- Backhouse G and Lester K. 2010. National recovery plan for the small golden moths orchid *Diuris basaltica*. Melbourne, Australia: Department of Sustainability and Environment.
- Burbidge AA, Kuchling G, Olenjik C, *et al.* 2010. Western swamp tortoise (*Pseudemydura umbrina*) recovery plan. Canberra, Australia: Department of Environment and Conservation, WA.
- Coates F, Jeanse J, and Pritchard A. 2002. Recovery plan for twenty-five threatened orchids of Victoria, South Australia and New South Wales 2003–2007. Melbourne, Australia: Department of Sustainability and Environment.
- Department of Environment and Conservation. 2004. *Grevillea caleyi* R Br (Proteaceae) recovery plan. Hurtsville, Australia: Department of Environment and Conservation (NSW).
- Department of Environment and Conservation. 2005. *Pimela spicata* R Br recovery plan. Hurtsville, Australia: Department of Environment and Conservation (NSW).
- Department of Environment and Conservation. 2009. Scarp darwinia (*Darwinia apiculata*) recovery plan. Perth, Australia: Department of Environment and Conservation.
- Department of Environment and Conservation. 2009. Wavy-leaved smokebush (*Conospermum undulatum*) recovery plan. Canberra, Australia: Commonwealth Department of the Environment, Water, Heritage and the Arts.
- Department of Environment and Conservation. 2011. *Caladenia procera* interim recovery plan 2011–2016. Perth, Australia: Department of Environment and Conservation.
- Department of Environment, Climate Change and Water. 2010. National recovery plan for *Ziera baeuerlenii*. Hurtsville, Australia: Department of Environment, Climate Change and Water, New South Wales.
- Department of Environment, Climate Change and Water. 2010. Recovery plan for *Acacia terminalis terminalis* (sunshine wattle). Hurtsville, Australia: Department of Environment, Climate Change and Water, New South Wales.
- Department of Environment, Climate Change and Water. 2010. Recovery Plan for *Microtis angusii*. Hurtsville, Australia: Department of Environment, Climate Change and Water, New South Wales.
- Department of the Environment, Water, Heritage and the Arts. 2008. Approved conservation advice for *Hydatella dioica* (one-sexed hydatella). Canberra, Australia: Department of the Environment, Water, Heritage and the Arts.

- Department of the Environment, Water, Heritage and the Arts. 2008. Approved conservation advice for *Pterostylis saxicola* (Sydney Plains greenhood). Canberra, Australia: Department of the Environment, Water, Heritage and the Arts.
- Frawley K. 2010. National recovery plan for the Canberra spider-orchid (*Arachmorchis actensis*). Canberra, Australia: ACT Department of Territory and Municipal Services.
- Luu R and English V. 2004. Swamp starflower (*Calytrix breviseta* subsp *breviseta*) interim recovery plan 2004–2009. Wanneroo, Australia: Department of Conservation and Land Management, Western Australian Threatened Species and Communities Unit.
- Murphy AH, Webster A, Knight C, *et al.* 2008. National recovery plan for the sunshine diuris *Diuris fragrantissima*. Melbourne, Australia: Department of Sustainability and Environment.
- NSW (New South Wales) National Parks and Wildlife Service. 2000. *Allocasuarina portuensis* recovery plan. Hurtsville, Australia: NSW National Parks and Wildlife Service.
- NSW (New South Wales) National Parks and Wildlife Service. 2003. Downy wattle (*Acacia pubescens*) recovery plan. Hurtsville, Australia: NSW National Parks and Wildlife Service.
- Threatened Species Section. 2006. Flora recovery plan: Morrisby's gum, *Eucalyptus morrisbyi*, year 2006–2010. Hobart, Australia: Department of Primary Industries and Water.
- Threatened Species Section. 2017. Threatened Tasmanian orchids flora recovery plan. Hobart, Australia: Department of Primary Industries, Parks, Water & Environment.
- Todd JA. 2000. Recovery plan for twelve threatened spider-orchid *Caladenia* R Br taxa of Victoria and South Australia, 2000–2004. Melbourne, Australia: Department of Natural Resources and Environment.
- TSSC (Threatened Species Scientific Community). 2008. Approved conservation advice for *Allocasuarina thalassoscopia*. Canberra, Australia: TSSC, Department of the Environment and Energy.
- TSSC (Threatened Species Scientific Community). 2008. Approved conservation advice for *Caladenia procera* (Carbunup king spider-orchid). Canberra, Australia: TSSC, Department of the Environment and Energy.
- TSSC (Threatened Species Scientific Community). 2008. Approved conservation advice for *Haloragodendron lucasii* (Hal). Canberra, Australia: TSSC, Department of the Environment and Energy.
- TSSC (Threatened Species Scientific Community). 2008. Approved conservation advice for *Hibbertia basaltica* (basalt guinea flower). Canberra, Australia: TSSC, Department of the Environment and Energy.
- TSSC (Threatened Species Scientific Community). 2008. Approved conservation advice for *Hibbertia* sp Bankstown (RT Miller & CP Gibson sn 18/10/06)(a shrub). Canberra, Australia: TSSC, Department of the Environment and Energy.

