

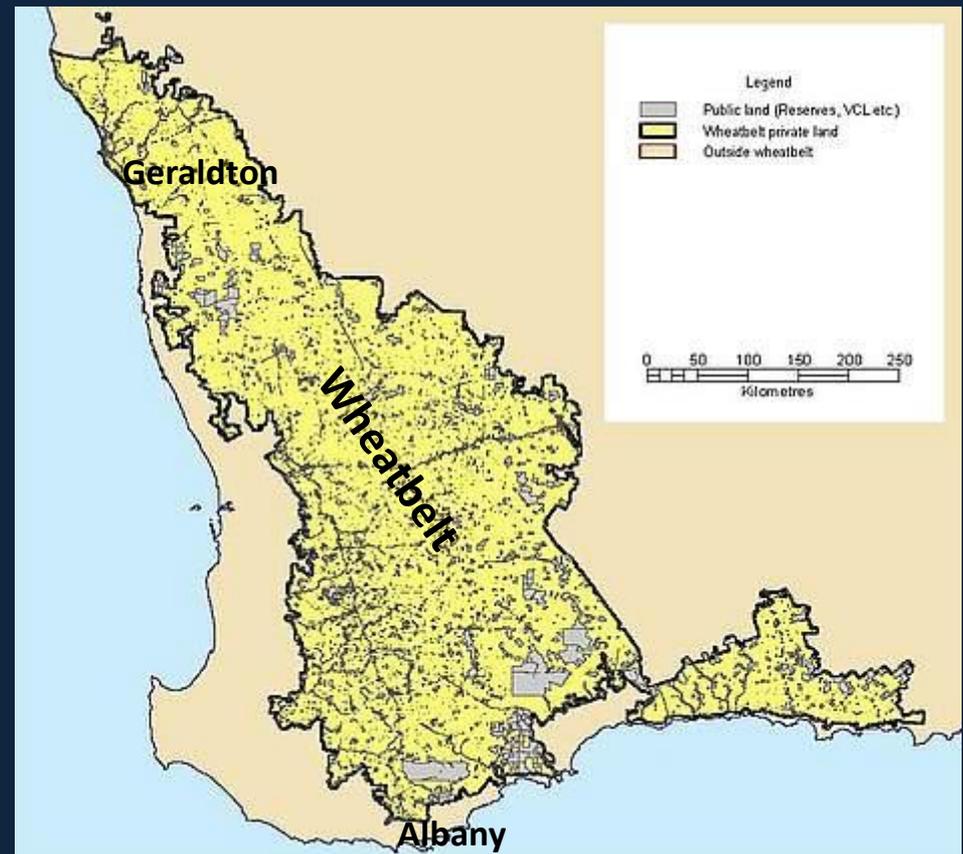
Western Australia's Adopt an Orchid Project (ADORP)



Andrew Brown
Kevin Uhe

Adopt an Orchid – threats

- Since European settlement in 1829 over 80% of the natural vegetation in the Wheatbelt Region of Western Australia along with large areas of coastal vegetation between Geraldton and Albany have been cleared
- Much of the remaining bushland is fragmented and often degraded and is surrounded by cleared pasture or housing, rendering it vulnerable to further human influences



Adopt an Orchid – threats

Threats to the remaining areas of natural vegetation include further clearing, water drawdown, disease, salinity, frequent burning and weed invasion



Adopt an Orchid – threats

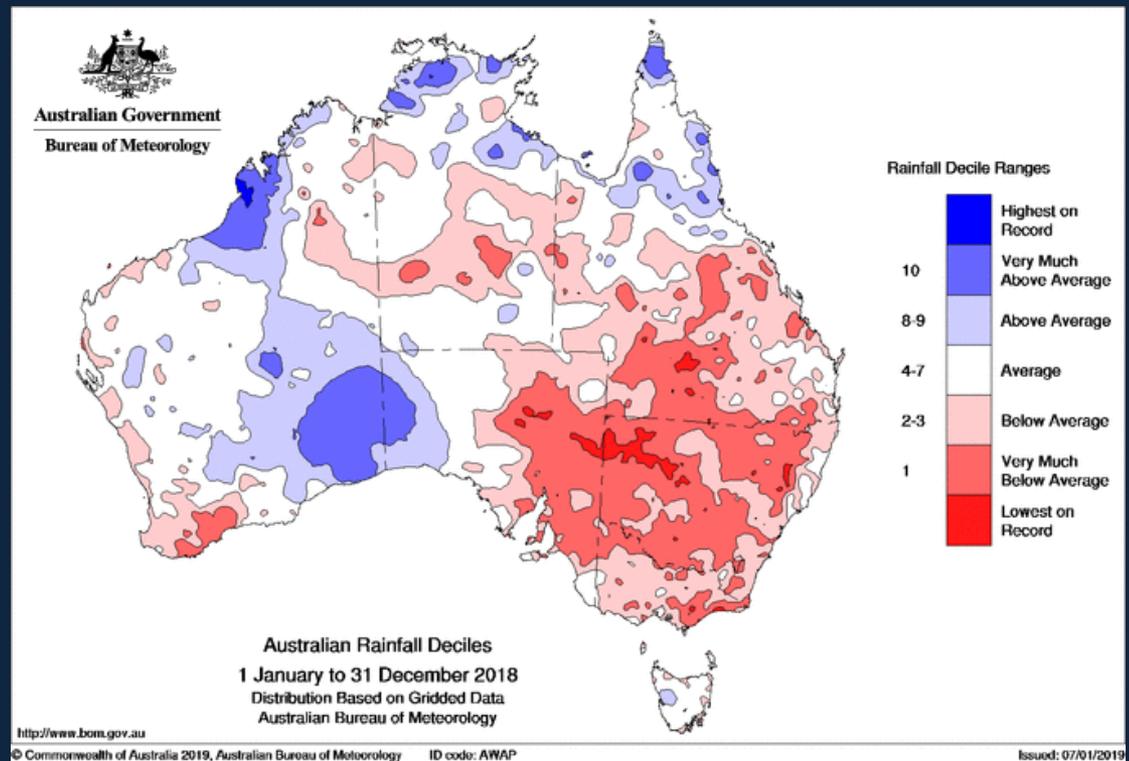
Even the large areas of State Forest are subject to threats that adversely affect our native orchids

- Prescribed burning has resulted in a dramatic decrease in both orchid composition and abundance
- The spread of the root-rot disease commonly known as dieback has the potential to kill up to 40% of native plant species and dramatically change the habitat occupied by orchids



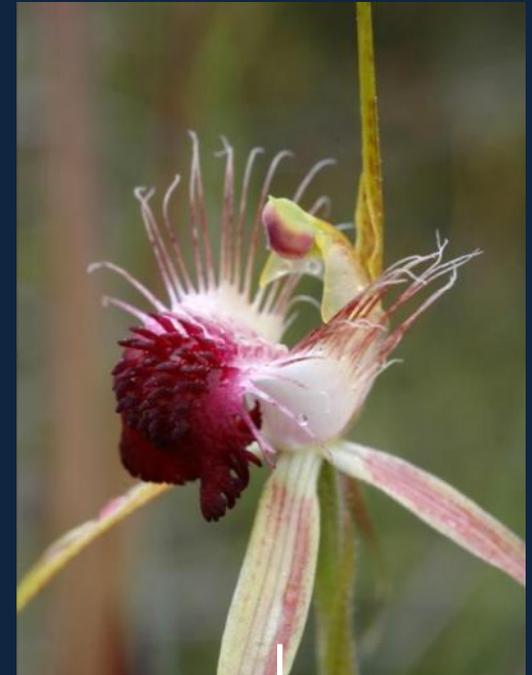
Adopt an Orchid – threats

Global climate change has caused uncertain weather conditions and increased periods of drought which threaten to overturn the delicate balance for survival for many native plant taxa, including orchids



