



Above *Grevillea murex*. Photo – Gemma Phelan Above right *Kunzea acicularis*. Photo – Andrew Brown

New flora Interim Recovery Plans approved

By Andrew Brown

Eleven new flora Interim Recovery Plans (IRPs) have recently been approved by the department's Director of Science and Conservation (see page 9). Five are new plans and six are updates of previously adopted plans. To view the full IRPs for all eleven species go to <http://www.dpaw.wa.gov.au/plants-and-animals/threatened-species-and-communities/198-approved-interim-recovery-plans#flora>.

In this article I provide a summary of each of the five species covered by new plans. All five species are specially protected under the Western Australian *Wildlife Conservation Act 1950* with *Caladenia lodgeana* ranked as Critically Endangered, *Androcalva perlaria*, *Daviesia dielsii* and *Grevillea murex* ranked as Endangered and *Kunzea acicularis* ranked as Vulnerable.

Lodge's spider orchid (*Caladenia lodgeana*)

Caladenia lodgeana is a late flowering species formally described by Stephen Hopper and Andrew Brown in 2001 when they named it in honour of Harry Lodge, a foundation member of Western Australian Native Orchid Study and Conservation Group (WANOSCG).

Plants grow from 200–400mm high with a single, erect, hairy leaf 100–200mm long by 5–10mm wide. The species has up to two cream to creamy-yellow, red marked flowers 50–100mm across with narrowly-clubbed petals and sepals and a white labellum (lip) with long fringe segments and four or more rows of pale red calli. It is distinguished from the similar *Caladenia serotina* by its narrowly clubbed petals and sepals and slightly earlier flowering period. *Caladenia lodgeana* belongs to the *C. huegelii* complex which is characterised by having clubbed sepals and shortened petals. However, *Caladenia lodgeana* lacks the dark maroon labellum apex typical of most members of complex, with only the closely related *C. busselliana*, *C. interjacens* and *C. sp. Collie* (E.

Bennett s.n. PERTH 08396051) sharing this feature. *Caladenia lodgeana* differs from these species in its later flowering period and confinement to the Augusta area.

The first collection of *Caladenia lodgeana* was made in Leeuwin–Naturaliste National Park south of Augusta by Eric Chapman in 1984. A single mature plant was then found at Margaret River by Stephen Hopper in 1987. Despite numerous searches by Parks and Wildlife and members of the WANOSCG, no plants have been located at either of these sites since the original collections were made. *Caladenia lodgeana* is currently known from a single population at Augusta, growing under low scrub in seasonally moist to wet clay soil on the margins of low granite outcrops.

The main threats to the species are possible future clearing, inappropriate fire regimes, four-wheel-drive access, picking and trampling, grazing, weeds and small population size.

Diel's daviesia (*Daviesia dielsii*)

Daviesia dielsii is an attractive species, formally described by Ernst Pritzel in 1904 when he named it in honour of Friedrich Diels who collected widely in WA between 1900 and 1901.

Plants grow to 90cm high by 1.8m wide and have densely hairy branchlets and phyllodes (leaf-like structures). The phyllodes are 2–4mm long by 1–3mm wide, flattened, obliquely oval and have a sharp point. Flowers are also small and are borne singly in the axils of the upper phyllodes. Each flower has calyx lobes that are much shorter than the tube. The outer part of the standard petal is orange or orange red, and the inner part and the wings and keel are a dark red. The fruit is a triangular pod, about 1mm long and has convex valves.

Daviesia dielsii is restricted to the Moora, Watheroo and Dalwallinu areas where it grows in brown and grey sandy loam with chert over laterite and yellow sand.

The species is currently known from 19 populations, 13 of which are located on road reserves that have little or no natural habitat and are infested with weeds. Many mature plants are senescing with little natural recruitment occurring and five of the 19 populations no longer have extant plants. The main threats to the species are road, track and firebreak maintenance, altered fire regimes, habitat degradation and grazing.

Shell-fruited *Grevillea* (*Grevillea murex*)

Grevillea murex is northern Wheatbelt species formally described by Don McGillivray and Robert Makinson in 1986 from specimens collected south-west of Morawa in 1976. The name *murex* refers to the similarity of the fruit surface to that of the shellfish *Murex*, which has pointy projections on its surface.

Plants grow from 1–2m tall and have many hairy branches. The leaves are on stalks up to 1.5mm long and have four or five blunt-tipped lobes. The dome-shaped flower heads are at the ends of the branchlets and contain cream to yellow flowers about 3cm long. The fruits, 9–13mm long, are oblong to ellipsoid in shape and are covered with irregular shiny protuberances to 2.5mm high. The species is related to *Grevillea crithmifolia* but has hairy branchlets, smaller leaves and hard-coated seed pods with irregular projections.

Grevillea murex was first collected north of Three Springs by C. Chapman in 1975, with subsequent collections made between there and the Mingenew–Morawa Road, growing in lateritic-gravel, brown clay-loam or red clayey-sand soil on gentle lower valley slopes or flat areas. Habitat is open York gum (*Eucalyptus loxophleba*) woodland over open low scrub, grasses and herbs.

