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Clay Dam Doline (5N16), Nullarbor Plain, S.A., September 1999. Photo by Rudy Frank.



Front Cover

“Robyn McBeath on
entrance pitch to Great
Nowranie Cave.”

Photo by Stefan Eberhard.



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Geoff Crossley



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Issue 157 Please Note

The editor will be overseas for the months of April and May. Please submit contributions for the next issue (no. 157) to Angus Macoun at [REDACTED]. Future arrangements will be advised as soon as possible.

Coming Events

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2. The Tenth International Symposium on Volcanospeleology. Page 17.
3. Under WAY Conference -January 2003. Page 18.

Advertising

Commercial Advertising rates are as follows:

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Caving community event advertisements cost:

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Available to ASF members at \$5 per 1/24th of a page.

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By Rudy Frank.
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Apologies

The Editor apologises unreservedly to David Rothery, the editorial staff of *Calcite*, and members of HCG for omitting that the "Personal CO₂ Scrubber" article in *Australian Caver No. 155* was Originally published in *Calcite* 40.

I similarly apologise to Stefan Eberhard for omitting credit for the back cover photograph.

Education about caves: Are there side effects?

By John Ganter.

A few years ago I was walking through a bookstore when a new title caught my eye: *HOT SPRINGS OF THE VALLE ROYALE*. I picked up the book and began to thumb through it from the back to the front. There were descriptions of springs, their unique geology, delicate flora and fauna, delights of bathing, historic significance, and the like. I began to feel educated about hot springs. Interested in hot springs. After some minutes of absorption, I reached the front of the book. And there I got a surprise. Springs, the author informed me, are under attack. People are bulldozing them. Filling them with concrete. Somebody do something!

Hot springs quietly discharge water. Steam wafts gently from their limpid pools. On occasion, gas bubbles out of solution. What, I wondered, had innocent hot springs done to deserve such a fate? The springs had done nothing. Except attract people. Do they resemble another natural feature that we know and love? We'll return to the story of the springs after thinking about one of our primary goals as a caving community — and what we may do unintentionally.

Go forth from the darkness and educate

Public education is a major mission of the caving community. The public only values and protects what it understands, and caves surrounded by superstition are not understood. We educate so that non-cavers will join us in demanding that ancient natural features with little economic value will nonetheless be protected from modern threats. People in technological societies do this odd thing: they cherish and protect remnants of wildness that they will never visit, just to know such places exist (Nash 1973).

Caves are occasionally subject to outside threats: quarrying, land development, sewage, runoff from logging, and the like. Someone, somewhere, is shifting costs or byproducts onto the cave. Economists call this *externalizing* costs: my chemical plant makes me a profit and a wage for my employees, with one small detail: we externalize some nasty costs into a circular

depression on my property. Now, about the many benefits of polyvinyl chloride. Not so fast, shout the cavers. That depression is part of a karst *system*. The public is mobilized, letters are written, and eventually costs are internalized, reduced and absorbed, and the cave stream runs clean again.

To educate the public to action, we tell about caves. Caves are dark places full of neat things. Big rocks. Speleothems. Bats. Mud. Isopods. Groundwater. Extremophiles. The audience is leaning forward; they are intrigued. Give us more. And our enthusiasm comes forth. Not only are there caves, we say, but *caving*. Mystery. Excitement. Dangers overcome. Adrenaline. Helmets. Carbide lamps. Rappel racks. Big pits. Booty in the survey book. Old Timers Reunion! It's not just a hobby, it's a lifestyle.

Now, 99.9% of the audience is thinking something like, "I'll write a letter save this cave, but my slacks are pressed, tee time is 10 sharp on Saturday and I will never, ever set foot in a wild cave." But notice how seamlessly we have segued from the explicit message *Caves are valuable and should be protected* to the implicit message: *Caves are fun places to go*. And we have to ask what happens when we broadcast this message to 270 million people, the current population of the United States. A land of quick fads and lingering subcultures. What happens over time? Let us consider a cautionary tale.

The multiple legacies of Edward Abbey

Societies take all sorts of unified actions to achieve goals. Some actions succeed, some fail. But the most peculiar actions are those that, when viewed from the future, do something unexpected. Those who study such anomalies call them *unintended consequences*.

We live in a mix of intended and unintended consequences. In the 1800s, there were societies dedicated to the propagation of wonderful things like carp, English sparrows, and kudzu. These were intelligent people. They had the best of intentions and scientific thinking (Tenner 1996). Thanks, guys!

In the social realm, scholars now believe that New Deal programs produced undeniable benefits in the 1930s but also cultures of dependency and entitlement in the '60s and forward.

Actions today that address these legacies may produce a few of their own. Does this mean we should not do things? Of course not. But we should try to make sure we are fixing the right problem and not producing more.

Ideas can have unintended consequences. Let us consider the idea of wilderness. The 1950's were the heyday of technological utopianism. Many believed that any place on earth could be brought to perfection by the application of concrete, asphalt, gasoline (with tetraethyl lead, of course, for High Octane), napalm, and American Ingenuity.

Edward Abbey disagreed. He built from the foundations of John Muir, Aldo Leopold, and others and took the philosophy of wilderness to a mass audience. In his *DESERT SOLITAIRE* and other books, Abbey showed the intrinsic values of wilderness and demanded that it be experienced on its own terms: no road building. *Get out of your car and walk.* This change in thinking led to many benefits. Wilderness faced external threats: excessive logging, mining, petroleum extraction, development. Abbey and others catalyzed unprecedented support among the populace, and lawmakers, for protecting wilderness from external threats.

But there was another threat that took time to become visible: an unintended consequence. It was the impact of hundreds, then thousands, then millions of boot soles walking through wilderness seeking the values that Abbey suggested could be found there.