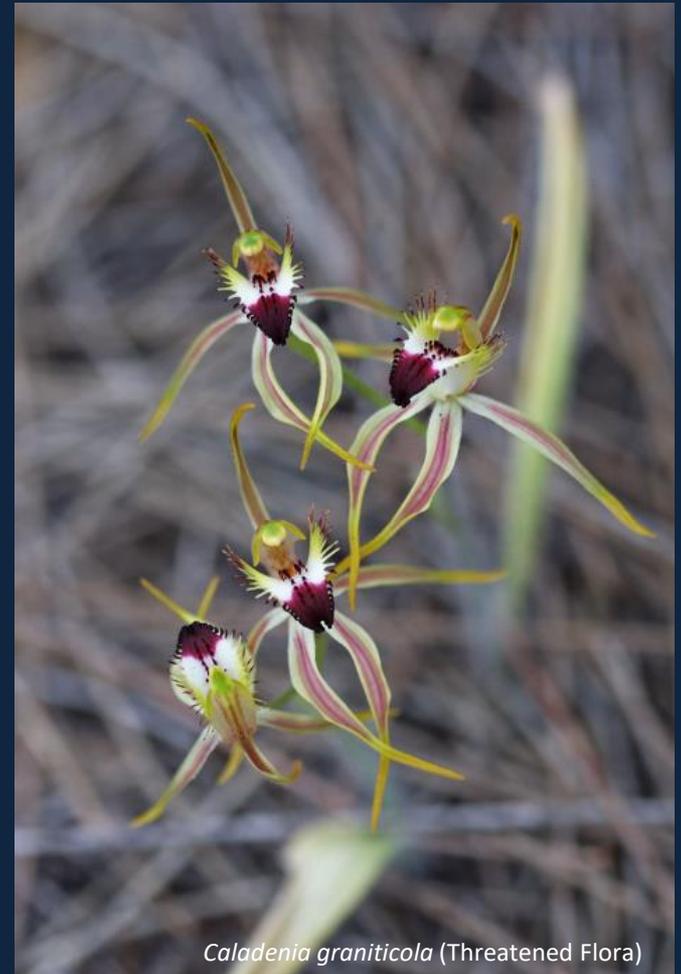
Adopt an Orchid – rarity

- These threats, both individually and combined, have led to large population declines of many orchid taxa in south-west Western Australia and it is not surprising that some orchids that were once common are now rare
- An example is *Caladenia huegelii* which was almost certainly once abundant between Perth and Capel but now occupies mostly small bush remnants, the majority of which are wedged between housing estates or areas of cleared farmland



Adopt an Orchid – Threatened Flora

- Under Western Australian legislation, the *Biodiversity Conservation Act 2016* provides for the protection of plant taxa that are under threat of extinction, are rare or are in need of special protection
- Termed Threatened Flora, such taxa may not be removed or collected from any lands (including private land) without the permission of the Western Australian Minister for the Environment
- As at June 2019, 427 plant taxa including 41 orchid taxa are listed as Threatened Flora



Caladenia graniticola (Threatened Flora)

Adopt an Orchid – Priority Flora

- In addition to those plant taxa that are protected by legislation there are many other potentially rare or threatened plant taxa that do not currently receive any formal protection
- These taxa are known from few sites and may potentially be rare or under threat, but cannot be declared as Threatened Flora until proper assessments have been undertaken
- The Department of Biodiversity, Conservation and Attractions (DBCA) lists these plants as Priority Flora as they are a high priority for monitoring and assessment for listing as Threatened Flora
- There are currently 3182 Priority Flora in Western Australia, 66 of which are orchids



Caladenia cristata (Priority Flora)

Adopt an Orchid – Priority Flora

Priority Flora are placed into one of four conservation categories with Priority 1 taxa thought at most risk of population decline and Priority 4 taxa at least risk



Caladenia dundasiae
Priority 1



Cyanicula ixioides subsp. *candida*
Priority 2



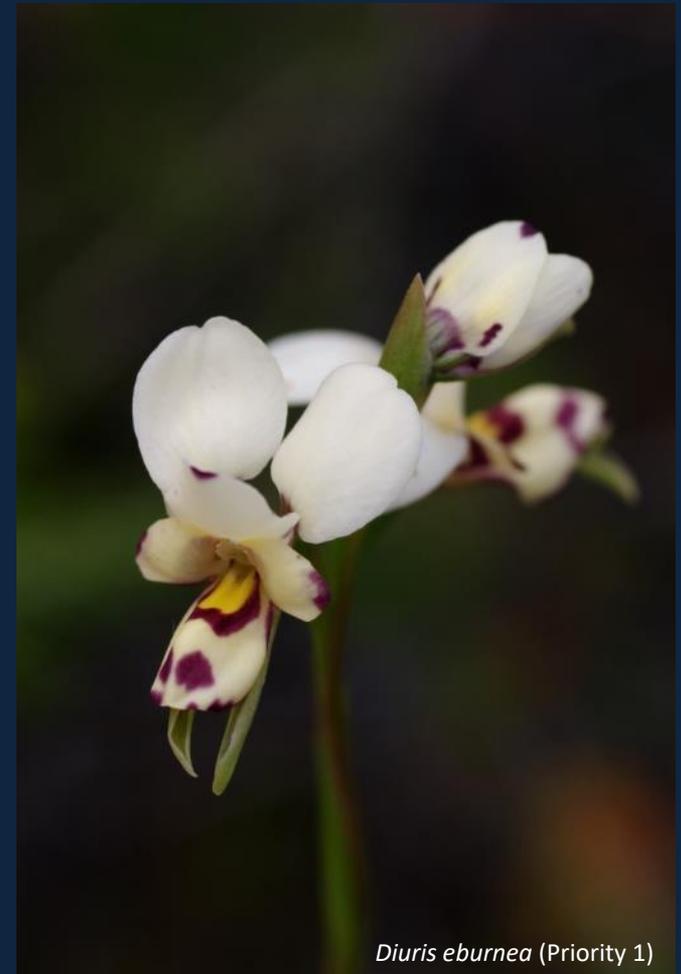
Thelymitra jacksonii
Priority 3



Diuris recurva
Priority 4

Adopt an Orchid – Priority Flora

- In Western Australia DBCA is the Government agency responsible for the protection of our flora
- However, just four full time Perth staff and 15 mostly part time regional staff are involved in flora monitoring and recovery, and the Department is necessarily focussed on implementing programs for Threatened Flora
- Much less time is available for Priority Flora which, at best, receives a rudimentary amount of monitoring and survey by Departmental staff



Diuris eburnea (Priority 1)

Adopt an Orchid – background

- Many Priority Flora taxa are likely to be genuinely rare and potentially could be highly threatened but, as little is known about their distribution, population sizes and the threatening processes affecting them, their conservation status cannot be accurately assessed
- This information is essential if these taxa are to be nominated for listing as Threatened Flora and is also required for the development and implementation of on ground protective measures
- A way to address the huge task of assessing the conservation status of such a large number of Priority Flora is to enlist the services of volunteers who can each adopt a taxon or group of taxa and undertake monitoring and surveys



ADORP Volunteer George Kokosinski measuring the Priority 1 orchid *Caladenia uliginosa* subsp. *patulens*

Adopt an Orchid – background

- In 2011 the Western Australian Native Orchid Study and Conservation Group (WANOSCG) took up the challenge to monitor and survey Priority orchids and the Adopt an Orchid Program (ADORP) began as a collaborative program between WANOSCG and DBCA
- At that time 21 participants in 10 groups covered 11 Priority orchids
- ADORP has grown substantially since then and currently has 74 participants in 23 groups covering 31 Priority orchids found between Kalbarri in the north and Esperance in the east



Adopt an Orchid – background

- ADORP's aim is to obtain a better knowledge of the biology, ecology, distribution, abundance and threats to Priority Orchids in Western Australia so as to accurately assess their conservation status in the wild
- This is achieved by small groups managed by WANOSCG and DBCA coordinators adopting a Priority Orchid which they monitor and survey
- Information obtained is disseminated to relevant DBCA staff through the DBCA Coordinator. This information is also added to the DBCA Threatened and Priority Flora database and the WANOSCG orchid database
- Following assessment, highly threatened orchid taxa may be nominated as Threatened flora and, if required, appropriate protective and recovery actions implemented



ADORP members searching for the Priority 1 species
Paracaleana gracilicordata

Adopt an Orchid – procedures and guidelines

Each volunteer group must agree to abide by ADORP and DBCA procedures and guidelines. These include:

- Each group comprising no more than six members
- Group members completing a DBCA Volunteer Registration form and providing returns every three months showing hours spent on the project
- The group making contact with the nominated DBCA District flora officer when planning trips
- The group not entering sensitive sites, i.e. sites affected by dieback, without approval from DBCA
- The group not entering private property without the owner's permission



Government of Western Australia
Department of Parks and Wildlife

DPaW 205

COMMUNITY INVOLVEMENT PROGRAM
VOLUNTEER REGISTRATION FORM
Please print clearly and fill out all details

Office use only:
Volunteer number:

SURNAME:		TITLE: (Mr / Mrs / Miss / Ms / Dr / Rev.)	
GIVEN NAMES:		PREFERRED NAME:	
POSTAL ADDRESS:		Post Code:	
EMAIL ADDRESS (Please Print):			
TELEPHONE: Home:		Work:	Mobile:
DATE OF BIRTH:		Are you: Male <input type="checkbox"/> Female <input type="checkbox"/>	
<small>Applicants should be over 18 years or contact Volunteer Coordinator</small>		Please specify other language spoken:	
Is English your second language? Yes <input type="checkbox"/> No <input type="checkbox"/>			
Which of the following best describes your main usual activity?			
Carers / disability pension <input type="checkbox"/>	Full time employment <input type="checkbox"/>	Full time home duties <input type="checkbox"/>	Interstate Visitor <input type="checkbox"/>
Part-time employment <input type="checkbox"/>	Retired <input type="checkbox"/>	Self-employed <input type="checkbox"/>	Student <input type="checkbox"/> Unemployed <input type="checkbox"/>
International Visitor <input type="checkbox"/>	<small>(NB: International visitors are <u>not</u> covered by the Department's insurance. A copy of their travel insurance <u>must</u> be attached to this registration form.)</small>		
Are you of Aboriginal or Torres Strait Islander descent? Yes <input type="checkbox"/> No <input type="checkbox"/>		Are you on workers compensation or sick leave? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Is there any reason why you would be restricted in some areas of volunteer work e.g. back injury? Yes <input type="checkbox"/> No <input type="checkbox"/>			
If yes, please specify:			
<p>I (name) _____ confirm that I have received, read and acknowledged DPaW's Code of Conduct. I agree to abide by the expectations and requirements as explained in the document and I understand that failure to do so may result in deregistration as a volunteer.</p> <p>I understand that my data will be held on a secure computer system. I hereby consent to this information being stored (in any format), and processed as required for the purposes of my prospective volunteer status by DPaW, on condition that the Department will, so far as possible, keep such information confidential within DPaW.</p> <p>I permit DPaW to use my image for training, promotional, media and other non-commercial purposes as appropriate.</p> <p>Signature: _____ Date: _____</p> <p>Please note that by signing this document you are acknowledging the above is true and correct.</p>			

To be completed by PROJECT SUPERVISOR
Registration cannot be completed without this information

Project number: 1.1.20

Project name: Adopt an Orchid

(As written in registered Project Notification Form DPaW206 - contact CIU for information)

Project Supervisor (Print Name):

Date:

Signature of Project Supervisor: _____

Date: _____

Please return completed forms to:

Community Involvement Unit
Department of Parks and Wildlife
Locked Bag 104, Bentley WA 6163
Phone: 9334 9468 Fax: 9334 0221 Email: community.involvement@dpaw.wa.gov.au



LHCIF482014

Adopt an Orchid – information packages

Following registration the group is provided an information package on the selected orchid which contains:

- A general induction to the program
- Threatened and Priority Report Forms and Field Manual
- DBCA Regional or District Officer contact details
- Information on how to identify the orchid
- Known locations. Noting that surveying of private properties will only be done with the permission of the land owner
- Type of habitat to look in
- Threatening processes to look out for and identify

Information package for
Paracaleana alcockii



Information package includes: Descriptive, habitat and location information, photographs, an introduction to "Adopt an Orchid", Threatened and Priority Flora Report forms, field manual and guide.

District DEC Flora Officer contact details: (please make contact with this or these officers before undertaking monitoring/surveys)

Geraldton District	Alanna Chant	(P) 9964 0935	Alana.chant@dec.wa.gov.au
Geraldton District	Kiera Foster	(P) 9964 0935	Kiera.foster@dec.wa.gov.au

Important note: If visiting private property populations the permission of the owner must be obtained prior to entering the property.

Derivation of name: Named in honour of Professor John Alcock from Arizona State University, author of *An Enthusiasm for Orchids, Sex and Deception in Plant Evolution*, who recognised the species as being distinct on one of his many visits to Western Australia.

Flowering: September to October.

Description: A rare flying duck orchid 80 to 160 mm high with a single, smooth, dull green to dull red leaf 20 to 30 mm long by 5 to 12 mm wide, and one (rarely two) inverted, greenish-yellow and red flowers 5 to 8 mm across with narrow petals and sepals, broad column wings and a prominently humped labellum with calli confined to the apical third to half. The species is distinguished from the sometimes co-occurring smooth-billed duck orchid (*Paracaleana terminalis*) by its later flowering period, generally larger flower and prominently humped labellum with calli confined to the apical third to half.

Distribution and habitat: Found north of the Murchison River, growing in sandy yellow sandy soil amongst sedges and shrubs.

Notes: Named in 2006 from specimens collected north of Galena Bridge in September 2005. Due to its rarity the species is listed as Priority flora in Western Australia.

Localities

Adopt an Orchid – surveys and reports

Once groups are set up:

- Each group conducts monitoring and surveying of their selected orchid or orchids
- At each orchid population the group fills out a Threatened and Priority Flora Report Form and takes digital photos of the orchid, the site and observed threats
- During surveys for new populations the group notes all areas searched regardless of success or failure in locating the orchid
- The group sends reports, photos and other information to the WANOSCG Coordinator who forwards them to the DBCA Coordinator
- Reports are placed on the DBCA Threatened and Priority Flora database and copies are sent to relevant DBCA Regional staff


Threatened and Priority Flora Report Form
Version 1.3 August 2017

Please complete as much of the form as possible, with emphasis on those sections bordered in black. For information on how to complete the form please refer to the Threatened & Priority Flora Report Form (TPRF) manual on the DBCA website at <http://dbca.wa.gov.au> under Standard Report Forms

TAXON: <i>Diclis brevis</i>		TPFL Pop. No:	
OBSERVATION DATE: 20/08/2018		CONSERVATION STATUS: P2 New population <input type="checkbox"/>	
OBSERVER/S: Kevin Uhe, Jeanette Wheatley and Margaretha Roepen		PHONE: 0419913792	
ROLE: DBCA volunteers		ORGANISATION: WA Native Orchid Study & Conservation Group	

DESCRIPTION OF LOCATION (provide at least nearest town/village locality, and the distance and direction to that place):
 Brixton Street Wetland, entry off Alton Street, Kenwick. Veer left and follow middle track towards the railway. Plants alongside the track and just south of the track in a higher area near a wetter area.

DBC DISTRICT: Swan Coastal **LGA:** Gosnells Land manager present:

DATUM:	COORDINATES: (if UTM coords provided, Zone is also required)	METHOD USED:
GD94 / MGA94 <input type="checkbox"/>	DecDegrees <input type="checkbox"/> Deg/Min/Sec <input type="checkbox"/> UTM <input type="checkbox"/>	GPS <input checked="" type="checkbox"/> Differential GPS <input type="checkbox"/> Map <input type="checkbox"/>
AGD84 / AMG84 <input type="checkbox"/>	Lat / Northing: 32 01.872 & 32 01.866	No. satellites: 9 Map used: _____
WGS84 <input checked="" type="checkbox"/>	Long / Easting: 115 58.190 & 115 58.153	Boundary polygon captured: <input type="checkbox"/> Map scale: _____
Unknown <input type="checkbox"/>	ZONE: _____	

LAND TENURE:

Nature reserve <input checked="" type="checkbox"/>	Timber reserve <input type="checkbox"/>	Private property <input type="checkbox"/>	Rail reserve <input type="checkbox"/>	Shire road reserve <input type="checkbox"/>
National park <input type="checkbox"/>	State forest <input type="checkbox"/>	Pastoral lease <input type="checkbox"/>	MRWA road reserve <input type="checkbox"/>	Other Crown reserve <input type="checkbox"/>
Conservation park <input type="checkbox"/>	Water reserve <input type="checkbox"/>	UCL <input type="checkbox"/>	SLKPole _____ to _____	Specify other: _____

AREA ASSESSMENT: Edge survey Partial survey Full survey Area observed (m²): 2000

EFFORT: Time spent surveying (minutes): _____ No. of minutes spent / 100 m²: _____

POP'N COUNT ACCURACY: Actual Extrapolation Estimate Count method: _____
(Refer to field manual for list)

WHAT COUNTED:	Plants <input checked="" type="checkbox"/>	Clumps <input type="checkbox"/>	Clonal stems <input type="checkbox"/>	
TOTAL POP'N STRUCTURE:	Mature:	Juveniles:	Seedlings:	Totals:
Alive	15			15
Dead				

Note: Pts record count as numbers (not percentages) for database.