The species is currently known from 10 populations comprising 314 mature plants. All but one population are located on narrow road reserves which are under threat from road maintenance activities. The main threats

New flora Interim Recovery Plans approved (continued)

to the species are road, track and firebreak maintenance, insect infestation, altered fire regimes, weed invasion and rabbits.

Kunzea acicularis

Kunzea acicularis is an attractive pink-flowered species formally described by Hellmut Toelken and Gillian Craig in 2007 from specimens collected north-east Ravensthorpe in 2001. The name *acicularis* refers to the 'needle-like' bracts.

Plants grow to 2m tall with few erect stems, each of which is irregularly branched. Young branches are densely covered with fine spreading hairs. The inflorescence comprises three to five pink to mauve flowers. *Kunzea acicularis* is similar to the southern form of *K. preissiana* with both having similarly-lengthed bracts. However, *Kunzea acicularis* is distinguished by being usually taller, having broader leaves and different-shaped, long-pointed bracts on the inflorescence, as well as longer, acute, triangular calyx lobes.

The species is known from one population north-east of Ravensthorpe where it grows in pale orange clay-loam soil in open mallee woodland and heath. The main threats to the species are narrow distribution, road maintenance, altered fire regimes, *Phytophthora* dieback and potential future mining operations.

Pearl-like androcalva (*Androcalva perlaria*)

Androcalva perlaria (formerly *Commersonia* sp. *Mt Groper*) is a spreading shrub first collected by Ray Cranfield and Dave Kabay from north of Mount Groper in 1993. The species was formally named by Carol Wilkins in 2011 from specimens she collected east of Wellstead in 2006.

Plants grow to 50cm high by 1m wide and have shallowly to deeply lobed grey-green leaves. The cream and white flowers appear between September and December with spot flowering at other times of the year. The fruit is green-grey in colour with a velvety hairy covering.

The species is found over a range of approximately 33km around Wellstead, approximately 100km east of Albany, growing sandy-clay soil in seasonally-waterlogged sites. Five populations are known, four of which are extant and together contain 207 plants. Live plants are absent from a fifth population where the species is thought to persist as a soil stored seed bank.

The main threats to the species include grazing, mining, altered hydrology and water quality, weeds and inappropriate fire regimes.

For more information please contact Andrew Brown: phone (08) 9334 0122 or email andrew.brown@dpaw.wa.gov.au.



Above top *Androcalva perlaria*. Photo – Shane Turner **Above** *Daviesia dielsii*. Photo – Lorraine Duffy

Re-introduction of chuditch into Flinders Range National Park, South Australia

By Abby Thomas

Chuditch (*Dasyurus geoffroi*) are medium-sized marsupial carnivores that once occupied approximately 70 per cent of the Australian mainland, ranging throughout much of central, western and southern Australia, including most of South Australia (SA). Chuditch have declined from their former range probably due to fox (*Vulpes vulpes*) and feral cat (*Felis catus*) predation and competition. They are now only extant in Western Australia between Kalbarri and Esperance, where they are listed as threatened fauna under the *Wildlife Conservation Act 1950*. The estimated population size is between 10,000–12,000 mature individuals.

In SA, chuditch are listed as endangered (presumed extinct) under the *SA National Parks and Wildlife Act 1972*, and were last recorded in the SA landscape in the 1950s, with the last museum specimen being collected in February 1933. The SA Department of Environment, Water and Natural Resources (DEWNR) Bounceback program is a long-running landscape-scale conservation program that aims to restore the semi-arid environments of the Flinders, Olary and Gawler Ranges in South Australia.

As part of the program, a translocation proposal between DEWNR and Parks and

Wildlife was approved to re-introduce wild chuditch from WA into Flinders Range National Park. The aim of the translocation is to re-establish a self-sustaining population of chuditch outside WA. Chuditch were considered the ideal species for re-introduction as they were previously known from the area, and possibly less sensitive to cat predation than many other locally extinct mammals. They are an opportunistic generalist that adapts well to different environments and an important totem animal for Adnyamathanha people of the northern Flinders Range.

As part of Parks and Wildlife's recovery program, chuditch have successfully been translocated by Parks and Wildlife to Julimar Forest, Lake Magenta Nature Reserve and Kalbarri National Park in WA.

Between March and April 2014, Parks and Wildlife staff and volunteers trapped chuditch from two populations – Julimar State Forest (proposed Conservation Park) and Perup Nature Reserve. Over two trapping periods, 20 females and 17 males were captured and consequently transported and released into Flinders Range National Park. Between the time of capture and the flights to the Flinders Range National Park, the chuditch were housed and cared for at the 'chuditch hotel'



Above top Chuditch caught in camera monitoring. Photo – Parks and Wildlife

(Native Animal Rescue facilities) in Malaga.

Three months of intensive monitoring by DEWNR staff, using aerial radio tracking, camera monitoring and trapping, indicates that the released animals are in good physical condition and settling into their home ranges with many females now carrying pouch young. The translocation will be deemed successful if these translocated animals continue to thrive and reproduce within the Flinders Range and become a self-sustaining population. This chuditch release will contribute to the national recovery of this species and will be a land mark as the first reintroduction of chuditch outside WA.

For more information please contact Abby Thomas: phone (08) 9219 8636 or email abby.thomas@dpaw.wa.gov.au.