The Utah slickrock country that Abbey praised is becoming overrun and overpopulated. One observer claims, "Edward Abbey caused it more than anybody. Everybody came in here with a copy of *DESERT SOLITAIRE* in his back pocket" (Weller). How's that for an unintended consequence?

By educating about caves (a natural feature), do we also risk popularizing caving (a human activity)? Caves and cave owners can only take so much traffic, as this letter to the NSS suggests:

"It is with regret that we must inform your society and any associated groups that henceforth we are denying admission to [the cave we own].

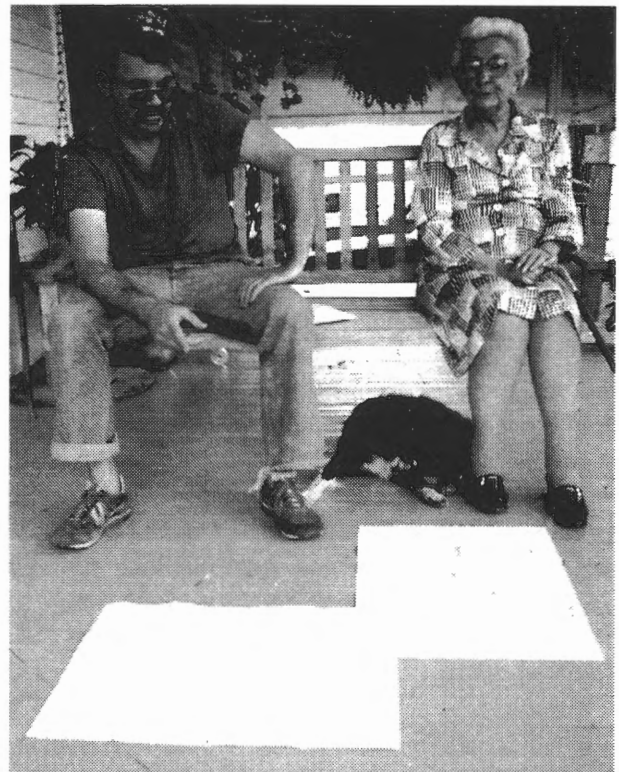
There has been a great increase in visitors from far and wide in recent years, and along with that

have come abuses of the site and unannounced visits. Though well intentioned, we feel part of the problem has probably been due to the increased knowledge of the site from your guide books.

And, more specifically, the liability insurance costs associated with any public access have risen beyond that which we can absorb." (Taran 1987)

Cavers are always talking about caves, and themselves, but what about cave owners? What do they think about all this advertising? Oh, I meant to say *educating*.

Cave owners: the unconsulted recipients



A Kentucky cave owner is briefed on the latest mapping in the 11km cave underlying her land. With a growing town nearby, what does she think of education about caves? On one hand, it may result in more responsible visitors. On the other hand, it may result in more visitors. (J. Ganter photo)

Cavers often act as if we are in charge of caving. But perhaps the most important people in caving are not cavers, but cave owners. We sometimes forget that 90% of caves in the US are on private property (Thorne 1987). Lots of individual cavers and clubs have excellent relationships

with cave owners, but we don't know much about them as a group.



A West Virginia cave owner supervises as a caver maps a very small cave under his farm lane. Other caves on his property are much more appealing and receive visitation. Located just a few hours from the populated US east coast, West Virginia landowners are under increasing pressure by visitors with diverse interests and not always the best behavior. (J. Wetterling photo)

My impression from talking with a small sample of cave owners is that they are concerned about traffic to their caves and their own liability. Cave owners tell me, *a few of you cave explorers are fine. You all seem to know each other and respect the land, the cave, and me as a landowner. Seems like there is peer pressure to behave. But the others have started to show up. They got all the fancy gear, they got their group, but they don't show the respect of cavers. That's a hard thing to teach. I have to start being a policeman, and that's not my job. And if a lot of folks show up, it's just too much trouble even if they behave well. This is our home, not an amusement park.*

Earlier I gave the example of a chemical plant externalizing costs onto others. Do we as cavers externalize by-products of our education onto cave owners? The cave "owner" is really a surrogate for the cave itself. Visitors who overrun and disrespect a cave owner will do the same thing to the ancient cave.

Conclusions

I believe that increasing "education" about caves has many benefits and some significant costs (see my 1992 article for lists of each). I think that we should try to emphasize the value of caves and karst independent from the activity of caving.

Those with genuine interest can be directed to the wide-open doors of the organized caving community. But we don't have to set up huge billboards pointing to those doors or brag about our exploits next to the glossy ads for sport utility vehicles.

The author of the book about springs had worked himself up. These springs are under attack, he informed me. We must educate ourselves and others about the springs, and do something. What he seemed to miss was that the springs themselves were not the problem, it was human traffic to the springs. Traffic that was exhausting the spring owners. Traffic made up of people who *first* cared that they wanted to swim in a spring, and *second* cared about the spring, and *third* about the landowner. What the author seemed to miss was that his book was going to increase traffic to the very springs that he valued. He wanted somebody to do something?

Lots of somebodies doing things was the *problem*, I reflected. Like publicizing springs without their owners' consent. The author would take the book profits while externalizing the costs onto the spring owners. It resembled corporate culture at its worst, but here was an individual "educating" and feeling self-righteous in the bargain.

Yes, I thought, we could pass more laws after the fact. But there have been laws against trespassing for some time now. Well, he wasn't getting my money. I would visit no hot springs. I put the book back on the shelf and walked out, wondering idly if there was some lesson for cavers here. Is there?

