GEOCRINIA RECOVERY TEAM

ANNUAL REPORT
1999

BY

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ON BEHALF OF THE
GEOCRINIA RECOVERY TEAM

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Summary

During 1999 the achievements of the Geocrinia Recovery Team included the:
discovery of 1 new population of G.alba, confirmation of the persistence of another thought to be extinct, the development of a new monitoring technique to determine fluctuations in the larger sized populations, a honours student project investigating the biogeographical and land use history of a number of the sites for both species. A second attempt to raise funding for the purchase of Location 83 was also commenced through the submission of a NHT application. The outcome will not be known until late in 2000.

The major disappointment during the year was again the postponement of the translocation of G.vitellina egg masses. A combination of staff commitments to a very busy spring fire season, the clearing of accumulated staff leave and the resource requirements of implementing the new monitoring technique resulted in us being unable to undertake the translocation. However operational staff spent time learning and refining the capture techniques required for the translocation next season.

Introduction

During 1999 the focus of the Geocrinia Recovery Team shifted from concerntrating on the population dynamics of the small sized populations ie:from monitoring decline to developing techniques to assess the stability of the larger sized populations. With the raising of G.alba's conservation status to critically endangered and the observed continual decline of the very small populations, the long term survival and the stability of the larger populations is of paramount importance. Action taken towards securing this included the development of new monitoring protocols, attempts to secure the land tenure and purpose of the large populations through both reserve creation under the RFA process and private property purchase negoitiations, a refinement of fire protection measures and a review of site characteristics and past land use.

Major goals for 1999 were:
1) Undertake an experimental translocation of G.vitellina.
2) Research and analyse of the characteristics of the small sized and recently declined G.alba with the aim of determining some commonality between these sites which may contribute to their decline.
3) Complete the review and commence implementation of the fire management strategies for all sites.
4) Continue the population and fire ecology monitoring programs.
5) Develop appropriate weed control techniques for use within the conservation fencing program.
6) Continue the pig control program.

Of these goals 2, 3, 4, 6 were achieved. Item 5: Developing weed and regrowth control techniques within the conservation fenced areas remains as a ongoing task.
Item 1: the translocation of vitellina was not achieved but preparations for undertaking this next year have commenced. (refer 3.1.8)

Goals for year 2000 are:
1) Undertake a translocation of G.vitellina.
2) Continue the population and fire ecology monitoring programs utilising the lineal marking technique developed in 1999.
3) Continue to seek funds to purchase Location 83 for inclusion into the conservation estate.
4) Develop appropriate weed control techniques for use within the conservation fencing program.
5) Seek further funding for implementation of the Recovery Plan.

Team Membership

Team membership remained stable through the year. We were joined during the later half of the year by Natasha Pauli, a student from UWA undertaking an honours project reviewing the physical and historical land use aspects associated with the distribution of both species of geocrinia.
During 1999 the team was comprised of:

Andrew Burbidge	Director WATSCU	CALM – Nat Cons Div
Kim Williams	Rgnl. Ldr Nature Conservation	CALM - Regional Office
Roger Banks	District Manager	CALM - District Office
Greg Voigt	Dist. Nature Conservation Officer	CALM - District Office
Adrian Wayne	Forest Ecologist	CALM - CALMScience
Dale Roberts	Zoologist	UWA - Zoology Dept.
Simon Conroy	PhD Student	UWA - Zoology Dept.
Jack Stannard	Shire Ranger	Augusta/Marg River Shire
Lyn Serventy	Community Representative	Leeuwin Conservation Group

Attendance by our community representative has been dissappointing, having missed the last 4 team meetings.

Recovery Plan - Annual Report on Action Items

Geocrinia vitellina

3.1.1 Survey of Riparian Habitat

No further survey was undertaken this year.

3.1.2 Land Mangement and Tenure

A submission was made to the RFA working group to modify the proposed Blackwood National Park boundaries to include all populations of Geocrinia vitellina. The original proposal placed the northern boundary of the park along Denny Road and would have incorporated all known vitellina populations except one. Population 1A is on the northern side of Denny Road and extends upstream for a few hundred metres. Confirmation has been received that the park boundary will be altered to encompass all vitellina populations.

3.1.3 Fire Management and Research

The review of fire management strategies for all vitellina and alba sites continued during the year. This has been tackled as a two stage process, the first being the development of a Wildfire Suppression matrix, to be incorporated into the district fire control working plan and coordination maps. This document presents in tabular form the key information fire control staff need to be aware of when dealing with wildfires in or near the vicinity of geocrinia populations including recommended fire line construction techniques, use of fire retardent chemicals, access points, contact details of private property owners with frog populations etc.

