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WONGAN TRIGGERPLANT RECOVERY PLAN

FINAL REPORT - MARCH 1998

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This report details progress with the implementation of the Wongan Triggerplant Recovery Plan since the last Annual Report in December 1995.

1. RECOVERY PLAN AND PROJECT RESOURCES

Recovery Plan

The Wongan Triggerplant Recovery Plan was approved by CALM Corporate Executive in 1994 and published in 1995.

Resources

Since the commencement of the project, CALM's Merredin District has experienced a number of staff changes that have significantly affected progress with the implementation of the Recovery Plan for *Stylidium coroniforme*. Initially the District was only able to assign two staff to work on the project, on a part-time basis. To rectify this problem, changes were made to the Merredin District staff structure.

- In May 1995, the outgoing Reserves Officer was replaced by a new Operations Officer. Nick Woolfrey, the Operations Officer from May 1995 until March 1996 successfully completed the population monitoring, gravel pit rehabilitation and public education strategies. However, following his departure, the vacancy had to be advertised twice before it was again filled, in January 1997. The replacement Operations Officer was compelled to focus on an extensive backlog of work and has since become committed to a number of operational priorities that arose from this work.
- In October 1995, a new Reserves Officer position was created. The Reserves Officer position was filled for only six months and provided some assistance towards the completion of some of the strategies. The vacancy has been advertised twice, with an upgraded classification and salary package, since May 1996 without attracting a single applicant. In November 1997, the position was absorbed in a restructuring of the Merredin District.
- It was not possible to reassign the other staff portfolio's to take up *Stylidium coroniforme* recovery actions. The Conservation Officer position was vacant for a total of eight months among 1995 and 1997, and the Administrative Assistant position was vacant for a total of 12 months. Consequently, the District Manager and District Wildlife Officer were otherwise fully committed with both their own duties and with the duties forced on them by this period of unprecedented short staffing.
- In November 1997, as part of the District's restructure, a new Project Officer position was filled. It is envisaged that the position will address a range of duties, including the implementation of the *Stylidium coroniforme* Recovery Plan.

2. REVIEW OF IMPLEMENTATION

Item 1: Recovery Team

A recovery Team was formed in 1992 comprising representatives from:

- CALM (Various Branches)
- Western Australian Threatened Species and Communities Unit,
- Kings Park and Botanic Gardens,
- Water Corporation,
- Main Roads Western Australia,
- The Shire of Wongan-Ballidu, and
- Environment Australia.

The Recovery Team has met on five occasions between 1992 and the present time. The recovery team meeting scheduled for 1997 was cancelled due to the resourcing difficulties detailed earlier.

Item 2: Progressing the Acquisition of Reserve 16418

The Recovery Plan for *Stylidium coroniforme* recommended the creating of a new Nature Reserve from Water Reserve 16418.

Negotiations between CALM and the Water Authority commenced in August 1993 but were then delayed by the restructuring of the Water Authority. They resumed again in January 1996, following the restructuring and corporatisation of the Water Authority.

This round of discussions concluded in January 1997 with the resolution of a number of preliminary issues. These including the resolution of the Shire of Wongan-Ballidu's requirements for land adjacent to their Waste Disposal and Aerial Landing Ground Reserves.

Further progress has been delayed by CALM resourcing problems and by the Water Authority's consideration of the West Wongan Water Supply Scheme. This scheme aims at improving water supply to the area north west of Wongan Hills. If the scheme proves viable it may negate the Authority's requirement for Water Reserve 16418. However, it may further complicate negotiations for it may involve other high nature conservation lands in a land exchange.

If the Water Authority agrees to relinquish the reserve, the matter must then be referred for assessment under Native Title. As there are several overlapping claims over the Wongan Hills area, the resolution of the matter is likely to take several more years to resolve.

Item 3: Gravel Pit Rehabilitation

Planning of the gravel pit rehabilitation commenced in 1992.

A rehabilitation plan was completed in 1994 following close liaison between CALM, Main Roads Western Australia and the Shire of Wongan-Ballidu. Implementation of the rehabilitation plan was then delayed for about one year due to staff resourcing problems.