QUADRATS PRESENT: No. _____ Size _____ Data attached Total area of quadrats (m²): _____

Summary Quad. Totals: Alive _____

REPRODUCTIVE STATE:

Clonal <input type="checkbox"/>	Vegetative <input type="checkbox"/>	Flowerbud <input type="checkbox"/>	Flower <input checked="" type="checkbox"/>
Immature fruit <input type="checkbox"/>	Fruit <input type="checkbox"/>	Dehisced fruit <input type="checkbox"/>	Percentage in flower: 100%

CONDITION OF PLANTS: Healthy Moderate Poor Senescent

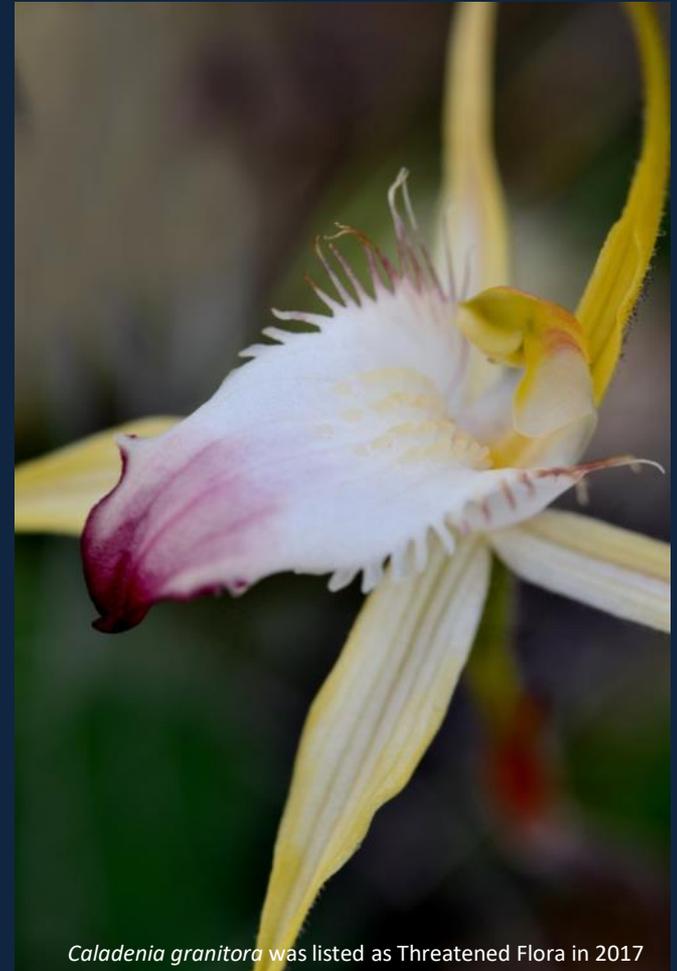
COMMENT: _____

THREATS - type, agent and supporting information: <small>Eg clearing, too frequent fire, weed, disease. Refer to field manual for list of threats & agents. Specify agent where relevant. Rate current and potential threat impact: N=Nil, L=Low, M=Medium, H=High, E=Extreme Estimate time to potential impact: S=Short (<12mths), M=Medium (<5yrs), L=Long (5yrs+)</small>	Current impact (N-E)	Potential Impact (L-E)	Potential Threat Onset (S-L)
• Weeds	L	L	L
• Trampling Some orchids very close to track	L	L	L
•	---	---	---

Please return completed form to **Species And Communities Branch DBCA**,
 Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 OR email to: flora.data@dbca.wa.gov.au
RECORDS: Please forward to **Flora Administrative Officer**, Species and Communities Branch.
 Record entered by: _____ Sheet No.: _____ Record Entered in Database

Adopt an Orchid – achievements

- After running for eight years the ADORP program has obtained important population and threat information on Priority Orchids that would not have otherwise been available
- Over 100 Priority Orchid populations have been visited and monitored
- Monitoring and threat information obtained through ADORP is being progressively put into the DBCA Threatened and Priority Flora Database
- Populations of many Priority Orchids have been found to be larger than previously thought and new populations have been located
- Conversely, some Priority Orchids have been shown to be genuinely rare and potentially highly threatened, therefore meeting criteria for nomination as Threatened Flora. Two former Priority Orchids have now gone through this process



Caladenia granitora was listed as Threatened Flora in 2017

Adopt an Orchid – achievements

In addition to monitoring and survey, ADORP groups have undertaken (or have assisted in) a number of other activities. These include, in corporation with land owners and land managers:

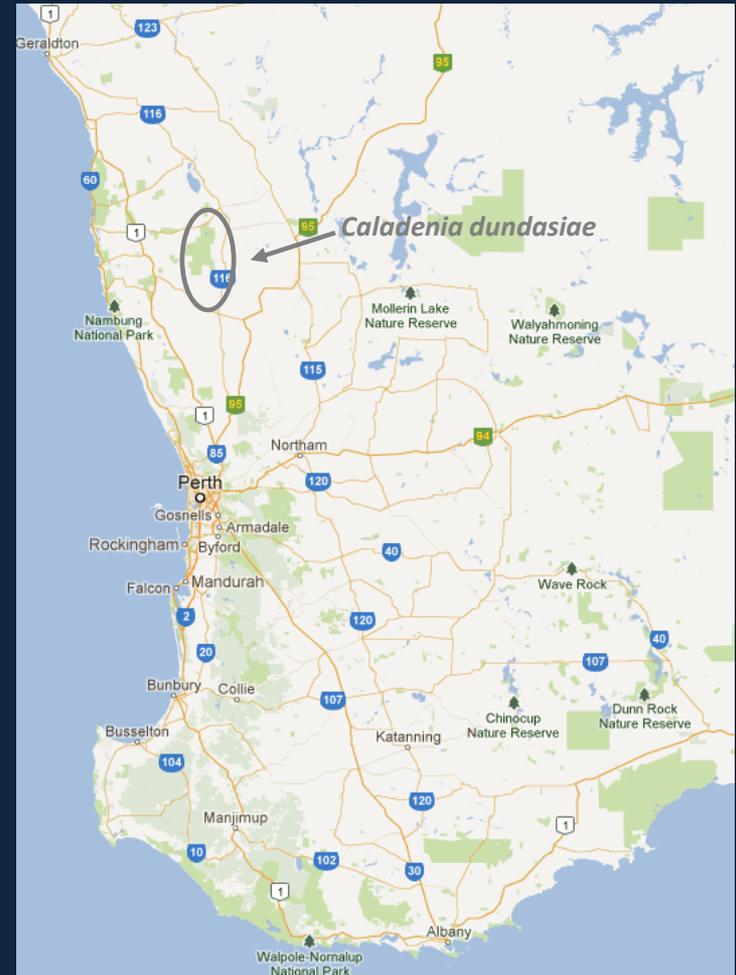
- Implementing recovery actions including rubbish removal, weed control, exclusion from prescribed burning, signage and protective fencing
- Undertaking or assisting in research projects including pollination studies, genetics, fire studies, water table monitoring and monitoring the effects of rising salinity
- Assisting in taxonomic studies

To give you an idea of some of the programs achievements, I will now cover four ADORP taxa in more detail



Adopt an Orchid – *Caladenia dundasiae*

- Listed as Priority 1, *Caladenia dundasiae* is a rare, geographically restricted species discovered by botanical artist Pat Dundas in 1995 and named in 2001
- Flowering between late July and mid-August, it produces one or two red, deep pink or cream flowers to 8 cm across
- The species is confined to a relatively small geographic area between Watheroo and Moora north of Perth, growing in open *Eucalyptus wandoo* and *E. loxophleba* woodland



Caladenia dundasiae



Caladenia dundasiae habitat

Adopt an Orchid – *Caladenia dundasiae*

- A team comprising David Lawson, John Ewing and Stuart Harris undertook a brief survey of the three known sites in 2011, with two sites at that time having a combined total of 157 flowering plants. No plants were located at a third site
- In 2013 a new population was found in a nature reserve and more intensive monitoring of all four known sites commenced in 2014
- The number of flowering plants in these four sites has fluctuated enormously and appears directly attributed to the presence of good early season (April-June) rainfall
- In 2018 two additional new sites were located. Both are fenced from stock and together contain 696 flowering plants
- As at August 2018, six populations when combined contained 2218 flowering plants