John Ganter is a member of the National Speleological Society (NSS) of the USA. He currently lives and caves in the arid southwestern US (Albuquerque, New Mexico) where most caves are publicly owned, gated, and managed. Many of his projects, however, have been in the eastern US (West Virginia and Kentucky) where almost all caves are privately owned. He can be reached at ganter@etrademail.com

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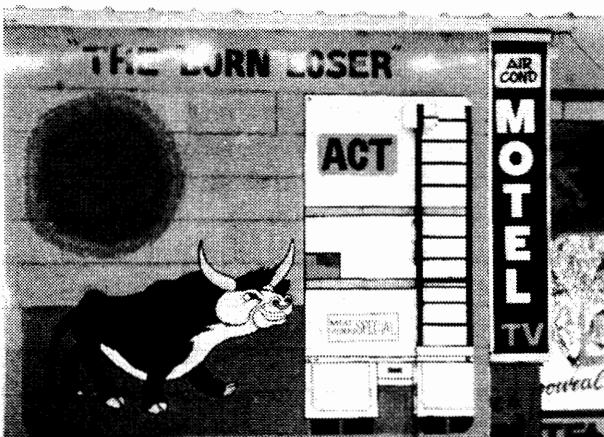
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Camooweal Caves

By Stefan Eberhard.

Camooweal is a one pub township on the Barkly Tableland in north west Queensland. This is cattle country - a land of rodeo, XXXX beer, diesel, dust and flies. Camooweal, established in 1884, was an important trading center in its early days. The township straddles the Barkly Highway near the Northern Territory border. Most of the traffic on the highway passes straight through, on its way to somewhere else. At first glance there doesn't seem to be much worth stopping for - a line of disheveled buildings huddled alongside each side of the main street. Behind the washing hung to dry on the back fences is a vast treeless grassland and low woodland that stretches beyond the horizon. People have died from thirst and heat exhaustion in this country. During the monsoonal summer it can be unbearably hot and humid, whilst in winter chill southerly winds blow from the Australian Alps. At other times, usually dawn or dusk, there is a softness and tranquility that defies the harsh extremes.



"The Born Loser". Shell Roadhouse at Camooweal.
Photo by Stefan Eberhard.

Whatever emotions are conjured by this landscape and environment, they exert a powerful influence

on people who have spent time here. At one end of town a sardonic message is painted on the wall of the last service station. It says,

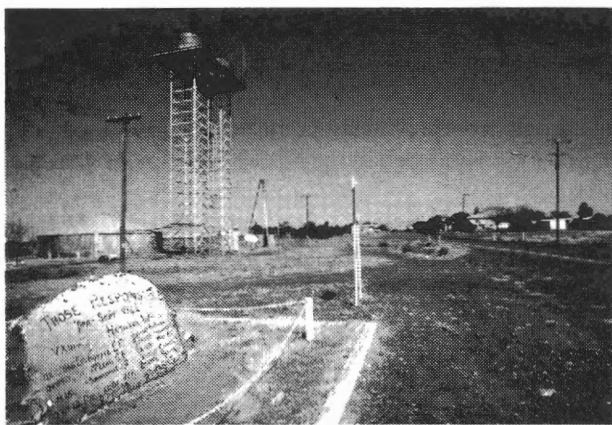
*"The Born Loser
45 degrees again!
Thank God I'm leaving Camooweal forever".*

The wry humour is pervasive. One of the roadside attractions is the "Buffaroo", a grotesque concrete statue of a kangaroo with Buffalo horns! Another claim to fame is that Camooweal comes under the jurisdiction of the Mount Isa City Council - this makes Mount Isa the largest city (in area) in the world and the Barkly Highway between Mount Isa and Camooweal the world's longest main street at 188 kilometres!

During World War II, the Barkly Highway was constructed as a supply route for Allied forces in northern Australia. Camooweal was one of the bases used by the road construction crews, which included a contingent of army engineers and Italian POWs. At the other end of town is a stone memorial. The rough carved inscription states, rather laconically, *"Those Responsible.... April - Sept. 1944"*, followed by a dozen names including rank and serial number.

No explanation is given for what *Those Responsible* actually did, but there are plenty of rusting relics in the form of thousands of tar drums, dumped into sinkholes and cave entrances, and scattered for some miles down the road toward Mount Isa. The remains of the POW camp can be seen on the way to Four Mile East Cave.

A dreamtime legend of the Injilujji and Thethanu people of this area ties the caves of the Barkly Tableland to a giant ridge-tailed monitor (QNPWS 1997). Apparently in one such cave lies a mystery where animals sense a presence far below! In Great



Camooweal main street and memorial to Those Responsible. Photo by Stefan Eberhard.

Nowranie Cave that presence might be the owl or large carnivorous Ghost Bats that roost there during the day and emerge to hunt at night. The fresh remains of the previous nights prey – feathers, fur and bone – may be seen scattered on the floor of the giant entrance portal into Great Nowranie (see back cover for photo supplied by Stefan Eberhard).

The earliest reports on the Camooweal caves go back at least 100 years. During the late 1960's and 1970's a great deal of cave exploration, survey and documentation was carried out by the University of Queensland Speleological Society (UQSS) and other caving groups. The maps published by UQSS and others showed dry passages ending in large sumps at the water table about 70 metres below the surface – an inviting prospect to cave divers. South Australians, Karel Lengs, Ian Lewis, Terry Reardon and Dave Warnes dived Hassel's Cave, Niggle Cave and another, still to be identified, cave during 1984. Despite evident potential the Camooweal caves then sunk back into relative speleological obscurity, although the Camooweal Caves National Park was established around Nowranie Caves, and caving has remained popular with some of the local populace.

I first visited Camooweal in 1993 with PhD student Russell Drysdale and Dr David Gillieson, a UQSS member from the early days and Russell's supervisor at the University of New South Wales. Russell was studying the massive tufa deposits at Lawn Hill, situated about 150 km north of Camooweal. The tufa was being deposited by carbonate-rich spring waters emerging from the edge of the Barkly karst. Our curiosity was piqued on the possible source of the spring waters. As we descended into Great Nowranie Cave, the well developed drainage gullies leading into the large entrance shaft, combined with flood

debris stranded high up on the passage walls, were a sober reminder of the terrific quantities of water which occasionally pour into this cave during wet season floods. I have heard the Camooweal Caves referred to as giant plugholes, a not inappropriate analogy considering that some engulf runoff from the black soil plains around a 360 degree arc.

