GEOCRINIA RECOVERY TEAM

ANNUAL REPORT
2002

BY

KIM WILLIAMS
ON BEHALF OF THE
GEOCRINIA RECOVERY TEAM

March 2003

DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Department of Conservation and Land Management
North Boyanup Road
Bunbury WA 6230.

Summary

During 2002 the focus of the Geocrinia Recovery Team was on continuing to monitor for change in the larger *G. alba* populations and post fire survival of McCloud Creek populations. Time was also committed to improving fire protection and environmental remediation within the Location 83 lands.

This seasons population monitoring resulted in 10 new subpopulations being discovered, 8 consisting of only 1 to 3 calling males and one (GA12d) being 8 calling males. One site, GA55e was located some 240m upstream of the previous closest record in 2001 and away from the main site (GA55a) which was burnt in the Forest Grove wildfire. We now have observed at a number of sites, single calling males 50+ m distance from the main subpopualtions which do not seem to presist at these location for more than 1 season. We believe these to be opportunitistic records of dispersing males.

The two translocation sites for *G.vitellina* (GV7a and GV7b) established in 2000 in Adelaide Creek, were monitored on multiple occassions during the year. As in 2001 there was no evidence of calling males at the GV7b site. GV7a again recorded a single calling male within a few metres of the 2001 location. Monitoring of both sites will continue for another two seasons before a determination on success will be made.

A wildfire in Feb 2002 left approximately 55 ha area of the G.alba populations along the McCloud Creek in the Boranup section of Leeuwin Naturaliste NP being burnt under extreme summer conditions. The intensity of the fire was aided by the proximity of Blue Gum plantations to the geocrinia sites. Four monitoring subpopulations were burnt in the fire (GA24b, 24c, 24d and GA55a). GA24d being one of the larger subpopulations in this part McCloud Creek (mean calling male count of 50+)

Team membership has declined during the 2001-2002 period with a number of significant changes. There is no longer representation from the Shire Council, Shire Officers, Community Conservation groups, Landholders or Science Division. During 2003 approaches will be made to the Augusta Margaret River Shire concerning renewing their participation in th team. Similarly the team recognises that the absence of landholder representation is a weakness and attempts will be made to address the situation. Consideration will be given to how the team can better coordinate with and inform the local subregional Natural Resource Management groups of Geocrinia matters.

Introduction

During 2002 the focus of the Geocrinia Recovery Team was on continuing to monitor for change in the larger Geocrinia alba populations and post fire survival of McCloud Creek populations. Time was also committed to fire protection and environmental remediation within the Location 83 lands.

Major goals for 2002 were:
1) Monitor the release sites used in the 2000 translocation of G.vitellina.
2) Continue the population and fire ecology monitoring programs.
3) Supplement the Adelaide Creek introduction sites with further egg mass translocations.
4) Raise awareness with landholders and other agencies/organisations of their responsibilites under the EPBC Act as it pertains to G.alba.

Item 1 was completed. Item 2 populations monitoring was completed but the fires ecology sites were not. Item 3 did not proceed due to a significant reduction in staff within the nature conservation program within the south west region. New and replacement staff have been or are in the process of being appointed.
EPBC Act awareness/advice was provided to a number of landholders / organisations in regard to potential geocrinia disturbances.

Goals for 2003 are:
1) Monitor the yr 2000 vitellina translocation.
2) Undertake a trial translocation of G.alba.
3) Continue the population and fire ecology monitoring programs utilising the lineal marking technique developed in 1999.
4) Have the population extents of at least 50% of alba sites captured and plotted to DGPS standards.
5) Supplement the Adelaide Creek introduction sites with further egg mass translocations
6) Review and update the Geocrinia Recovery Plan
7) Rebuild the membership of the Recovery Team with appropriately skilled people to guide the next 5 years of conservation actions and in light of changing nature of community based NRM involvement.
8) Commence the process of evaluating climate change and other impacts on the long term survival of Geocrinia species.

Team Membership

Team membership has declined during the 2001-2002 period with a number of significant changes; Dale Roberts returned from his sabbatical studies in the USA, Andrew Burbidge retired from DCLM with John Blyth filling the WATSCU position, Blackwood district were without a district manager for approximately 18 months, Jack Stannard, Augusta Margaret River Shire Ranger, retired from the shire, there has been no community conservation group attendance for a number of years and Shire Councillor representation has also fallen by the wayside, associated with a number of political upheavals within that organisation.
During 2002 the team was comprised of:

John Blyth	A/Manager WATSCU	CALM – Nat Cons Div
Kim Williams	Rgnl. Ldr Nature Conservation	CALM - Regional Office
Absent	District Manager	CALM - District Office
Greg Voigt	Dist. Nature Conservation Officer	CALM - District Office
Absent	Forest Ecologist	CALM - CALMScience
Dale Roberts	Zoologist	UWA - Zoology Dept.