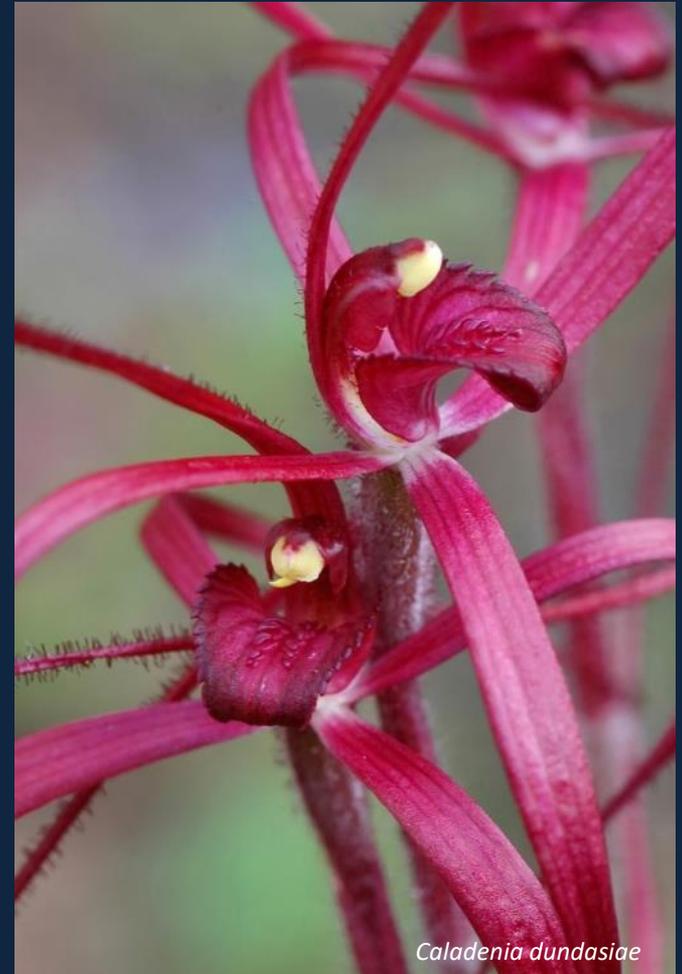
Adopt an Orchid – *Caladenia dundasiae*

- As the ADORP team become more familiar with the species, they questioned whether all populations were pure or some were a mixture of *Caladenia dundasiae* and hybrids with other species
- This is an important observation as it obviously affects the number of *Caladenia dundasiae* plants known
- In 2019 I will accompany the team to determine the correct identification of plants in all populations



Adopt an Orchid – *Caladenia dundasiae*

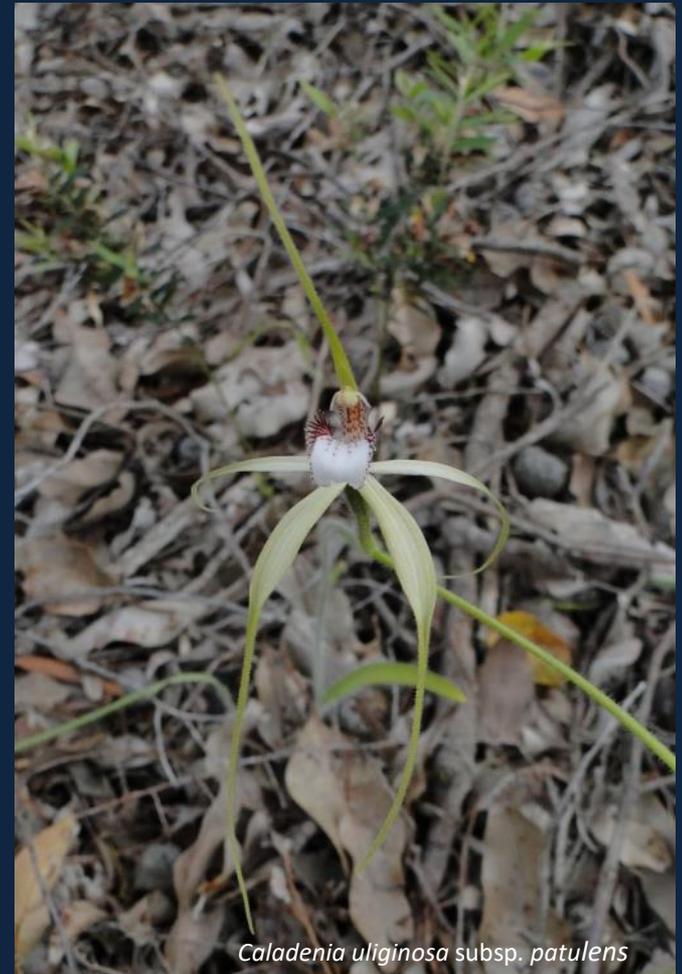
- The period of monitoring undertaken to date is too short to ascertain long term trends but indicates the species is safe at least in the short term
- Some 594 flowering plants were located in the reserve population in 2018, with few major threats noted
- Apart from some minor weed infestation and grazing by native animals the habitat of private property populations is healthy and the land owners are keen to protect the orchid
- There have been some very positive outcomes as a result of ADORP. New populations have been found, signage has been installed, protective fencing has been erected and landowners have come on board with a commitment to protect remnant vegetation containing populations of the species



Caladenia dundasiae

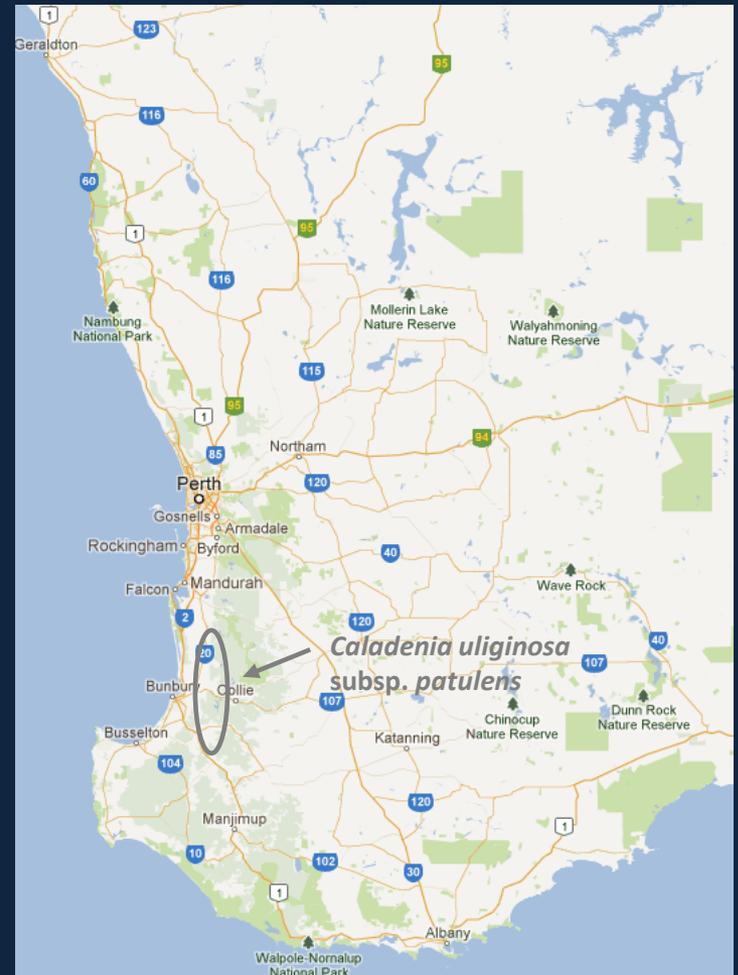
Adopt an Orchid – *Caladenia uliginosa* subsp. *patulens*

- Listed as Priority 1, *Caladenia uliginosa* subsp. *patulens* is a rare orchid named in 2001 from specimens collected near Harvey in September 1987
- The subspecies flowers between September and early October, producing one to three creamy-white to creamy-yellow flowers, characterised by their spreading petals and lateral sepals and forward projecting labellum with relatively short, narrow fringe segments



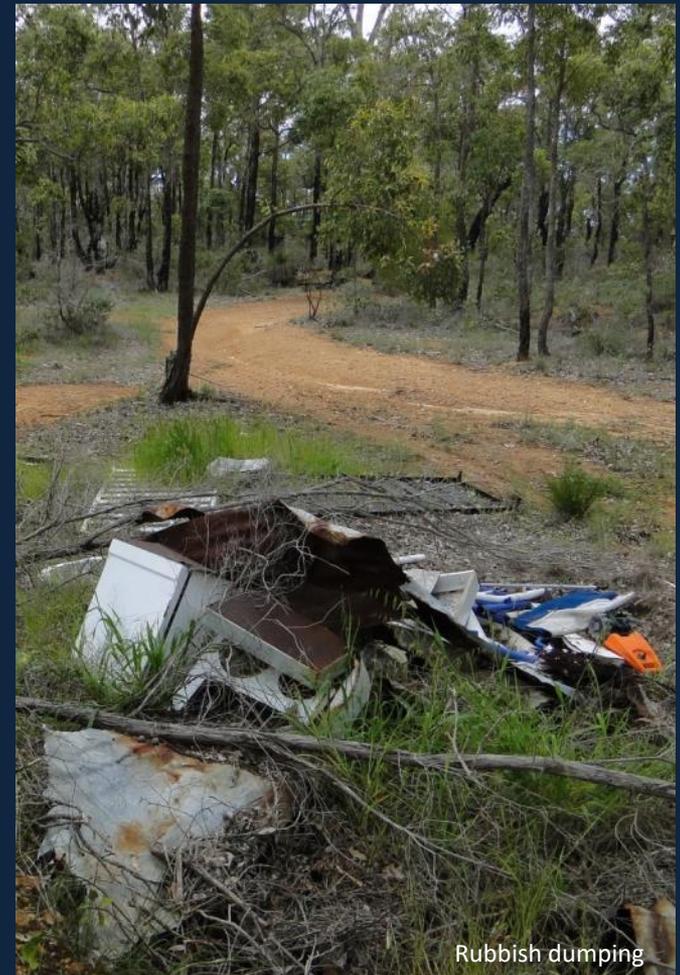
Adopt an Orchid – *Caladenia uliginosa* subsp. *patulens*

