

WELLINGTON CAVES WATER CAVE RESCUE

- You load sixteen tons and what do you get?*

- Greg Ryan

Cavers working on the Water Cave Entrance restoration. Photo: Hills Speleos.



They might have been metric tonnes, and the material wasn't number nine coal, but they're was a whisper of the Merle Travis song in the air at Wellington Caves on a recent weekend as a group gathered to begin restoration work on Water Cave.

During the 1960s the entrance to Water Cave (also known as Anticline Cave), in the centre of the Wellington Caves caravan park, must have been considered to as be in an inconvenient location, as it was filled in. Its location was forgotten as the grass grew back, and soon a road was routed almost overhead, and a power pole placed where there was once a doline.

In the late 1980s, armed with a survey from the late 1890s, the cave was re-located by the Sydney University Speleological Society (SUSS) and Ernie Holland from Jenolan Caves, and the entrance uncovered with help from a Wellington Council backhoe. The cave entrance was extensively filled with pieces of broken limestone, probably remnants of the karst landscape which became the park, and rubbish including bottles, cans, tyres, timber and wire.

Much of the rubbish and rock had found its way down to the lake which is straddled by the spectacular anticline in the ceiling which gives this cave its alternate name. Remains of a gate were discovered, harking back to the cave's early tourist history.

With no funds for redevelopment, and other projects on the Caves Reserve taking priority, a 'temporary' fence was erected and the site sat virtually untouched for sixteen years, deteriorating as the excavated entrance eroded, with each downfall (few and far between in recent years) washing more earth into the entrance and down to the lake. The need to preserve the cave from further damage and address the dilapidated appearance and safety of the site became more urgent this year. Proposals included installation of a drainpipe and ladder down to the cave entrance

and refilling the excavation, with a locked manhole cover at the surface, were put forward.

An alternative suggestion that the speleo community would be willing to help in the restoration of the site was taken on board by the Caves Advisory Committee and the recent working weekend was organised. Chris George, the manager for Wellington Caves, did extensive preparation of the site with the loan of a council truck and backhoe, removing sixteen truckloads of material in September ready for the labour intensive clearing near the cave entrance and down the slope to the water, and the final levelling and setting of the benches.

On the 13 and 14 November 2004 twenty-five cavers from SUSS, Orange Speleos, NHVSS, Hills Speleos, NSW Cave Rescue and the Limestone Cowboys joined forces with Chris and Kevin Joyce (one of the guides).

With Chris directing the work, advised by karst geologist Dr. Armstrong Osborne and aided by the mining engineering expertise of Ian Cooper from SUSS, the group undertook the stabilisation of the entrance to the cave. These were no armchair supervisors, each working more than their fair share by hand and on pick, shovel, and jackhammer.

Chris even found enough in reserve to take on hotplate duties at Saturday night's barbecue. The work involved installation of five gabions, rock filled cages stacked on a terrace, such as are often used in roadside construction.

Each gabion was made on site from plastic coated wire mesh, measured, cut and laced into a basket. The baskets were placed on a levelled soil bench, filled by hand with loose limestone pulled out of the cave entrance and taken from the stockpile built up from the September machine works, lined with geo-cloth and backfilled with soil.

All loose rock from the excavation was removed and used in the reinforcement. The sloped floor into the cave was substantially cleared, with the bottom of the original tourist steps exposed at the lake's edge, but progress in the cave was limited.

On Saturday much time was spent ensuring that work on the entrance slope would be able to be conducted safely, and Sunday's efforts were hampered by the gluggy consistency of the mud further into the cave – the result of a 25mm deluge a few days earlier – and the slow nature of the work as rocks were pulled from the mud by hand and chained up and out of the cave. Along with removal of loose rock, in-washed soil was bucketed out and used as backfill for the gabions. All 'artefacts' removed were set aside to be sifted through at a later date for any historical or cultural significance.

In total the gabions took about 15 cubic metres of limestone, so around 20 tonne of rock was moved

by hand into the baskets over the two days. Much work remains to be done. Another level of gabions needs to be installed.

The finished product – the Water Cave Entrance stabilized. Photo: Hills Speleos.



The cave and lake are still littered with rubbish, which extends into the small divisible side passage. Planting of appropriate native species is required to stabilise the entrance site and cover the gabions. Runoff from the park which funnels into

the cave needs to be redirected by landscaping around the site. It is expected that more working weekends will be organised if Council support can be gained.

