



Imperilled plants

ACTION PLAN TO SAVE AUSTRALIA'S 50 MOST THREATENED PLANTS

By Jaana Dielenber

THREATENED PLANTS have declined at an alarming rate in Australia over recent decades, pushing many species close to extinction.

In response, a team from the Threatened Species Recovery Hub has identified the 50 species at greatest risk of extinction and the steps needed to halt and reverse their declines.

Without action these species are really in trouble. About 30 of the species have less than 50 mature individuals left. Five of the species – slender-nerved acacia, Stirling Range dryandra, dwarf spider-orchid, Trigwell’s rulingua, and Bolivia Hill rice-flower each had less than five mature plants left in the wild at the end of 2020.

Associate Professor Rod Fensham from the School of Biological Sciences at the University of Queensland led the national initiative which has culminated in the launch of the Action Plan for Australia’s Imperilled Plants. Development of the plan was supported by the Australian Government’s National Environmental Science Program.

According to Prof. Fensham, threatened plants tend to receive less attention than threatened animals, even though they make up 72 percent of all threatened species listed under national law. At least 12 Australian plants have gone extinct since European colonisation and another 206 are Critically Endangered nationally.

“Without targeted action extinctions will occur,” Associate Professor Fensham said. “The good news is that we have the knowledge and the means to stop further extinctions of Australian flora, and this plan sets out the actions needed to achieve this. The majority of the actions in the plan are quite easy to implement but just need long term funding and commitment.”

Identifying plant species on the edge

To identify the species at greatest risk the team reviewed all available published information and interviewed more than 120 botanists and land managers across Australia. Co-author of the plan, Dr Jennifer Silcock, from the University of Queensland, said 90 percent of Australia’s plants are found nowhere else in the world.



“Plants are so remarkable. They’re all around us every day and they underpin every aspect of our lives. And so often we don’t notice them,” Dr Silcock said.

“They were used, managed and celebrated by Aboriginal Australians for at least 60,000 years, but since European colonisation, they’ve been beset by a range of threats, foremost habitat loss and clearing for agriculture and urbanisation, but also weeds, plant diseases, over grazing and changed ecological processes like fire regimes.

“Every plant is unique and the action plan lists the individual actions needed by each species,” Dr Silcock said.

“The most important action required for most species is habitat protection. Another common issue is lack of recruitment, meaning there’s no young plants coming up to replace the old ones.

“Sometimes this is because the things that triggered these plants to flower, release seed or germinate are no longer occurring. This can include things like fire of the right intensity or season.

“In some cases we do not yet know what trigger they need, so research is essential to establish this.”

Dr Silcock hopes that the plan will have broad appeal for people working in any aspect of plant conservation, but also to local communities who may have these plants growing really close to where they live.

“A lot of these plants grow close to urban centres. And what they mostly need is nothing particularly fancy in terms of research. They really just need someone to know that they’re there and care for them and their habitat.” ■

JAANA DIELENBERG has been a knowledge broker and science communicator for environmental science programs for 14 years, including for threatened species, northern Australia, climate adaptation and waterway focused programs. ■



Threatened plants, from opposite page:

1. Fewer than 10 lax leek-orchids (*Prasophyllum laxum*) remain in South Australia. The species only occurs on private property that is not managed for conservation and declines are ongoing due to drought and wildfire. Photo: Shane Graves.
2. Only 21 mature Gillingarra grevillea (*Grevillea sp. Gillingarra*) plants remain in a single population on a disturbed, weedy rail reserve in south-western Western Australia. Half the population was destroyed in 2011 due to railway maintenance and flooding. Photo: Andrew Crawford.
3. Smooth scrub turpentine (*Rhodamnia maideniana*) was once common in rainforests from Springbrook in Queensland to Ballina in NSW. It has rapidly declined over the last decade due to the plant disease myrtle rust. Less than 50 trees remain. Photo: Glenn Leiper.
4. Southern shepherds purse (*Ballantinia antipoda*) Once known from numerous locations in Victoria and Tasmania, this species is now only found at Leanganook (Mt Alexander) in central Victoria. Photo: Neville Walsh.
5. Caley’s grevillea (*Grevillea caleyi*) occurs in Sydney. It needs fire to germinate but this is difficult to implement close to urban areas. Photo: Tony Auld.
6. The Tunbridge leek-orchid (*Prasophyllum tunbridgense*) is restricted to small degraded remnants within a Tasmanian agricultural region. Less than 50 plants remain. Photo: Mark Wapstra.

7. Dr Marc Freestone pollinating a dwarf spider orchid (*Caladenia pumila*) at the Royal Botanic Gardens Victoria. Once common south-west of Melbourne, the dwarf spider-orchid was not seen for over 80 years until two plants were found. Photo: Marc Freestone.
8. The Grampians globe-pea (*Sphaerolobium acanthos*) has been lost from many former sites. Less than 70 plants remain across four sites. Threats include browsing by deer and goats, and infrastructure maintenance. Photo: Neville Walsh, Royal Botanic Gardens Victoria.
9. Bolivia Hill rice-flower (*Pimelea venosa*) is an extremely rare plant found only at one site in northern New South Wales. Photo: Murray Fagg 2017.
- 9a. Bolivia Hill rice-flower (*Pimelea venosa*) in habitat in New South Wales. Photo: Todd Sonderquist.
10. Less than 15 Woods Well spyridium shrubs (*Spyridium fontis-woodii*) remain on a single roadside in an agricultural region of South Australia. Photo: Daniel Duval, South Australian Seed Conservation Centre.
11. Ironstone pixie mop (*Petrophile latericola*) occurs on a soil type in Western Australia that has been heavily cleared for agriculture. It is suspected to be susceptible to the introduced root-rot disease phytophthora. Less than 200 remain. Photo: Andrew Crawford.
12. Fewer than 250 Coochin Hills grevilleas (*Grevillea hodgei*) remain on two hills surrounded by urbanisation on Queensland’s Sunshine Coast. Hybridisation with another species of grevillea planted in nearby gardens threatens its genetic integrity. Photo: Glenn Leiper.