The subspecies is found in rare populations between Harvey and Nannup, growing in *Eucalyptus marginata* - *E. wandoo* woodland near Harvey and *Eucalyptus marginata* - *Corymbia calophylla* woodland near Nannup



Adopt an Orchid – *Caladenia uliginosa* subsp. *patulens*

- In 2011 when ADORP began just two populations were known (one at Harvey and one at Nannup) neither of which had been monitored since the early 1990s
- Habitat of the Harvey population had been affected by rubbish dumping, weeds and track construction. The habitat of the Nannup population was in better condition but the population was very small with just a few plants recorded



Adopt an Orchid – *Caladenia uliginosa* subsp. *patulens*

- An ADORP team comprising Urszula and George Kokosinski began monitoring and surveying the subspecies in September 2011
- By October the same year they had visited and assessed both known sites, finding 100 flowering plants in the Harvey population and 1 plant in the Nannup population
- Prior to this, only a handful of flowering plants had been seen in the Harvey population and no plants had been found in the Nannup population since 1989



Adopt an Orchid – *Caladenia uliginosa* subsp. *patulens*

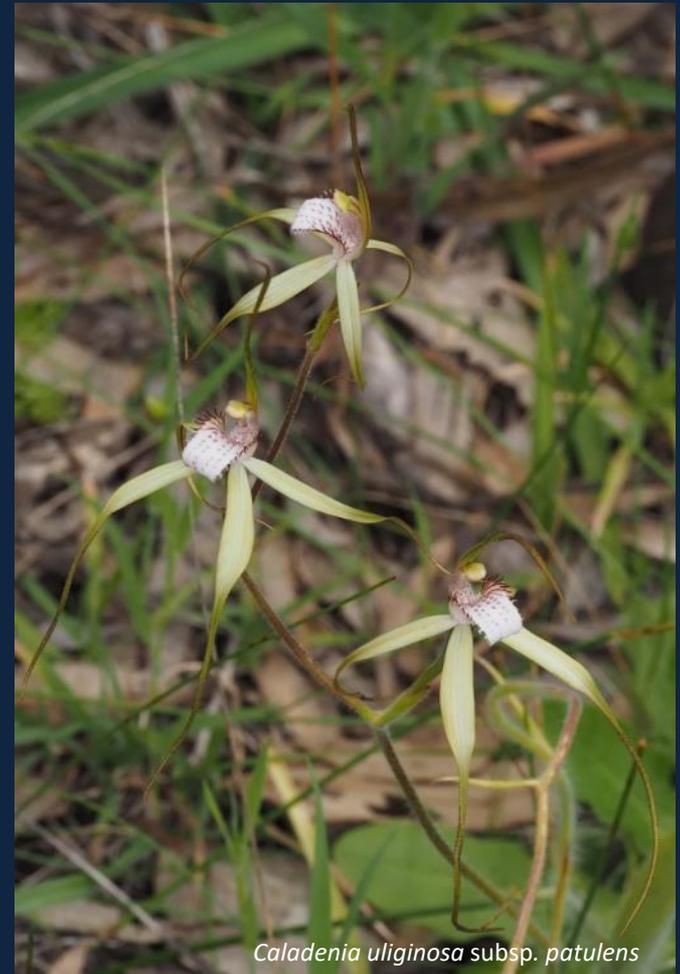
- Unfortunately, when conducting follow up surveys in August and September 2012 the team noticed that part of the Harvey population had been recently burnt
- The area is Shire managed land, however, the Shire indicated that they did not conduct the burns and did not know who had done it
- Because the orchid has no formal protection, a detailed investigation was not undertaken



Unseasonal fire is a threat to *Caladenia uliginosa* subsp. *patulens*

Adopt an Orchid – *Caladenia uliginosa* subsp. *patulens*

- Following the 2012 burns, discussions were undertaken between the Shire and the ADORP group with the view of implementing protective measures
- The Shire was very supportive and removed much of the rubbish that had been dumped at the Harvey location. They then erected a new fence around the bushland which has prevented further rubbish dumping and off road use
- As the area suffers from weed invasion and erosion from previous off road activities, weed control and habitat recovery including the planting of native species will be undertaken at the site



Caladenia uliginosa subsp. *patulens*

Adopt an Orchid – *Caladenia uliginosa* subsp. *patulens*

- Surveys in September 2013 uncovered a new population between Donnybrook and Capel. In October 2016 another new population was located near Donnybrook
- As at October 2018, five populations are known which together comprise 231 mature plants. This is a huge improvement on the one population of 44 mature plants known when surveys began in 2011
- However, we should not be complacent. Two populations together contain 214 plants and just 17 plants are found in the other three populations combined
- There are some very positive outcomes as a result of ADORP. New populations have been found, protective fencing has been erected and land managers have come on board with a commitment to protect remnant vegetation containing the subspecies



Adopt an Orchid – *Thelymitra magnifica*

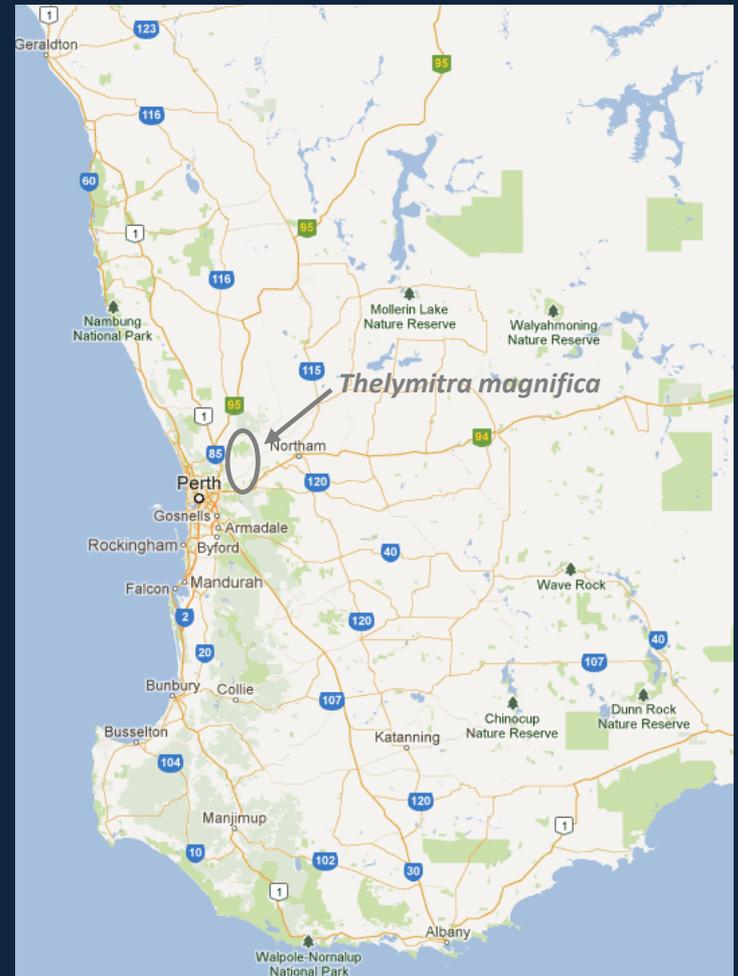
- Listed as Priority 1, *Thelymitra magnifica* is a rare geographically restricted species named in 2006 from specimens collected at Crystal Brook in October 2000
- Plants have a distinctive broad leaf and up to eight rich-brown and yellow, highly fragrant flowers with broad petals and sepals and a broad column with fimbriate lateral lobes and a bulbous apex



Thelymitra magnifica

Adopt an Orchid – *Thelymitra magnifica*

- The species is confined to a small geographic range along the western edge of the Darling Scarp east of Perth, growing in dense heath in association with *Eucalyptus wandoo*
- The habitat of the orchid is rare and subject to a range of threatening processes