- TSSC (Threatened Species Scientific Community). 2008. Approved conservation advice for *Lepidosperma rostratum* (beaked lepidosperma). Canberra, Australia: TSSC, Department of the Environment and Energy.
- TSSC (Threatened Species Scientific Community). 2009. Approved conservation advice for *Keraudrenia exastia* (fringed keraudrenia). Canberra, Australia: TSSC, Department of the Environment and Energy.
- TSSC (Threatened Species Scientific Community). 2009. Approved conservation advice for *Notelaea ipsviciensis* (Cooneana olive). Canberra, Australia: TSSC, Department of the Environment and Energy.
- TSSC (Threatened Species Scientific Community). 2014. Approved conservation advice for *Disocharopa vigens* (a land snail). Canberra, Australia: TSSC, Department of the Environment and Energy.
- TSSC (Threatened Species Scientific Community). 2014. Approved conservation advice for *Eucalyptus copulans*. Canberra, Australia: TSSC, Department of the Environment and Energy.
- TSSC (Threatened Species Scientific Community). 2014. Approved conservation advice for *Pherosphaera fitzgeraldii* (dwarf mountain pine). Canberra, Australia: TSSC, Department of the Environment and Energy.
- TSSC (Threatened Species Scientific Community). 2015. Conservation advice: *Grevillea caleyi*, Caley's grevillea. Canberra, Australia: TSSC, Department of the Environment and Energy.
- TSSC (Threatened Species Scientific Community). 2015. Conservation advice: *Lepidium ginninderrense*, Ginninderra peppercress. Canberra, Australia: TSSC, Department of the Environment and Energy.
- TSSC (Threatened Species Scientific Community). 2015. Conservation advice, *Calytrix breviseta* subs *breviseta*, swamp starflower. Canberra, Australia: TSSC, Department of the Environment and Energy.
- TSSC (Threatened Species Scientific Community). 2015. Conservation advice: *Prostanthera marifolia*, seaforth mintbush. Canberra, Australia: TSSC, Department of the Environment and Energy.
- TSSC (Threatened Species Scientific Community). 2016. Conservation advice: *Acacia pubescens*, downy wattle. Canberra, Australia: TSSC, Department of the Environment and Energy.
- TSSC (Threatened Species Scientific Community). 2016. Conservation advice: *Eucalyptus morrisbyi*, Morrisby's gum. Canberra, Australia: TSSC, Department of the Environment and Energy.
- TSSC (Threatened Species Scientific Community). 2016. Conservation advice: *Gossia gonoclada*, angle-stemmed myrtle. Canberra, Australia: TSSC, Department of the Environment and Energy.
- TSSC (Threatened Species Scientific Community). 2016. Conservation advice: *Ptilotus pyramidatus*, pyramid mulla-mulla. Canberra, Australia: TSSC, Department of the Environment and Energy.

- TSSC (Threatened Species Scientific Community). 2016. Conservation advice: *Allocasuarina portuensis*, Nielsen Park she-oak. Canberra, Australia: TSSC, Department of the Environment and Energy.
- TSSC (Threatened Species Scientific Community). 2016. Conservation advice: *Caladenia amoena*, charming spider-orchid. Canberra, Australia: TSSC, Department of the Environment and Energy.
- TSSC (Threatened Species Scientific Community). 2016. Conservation advice: *Caladenia robinsonii*, Frankston spider-orchid. Canberra, Australia: TSSC, Department of the Environment and Energy.
- TSSC (Threatened Species Scientific Community). 2016. Conservation advice: *Caladenia* sp Kilsyth South (GS Lorimer 1253), Kilsyth South spider-orchid. Canberra, Australia: TSSC, Department of the Environment and Energy.
- TSSC (Threatened Species Scientific Community). 2016. Conservation advice: *Caladenia thysanochila*, fringed spider-orchid. Canberra, Australia: TSSC, Department of the Environment and Energy.
- TSSC (Threatened Species Scientific Community). 2016. Conservation advice: *Pimela spicata*, spiked rice flower. Canberra, Australia: TSSC, Department of the Environment and Energy.
- TSSC (Threatened Species Scientific Community). 2016. Conservation advice: *Prasophyllum milfordense*, Milford leek-orchid. Canberra, Australia: TSSC, Department of the Environment and Energy.
- TSSC (Threatened Species Scientific Community). 2016. Conservation advice: *Prasophyllum perangustum*, knocklofty leek-orchid. Canberra, Australia: TSSC, Department of the Environment and Energy.