

Moora District Threatened Flora Recovery Team Annual Report 2007

Summary

This report summarises progress made by members and associates of the Moora District Threatened Flora Recovery Team (the Recovery Team) in 2007 towards the recovery of threatened flora species and Threatened Ecological Communities (TECs) occurring within the Department of Environment and Conservation's (DEC's) Moora District.

Details of recovery actions for most of the Moora District's threatened flora species are summarised in WA Wildlife Management Program No. 28, entitled *Declared Rare and Poorly Known Flora in the Moora District*, by SJ Patrick and AP Brown (2001). The principal District contact for threatened flora management is Benson Todd, Conservation Officer - Flora for the Moora District DEC.

Within the Moora District there are 72 species of Declared Rare Flora (DRF), of which 26 are considered Critically Endangered, 28 Endangered and 18 Vulnerable (IUCN red list categories). There are approximately a further 305 Priority flora species, and 9 TECs of which 1 is ranked Critically Endangered, 6 are ranked as Endangered and 2 as Vulnerable¹ (IUCN red list categories).

The Recovery Team meets twice per year and throughout the year its members work in partnership towards best practice management of threatened flora species and ecological communities. The many and varied accomplishments by team members are testament to its diverse membership and the positive working relationships.

In 2007, a suite of recovery actions were implemented including: surveys for unrecorded populations of threatened flora and occurrences of TECs; monitoring of known natural and translocated populations of threatened flora and occurrences of TECs; preparations for new threatened flora translocations; maintaining and expanding existing translocated populations of threatened flora; seed and propagule collection; community education; liaison with land managers; procuring external funds for on-ground works; industry consultation and authorship of Interim Recovery Plans (IRPs).

Recovery Team Membership

In addition to the full Recovery Team members (as listed), other parties who are involved in the management of threatened flora are also encouraged to attend the biannual meetings. These representatives are listed as "Extended Working Group" in the following table

MEMBERS		
Position (area of expertise)	Representing	Currently filled by
Conservation Officer - Flora	DEC, Moora District	Benson Todd (A/Chair)
Nature Conservation Coordinator	DEC, Moora District	Rebecca Carter
Research Scientist (Translocations)	DEC, WA Herbarium	Leonie Monks
Senior Technical Officer (Ex-situ Conservation)	DEC, Threatened Flora Seed Centre	Andrew Crawford
Coordinator, Threatened Flora	DEC, Species and Communities Branch	Andrew Brown
Project Officer (TECs)	DEC, Species and Communities Branch	Monica Batista
Herbarium Representative	Dandaragan Herbarium	Rep - rotating
Herbarium Representative	Jurien Bay Regional Herbarium	Rep - rotating
Environmental Officer	Main Roads WA	Nigel Rowe/Anna Sutherland
Environmental Officer	Works Infrastructure	Marie Jarvis
Community Representative	Shire of Carnamah	Allan Tinker

¹ Details of the current listings of individual species and communities are available from DEC Moora District. They have not been included due to the required brevity of this report.

Shire Representative	Shire of Carnamah	Malcolm Pumphrey
Community Representative	Shire of Coorow	Don and Joy Williams
Shire Representative	Shire of Coorow	Peter Gillis/Kelvin Bean
Community Representative	Shire of Dandaragan	Vacant
Shire Representative	Shire of Dandaragan	Mike Harvey/Gavin Harris
Community Representative	Shire of Irwin	Allan Tinker
Shire Representative	Shire of Irwin	Aaron Wotton
Community Representative	Shire of Moora	Vacant
Shire Representative	Shire of Moora	John Grey
Community Representative	Shire of Three Springs	Jenny Borger
Shire Representative	Shire of Three Springs	Charles Strahan
NRM Group Representative -West Midlands	West Midlands NRMG	Rep - rotating
Per Way Superintendent	Westnet Rail	Bruce Eldridge
EXTENDED WORKING GROUP		
Position (area of expertise)	Representing	Currently filled by
Senior Principal Research Scientist	DEC, Science Division	Dave Coates
Project Officer	DEC, Species and Communities Branch	Gillian Stack
Conservation Officer	DEC, Moora District	Kathy Himbeck
Conservation Officer (Back from the Brink project)	DEC, Moora District	Emma Richardson
Senior Research Scientist (Propagation)	Kings Park Botanic Gardens	Amanda Shade
Land for Wildlife and Buntine Marchagee Recovery Catchment Officer	DEC, Midwest Region	Fiona Falconer
Environmental Management Coordinator	Western Power	John Morrell
Per Way Supervisor	Westnet Rail	John Stevens
Environmental Officer	John Holland Group	Peter Bothwell