In 1996 the gravel pit rehabilitation plan was implemented by the District's Conservation Officer:

- The access control plan approved in the 1995 Recovery Team Meeting was implemented in June. Tracks were ripped and closed. Signage, fencing and vehicle barriers were also erected to discourage access to the rehabilitated areas.
- The pit was ripped and reshaped using funds supplied by Environment Australia, Main Roads Western Australia and assistance from the Shire of Wongan-Ballidu. Seedlings were planted throughout the rehabilitated area in accordance with the rehabilitation plan, using Aboriginal CDEP workers.
- An article was published in the "Central District's gazette" and in the Wongan Hills District High School newsletter.

This work is effectively completed and has achieved the desired outcome.

In 1997, CALM staff visited the site and reported that plantings had failed only on one small area of steep slope and in one patch of dense weed growth. Vandalised fencing and access gates were repaired. Staff eliminated emergent weeds in the rehabilitation area with herbicide and scheduled replanting of the worst affected area for winter of 1998.

It is expected that staff will continue to monitor the site and take such steps as are necessary to ensure the ongoing success of the recovery of *Stylidium coroniforme*.

Item 4: Search for additional populations

Surveys were undertaken by CALM staff for undetected populations throughout the species flowering period in 1992. In 1993 their work was supported by the Toodyay Naturalists' Club. Unfortunately this work failed to secure a positive outcome.

Opportunistic surveys have been undertaken in areas of suitable habitat in 1996 and 1997. Again, no new populations were discovered.

CALM staff will continue to undertake opportunistic surveys in areas with similar habitat as they have in the past.

Item 5: Monitoring and Management of Existing Populations

Population monitoring was conducted at each population annually between 1992 and 1995. The results were:

Population	No 1992	No 1993	No 1994	No 1995	% Loss 1992	Status
1. Roger's speedway	37	29	29	24	-35.13	Declining
2. Powerline, Res 16418	197	187	151	75	-61.92	Declining
3. Maya South	20	19	18	12	-40.00	Declining
4. Maya North	132	116	105	79	-40.15	Declining; 9 new recruits
5. Gravel Pit, Res 16418	257	199	127	39	-84.82	Declining

The results of this work show a decline in all populations.

No monitoring was undertaken in 1996 due to the resourcing problems detailed earlier.

In 1997, each population site was visited and population health assessed. However, no accurate population counts were undertaken, again due to resourcing difficulties. The results suggest that the populations are relatively healthy and that there has been no dramatic decrease in numbers.

Accurate population counts will be undertaken when the species is in flower in late 1998.

Item 6: Establishment of New Populations

Implementation has been restricted to the identification of possible translocation sites. Two potential sites were identified on Nature Reserves in the Wongan Hills area in 1997.

In 1995 the Recovery Team considered that it would be better to first trial recruitment methods at the sites of the known populations. Annual monitoring showed all the populations were experiencing declines in their numbers. Any positive outcomes from these trials would therefore benefit the populations by increasing numbers.

Consequently, CALM staff prepared plans to trial a series of recruitment methods at the population sites for implementation in 1997, after the completion of the gravel pit rehabilitation in 1996. These were to include different forms of mechanical disturbance, chemical applications (including smoke and smoke water) and the use of fire. If successful they were to then be applied to recruit more plants to each of the declining populations.

Unfortunately, this program could not be implemented due to the resourcing problems that affected the Merredin District during 1996 and 1997. The project will now be undertaken in mid 1998.

Item 7: Germplasm Storage

Seed was collected from all populations in 1992 (from 147 plants) and again in 1993 (from 118 plants). The seed was stored in CALM's Threatened Flora Seed Store

Tests undertaken in 1995 on the seed have indicated a reduction in viability of between 13% and 19% since collected in 1992. Although the results have not been fully analysed, tests in 1997 indicate that the viability has continued to decline.

CALM staff plan to continue seed testing, and to collect fresh seed, during 1998 to ensure that a supply of viable seed is maintained.