The future of the cave is still uncertain. It is unlikely that the cave will open to tourists again in the near future, but it is hoped that the work done will prevent any further deterioration. The benching will lend itself to landscaping and a new fence which may provide a view of the cave from the surface, providing another window to the underground world for tourists. Restoration of the original entrance may correct ventilation problems which currently lead to high levels of CO₂ in the cave. In the meantime, speleological and diving access to the site will also be restricted until the management is happy with the safety of the site.

Thanks have to go to all that worked so hard over the weekend, with special thanks to Chris George, Armstrong Osborne, Kevin Joyce and all the Caves staff.

*'Another day older and deeper in debt', according to Merle Travis' song, made a hit by 'Tennessee' Ernie Ford in 1955.

CHANGING VIEWS OF KARST LANDSCAPES – INTERNATIONAL INSIGHTS AND REGIONAL PERCEPTIONS OF TASMANIA

- Ian Houshold

The other night, dodging wombats at dusk on the Lake Highway, I tuned into Phillip Adams' *Late Night Live* on the radio. He was interviewing Peter Conrad, expatriate Tasmanian, author and lecturer at Christ Church, Oxford - "... a supremely versatile and penetrating critic of contemporary culture". Peter is in Australia to deliver this year's Boyer Lecture – the latest in a long-running series focussing on social, scientific and cultural issues relevant to Australians. Many past lectures have addressed the development of our culture and relationship with the land – apparently this is the topic Peter will address.



Vanishing Falls in South West Tasmania

It is also a topic I'd wanted to use as an introduction to a series on karst landscapes – how research into karst areas may be used to better define the way we view our physical and cultural landscape.

Peter's should be an interesting talk. In 1988 he published *Down Home*, an attempt to re-visit the physical and cultural landscape that he rejected in his late teens for the far more stimulating environment of Europe. *Down Home* was the result of a few weeks wanderings around Tasmania after 20 years away, skimming over the Southwest in a light plane, tentatively nudging the mid-slopes of Mt Wellington on foot, interviewing Aboriginal elder Aunty Ida West for a couple of hours, tramping what he perceived (and apparently still does) as the suburban wasteland of Hobart's northern suburbs along Main Road, and a visit to Newdegate Cave. These impressions are woven into flashbacks to an unhappy suburban childhood interspersed with blissful escapes into the farmland of the Huon Valley – down home.

When I first read the book I was surprised that someone with an international reputation for cultural perception could produce such a commentary, as the perception of Tasmania's landscapes that I had developed was very different. My overall impression of the book is of a very uneasy traveller, subconsciously comparing the cultured and comfortable surrounds of an Oxford study with the natural and cultural monstrosities of Tasmania's convict history and its prehistory, painted on a backdrop of unimaginably

inhospitable, tangled and dripping forests, crags and ravines, populated by poisonous serpents – ‘just beyond the Mountain’.

Down Home, is in some ways a sad story of a life severed from its roots, whilst making a very cursory attempt to reconcile that loss. It will be interesting to see whether in his Boyer lecture he expresses any regrets over this decision. If he does want to develop the ideas he established in *Down Home* to an acceptable standard he would have to put up with quite a few years of actually living here and acutely observing the truth of the landscape’s diversity and history.



In the Opium Den, Kubla Khan Cave, Mole Creek

There lies the potential tragedy of the great international commentator. Whilst making (mis)pronouncements on the nature of a foreign landscape and culture, his ego stroked by contemporaries with equally distorted perspectives, considerable damage is potentially done to those people who decide to stay and do it properly – and potentially to the landscape itself. Most of us don’t have the luxury to permanently escape our perceived suburban monotony in the way that Conrad did - many of us don’t see it that way anyway - a ‘relaxed and comfortable’ existence is an understandable goal, particularly if it allows for infrequent excursions into more risky terrain. So, either by choice or necessity we remain in these ‘safety-house zones’ between city and bush. However, many Australians who don’t already live in the bush do chose to visit occasionally, and many go to cave and karst areas. About 100 000 people visited Tasmania’s show caves last year – the equivalent of over a fifth of the State’s population. Presumably the main reason is to experience the karst landscape.