Assessment Against Criteria for Success

At present there are 28 current IRPs for threatened flora species and 7 current IRPs for TECs that occur within the Moora District. Each of these plans stipulates criteria for the recovery of the species or community, which aim to quantify the success or failure of the plan and its implementation. The standard criteria for flora plans are as follows:

Criteria for success: The numbers of individuals within populations and/or the number of populations has increased.

Criteria for failure: The numbers of individuals within populations and/or the number of populations have decreased.

As the implementation of IRPs is long term (i.e. 3 - 5 years), it is often not possible to quantify their success or failure on an annual basis. Where there have been significant observed increases or decreases in the number of individuals or known populations within 2007, these are outlined in the following section.

Major Recovery Actions Completed in 2007

Highlights of major recovery actions completed in 2007 are summarised below, further information on these actions can be obtained on request from Benson Todd.

Survey results - DRF

New populations of the following species were located; *Chorizema humile*, *Jacksonia pungens*, *Grevillea bracteosa*, *Calothamnus accedens* (now downgraded to Priority 4), *Grevillea christineae*, *Tetralthea nephelioides* and *Paracaleana dixonii*.

Survey results – Priority Flora

New populations of the following species were located: *Leucopogon* sp. Badgingarra and *Eucalyptus exilis*. Further populations of priority flora species have been identified by various consultancies on behalf of mining and exploration companies.

Monitoring DRF – populations of the following DRF species were monitored in 2007: *Acacia aprica*, *Grevillea bracteosa*, *Chorizema humile*, *Dryandra fuscobracteata*, *Eremophila koobabbiensis*, *Eremophila scaberula*, *Eucalyptus balanites*, *Grevillea batrachioides*, *Grevillea calliantha*, *Hemiandra gardneri*, *Jacksonia pungens*, *Verticordia albida*, *Acacia wilsonii*, *Gastrolobium appressum*, *Grevillea christineae*, *Leucopogon marginatus*, *Patersonia spirafolia*, *Thelymitra stallata*, *Acacia forrestiana*, *Eremophila vernicosa*, *Hensmania chapmanii* and *Davesia dielsii*.

Monitoring TECs – occurrences of the following TECs were monitored in 2007: Organic mound springs of the Three Springs area, Ferricrete floristic community (Rocky Springs Type), Herbaceous plant assemblages on bentonite lakes, and Claypans with mid dense shrublands of *Melaleuca lateritia* over herbs.

Translocated populations - establishment and repeat plantings

A new translocated population of *Chorizema humile* was established in Waddington Nature Reserve (R39322), in the Shire of Victoria Plains, with 206 seedlings planted out as described in the approved translocation proposal. The translocated population of *Grevillea batrachioides* was supplemented with a further 60 individuals planted in July 2007.

Translocated populations – maintenance and monitoring

Maintenance and monitoring of the following translocated populations of DRF within the Moora District has been carried out: *Grevillea althoferorum*, *Grevillea batrachioides*, *Grevillea calliantha*, *Grevillea humifusa*, *Synaphea quartzitica*, *Daviesia bursarioides*, *Acacia cochlocarpa* subsp. *cochlocarpa*, *Acacia aprica*, *Verticordia albida* and *Eucalyptus rhodantha* var. *rhodantha*.