Adopt an Orchid – *Thelymitra magnifica*

- A team comprising Bob and Jay Steer and Jon Warren began monitoring and surveying the species in September 2011 and by October 2012 had visited all but one of the nine previously known sites
- Five sites visited in 2012 contained a combined total of 49 flowering plants and three sites contained no extant plants
- Over the next six years, apart from one small subpopulation, no new populations have been located and just five populations containing a combined total of 58 flowering plants are known
- The two largest populations together contain 41 flowering plants while the remaining three populations when combined contain just 17 plants



ADORP volunteer Jay Steer photographing *Thelymitra magnifica*

Adopt an Orchid – *Thelymitra magnifica*

- Much of the orchids former habitat in the Darling Range has been lost to quarries and residential development and threats to extant populations are numerous
- Fuel reduction burns coincide with the growing, flowering and seed set of the species and are likely to be detrimental to its long-term survival
- Inappropriate recreational use of bush reserves, including illegal track construction by trail bikes, dirt bikes and cars also impacts on orchid habitat
- Grazing by rabbits and kangaroos is also a problem
- And finally, over-visitation by orchid enthusiasts is becoming an increasing problem for this iconic species due to trampling of associated vegetation and pruning of protective native plants to get a better photograph



Trail bike track construction in habitat of *Thelymitra magnifica*



Residential development encroaching on *Thelymitra magnifica* habitat

Adopt an Orchid – *Thelymitra magnifica*

- In most cases populations have suffered a decline since they were first discovered with a 43% reduction in the number of flowering plants. Just two populations appear to be stable
- These negative environmental factors, together with the trend towards a drier climate, suggest that this magnificent orchid may struggle to survive long-term without intervention



Thelymitra magnifica has been nominated as Threatened Flora

Adopt an Orchid – *Thelymitra magnifica*

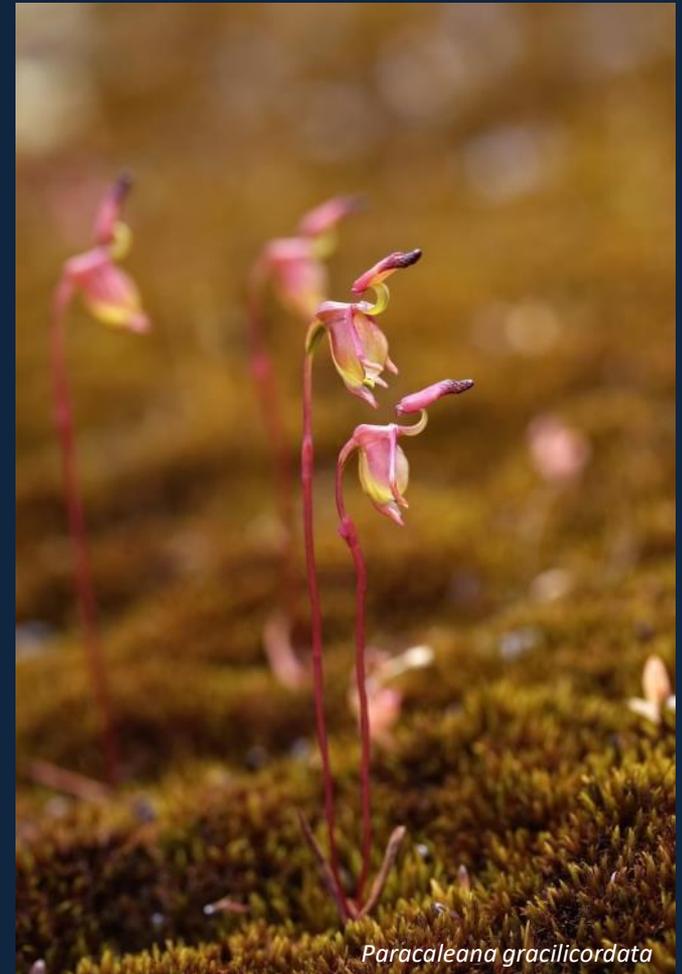
- Not all is doom and gloom, however, and there have been some positive outcomes as a result of ADORP members adopting this orchid
- A walk track has been realigned to avoid a population of the orchid, discussions have been undertaken with land managers to avoid burning plants when in active growth and the owners of private property populations have agreed to protect plants where possible
- The species has been nominated as Threatened Flora which, if endorsed, will offer it legislative protection



Thelymitra magnifica

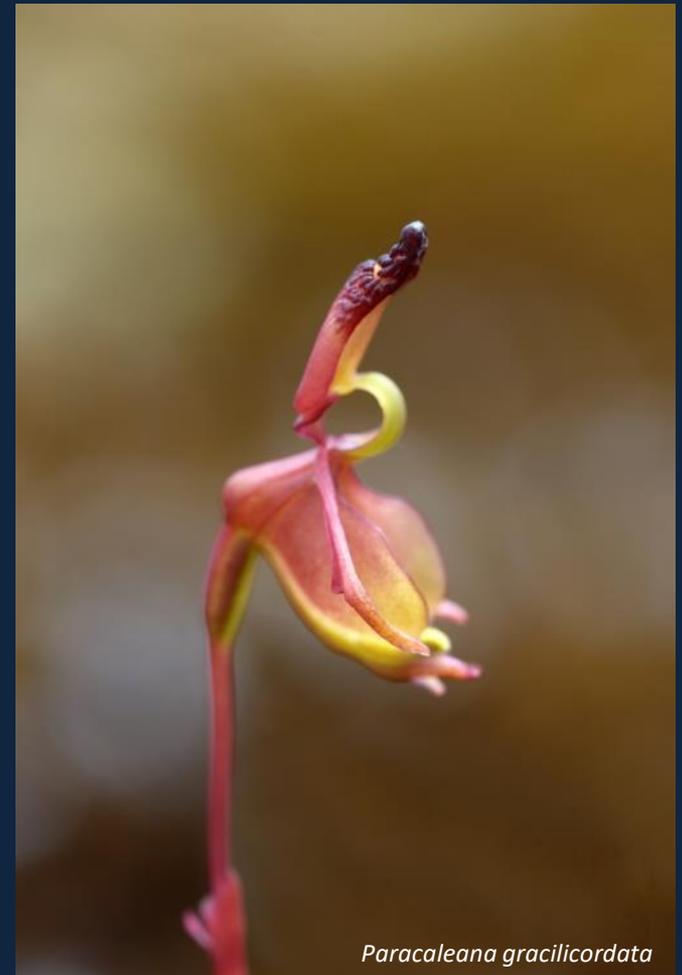
Adopt an Orchid – *Paracaleana gracilicordata*

- The Priority 1 species, *Paracaleana gracilicordata*, is an uncommon, habitat specific orchid named in 2006 from specimens collected south of Armadale in October 2003
- It is one of two Western Australian *Paracaleana* species that are confined to granite outcrops, the other being *P. granitica*



Adopt an Orchid – *Paracaleana gracilicordata*

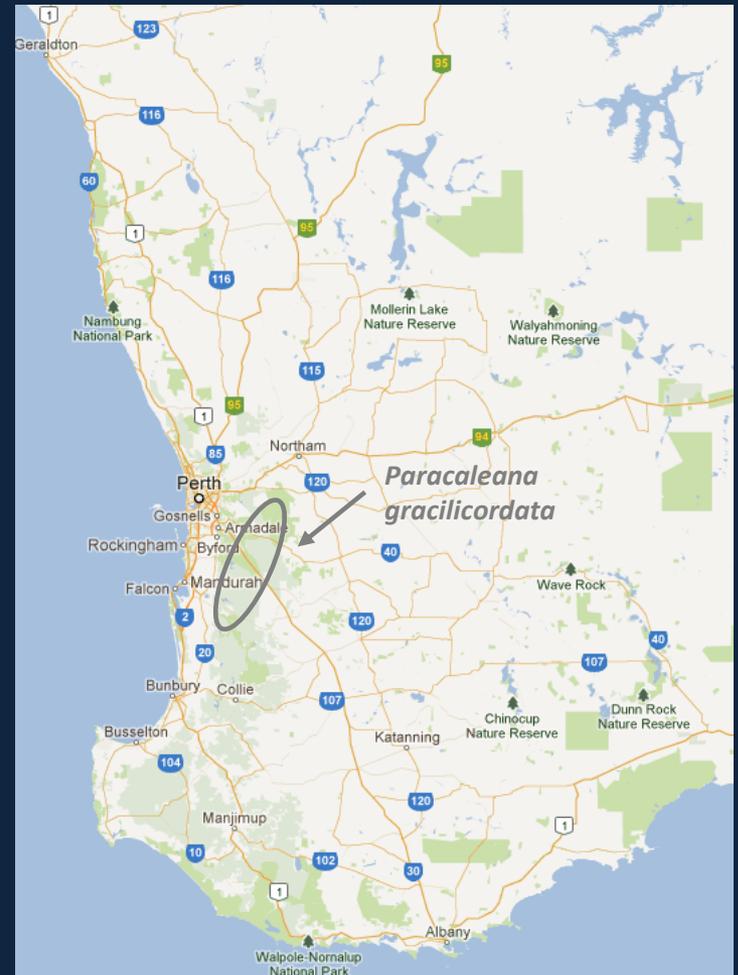
- The species flowers in late October and November, producing one or two small flowers with narrow petals and sepals and broad spreading column wings that almost enclose the stigma
- Like other Duck orchid species it has an irritable labellum that flicks over when touched