So, what are the attractions and interest of karst landscapes, and how does a karst scientist achieve

some relevance through researching them? Again, I’ll pick on Peter to set the scene. Interestingly, a chapter of *Down Home* is devoted to “*Under Ground*” – where he retreats after a harrowing flight over the incomprehensible Southwest. Here he describes caves as retreats from that incomprehension:

“From the air, Tasmania is alien, intractable. That day on the plane I felt amazed and ashamed that I’d lived on the edge of this wild immensity and had known nothing about it. But if I had known, how could I have coped with the knowledge? That lost world won’t ever be conquered; the rest of Tasmania is habitable only under duress, in narrow valleys between mountains. Living there you resolve not to notice, or else you would be demoralised forever. My tendency too, after that aerial survey, was to burrow. Up above, it may look desolate. Down below, crushed and compressed under ground, there is a wild, subliminal beauty – a surreal Tasmania guarded in the darkness.”

He provides an entertaining yet ultimately disappointing narrative of a trip through Newdegate Cave:

“At Hastings, in the far south, is another subterranean grotto of likenesses: the Newdegate Cave, discovered by timber-getters in 1916. The path leads to it through a forest of spindly gums, beaten by wind until they sound like hissing surf. You seem to be on the bed of an evergreen ocean, with waves far overhead. Lyre birds metallicly chirp and chuckle out of sight. A barred gate clanks open onto a spiral staircase. Down you fumble on dark steps past a suppurating wall into this dark cleft of impersonations, irrigated far beneath by Mystery Creek, whose source has never been traced. The cave is a garden of rock as soft and spongy as algae – moist knobs like mushrooms, tufts of mineral broccoli, calcium cones of spun sugar, all nurtured in this den of wet fertility where you can watch the stealthy growth of stone, as drips gather on the nozzles of stalactites and crust there before they can fall. An icy fountain of dolomite spills and billows: it’s known as the frozen waterfall. These thin, moist accretions, growing toward each other from the roof and the floor but never meeting, act out architectural fantasies. In one cave there’s a teetering pagoda; in another some wreathing shawls with the consistency of bats’ wings surround a stage of igloos, white banyan trees and frothy cliffs. Resemblances are painstakingly pointed out: with the aid of light, an inclined rock like a horizontal cactus becomes a dragon, its slimy wings rusted by iron impurities; in Titania’s Palace, sunrise glares from an artificial lantern, and the shadowy pimples on the pavement are said to be people hastening to leave the ball. The wall has the feel of congealing mucus; inside the earth, it’s

like travelling through a sleek human body.

The metaphors are inescapable. How else can something so subterranean yet so outlandish ever be comprehended? Metaphor is a carrier, and its burden is to transport significance from known things to those unknown; to make correspondences between familiarity above ground level and those lapidary oddments below ground; to discern in the upside-down southern hemisphere the translated replicas of northern meanings.”

Unfortunately for Peter, he again misses the point – to give up on the possibility of comprehension of Tasmanian karst processes is not dissimilar to running away to England in the first place. But his missing the point really illustrates how easy it is to do – maybe the value of his book is to express the fears and misunderstandings that many contemporary Australians still feel about our environment, and in the uncomfortable premise that many Australians still have as little awareness of their physical and cultural landscape as an Oxford academic. Maybe the extent of our comprehension of our landscape only runs to the definition of upside down metaphors from the northern hemisphere, but I'd like to think not.



Arthur Clarke at a logged and burnt polje near Lawrence Creek, Florentine Valley

Thankfully, guides at Newdegate these days craft their presentations to mix an almost apologetic element of fantasy and metaphor with a fascinating interpretation of earth science, biogeography and biology that allows visitors to follow the development of a locally generated understanding of our landscape. Whilst Jason Gardner's horror tours are a wonderful parody of traditional fantasy still common in many guided caves, Dave Hawkins and Roger Griffiths take pride in a particularly southern Tasmanian interpretation of the natural processes and history that have developed these 'lapidary oddments' and the ecosystems around them. Their tours entertain and educate visitors about our understanding of the working of our own fascinating ecosystems rather than through a miserable translocation of northern hemisphere interpretations. Most importantly they do it in a way which celebrates the regional variations of southern Tasmania in a mature and logical way, rather than through a

self-deprecating cultural cringe still unfortunately common in some regions. Their greater value lies in transmitting concepts of appropriate custodianship and stewardship of the land. How can something reduced to an upside-down metaphor have any real value? – might as well woodchip it, dig it up, shoot it or burn it. The value of good regionally based landscape interpretation – just think David Attenborough - is that it generates a respect for ecosystem processes within a justified context. If that context is different to everywhere else rejoice in it - don't cringe from it- therein lies its value!