Item 8: Seed Research

Seed research comprised a number of activities:

- 1992: • Field trials were established to monitor seed germination under natural conditions. Different quadrats were exposed to soil disturbance, fire and smoking. Only 6 germinants were detected during subsequent monitoring up until 1995. No additional recruits were observed in 1997.
- 1993: • Seed production was measured across each of the populations. It was found that seed production is variable within populations but does not significantly vary between populations.
 - Selfing and crossing trials demonstrated a high level of seed abortion following selfing compared with crossing.
- 1994 • Kings Park & Botanic Garden undertook laboratory trials to determine effectiveness of smoking on breaking of seed dormancy. The results were inconclusive.

Item 9: Monitoring and Reporting

Refer to Item 5.

Item 10: Public Display

This strategy fell into three categories

- Threatened Flora Garden

Planning of the Threatened Flora Garden commenced in 1992 and involved Kings Park and Botanic Garden, the Shire of Wongan-Ballidu and CALM. By May 1994, a site for the garden had been selected and a species list had been approved. A planting ceremony was undertaken in June 1994 and involved members of the Recovery Team, a number of local dignitaries and school children from the Wongan Hills District High School.

Information panels were erected on granite plinths at the site, by the Shire of Wongan-Ballidu, in 1996.

- Brochure

Preparation of a brochure covering the species to be planted in the Threatened Flora Garden commenced in 1992. It was distributed at the planting ceremony in June 1994. A second brochure on the Wongan Triggerplant was also prepared and will shortly be published by WATSCU.

- Press Releases and other activities

Since 1992 a number of press articles have been released and other activities undertaken to increase public understanding of the issues relevant to the recovery of the Wongan Triggerplant. These have included:

- ◆ A press release in 1992 outlining the creation of the recovery team and the issues affecting the Wongan Triggerplant. The article was published in the Central Districts Gazette and in the CALM News.
- ◆ In 1994, Roger Fryer, a member of the Recovery team undertook an educational exercise with students of the Wongan Hills District High School as part of their preparation for the planting ceremony at the Threatened Flora Garden.
- ◆ The Threatened Flora Garden ceremony was reported in the Central District's Gazette and in the Wongan Hills District High School newsletter.
- ◆ The rehabilitation of the gravel pit was also covered in the local press with the operation covered by an article in the Central District gazette in 1996.

3. OTHER ACTIONS

Although not specifically covered by the Recovery Plan, a number of other actions have been undertaken that have reduced the level of threat to the species long term survival. These have included:

- Liaison with the Water Authority over the management of Water reserve 16418

While negotiations over the future tenure of the reserve have not been resolved, CALM and the Water Corporation have agreed on the management of wildflower pickers on the reserve.

Wildflower picking represents a threat to both populations occurring on the reserve through impacts associated with vehicle and foot traffic. These include direct damage to individual plants by crushing, plant deaths and habitat damage from wildfires and disease introduction.

Given these factors, it is unlikely that the matter could reasonably be brought to a satisfactory conclusion within the two year time period.

In relation to Item 6 (Establishment of New Populations), the Recovery Team agreed that priority had to be given to recruiting to the existing populations that were found to be in serious decline. However, unprecedented instability in the staffing of the Merredin District meant that neither the stated nor the amended objective could be met.

10 Year Criterion

In contrast to the 2 year criteria for successful recovery, all the actions recommended to achieve the 10 year criteria have been successfully implemented.

- A Recovery Team has been formed,
- The gravel pit rehabilitation has been completed,
- Surveys have been undertaken to locate additional populations,
- Existing populations have been monitored,
- Seed biology has been researched, and
- Public displays have been and other activities have been implemented to raise public awareness

However, Recovery Team meetings have not been held as frequently as originally planned. Additionally, population monitoring has not been of the same standard throughout. Both deficiencies can be traced to the recent period of critical staff instability in the Merredin District.

Conclusion

While the Recovery Team has successfully implemented the actions required to meet the long-term criterion for successful recovery, the short term criterion has not been met.