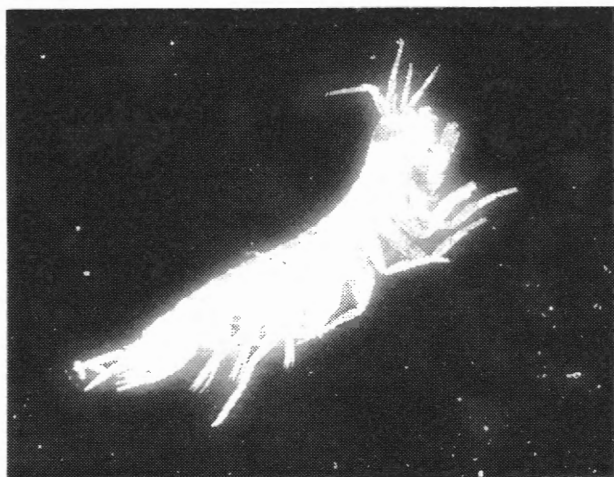


Tufa dam and waterfall, Lawn Hill Creek. Height of the dam wall is about 3 metres above water level. Photo by Stefan Eberhard.

The map we had showed Great Nowranie terminating in a small muddy sump at the base of the last pitch. I had a facemask and waterproof torch with which to check out the sump, which turned out to be an easy short duck. I surfaced in a small pool on the other side and found myself eyeball to eyeball with a snake. Thankfully it was only a small python, albeit a hungry one, since lots of snakes, frogs and other creatures get swept underground during floods then slowly perish in the darkness. Climbing out of the pool which had the snake I entered a crawlway that wound its way along for some metres before dropping into another, deeper pool. Peering beneath the surface I saw what I had been fervently hoping for, the torch beam swallowed up by an unexplored underwater tunnel!

Swimming about in the water were many small white crustaceans that had no eyes. These creatures have been identified by Dr John Bradbury from the University of Adelaide as a new species of amphipod that is closely related to a species that inhabits the Chillagoe caves 600km to the east. Both species are today confined to the refugiums of their respective underground waters, living relicts that have survived extinction of their surface dwelling ancestors. Relict cave dwelling species like these amphipods can tell us a lot about the ecological history of Australia.

The distributions of the Camooweal and Chillagoe species extends more to the north – by many



Camooweal cave amphipod. Photo by Stefan Eberhard.

hundreds of kilometers – in Australia than any surface aquatic amphipod. An explanation for this is that freshwater amphipods are not common in subtropical and tropical waters and only subterranean waters in these regions provide the lower temperatures and more stable environmental conditions required to support amphipod populations (Bradbury & Williams 1997). The Camooweal and Chillagoe species are derived from old freshwater ancestors that once occurred on the surface at both locations in the distant past. Bradbury & Williams have suggested that a succession of favourable (wetter and colder) and unfavourable (drier and warmer) climates during the previous 65 million years or so, could have driven surface populations to seek subterranean refugia. The surface dwelling ancestors became extinct whilst the subterranean populations survived and gradually evolved into new and highly specialized underground species.

On my next trip to Lawn Hill in 1996 I dropped in at Camooweal again and checked out the sumps in a number of other caves, including Little Nowranie, Niggle, Marcus Mice and Four Mile East Caves, reaffirming that it would be worth returning to these sites with diving equipment. In Marcus Mice Cave I explored a long narrow muddy fissure at sump level that was not shown on the existing survey. The upper vertical sections of the caves are clean and well scoured, but the lower levels and sumps collect much silt. Camooweal offers good quality caving experiences, the caves are physically challenging whilst the light-coloured, water-smoothed rock is aesthetically pleasing and solid to climb upon. In 1998 I returned with diving equipment. Robyn McBeath was my companion on this trip, and together we carried gear to the sump in Great Nowranie Cave. The route involved two vertical

itches, some rockfall and squeezes, a roof sniff, and then a rather squalid grovel along a low muddy tube – all fun sporty caving but hard work with heavy gear.

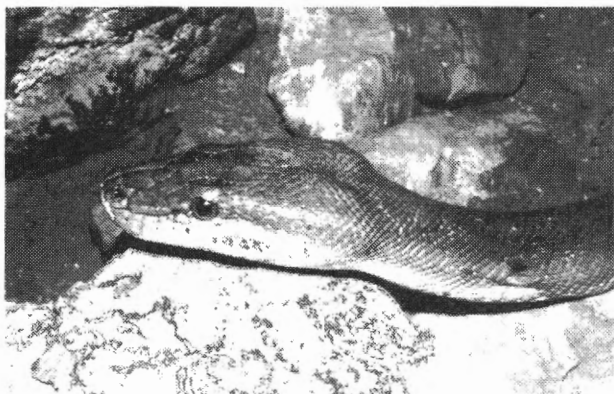


Second pitch Great Nowranie Cave. Photo by Robyn McBeath & Stefan Eberhard

To my initial surprise on first entering the sump the passage plunged straight down a vertical shaft. The walls were cloaked in dark sediment, which when dislodged rained down in a cloud that obscured visibility. The scene was rather gloomy as I sank down the narrow rift ahead of the enveloping silt cloud. It was a relief to find the bottom at 29 metres depth, where leading off horizontally was a tunnel about three metres in diameter. The visibility improved and as I swam further in I could hardly believe my luck as the tunnel continued at the same moderate depth, with no serious obstructions.

Having a limited number of air cylinders but no compressor to refill them with, we managed two more dive trips into Great Nowranie. The line was taken a distance of 300 metres into the sump, where the tube continued in much the same fashion with no apparent end in sight. I admit to feeling quite exhilarated, since I had hardly dared to hope for something like this – an open, going conduit draining the Camooweal karst!