Stephen Blanden and Serena Benjamin at the far end of Gunns Plains Cave

For this reason I have always been a little suspicious of the potential for McDonaldisation of cave interpretation which may develop through Sam Ham or Pasquali-style blueprints. The best way to throw off the cultural cringe that Conrad perpetuates isn't to run away from it to England or adopt a process direct from the USA or Sydney, but to develop unique approaches in regional areas based on the best available information about the local karst landscape – geomorphic, ecological and historical. I am often surprised at the variations in approach between Mole Creek and Hastings (let alone Abercrombie or Chillagoe – or the Cave Wizard at Wee Jasper). The success of this regional pride and diversity amongst guides helps to explain why, in our quest to diversify tourist experiences in our commercial cave systems, we should never lose sight of the enormous value of local knowledge and experiences. This isn't parochialism, it is the type of long standing, detailed landscape knowledge that has accumulated over generations that may never be obtained by commentators such as Conrad (well, maybe he understands Oxford – he certainly doesn't understand Tasmania).

If karst systems can be presented in a way that combines a dynamic understanding of local ecosystems, environmental history and the effects of the northern hemisphere migration on the Australian landscape and its Aboriginal inhabitants, this diversity can be used by visitors to build up a picture of regional variation throughout the country. Many of Australia's distinct biophysical regions contain karst areas which provide detailed information about their development and development of surrounding landscapes. The ongoing palaeontological work at Naracoorte and Riversleigh, and the rapid acceleration of palaeoenvironmental work on cave sediments and speleothems throughout the country (Eight papers on palaeoenvironmental reconstruction using speleothem analysis will be presented at the December conference of the Australasian Quaternary Association at Cradle Mountain) are starting to provide narratives of the historical development of cave systems and their environments which are just not possible in other ecosystem types. Cave systems have long been used by Aborigines, and the potential to integrate natural and cultural histories over many thousands of years is arguably higher in karst areas than any other distinct environmental system. Our recent work at Riveaux highlights the

importance of karst landscapes as a focus for investigating the interaction of changing physical environments with Aboriginal management in the development of landscapes over millennia. Cave fauna communities are now being studied in relation to both climatic change and the effects of plate tectonics on faunal distributions – work at the Cape Range and in the Pilbara provides evidence for biogeographic radiation of species in relation to continental drift. Relicts of regionally relict floral communities are often preserved in fire resistant karst refuges, such as dolines and gorges. Who knows what pioneering work on cave bacterial communities will tell us about both cave ecosystems and regional environmental change?

A detailed, regionally based understanding of karst landscapes, and how they relate to their surroundings has the potential to play an important role in the development of Australians' perceptions of the land, and through that, to better judgements of appropriate land management practices. Cave tourism centres play an important role by distributing this knowledge to surrounding communities and visitors in a way not possible at other venues. Rejoice in regional diversity, because no matter what the international gurus say, you are in many ways the experts.

TASSIE NEWS

- Ian Houshold

Dr Fred Stone and Debbie Ward



Greetings from the carbonate state. News from various areas appears below:

Mole Creek

Against all odds, (and maybe you didn't even notice) Mole Creek karst management made it as an issue in the last Federal election as part of the Liberal's Tasmania package. \$3.6 mill has been promised for the purchase and/or covenanting of significant karst land at Mole Creek – a working group has been established to implement this policy following negotiations between State and Federal representatives. Although potentially a source of controversy in itself, this sum will go some way to advancing karst conservation on private land in this area. The Liberals have also promised to reserve another 170 000 ha of old

growth forest statewide on both public and private land. It is quite possible that some of the new reserves will contain karst, as significant areas of unreserved karst support old growth forest which may be unsuitable for timber harvesting under the Forest Practices Code. Once again, Federal and State negotiating teams have been set up to manage the issue.

We would all like to wish Janelle Payne all the best following her recent resignation from the Manager's job at Marakoopa and King Solomons Caves. The effort that Janelle put in to the job was legendary, often working long into evenings in her own time. Janelle made significant advances in the quality of tours to Marakoopa, primarily through restricting numbers on individual tours, dividing tours to separate parts of the cave and adjusting the frequency of tours according to demand. Janelle now works as an environmental tourism consultant from Devonport with postings around the country.