Seed and propagule collection

Through the Back From the Brink project (see below) funds have been made available for staff from DEC's Threatened Flora Seed Centre to focus on the Moora and Geraldton Districts during the 2007 and 2008 seed collecting season. DRF species collected thus far include: *Acacia aprica*, *Acacia recurvata*, *Chorizema humile*, *Eremophila nivea*, *Daviesia dielsii*, *Daviesia bursarioides*, *Eremophila scaberula*, *Eremophila vernicosa*, *Eucalyptus absita*, *Eucalyptus crispata*, *Eucalyptus impensa*, *Eucalyptus johnsoniana*, *Gastrolobium appressum*, *Grevillea batrachioides*, *Grevillea bracteosa*, *Grevillea calliantha*, *Grevillea christineae*, *Grevillea murex*, *Hakea megalosperma*, *Hensmania chapmanii*, *Jacksonia pungens*, *Tetradlea nephelioides*, *Verticordia albida*, *Verticordia spicata* subsp. *squamosa*, and *Wurmbea tubulosa*.

Threat abatement

Further steel mesh cages were constructed and placed over all known individuals of *Chorizema humile*. The cages are designed to protect the species from grazing, allowing for seed production and subsequent recruitment. A further 35 cages were installed in 2007 at Populations 1, 8, 9, 13 and 14.

A 21.8 ha area of remnant vegetation containing population 11 of DRF species *Leucopogon marginatus* has been protected from grazing with a 2.3 km long fence. A further 266.8 ha of remnant vegetation containing occurrences of the TECs Ferricrete floristic community and Organic mound springs of the Three Springs area has been fenced with 5.6 km of fencing. Both projects were initiatives of the Back From the Brink Project (see below).

Educational activities

A number of education and capacity building activities were undertaken in 2007, activities include interpretive site visits with community groups, structured school visits and displays at

local events including the Cervantes Easter Gala Day and Blessing of the Fleet celebrations in Jurien Bay.

A number of educational and awareness raising products have also been created to increase the profile of threatened species and community management in the broader community. These products include, 'have you seen this species' magnets, an activity book aimed at primary school aged children, a poster series created by a local artist and the drafting of a teacher resource pack specific to threatened species and communities of the Northern Agricultural Region.

Liaison with land managers/Industry consultation

Liaison has been undertaken with staff from Main Roads WA, Western Power, Westnet Rail, John Holland Group, Works Infrastructure, various mining companies, private landholders and employees of the Shires of Dandaragan, Three Springs, Moora, Carnamah and Coorow in order to assist these land managers in the conservation of threatened flora and TECs on the lands they manage.

Externally funded projects

External funding has been sourced for a regional project funded by the Federal and State Governments and administered by the Northern Agricultural Catchment Council (NACC). The project is entitled Back From the Brink and is being implemented by the Moora and Geraldton Districts of the Midwest Region and aims to increase the security of the threatened species and communities in the Northern Agricultural Region.

The three year project commenced in January 2006 and is set for completion in mid 2008. Major project outcomes for 2007 include the successful survey of new populations of DRF, seed collection, community engagement, contributions towards initiating and maintenance of DRF translocations, publication of educational and awareness raising products and significant advances in education and capacity raising activities.

Funding for the preparation of a Translocation Proposal and subsequent establishment of two translocated populations of *Chorizema humile* was sourced through the DEC Biodiversity Conservation Initiative entitled Saving Our Species. The first of these two populations was planted out in July 2007 with second population to be planted out in 2008.

Funding has also been secured through the Saving Our Species Initiative for the biological assessment and preparation of a management plan for the future protection of threatened species occurring in a 350 ha area of remnant vegetation located on Hi-Vallee farm north of Badgingarra owned by Recovery Team members Don and Joy Williams.

Reports/Plans completed

- *Interim Recovery Plan – Andersonia gracilis*. Gillian Stack *et al.* DEC 2006
- *Interim Recovery Plan – Eremophila koobabbiensis*. Craig Douglas, Andrew Brown and Benson Todd DEC 2007
- *Interim Recovery Plan – Chorizema humile*. Kathy Himbeck DEC 2006
- *DRAFT Interim Recovery Plan – Acacia cochlocarpa* subsp *cochlocarpa*. Kathy Himbeck DEC 2006
- *DRAFT Interim Recovery Plan – Dryandra fuscobracteata*. Kym Pryor and Benson Todd DEC 2007
- *DRAFT Interim Recovery Plan – Tetratheca nephelioides*. DEC 2007