On this same trip Robyn and I also visited some other caves. Hassel's Cave was dived by Dave Warnes in 1984, who reported it as being silty and somewhat treacherous because the narrow walls pinched inwards at several spots thus potentially causing entrapment if a diver wasn't careful. In the entrance we found the recently shed skin of a very large snake, but no sign of its previous owner – the Olive Python which can grow to more than six metres. Inside the entrance a 25 metre pitch lands on a pile of loose rocks jammed in a narrow fissure, where care must be taken not to dislodge the rocks down the next 17 metre shaft that drops sheer into the water. Underwater I followed the fissure straight down to an apparent blockage at 34 metres depth. The fissure also extended horizontally in both directions, but fine silt quickly obscured the visibility. As Dave had intimated, Robyn and I also found this cave slightly ominous.



Olive Python in a cave near Lawn Hill. Length of snake about 5 metres! Photo Stefan Eberhard.

In Five O'Clock Cave the sump at the bottom had a strong air draft roaring through a small air gap, so we ducked through and explored the long horizontal extension beyond. From where Ken Grimes 1980 survey had paused (at 5 O'Clock = Beer O'Clock perhaps?) we followed the passage some 300 to 400 metres further to the brink of a shaft that we did not descend owing to the high levels of Carbon dioxide. The shaft dropped about 15 metres into a pool or sump.

The large sump pool in Niggle Cave is known as the "Melting Pots" and has a quite unusual appearance, being divided in the middle by a thin, almost elegant, bridge of rock. It was dived by Terry Reardon and Karel Lengs in 1984. Terry reported a large silty chamber some 20 metres deep, containing a blind upper level lead and another lead at the bottom. A short distance back upstream from the Melting Pots is an inflow leading to the base of a high aven. Robyn and I climbed up the aven a long way until

the walls became smooth and overhanging at a point we estimated to be not far below the surface.



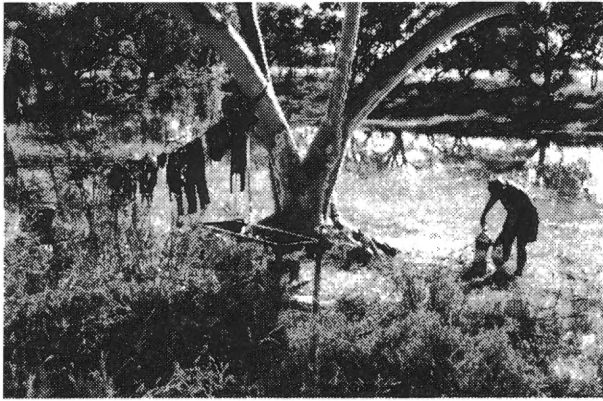
Niggle Cave entrance alongside the Barkly Highway. Photo by Stefan Eberhard.

The UQSS map indicates this point to be immediately below Tar Drum Sink. If this connection could be forced through it would greatly ease the task of getting dive gear to the Melting Pots.

During July last year Robyn and I returned to push Great Nowranie Cave with Perth diver Carl Close. Over a number of days we extended the line to a silty "dead end" 500 metres from the start of the dive. We were anticipating an underwater connection with Little Nowranie Cave that is situated close by and developed along the same geological joint as Great Nowranie. The connection did not eventuate on this occasion as the direction of the underwater tunnel departed from the orientation of the main joint and meandered away to the south instead. A passage branching off at the 90 metre mark led into a vertically ascending rift. Another passage near the 150 metre mark trended in a northerly direction.



Diver Carl Close. Photo by Stefan Eberhard.



Filling tanks at Nowranie Creek campsite. Photo by Stefan Eberhard.

The Nowranie cave system is developed along a prominent joint set that has an orientation of approximately 60 – 240 magnetic bearing. Joint control of passage development is clearly visible in the upper levels of both Great Nowranie and Little Nowranie Caves. The large entrance tunnel of Great Nowranie follows this joint system, as do the narrow vertical or sub-vertical fissures developed deeper inside both caves. Narrow zones of phreatic tube development occur at three distinct horizontal levels in the vertical profile, at about +7m, +20m, and +40m above present water level. The tubes are developed along bedding planes in the nearly flat lying limestone strata. These fossil levels indicate higher water tables in the distant past, possibly during the Tertiary when conditions were less arid than present (Grimes 1988). In Great Nowranie Cave, the active level of phreatic tube development is now 25m below the present water table. The fossil levels and associated phreatic tubes can also be seen in the other caves at Camooweal.

The destination of the groundwater draining from the Camooweal karst remains somewhat of a mystery. The hydrogeology indicates the regional gradient of the water table, as measured in bores, is southwards, so water movement must be in this direction. Grimes (1988) therefore postulated that the Camooweal groundwater might eventually leak vertically upwards into the overlying aquifers of the Great Artesian Basin. The major surface watercourse at Camooweal is the Georgina River that drains south through the Channel Country into the Lake Eyre Basin. Henry Shannon has raised the possibility that the caves may drain in a different direction altogether. To the north, the relict riverine gallery palm forests at Lawn Hill Creek and

Gregory River are fed by karst springs that emerge from the edge of the Barkly Tableland. Although these spring waters may not be directly connected to Camooweal itself, the Barkly Tableland is the largest area of continuous carbonate rock in Australia beyond the Nullarbor Plain. Whatever the source and destination of these groundwaters, the absence of springs near to Camooweal indicates that potential for long penetration cave dives exists.