Paul Flood is currently acting manager, pending advertising of the job next year. Paul is focussed on development of new opportunities at Marakoopa, particularly with the potential for extended cave tours, combined with guided karst interpretation trips in the Marakoopa catchment. Paul is also very keen to establish an ongoing environmental monitoring system at the caves – guiding staff have established a volunteer 'Karstwatch' group in order to set up and maintain monitoring systems in the tourist caves, as well as wild caves in the Karst National Park. Rolan Eberhard will co-ordinate planning and establishment of the system using \$20 000 from World Heritage project funds. Paul has also commenced a lampenflora monitoring project in

King Solomons. Using the expertise of Dr Gintaris Kantvilas, an expert on lower plants from the Tasmanian herbarium, Paul will identify and map the different species present. He is also researching the feasibility of using a portable and appropriately shielded u/v lamp to target and kill small, specific areas of lampenflora.

Just around the road, Rolan has just completed a summary and interpretation of environmental monitoring of Little Trimmer Cave, carried out by the Forest Practices Board, originally under Kevin Kiernan's guidance. This project, established to monitor the effects of timber harvesting on karst processes, metamorphosed to baseline data collection only following recognition that logging over Little Trimmer would not be in the best interests of the cave. It is uncertain whether future monitoring of karst processes in logging areas will proceed.



A karst spring in the Vale of Belvoir, Tasmania

Neil Kell has completed detailed planning and equipment purchase for the King Solomon cave re-lighting. Using a combination of dichroic and LED lamps, Neil's system will now light the entire cave using a mere 2400W of power – the equivalent of only 5 large lights presently illuminating part of Marakoopa's main chamber. Similar to Hastings, all light fittings will be easily accessible from the tourist track, making climbing over sensitive areas obsolete. Heat channelled through the back of dichroics will greatly reduce the desiccating effect of current lamps on speleothems, and LED's used for tracklighting will produce very little heat at all. Neil believes that it will not be long before entire cave lighting installations may be carried out using

LED's. Neil will return after the busy season in late February to complete installation of the lights.

The State/Meander Valley karst management group has applied for a three year, \$1 mill grant to complete development and implement the cross-tenure Mole Creek karst strategy. Based on an issues and options paper developed by Rolan Eberhard under the first stage of Natural Heritage Trust Funding, the new project will concentrate on development of catchment based property plans in the Mayberry and Caveside areas.

I will be working with an agricultural consultant to help define appropriate karst management systems and deal with cross-boundary and cross-tenure issues. Funds have also been applied for to continue karst hydrological work eastwards from Caveside into the Meander River catchment.

Gunns Plains

Trish and Geoff Deer are now well into the swing of things at Gunns Plains. Steve Blanden, Serena Benjamin and I accompanied Trish into the cave beyond the duckunder to both introduce her to the pleasures of total immersion in a Tasmanian stream cave, and to help map post-settlement sedimentation of the cave as part of Serena's Honours project on agricultural impacts on the karst system. Serena has used air photo interpretation, analysis of landslips and exposure of rundkarren, along with sediment mapping in caves to document effects of past and current land use on cave systems.

Stephen has completed the final draft of his comprehensive book on Gunns Plains Caves. This book documents the history of exploration of all known cave systems at Gunns Plains, with over 140 entries. Individual caves are described, with maps of most also provided. Stephen's own photographs illustrate the book. The proofs are currently at the printers – copies should be available soon.

ASF conference

We are all looking forward to the ASF conference, to be held at Dover next January. Having finally sorted out our new governor following a somewhat embarrassing episode with the old one, the conference should now be able to be opened with due ceremony.

My involvement will be focussed on post-conference cleaning trips to Kubla Khan at Mole Creek, where David Wools-Cobb has organised a program of track-marking and cave restoration, similar to that undertaken following the last ASF conference in 1991. Paul Hawthorne, (Caves Ranger at Mole Creek), David and I have agreed on areas to be cleaned, and have stored sufficient water in inflatable childrens pools to undertake the job. Areas to be targeted include the main route between the City Wall (terminus of the last effort) and the Khans Army, and a second major area around the base of the Khan itself. With installation of appropriate boot washing stations, string lines and reflectors the majority of cleaning on the main route through the cave should be complete by the end of post-conference trips.
