

The Threat to Cliefden Caves

Ian Curtis and Denis Marsh

Orange Speleological Society

Preliminary

First. It is very fitting that I should be giving this talk here, in this area of world importance, where a fragile reef ecosystem is recognised and so passionately defended. We feel the same about the Belubula Valley and the Cliefden Caves which are currently under threat from a proposed new dam.

Heather* on Monday spoke of the 'Big 5' of Ningaloo: the whale sharks; the dugongs; the dolphins; the turtles and the rays. We, too, have our Big 5: Fossil Hill and Trilobite Hill (Ordovician fossil sites); over 60 highly decorated caves, including rare blue stal.; a thermal spring; rare tufa dams; and (endangered) bat species habitat and maternity sites.

And second. The ASF and local clubs seem constantly to be fighting ecological (and even ideological) threats. Remember Colong? The Bathurst/Orange Growth Centre? Timor? Well, over in NSW the latest in this list is the threat to build a dam on the Belubula River which will significantly impact the valley and the caves.

Introduction

Who am I? I am currently the President of the Orange Speleological Society. Over there sits Denis Marsh, our Vice President. We (OSS) are heading the ASF campaign to protect these caves. We are in constant touch with Nic White, whom most of you will know, the main man in the Karst Conservation side of our organisation.

Where are these caves? About five hours west of Sydney on the western side of the Great Divide. Who are OSS? We are a small club - the furthest Western club in NSW. Our club was formed in 1955 and is a foundation member of the ASF. We have a long, close link to these caves.

In March I was invited to Sydney to speak at the Trades Hall with several others. Keynote speaker that night was Tim Flannery. That's right - **that** Tim Flannery. Tim spoke on the importance of caves and what we can learn from them. Others spoke on fossils and water. My brief was to speak on the local perspective. I began by talking of Orange's reputation as a wine and food centre. I pointed out that Angullong wines came from a caving property - two of their wines being called Taplow Maze and Fossil Hill. Few outside the speleological and scientific communities knew of these caves. I pointed out that these caves are on private land and land owners have concerns about insurance, trespass and safety. Their farms are their livelihoods.

I gave a brief history of the limestone - the first found in NSW - 200 years ago last month. I talked of the Rothereys who took up land grants in the 1830s and lived here till the early 20th century, early exploration of the caves, the link of the caves to the local Wiradjuri people (scar trees, Malongulli, Burrumbarangal - caves with indigenous names), and the Dunhill family, who have farmed this land for four generations. My point: **The caves have been in the hands of only two families for nearly two centuries.**

I spoke of OSS's link to Cliefden. In 1960 we were invited by Anthony Dunhill's grandfather to manage the caves. This access control has meant that the caves are extraordinarily well cared for. Entry to the caves is permitted to ASF clubs and to visiting researchers. Many of you here will have visited our caves and know the ropes.

So, where has this dam proposal come from?

The Millenium Drought was the catalyst for additional water storage in our area. Our area, the Central West, traditionally is the last to go into drought in NSW but those years were very dry. Local councils tried a variety of measures to collect water: water harvesting; using grey water differently; raising the local Suma Park dam wall and starting (since completed) a river pipeline to Orange from the Macquarie River.

State Water NSW began looking at a dam and were encouraged to do so by water users - local mines (Cadia), farmers and lucerne growers at Canowindra - and local politicians.

National Party policy is to dam rivers. This dam is politically driven. The National Party is comfortably in power locally in both Federal and State seats and they are very influential on local councils. John Cobb, Federal MP for Calare, has been under strong pressure to do something about providing employment for local businesses which are closing down. Electrolux in Orange is slated to close in just over twelve months with the loss of 800 jobs. Simplot, Downer EDI (Bathurst), the Wallerawang Power Station - all



are closing or shedding jobs. John Cobb argues this dam will provide employment and attract new industry (code for mines) to the area.

So, who is opposed to this dam?

NSW Labor (under Luke Foley) and the Greens, the union movement and all environment groups: the National Conservation Council; the Inland Rivers Network; the Central West Environment Group; the Environmentally Concerned Citizens of Orange; and, of course, us.

Let me read out from the handout sheet we give to local politicians. This is a double-sided A4 sheet with a series of points under five headings: ***What is wrong with the Needles site for a dam? What will be lost if the dam is built? Why aren't these caves better known? Does the Belubula need another dam?*** and ***What are the alternatives to a dam?***

It finishes with two statements: **This Needles Gap dam is not the answer to our water security** and **Dams do not create water, they simply prevent rivers flowing.**

So, what *will* be lost if this dam is built?

