

From the President's Desk

Dr Julie Old – President

The 2023 Wildlife of the Year is an iconic group of plants, the Proteaceae Family, a family which is distributed throughout all states of Australia and includes at least 1,100 species.



Welcome to the Summer 2023 Edition of *Australian Wildlife*

Another year starts with the Society continuing efforts to conserve Australia's unique flora and fauna, but what a busy year 2022 was! Many of the Society's activities are highlighted in the Society's newsletter – *Wildlife Wisdom*. If you are not already receiving the newsletter, please email us at accounts@aws.org.au, and we will add you to the list.

In this edition of *Australian Wildlife*, the Society celebrates the research undertaken by students sponsored by the Society's University of Technology Sydney Wildlife Ecology Research Scholarship to celebrate the tenth year since the establishment of this scholarship (Pages 20-21). The Society is immensely proud to support the next generation of conservationists and scientists who are conserving and protecting our unique flora and fauna into the future.

Recently, several Directors visited the Australian Reptile Park to see first-hand how the Society's funds were utilised to establish a broad-tooth rat (*Mastacomys fuscus*) breeding facility. Broad-toothed rats are listed as Endangered and are one of only a few native mice and rats (murids) endemic to Australia's alpine regions. In this edition of *Australian Wildlife*, on pages 13-15, you can read more about the visit by the Directors and why it is so important to conserve this species. Another article on pages 11-12 highlights other Australian native murid and the global significance of this group of animals, not just ecologically but also economically and culturally.

Other activities undertaken by some of the Directors included a visit to Aussie Ark's Barrington Tops Conservation Area, Cedar Creek Wombat Rescue

Inc. and Hospital, Hunter Wetlands Centre Australia, the Sydney Basin Koala Network Community Launch, and the Australian Wildlife Management Society Conference in Napier, New Zealand.

At Aussie Ark, Directors were able to see first-hand how the Society's support has helped to save the iconic Tasmanian devil (*Sarcophilus harrisii*) from extinction and were updated on the conservation efforts of other species, including eastern quolls (*Dasyurus viverrinus*), long-nosed potoroo (*Potorous tridactylus*) and brush-tailed rock-wallabies (*Petrogale penicillata*).

At Cedar Creek, Directors were shown how funding to support the establishment of a new and improved hospital had enabled the treatment of bare-nosed wombats (*Vombatus ursinus*) with sarcoptic mange, and joeys whose mother's are victims of roadkill return to the wild.





Proteaceae

THE SOCIETY'S 2023 WILDLIFE OF THE YEAR

Annie Nguyen

The Proteaceae family contains more than 1,766 species in eighty genera. Its predominantly southern hemispheric distribution is an attribute of its ancient evolution from the Cretaceous period (145 to 66 million years ago), when Australia, Africa, and South America were one interlocking landmass called Gondwana.

There are presently 1,154 species described from forty-seven genera native to Australia. Though taxonomy is not a static discipline, this will continue to change with time as new species are discovered. On the cover of this issue is a vibrant red *Telopea speciosissima*, commonly known as the

waratah, which is endemic to New South Wales and is the state's floral emblem. *Telopea* has four other species, all of which are endemic to the east coast of Australia.

Proteaceae is important because the family is so diversified, encompassing species that grow in sclerophyllous forests such as the *Banksia* and *Grevillea* to species that are restricted to rainforests such as *Hollandaea* and *Buckinghamia*. Furthermore, *Macadamia integrifolia* provides a source of income to the Australian economy. But what makes it important is not its economic value but its indispensable environmental value. The speciose

family also provides food and shelter to many of Australia's native wildlife. Hence, protecting threatened Proteaceae species also protects habitats that Australia's wildlife call home.

There are currently 1,374 plants listed as threatened by extinction in the *Environment Protection and Biodiversity Conservation Act 1999*. Of the 226 critically endangered and 564 endangered species, Proteaceae makes up nineteen percent of the critically