The second phase, to be completed during the coming year will be a more detailed fire management plan dealing with the use of fire in the management of geocrinia populations and habitat.

Old tracks to the north of Denny Road and either side of GV1a have been upgraded to encircle the area of geocrinia habitat providing both access and protection in the event of a fire.

3.1.4 Habitat Protection

Pig Control

As reported in last years report, patrols were increased in the area of the Spearwood Creek Complex. Tracks were observed on several occasions, especially along the fire breaks which were constructed north of Denny Rd, evidence of pig activity was found at the edge of the GV1a transect site. Activity was also noticed along Denny Rd (west of Gt North Rd) where some road upgrade works were completed. However no pig activity was recorded at these frog sites.

It appears that pigs are certainly in the area but as yet have created limited disturbance the frog sites. 29 pigs were destroyed in 1999 in the Blackwood area for a total of 267 volunteer hours, 1 pig for each nine hours worked.

This years wet winter appears to have delayed the movement of pigs into their traditional summer feeding sites in the riparian zones, as such the numbers captured so far this season have been low. This is likely to change as the summer weather pattern establishes.

3.1.5 Wider Community participation

Refer to this heading for G.alba

3.1.6 Population Monitoring

All Geocrinia vitellina sites were monitored during the year using both point and transect counts. All populations were present, with increases being recorded at GV1b and GV1d indicating the first signs of recovery following the September 1997 fire. Small increases in the number of calling males on the transects were recorded at GV1a and GV2 and a decline noted at GV3b and GV5. These results are considered to be natural patterns of fluctuation that occur in populations. None of these sites were burnt in the1997 fire.

3.1.7 Genetic Studies

This action was completed in 1994.

3.1.8 Translocations

A revised proposal to undertake a translocation of G.vitellina egg masses from the Spearwood Creek Complex to suitable sites in creek systems to the east was approved by CALM's Ethic's Committee during the year. The proposal will now be forwarded to the Director of Nature Conservation for approval and for implementation in October-November 2000.
Opportunity was taken during the course of this years monitoring program to trial and practice a number of the field skills required to implement the forthcoming translocation. Specifically the success of the translocation will in part be determined by the number of active nest sites which can be located and the ease to which the nests can be collected and transported. District and region operational staff spent time learning and practising these skills in preparation for next years translocation.

Geocrinia alba

3.2.1 Survey of Riparian Habitat

This action was completed in 1994.

3.2.2 Land Tenure and Management

A new proposal to gather support for the purchase of Location 83 was constructed during the year. This involved an NHT funding application being submitted by CALM and the Shire of Augusta / Margaret River with support from local local and state politicians. The outcome of this attempt will not be known until later in 2000

The RFA proposal has recommended a number of tenure changes and the creation of X new conservation reserves within the distribution of G.alba. In summary all but seven known occurrences of alba on crown lands are now within proposed National Parks. The seven not in a park are found in UCL Witchcliffe Block which will become state forest. Three of these populations considered to be extinct.

3.2.3 Fire Management and Research

See item 2.2.3

The Geocrinia lutea fire impact sites in Walpole district were again monitored this year. One site: the control plot on Angove Road was included in a hazard reduction burn undertaken in October. Precautions were taken by the district to minimise as far as practicable the impact of the burn on the monitoring site. Transect monitoring took place pre and post burn with the following results: Pre-burn 29 calling males, approx 2 weeks post-burn 24 calling males were recorded. Further monitoring over the next few years will be required to determine the impact of this event.

During the course of routine population monitoring it was noted that a considerable portion of the populations on Loc 83 were burnt during October. While this is not an unusual occurrence,

regular small scale mosiac burns being a regular feature of the management if this private property, the scale of the current burning is of concern. Though the mapping of the burnt areas has not been completed, it appears the majority of the populations were burnt over the course of a couple of weeks. Our linear monitoring data which was gathered 1-2 days post burn over the majority of the populations burnt this year will assist in determing the impact of this action. This event and the lack of control the department has re: land use/management on private property serves to highlight the fragility and insecurity of critically endangered fauna species occuring on private property.

3.2.4 Habitat Protection, Conservation Fencing

The condition of the conservation fences was checked during the process of GPS'ing fence alignments during the year. All were found to be in good condition with the exception of the ongoing pasture grass encroachment and eucalypt regrowth along a few of the alignments. Weed control within the fenced areas will need to be undertaken over the summer months as water levels within the creeks recede and machinery is able to gain access

3.2.5 Public Information and Land-owner participation

Copies of the Geocrinia Recovery Plan and the Farmers Kit were given to the new landholders of population GV11.