During 2003 approaches will be made to the Augusta Margaret River Shire concerning renewing their participation in th team. Similarly the team recognises that the absence of landholder

representation is a weakness and attempts will be made to address the situation. Consideration will be given to how the team can better coordinate with and inform the local subregional Natural Resource Management groups of Geocrinia matters.

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

The governments "Old Growth Forest Policy" was commenced during the year with the proposal to create 30 new National Parks across the south west of WA. The proposed Blackwood River National Park will encompass all of the G.vitellina sites

3.1.3 Fire Management and Research

No G. vitellina populations were impacted upon or threatened by fire during the year, though the potential for a fire in these areas is high with a notable increase in public use of the boundary tracks and firebreaks in the Spearwood Creek/Geocrinia Creek area as a means of accessing informal camp sites along the Blackwood River. The popularity of these areas is likely to increase as the national park proposals are implemented and additional recreation facilites constructed. To reduce these risks public access to two tracks either side of Spearwood Creek and a linking track from Adelaide Road were closed during the year via installation of gates and "Wildlife Aware" signage.

3.1.4 Habitat Protection

Pig Control

During 2002 the pig control program using selected volunteers was maintained. There have been no further loss of monitoring sites to pig damage since that reported in 1999. Anecdotally and through field observation their appears to have been no significant increase in pig activity over the last two seasons. Under the New Parks program 10 additional pig traps have been established in and around the G.vitellina sites. This is the start of establishing a more formal monitoring program to provide some "early warning" of potential pig problem areas, so that control efforts can be more targetted as was proposed in the 2000 annual report.

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. GPS data relating to population extents was also collected for 3 sites.
All populations except G3a were present, with substantial increases being recorded at GV3b (up from 17 to 28), GV1d and GV6 have experienced rapid increases post the 1997 fire but now appear to be moderating. Calling males had returned to the transect at GV5 (3 up from 0 the previous 2 years). In addition the pig disturbance and "faunal thouroghfare" reported in 2000 was no longer present, vegetation in the creek appearing to having returned to pre-disturbance condition.

3.1.7 Genetic Studies

This action was completed in 1994.

3.1.8 Translocations

The two translocation sites (GV7a and GV7b) established in 2000 in Adelaide Creek, were agained monitored on multiple occassions during the year. As in 2001 there was no evidence of calling males at the GV7b site. GV7a again recorded a single calling male within a few metres of the single animal recorded in 2001. Monitoring of both sites will continue for another two seasons before a determination on success will be made.

Geocrinia alba

3.2.1 Survey of Riparian Habitat

This action was completed in 1994.

3.2.2 Land Tenure and Management

The 'New Parks" proposal will result in geocrinia sites in Forest Grove and parts of Witchcliffe Block becoming National Park. This means that all known occurrences of G.alba on crown lands will now be contained in National Parks. This accounts for approx 40% of all known alba populations.