For me, the underwater exploration and survey undertaken in Great Nowranie Cave represented the culmination of four separate visits to Camooweal over an eight year period. The mapping project showed, to our initial surprise at least, that the underwater tunnel does not trend in the same direction as the air-filled passages. Future dive exploration and underwater survey may help in better understanding of the local hydrogeology. The discovery of an extensive zone of active phreatic cave development occurring some 25 metres below the present water table may be of some relevance to greater understanding of the evolutionary development of the Camooweal karst. The well-preserved fossil phreatic levels and the relict groundwater fauna underscore the significance of these caves as valuable storehouses of information on the evolutionary history of northern Australia over several millions of years. These small but ancient fragments of ecological and geological history form an important ingredient of my own fascination with Camooweal, and, one of the reasons I keep venturing back there. As we departed Camooweal this last time and headed toward the comparatively Edenic oasis of Lawn Hill, Robyn remarked dryly, "Thank God I'm leaving Camooweal forever". I smiled and thought about my next trip there.

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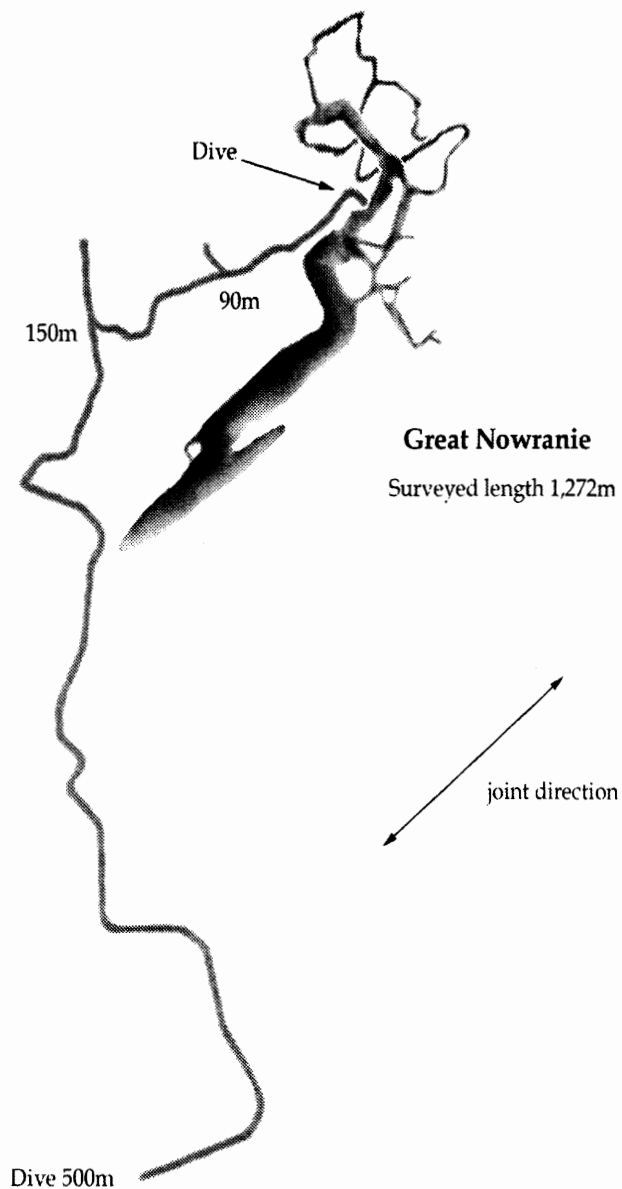
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NOWRANIE CAVES

Camooweal, Queensland



Little Nowranie
Surveyed length 173m



GN

Plan view

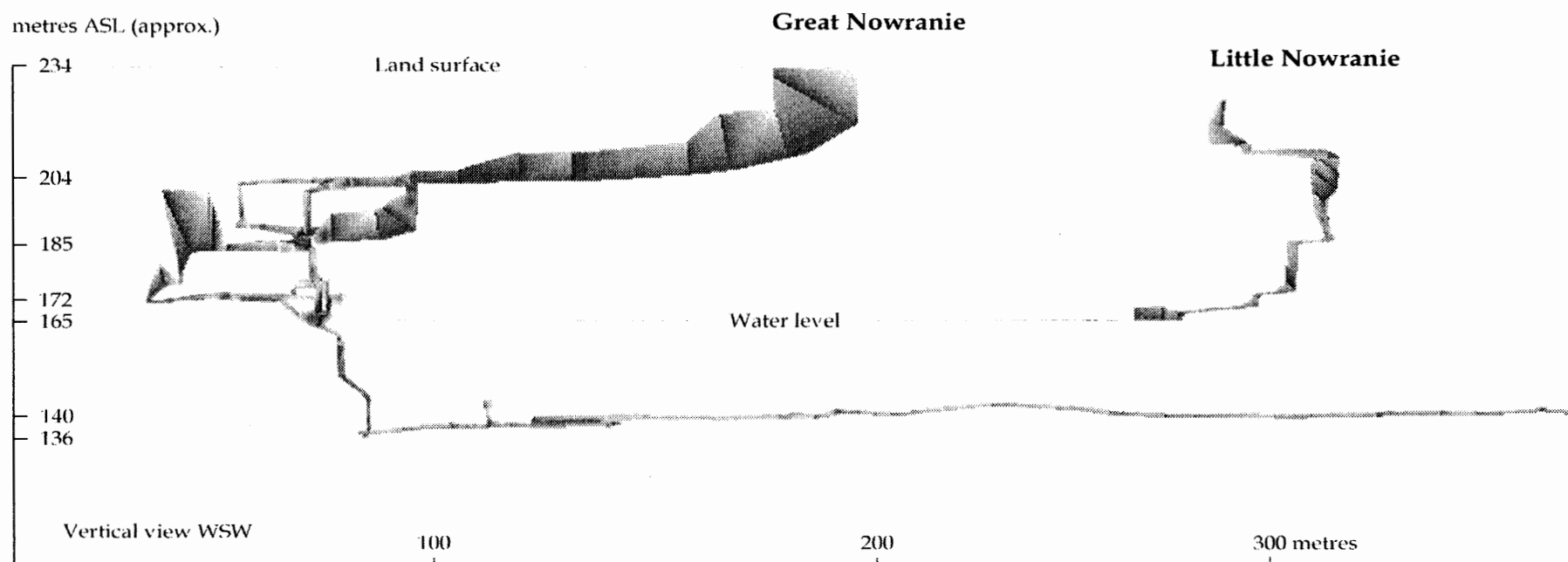


Instruments (above water):
Fibreglass tape $\pm 0.1\text{m}$, compass & clinometer $\pm 1^\circ$
Underwater:
Depth gauge $\pm 0.1\text{m}$, compass $\pm 5^\circ$
Software: On Station 3.0a