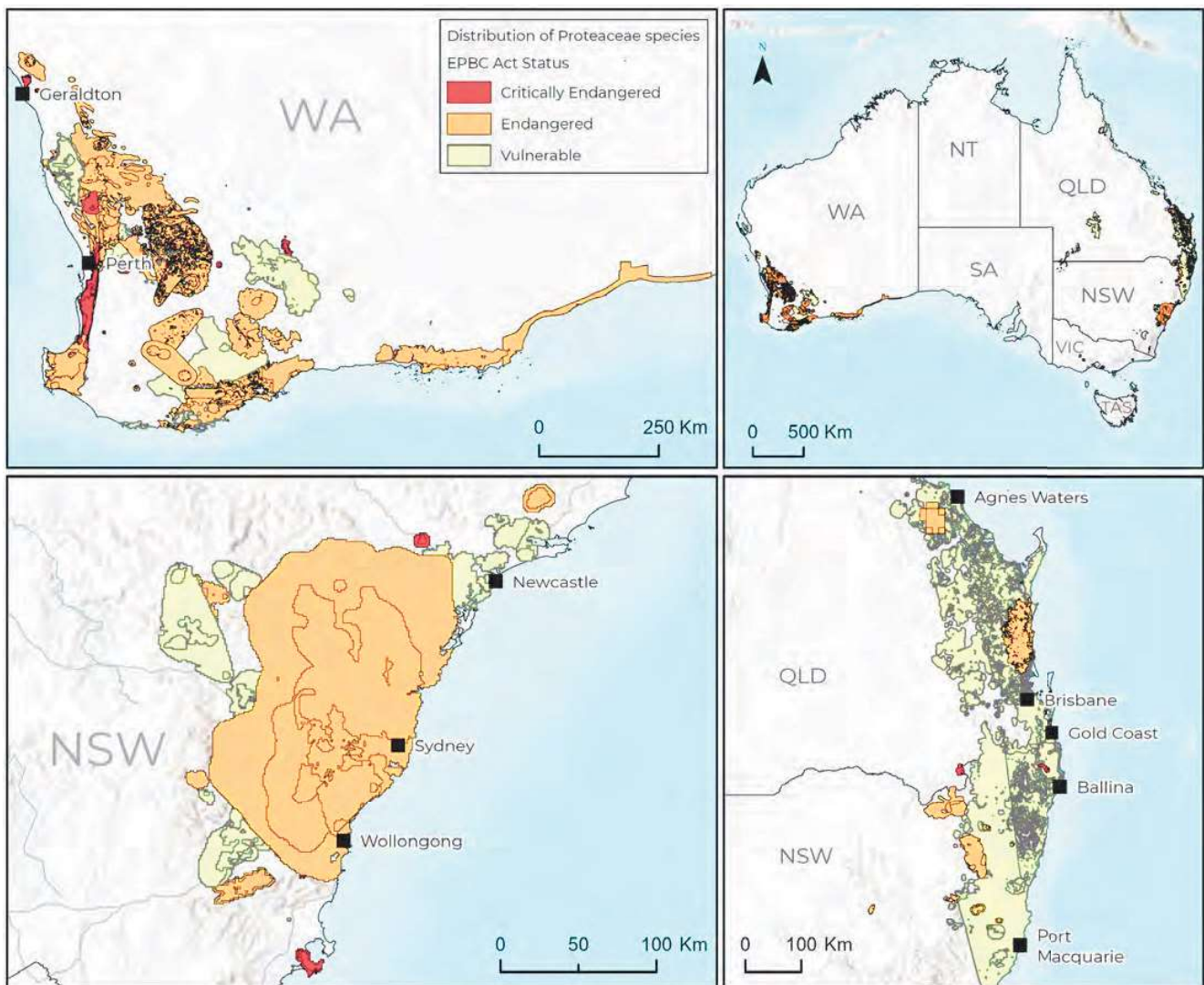
Top: Scarlet banksia (*Banksia coccinea*) are frequently displayed in bouquets and native gardens. Image: Annie Nguyen.



A rainbow lorikeet (*Trichoglossus moluccanus*) amongst *Grevillea*. Image: Malcolm Paterson.