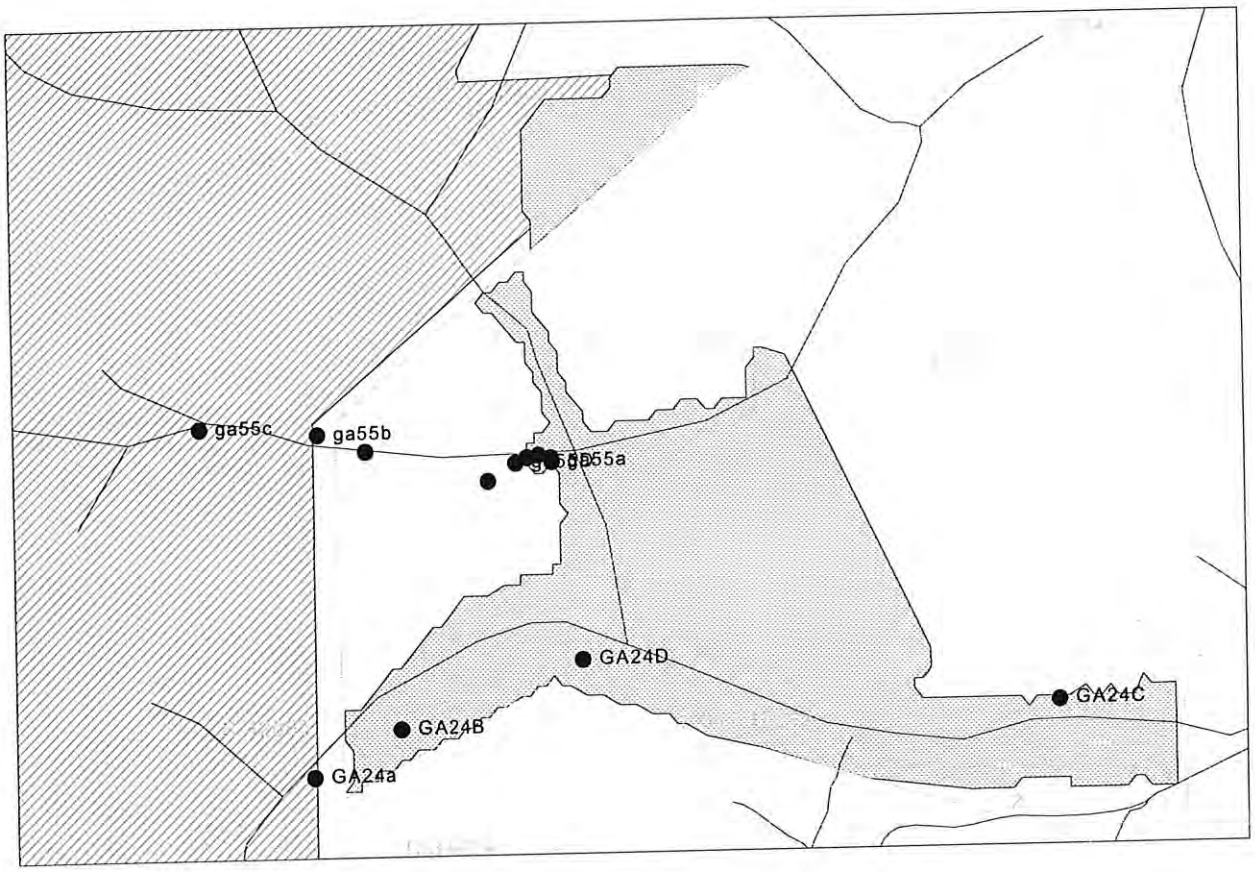
3.2.3 Fire Management and Research

The Geocrinia lutea fire impact sites in Walpole district were not monitored this year by Science Division staff in Manjimup. A change in duties and other project commitments prevented this work from being uundertaken. Arrangements have been made for SW region staff to undertake this task next season if Science Division staff are not available.

Maintenance of existing, and creation of some new, strategic firebreaks in Loc 83 was completed during the year. A Wildfire Response Plan addressing the operational suppression requirements was completed during 2002. This needs to be expanded to a Fire Management Plan to guide the development of an appropriate fuel reduction regime to minimize impact on frog populations whilst maintaining other biodiversity values.

A wildfire in Feb 2002 left approximately 55 ha area of the G.alba populations along the McCloud Creek in the Boranup section of Leeuwin Naturaliste NP being burnt under extreme summer conditions. The intensity of the fire was aided by the proximity of Blue Gum plantations to the geocrinia sites. Four monitoring subpopulations were burnt in the fire (GA24b, 24c, 24d and GA55a). GA24d being one of the larger subpopulations in this part McCloud Creek (mean calling male count of 50+)

(See map below – burnt area shown in pink)



3.2.4 Habitat Protection, Conservation Fencing

No action was taken on this issue during 2002.