Surveyed July 2000
Stefan Eberhard
Carl Close
Reto Zolinger
Robyn McBeath

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NOWRANIE CAVES - Camooweal, Queensland



Instruments (above water):
 Fibreglass tape $\pm 0.1\text{m}$, compass & clinometer $\pm 1^\circ$
 Underwater:
 Depth gauge $\pm 0.1\text{m}$, compass $\pm 5^\circ$
 Software: On Station 3.0a

Surveyed July 2000
 Stefan Eberhard
 Carl Close
 Reto Zolinger
 Robyn McBeath

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Book Review

Dark Zones: "Exploring Caves"

by Julie Haydon.

Published 2001 by Nelson Thomson Learning, 102 Dodds St., South Melbourne, 3205.

ISBN: 1 86961 489 5

Price: \$12.00 Australian.

This is a small (33 pages) introductory book about caves for children and young adults — something that cavers tend to shudder away from! However, do not be put off by the rather lurid cover; inside is a text that manages to instruct as well as arouse interest and which has none of the sensationalism that one sometimes meets. The photographs are excellent; some are by professionals (including some you may recognise from other books) and some were contributed by Australian cavers, such as Norm Poulter and Ken Boland. I should admit to possible bias here — there are also some photos of mine!

Julie did some serious research and turned up at a meeting of the VSA asking for advice - which she got! She has obviously listened to what they told her. However, the book is aimed at a world-wide audience, so there is little specific information about Australian caves.

The book is glossy with all pages in colour, including colour (or black) backgrounds to the text. Fortunately, the graphics designer has avoided some of the problems that can result from this and the text is all quite decipherable. There are 10 chapters, each running from one to five pages, though the contents sometimes drift away from the chapter title. Half or more of each page is taken up with photos so the text (and science in particular) is fairly basic, a necessity given the age of the audience and the limited size of the book. But all aspects of caves that we would expect get at least a brief coverage. Most of the photos are quite relevant to the section they appear in.

The chapters comprise:

- What is a Cave? — definitions and a section on how caves are formed with a pair of block diagrams to illustrate underground solution.
- Cave Formations — a couple of pages on stalts etc. (including **that** Poulter straw photo), and then breaks to a pair on Other Types of Caves (Sea caves, Lava caves and Glacier caves) which might have been better in the previous chapter.

- Cave Inhabitants — Defines Troglodenes etc, and has a good double page on bats. Examples include photos of both Australian beasts (possum) and overseas (bear) as well as various invertebrates that could be from anywhere!
- Food Chain — essentially a "who eats who" of the underground.
- Caving — Lists personal & group equipment, potential dangers, and safety rules. Here and in the following chapter there is an emphasis on group activities and the need to learn from experienced leaders. I was fairly happy with the overall tone of this, it is not going to encourage kids to go racing off on their own.
- Caving Techniques — walking, crawling, climbing and diving(!). The treatment of the last should cool off most newbies!
- Getting Started — Join a club, take guided wild tours, practice above ground, read on the internet & books.
- What is a Speleologist? — What scientists do in caves (very brief).
- A Fragile Environment — Cave softly, with brief guidelines.
- Famous Caves — Carlsbad, Waitomo, Chattanooga and Sarawak Cavern. (Mammoth (US) and Lascaux have been mentioned earlier. Australia dips out (which is perhaps a good thing?) but Australian cavers will recognise some of the photos (which do not have their locations indicated).

There is also a 31-item Glossary of terms ("abseil" to "twilight zone"), A three-item "further reading" list, a list of web sites (Australian and overseas) and an index. Scattered through the book are a series of "Cave Quiz" boxes - with simple questions (e.g. what is the difference between a cave and a mine?) and the answers (printed upside-down).

Recommended for your caver-kids, for schools and should sell well at "kiosks" at commercial caves and cave-oriented National Parks. The publishers appear to specialise in school books, so this book may not appear in normal bookshops unless you ask for it.

Review by Ken Grimes.

Ashford Caves new home under the NPWS.

Report by Jodie Rutledge (NHVSS).

