

THROMBOLITE (STROMATOLITE-LIKE MICROBIOLITE) COMMUNITY OF A COASTAL BRACKISH LAKE (Lake Clifton) RECOVERY TEAM



Photos: Jill Pryde

ANNUAL REPORT 2004-5

by Jill Pryde

for the Recovery Team

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Summary

This report summarises work carried out during 2004 and 2005 calendar year on behalf of the Lake Clifton Thrombolite Community Recovery Team. Due to staff changes there has not been a recovery team meeting since July 2004 and no Annual Report was produced for that year.

Despite this members of the team have continued to contribute to recovery actions in providing advice on a number of issues and continued studies affecting Lake Clifton microbial community.

On recommendations of the recovery team the City of Mandurah undertook a land use survey of residential properties in the Lake Clifton Catchment area in 2005. This culminated with a Community Open day held on 26 June 2005 at the Lake Clifton-Herron Community Centre. Approximately 60 people attended. Dolores Soler-Pittman (City of Mandurah) has now produced a report *Lake Clifton Land Use Survey* (City of Mandurah 2005).

A literature review has been compiled for Yalgorup National Park

Interim Recovery Plan No. 153 *Thrombolite (Stromatolite-like Microbialite) Community of a Coastal Brackish Lake (Lake Clifton) 2004-2009* by Robyn Luu, David Mitchell and John Blyth was endorsed by Director of Nature Conservation in June 2004.

A monitoring protocol has been prepared. Once ratified by the team the protocol will be implemented.

Recovery Team

The aim of the Lake Clifton Thrombolites Recovery Team is to oversee the implementation of recovery actions as listed in the interim recovery plan. The team is structured to allow for the encouragement, promotion and participation of associated groups in the protection of the thrombolites community. By linking private landowners, community groups, community catchment groups, local government authorities and other government agencies assists the team in achieve its goals.

Current members of the team are:

David Mitchell (Chair)	Leader Nature Conservation, CALM, Swan Region Program
Jill Pryde	Ecologist, CALM Species & Communities Branch (replacing John Blyth)
Jim Lane	Principal Research Scientist, CALM Science Division, Busselton
Steve Dutton	Senior Ranger, CALM, Yalgorup National Park
Dr Brenton Knott	University of Western Australia
Jenny Longstaff	Department of Environment, Mandurah (replacing Adian Parker)
Hamid Mohsenzadeh	Department of Environment
Michelle Mullarkey	Member of Peel Preservation Group; Peel Harvey Catchment Coordinator Committee
Fiona O'Connor	Coordinator, Lake Clifton Landcare Group
Anne Noordermeer	Environmental Planner, City of Mandurah (replacing Jane O'Malley)
Anthony Barr	CSIRO
Linda Moore	Biological Consultant (no longer attends)
Helen Ramsey	Development Officer, AGWA (Harvey District) (no longer attends)

Changes to the Recovery Team include Jill Pryde replacing John Blyth due to his retirement. Robyn Luu went on maternity leave. Anne Noordermeer replaced Jane O'Malley, City of Mandurah, Jenny Longstaff replaces Adrian Parker, Department of Environment

The Team met in July 2004 but not in 2005. A Recovery Team meeting was convened for February 2006.

Interim Recovery Plan

Interim Recovery Plan No. 153 *Thrombolite (Stromatolite-like Microbialite) Community of a Coastal Brackish Lake (Lake Clifton) 2004-2009* by Robyn Luu, David Mitchell and John Blyth was endorsed by Director of Nature Conservation in June 2004.

Recovery progress

Tuart Decline

Liaison continues between the Tuart Response Group and the Lake Clifton Recovery Team. A number of research projects are being carried out within the Lake Clifton catchment area. A summary of these will be presented at the February 2006 meeting.

Monitoring

Salinity/hydrological changes

Waters of Lake Clifton are now more saline than in the mid 1980s (Journal of the WA Royal Society 2000). CALM's Monitoring of salinity and water depth has continued at Lake Clifton. This ongoing program overseen by Jim Lane has continued since 1985. It is not certain what affect the increasing salinity will have on the thrombolites but it is thought that the original microbes may not be able to survive this change in salinity and therefore a change in the assemblage may occur. Dr Brenton Knott (University of Western Australia) published his conclusions with supporting data gathered by Jim Lane (CALM). Given the very high conservation values of Lake Clifton it is important that work to examine the causes of the increased salinity in Lake Clifton continues expressed the desire that the team's focus would be setting up a monitoring program and its implementation. The aim would be to review and evaluate data at hand and develop a monitoring protocol for hydrological monitoring setting a trigger for intervention.

Thrombolite monitoring

Linda Moore has now prepared a fully costed monitoring program for the Lake Clifton thrombolites. The monitoring program will include water quality, lake and groundwater levels, physical condition of microbiolites and microbial assemblage. The Recovery Team will be seeking funds to enable this program to go ahead and is confident that the program will get underway during 2006.

Information Dissemination

Lake Clifton Land use Survey

The Recovery Team recommended that the City of Mandurah undertake a land use survey of residential properties in the Lake Clifton catchment. The project entailed surveying properties within the catchment in relation to land use activities that may potentially impact the lake's water quality and the Thrombolite community. A Lake Clifton Land Use Survey Community Open day was held on Sunday 26 June 2005 at the Lake Clifton-Herron Community Centre. Around 60 people attended and presentations included: Tuart Decline, Drew Haswell; Lake Clifton Hydrology and Thrombolite Community, Brenton Knott; Sarah Goater, Environmental Scientist, Water Corporation; Lake Clifton Thrombolites: Recovery of a Threatened Ecological Community, David Mitchell; Property Management – local perspective, Fiona O'Conner, Community Representative, LandCare; Property Survey Overview, Dolores Soler-Pittman, City of Mandurah; Mosquito Control, Peter Jensen, City of Mandurah

Results of a land use survey have now been compiled resulting in a report *Lake Clifton Land use Survey* (City of Mandurah, 2005) by Dolores Soler-Pittman. This has been circulated to recovery team members.

Posters

A new batch of 1000 A4 sized posters have now been printed. These posters provide a description of the community and information about threats and recovery actions for Lake Clifton. The posters have been circulated for distribution and have been placed at the Lake Clifton-Herron Community Centre and the winery adjacent to Lake Clifton.

Recovery Actions

Recovery actions that are being progressing include:

The construction of a boardwalk	completed
Weed control	ongoing
regular monitoring of water quality and levels	ongoing
Monitoring the general health of the microbialite community	Costed program completed. Implementation to begin in 2006
Ensure relevant authorities, landowners and CALM's personnel are aware of the presence of the thrombolite community and the need to protect the TEC	Land use survey conducted by City of Mandurah completed in 2005
Promoting research that assists in the recovery of the TEC	A number of projects have been identified that would be beneficial of furthering our knowledge

Implementation a three more actions considered high priority will be considered at a future meeting of the recovery team, including:

- Mapping critical habitat
- Clarify condition and extent of community
- Mapping vegetation buffer