The reasons underpinning this shortcoming were:

1. The success criterion was superceded by circumstances beyond the recovery Teams control in the form of the Water Corporation's restructuring and in the Native Title decision, and
2. Unforseeable difficulties with resources.

Following initial discussions of the issue the Water Corporation has refused all applications to harvest wildflowers from the reserve and has reported any incidents involving observed or suspected wildflower picking in the area.

- The fencing of the Maya populations in conjunction with Westrail

Both of the Maya populations are located on a rail reserve where they were highly threatened by rail maintenance and weed control activities, and vehicle traffic associated with these operations.

In 1993 the Recovery team discussed advising Westrail of concerns over the populations. Shortly after communicating these concerns, Westrail undertook a major restructuring and downsizing. There followed a period of considerable instability during which there were three successions in the staff responsible for addressing threatened flora issues.

It was not until late 1996 that Westrail staff were able to address the concerns. In March 1997, CALM staff worked with Westrail personnel to oversee the fencing of both populations to exclude work crews and vehicles from the population areas. Both populations are now securely fenced.

4. CONCLUSIONS

The Wongan Triggerplant Recovery Plan states that the “criteria for successful recovery will be:

- 2 years - the land on which the two larger Wongan populations are found will have been gazetted as a Nature Reserve. At least two new populations will be established on the reserve.
- 10 years - all known populations will be stable and increasing, taking into account mature plants, seedlings, and the viable seed in any soil bank.”

2 Year Criterion

It is clear from the progress reported in relation to action items 2 (Progressing the Acquisition of Reserve 16418) and 6 (Establishment of New Populations) that the first criterion has not been met.

In relation to Item 2 (Progressing the Acquisition of Reserve 16418), the progress that was anticipated did not take into account either:

- a) The Water Corporation’s ongoing requirements for part of the reserve,
- b) The restructuring and corporatisation of the Water Corporation, or
- c) The High Court’s ruling on Native Title.

5. RECOMMENDATIONS

The period of the current agreement over the Wongan Triggerplant's recovery has now elapsed.

To cover the requirement for future recovery actions, the following recommendations will be put to the Recovery Team at its next meeting:

1. The recovery of the Wongan Triggerplant will continue to be managed as an independent recovery program until 2002, when it will again be formally reviewed.

It will not be integrated into an area based management program until all success criteria have been achieved and outstanding recovery actions are limited to monitoring and minor maintenance.

2. An annual report will continue to be prepared and circulated to interested parties, including Environment Australia.
3. The success criteria will be revised. Key changes will include:
 - Reference to the creation of the of a Nature Reserve from Water Reserve 16418 will be removed.
 - A management agreement covering Water Reserve 16418 will be endorsed by the Water Corporation and CALM by 1999.
 - Techniques to safely promote recruitment to declining populations will be developed and implemented by 2000.
 - At least two new populations will be established on Water Reserve 16418 or on other lands within the Wongan Hills area by 2002.
 - By 2002, all known populations will be stable or increasing, taking into account mature plants, seedlings and the viable seed in any soil seed bank
4. The following actions will be undertaken to ensure successful recovery:
 - 4.1. The Recovery Team will reform with a membership reflecting the revised recovery actions.
 - 4.2. CALM will continue to negotiate for Water Reserve 16418 to be set aside as a Nature Reserve.
 - 4.3. A management agreement will be endorsed by Water Corporation and CALM. It will cover the protection of the populations located on Water Reserve 16418.
 - 4.4. Surveys for additional populations will continue on an opportunistic basis.
 - 4.5. All populations will be managed to minimise threats to the populations long term survival. Additionally, recruitment methods will be trialed at each of the population sites.

Those methods that prove to be most successful in terms of the number and subsequent, overall health of germinants and their populations will then be applied more widely.

- 4.6. Two new populations will be established in the Wongan Hills area.
- 4.7. The viability of seed stored in the Threatened Flora Seed Store will be maintained by annual testing and by harvesting of new seed as required.
- 4.8. All populations will be monitored by accurate census on an annual basis. Environmental events will be reported and trends will be analysed.
- 4.9. Public awareness will be maintained by regular press releases and other activities.