Responses to a number of media enquiries and numerous public enquiries concerning general frog issues and decline were made during the year. This increase in public awareness related primarily to the FrogWatch Program and the call by the WA Museum for all dead and dying frogs potentially impacted by Chytrid fungus to be sent to them via local CALM offices.

3.2.6 Population Monitoring

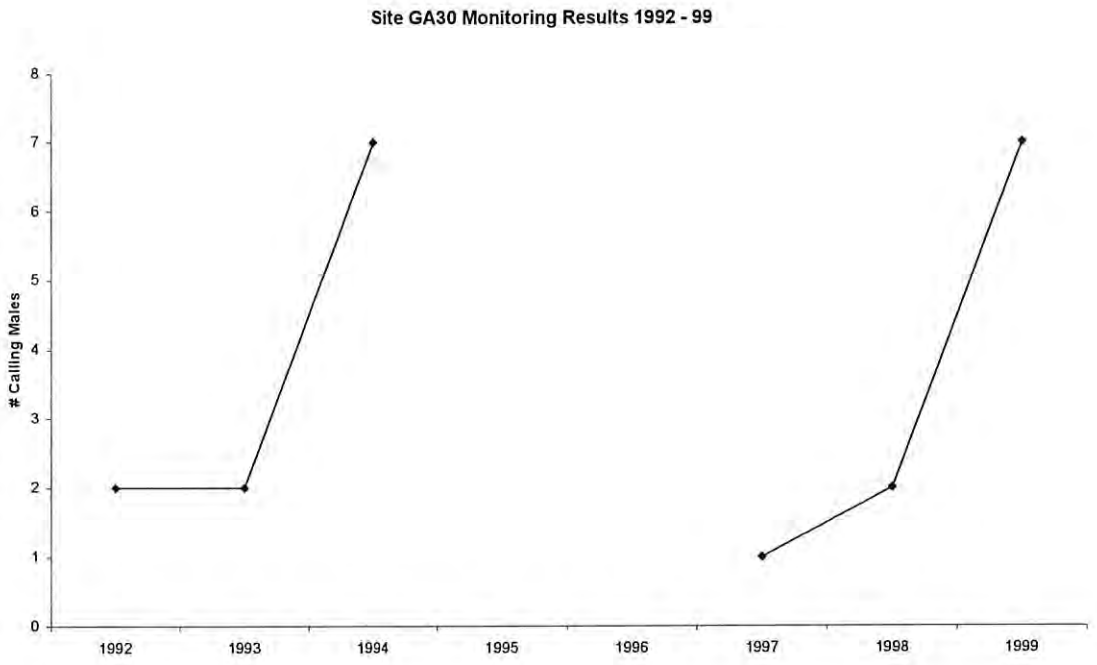
In 1999 the team shifted its focus from concerntrating on monitoring the decline of the small sized populations to trying to determine the level of fluctuation in the large sized populations using a linear monitoring technique. This technique aims to accurately determine the spatial extent and size of a population by marking the position of the first and last calling frog along the length of the creek and accurately locating and counting the number of calling frogs between these two points.

This approach will be repeated in subsequent years to monitor the contraction/expansion of the population extent and fluctuations in numbers of calling males. Although slow and labour intensive (ie: 2 people cover approx 250m in 3 hours) it is hoped it will provide useful information on the dynamics of the larger sized populations.

Other monitoring targets included confirmation of the presence/absence of those sites recorded as absent over the last 3 or more years and 2 sites which had not been monitored since 1994 & 1996 respectively.

Results were :

- Fifty Seven Geocrinia alba sites were monitored during the year including ten sites using the linear monitoring technique, 29 sites had calling animals, 25 sites had no calling males.
- Fourteen sites were confirmed as extinct, that being sites with no record of calling males for four or more years.
- One site, GA27 with no record of calling males since 1993 had one male calling in 1999.
- Two sites which had animals calling in 1998 did not have any calling males in 1999,
- Ten sites recorded an increase in the number of calling animals in 1999 compared to 1998.
- One new site was located in 1999, in an area which had been previously searched between 1992-1994.



Example of fluctuations in the numbers of calling males recorded a small sized population. NB: site not monitored in 1995 & 1996.

3.2.7 Genetic Studies
This action was completed in 1994

3.2.8 Translocations
Refer to item 2.2.8

Conclusion
1999 saw a change in emphasis for the team associated with an acceptance that the decline in small sized populations continues and appears to be inevitable regardless of the management actions implemented. Given this progression, the importance of maintaining the health and viability of the larger sized populations is of high priority. The first step in understanding the dynamics of these populations was implemented with the introduction of a linear monitoring technique. Preparations for the undertaking a vitellina translocation next year are nearly complete and the results of the investigation into past land use and site characteristics will need to be considered by the team during the coming year.