3.2.5 Public Information and Land-owner participation

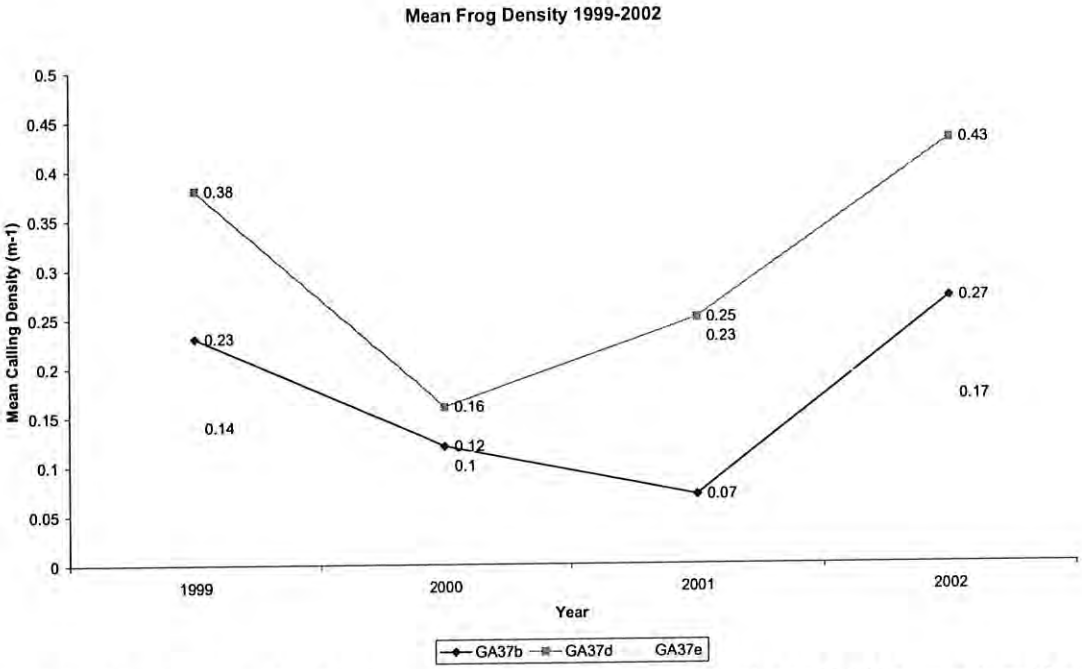
Responses to a number of media enquiries and numerous public enquiries concerning general frog issues, and distribution of geocrinia populations in relation to land clearing proposals were made during the year. Advice and information concerning the EPBC Act was provide to two frog property landholders who placed their properties on the market during the year.

Further harvesting operations on frog properties planted with Blue Gums neccessitated advice being provided to landholders and liaison with the Forest Products Commission concerning these operations. Further attempts will be made to brief the new (absentee) owner of loc 2718 and 4590 (GA15,16, 98a, 98b, 117, 12b, 12c, 58) concerning frog management on his properties.

3.2.6 Population Monitoring

In 2002 the focus was again on monitoring the larger populations and confirming the presence or absence of sites recorded as absent over the last 3 or more years. The linear monitoring technique were again repeated at three sites in location 83 and a number of other sites.
10 new subpopulations were discovered, 8 being only 1 to 3 calling males and one (GA12d) being 8 calling males. GA55e was located some 240m upstream of the previous closest record in 2001 and away from the main site (GA55a) which was burnt in the Forest Grove wildlfire. We now have observed at a number of sites, single calling males 50+ m distance from the main subpopulations which do not seem to presist at these location for more than 1 season. We believe these to be opportunitistic records of dispersing males.

Thirty Five Geocrinia alba sites were monitored during the year including 3 sites using the linear monitoring technique, 25 sites had calling animals, 12 sites had no calling males.



Lineal Monitoring results for three populations in location 83. GA37b and GA37e were burnt just prior to monitoring in 1999. GA37d was not burnt.

Table 1
Population extents (m) of three populations in Location 83. (ie the distance between the first and last calling frog where less than 50m separates any calling frogs.

Site	1999	2000	2001	2002
GA37b	220	218	188	205
Ga37d	97	102	62	83
Ga37e	114	48	56	95

Finding a plausible explanation for these results is difficult. The distribution of frogs within site 37b appears to have remained stable over the last 4 years despite being burnt in1999, whereas 37e (also burnt in 1999) suffered a dramatic reduction (over 50%) for 2 years immediately following the fire, but has shown some recovery in the last year. Site 37d was unburnt and though initially stable has reduced by more than 40. This may be related to rainfall/soil moisture availablility particularly given the winter drought experienced in 2000.

This trend is not refected in the results for mean calling density. All sites initially declined but have now recovered to preburn levels. Factors other than the impact of fire are obviously acting on these populations. Future monitoring may help develop an understanding regarding the ecology of these sites.

3.2.7 Genetic Studies

This action was completed in 1994

3.2.8 Translocations
Refer to item 3.1.8

Conclusion
2002 was a routine year for the Geocrinia Recovery Team, with no significant new achievements. Despite this there were a number of progressive advancements which contributed to improving our understanding of the ecology of the species or securing the long term protection of habitat. Specifically the creation of new National Parks and the results of the population extent GPS monitoring which suggest that dispersal distances may not be as limited as previously thought.

The results of the G.vitellina translocation, though still early days, give some hope towards using this technique to buffer or reverse the general declining trend in alba populations.

On a down side the Forest Grove wildfire once again demonstrated the susceptibility of geocrinia sites and habitat to unplanned fire events.

A new line of consideration for the team will need to be the potential impacts of climate change, declining rainfall and proposals to extract greater volumes of ground water from the south west area.