- Extensive, highly decorated cave systems, including rare blue stal. formations. (There are over 60 caves at Cliefden.)
- World-renowned fossil sites. Fossil Hill, Trilobite Hill and much of the highly fossiliferous Cliefden caves limestone will be inundated.
- An important national geoheritage site. This is the first Ordovician limestone found in NSW and it contains examples of some of the earliest shell beds in the geological record and earliest rugose corals known.
- Caves, ranked by NPWS as **'highly significant'** with **the highest number of internationally significant values** for any cave area outside the National Parks estate in NSW.
- The thermal spring - one of only three associated with karst in NSW.
- The rare tufa dams (calcite dams) on Davys Creek. These are the largest and most extensive in NSW.
- Cultural heritage sites - indigenous and early colonial.
- An important scientific research site for universities, scientists and local schools. More than 50 papers (including international papers) have been published on this area and the caves. Two academic studies (on bats and geomorphology) are currently in progress.
- Endangered bat species habitat and bat maternity sites.
- Large areas of productive river flat agricultural land, of high value, on several properties. There is no net benefit in losing productive land upstream to irrigate land downstream.
- A significant area of remnant riparian vegetation and wildlife corridor in an otherwise cleared landscape.
- A number of rare and/or endemic invertebrate species and their habitat: Syncarida, ***Cavernaspides Cliefdenensis***; Cliefden Pinwheel Snail, ***Elsothera belubula*** et. al.

What have we (OSS) done?

Practical things.

A Cliefden cave mapping project has begun and several NSW speleo clubs are working in the area. This has been organised through us and the NSW Speleo Council.

A bat study has begun.

A Geomorphology study is in progress.

Written things.

A submission (followed by a two hour interview) has been presented to State Water NSW. This was considered by us and Nic White as being of the utmost importance.

Newspaper articles have been published.

Political things.



Politicians have been interviewed - local State and Federal Members, Greens Upper House MP Jeremy Buckingham, local councillors.

Questions have been submitted and asked in State Parliament.

Media things.

The 7.30 NSW Report you've just seen was initiated. Interviews have been broadcast on local TV. Meetings have been addressed.

In all of this there have been two significant dates: the 9th of February 2015, when the Water Security Report was released, naming Cranky Rock as the preferred dam site in the upper Lachlan (though not ruling out The Needles) and 28th March 2015, when the Liberal/National government was returned at the State election, albeit with a lessened majority.

First, a few comments on the **Water Security Report for the Regions** (the 220 pages of it).

This report prioritised four sites/proposals for water storage:

#1 Build a dam at Cranky Rock on the Belubula - an 87m high wall; to hold 700 GL; to cost \$768.5m.

#2 Build a dam on the Abercrombie above Wyangalah - to hold 700 GL; to cost \$785 m.

#3 Build a dam at The Needles on the Belubula - to hold 700 GL, with a 102m high wall, 480m long; to cost \$665.3 m.

#4 Raise Wyangalah Dam wall 20m; to cost \$592 m.

The *in situ* investigation has begun and is due for completion in March 2016.

Some Points:

- Is inundation of Cliefden (caves, karst, fossil sites, hot spring, tufa dams) ruled out? NO.
- Will a dam at Cranky Rock, further downstream from the caves, save the caves? NO. Much uncertainty here because figures seem pretty rubbery.
- Could The Needles - third choice - be chosen? YES. This site is \$100 million cheaper than the two preferred options and in difficult economic times ...
- Who will own the water, which must be sold at full cost? GOOD QUESTION.
- Who is this dam for? MINING.
- Will a dam ever be full? ALMOST NEVER.
- Are these the final costs? NO. The costs shift. An original projected cost of \$150m was given. Cranky Rock costing is \$665 million and includes roads, land clearing, vegetation offsets, fish ways, land acquisition, and 10% profits. Not included are tunnels and diversion structures, gates and mechanical equipment, site security, sheds etc, decommissioning of downstream lakes/storages, electrical works. **It is not fanciful to cost this dam at \$1 billion.**

Here is Nic White's take on this proposal. I work this, as often as I can, into conversations (written and oral) with interested parties.

'Cavers object to a dam which will flood and affect the Cliefden Caves. NSW taxpayers should not pay for a dam on a river system which already has dams which are seldom full due to insufficient rainfall and overcommitted water rights to downstream users which will have the effect of damaging karst values, flood nesting trees used by forest bats, birds and arboreal animals.'

So, is there any good news?

YES.

- Ian Houshold's Hydrogenesis study is progressing well.
- The Cliefden Caves mapping project, driven by Phil Maynard [SUSS] and Bruce Howlett [OSS] is coming along nicely.
- Meredith Brainwood's bat study has identified the caves as a bat 'hot spot', with at last count, 18 species identified. Meredith is currently writing up her findings for presentation at the Linnean Society symposium in Bathurst in early September.



What is still to do?

We need to pursue indigenous links.

We need to chase up some scientific studies.

We need to get back to State Water to see where they are up to.

Will We Win?

Ah, the Crystal Ball! I'm quietly confident. There are many elections to come and many millions of dollars to find in who-knows-what economic future. State Labor and the Greens are opposed to building this dam.

All this information (in greater detail) can be found in **Caves Australia** Nos. 198, 199 and 200.

.