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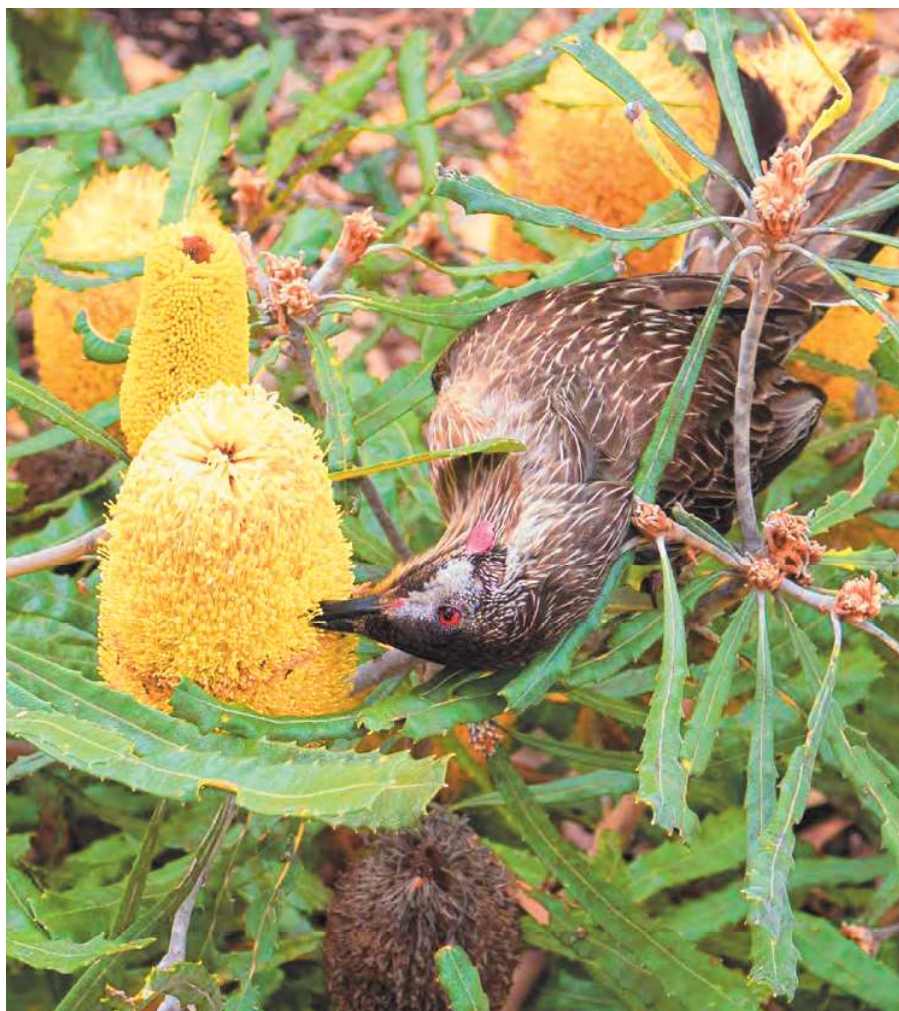
Lomatia tasmanica, possibly the oldest living plant, is a critically endangered species in Tasmania that has less than five hundred individuals left. Unable to produce seeds, *Lomatia tasmanica* are found in a single population that is a clone of itself dating back to at least 43,000 years old. The species is threatened by inappropriate fire regimes and 'root rot' caused by mould (*Phytophthora cinnamomi*) infections. Another ancient species is the *Cenarrhenes nitida* or the native plum. The native plum is the only species in its genus and is endemic to western parts of Tasmania. Macrofossil plant material of *C. nitida* has been found in Eocene assemblages dating back to ~ 30 million years old. Along with *Bellandena montana*, the native plum tree requires cool, moist shady conditions to thrive. However, forest fragmentation and changing climates could see further contractions in these paleoendemics.



A map of threatened Proteaceae species by state. Image: Annie Nguyen.

The Australian government has recently launched the *Threatened Species Action Plan 2022-2032*, which will focus on 110 priority species through \$12 million in funding to community-led projects helping to conserve and manage those species. The Plan includes thirty plant species, of which four are in the Proteaceae family; these are the bulberin nut (*Macadamia jansentii*), Foote's grevillea (*Grevillea calliantha*), small-flowered snottygobble (*Persoonia micranthera*), and stirring range dryandra (*Banksia montana*). The priority species are chosen based on six fundamental principles, including their risk of extinction and benefit to other species. Keen individuals are encouraged to participate in these community projects by looking up the complete list of grant proponents from the Environment Restoration Fund on the Department of Climate Change, Energy, the Environment and Water website.

Other actions readers can take to increase biodiversity and support local fauna is by planting native species of Proteaceae such as *Grevillea*, *Banksia*, and *Hakea*. Planting native species is a great way to support the birds, beetles, bees, and butterflies in your neighbourhood.



A red wattlebird (*Anthochaera carunculata*) enjoys the delicious nectar from a *Banksia*. Image: Julia Kalinkina.



The critically endangered *Grevillea caleyi* is restricted to an eight-kilometre square area around Terrey Hills, Sydney. Image: Annie Nguyen.



Little drumsticks (*Isopogon anemonifolius*) can be found in many nurseries and attracts butterflies, birds, and bees. Image: Annie Nguyen.