Paracaleana gracilicordata

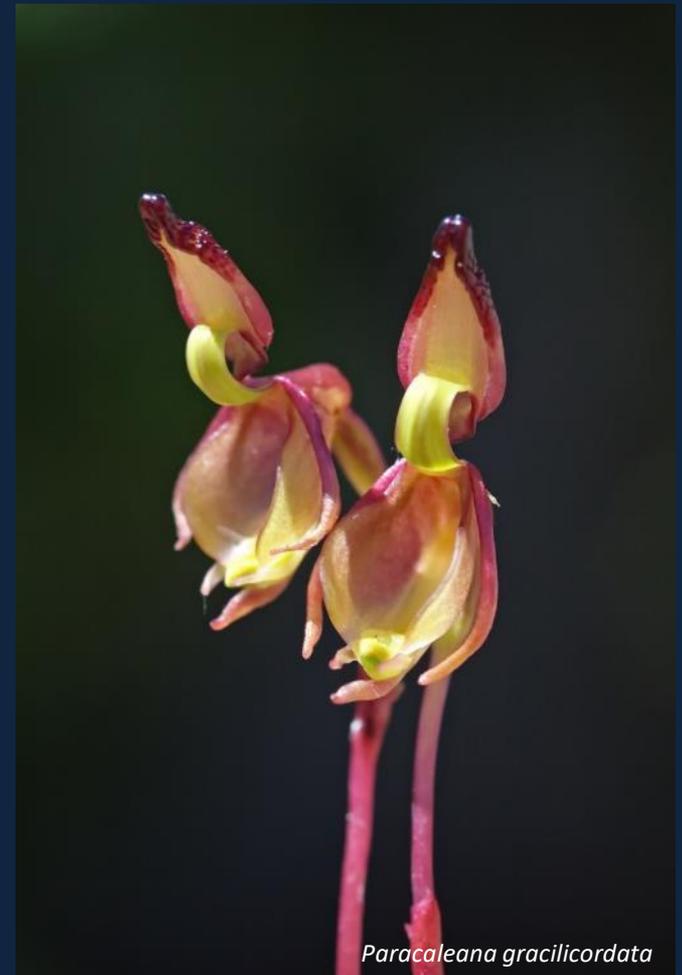
Adopt an Orchid – *Paracaleana gracilicordata*

- The species is found in the Darling Range between Armadale and Waroona
- Habitat is shallow, mossy soil pockets on granite outcrops



Adopt an Orchid – *Paracaleana gracilicordata*

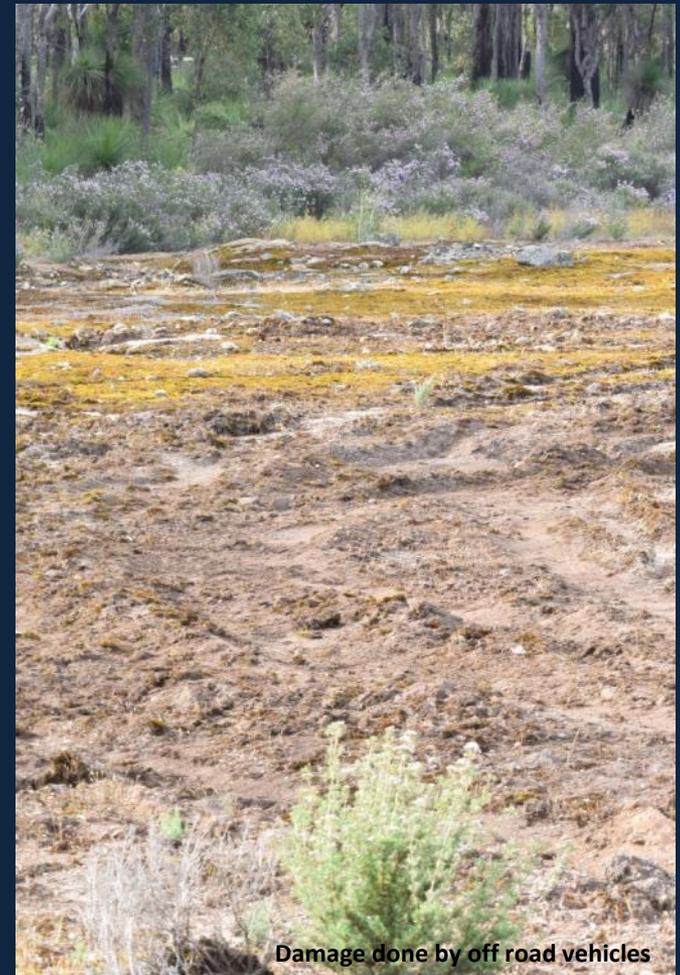
- In 2015 a team comprising Bill Gaynor and David Stevens was formed and expanded in 2018 to include Ian Puddey and Leif Jamvold
- Surveying and monitoring populations of this species has had some challenges as the ADORP group has needed to liaise with a range of different land managers to gain access to restricted areas
- Obtaining permission has, however, proved a worthwhile exercise as it has enabled the team to develop good relationships with the land managers and has brought the rare orchid to their attention



Paracaleana gracilicordata

Adopt an Orchid – *Paracaleana gracilicordata*

- Five known sites were monitored in October-November 2015 with visible threats (off road vehicles and prescribed fire) observed at two of the sites
- The five populations, when combined, contained 286 flowering plants
- In 2016 a new population of 36 flowering plants was discovered and a further new population of 151 flowering plants was found in 2017
- In 2018 an old population that had not been seen since 2011 was rediscovered and contained 23 flowering plants
- Currently around 3000 plants in nine populations are known. Given the difficulty of accessing many as yet unexplored outcrops it is thought very likely that ongoing searches will reveal further populations



Damage done by off road vehicles

Adopt an Orchid – *Paracaleana gracilicordata*

- The conservation of this species appears reasonably secure
- Many populations are found in restricted, difficult to get to areas, providing them a high level of protection from accidental damage
- Although some habitat has been damaged by fire and off road vehicles the habitat on most rocks is in good condition and new populations are being located



The habitat on most rocks is in good condition

Adopt an Orchid – *Paracaleana gracilicordata*

- There have been some very positive outcomes as a result of ADORP
- Three new populations have been located, tracks have been closed to prevent entry to off road vehicles, a monitoring camera has been set up to record vehicles damaging orchid habitat at one site and land managers have committed to protect the granite outcrop habitat of the species
- The team is now undertaking a study to ascertain what pollinates the orchid, how successful it is (seed set) and what habitat is required to support the pollinator



Adopt an Orchid – finish

- In summary, ADORP is proving to be an important source of information on poorly known but potentially rare and highly threatened orchid taxa, resulting in a better understanding of their conservation status in the wild
- It has enabled productive relationships with land owners and land managers, resulting in populations of orchids being protected and important recovery actions being implemented
- As a result of ADORP surveys some populations have been found to be larger than previously thought and new populations have been discovered. When taxa are considered to no longer be under threat they are provided a lower Priority status or removed from the program
- Conversely, once sufficient supporting information becomes available, taxa that have been found to be rare and highly threatened in the wild will be nominated as Threatened Flora. Once listed, they will receive a higher level of legislative protection
- For participants, the experience has been fun and rewarding, seeing rare orchids in the wild and working as a team with other dedicated orchid enthusiasts and conservationists
- There has also been a feeling of achievement when new populations are located or existing populations have been subject to recovery actions resulting in improved conservation
- This collaborative program is proving immensely valuable, enabling the public to make contributions to conservation efforts in partnership with government, land owners and land managers

Adopt an Orchid – finish

- I would like to finish this talk by thanking Kim and Thea Hanson of WANOSCG for initiating the idea of ADORP back in 2010 and running with it with me during its implementation phase
- I would also like to thank my co-author Kevin Uhe who, when Kim and Thea had to pull out due to ill health, has enthusiastically taken up the position of coordinating ADORP, resulting in the program going from strength to strength
- And of course I must not forget the nearly 100 past and present volunteers. Without them ADORP would simply not be possible
- Further information on ADORP can be obtained by visiting:
- DBCA <https://www.dpaw.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-plants/73-adopt-an-orchid> and
- WANOSCG <http://wanoscg.com/study-groups/>