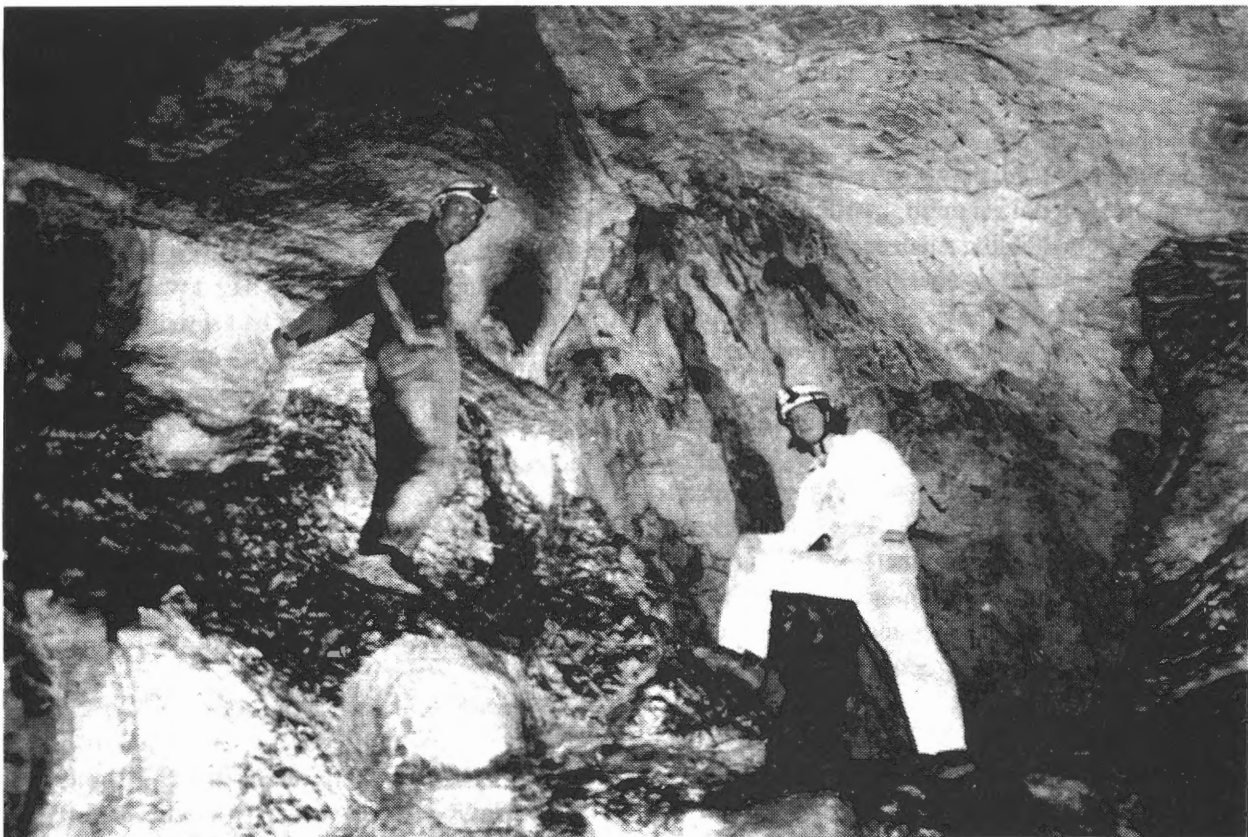
Ashford Caves are now part of the newly formed National Park, "Kwiambal National Park" (pronounced Kigh-am-bal) and are located about 90km north of Inverell in Northern inland NSW.

Recently, the Newcastle and Hunter Valley Speleological Society visited Kwiambal National Park and the caves, and were pleasantly surprised. The area's biggest known cave, "Ashford Main" is around 578 meters and consists of large walkthrough horizontal chambers and halls, some chambers reach heights of over 10 meters. One chamber in particular has a day-light hole way up in the ceiling which desends a spectacular ray of sunlight into the room at noon. The cave was used in the past for guano mining and has a dry dusty feel about it, but upon closer inspections a small amount of active formation and flowstone can be seen.

Ashford Main is also home to Many Eastern Horseshoe Bats, around 100 individuals were noted of this species on this visit. While many hundred Large bent-winged bats were also noted.

While this one cave plus the other three that appear on the Karst database might not be enough to constitute a full weekend of caving, there's plenty of other activities in Kwiambal National Park to keep the troops interested. The Park is located at the junction of the Severn and McIntyre Rivers and has some wonderfully deep granite plunge pools to go swimming. There's also some great abseiling spots around the park (we went abseiling opposite the Cascades Water Falls Lookout). The Park's only camping area is also spacious and right on the Severn River, complete with some rapids (we're taking lilo's next time!).

At the time of writing this there were no camping or car fees for use of the Park. There was no permit system in place to organise our caving or abseiling activities within the park, we had verbal permission from the office in Glenn Innes but I would advise to ring well in advance in case this changes. For more information or if you would like a visitors guide to the Park, contact the Glenn Innes Office of the NSW National Parks and Wildlife Service on (02) 6732 5133. For a revised map of 'Ashford Main' watch out for the next Newcaves Chronicles Magazine.



Luke Buckingham and Mike Helman from NHVSS in 'Ashford Main'. Photo by Jodie Rutledge.

The View from the Top, or Whence Cometh the (Inside Front) Cover Picture.

Rudy Frank 19th July 2001



Clay dam Doline with fish-eye lens. Photo by Rudy Frank.

Having worked for many years in a technical support capacity for archaeologists and taken the odd photograph from a plane, off a roofrack, standing ontop of a ladder with a camera on the end of a 3.6m painters pole shouting, “when the camera looks like its not wobbling squeeze the bulb hard (of the pneumatic release), we occasionally toyed with the idea of kite photography... but a little thought suggested it all might get quite large and complicated.

In 1999 excavations at Marki in Cyprus, for which I’d done the finds photography for 6-odd seasons, were drawing to a close so some final overall aerial shots would be useful. So as a token gesture I picked up the “Rhino” remote from my favorite electronics junk—and—odd-things disposal dealer—Oatley’s—and mucked around with it a bit. It worked to around 100m... enough, but only just.

In August 1999, quite by accident, I visited my workplace, (the Archaeology Department at Latrobe Uni) on Open Day. Not really in a good mood, as I walked in the door I saw folks across the lawn flying kites, I thought to myself “maybe?”, then “no, bugger it got enough to

do!”, went inside, changed my mind, came out again and wandered over for a chat. Quickly the bloke said “you need one of these”, pulled what looked like a sleeping bag out of his trailer, extracted the deliciously pink thing out of the bag and then ran round the lawn ‘til it was flying. No bits of stick or anything, straight out of the bag. I was hooked, they were happy to sell, as they had sewn a more rugged one recently so it gave them cash to make more kites. They suggested I meet them down at Elwood where they fly regularly, this I did. I parted with my money and went home with a satisfied smile.

In September 1999 Bruce Downes was running a quiet trip to the Nullarbor, a great excuse to get out there again, so I tagged along thinking maybe good place to try out this kite stuff.

At Murra-El-Elevyn Cave, out from Cocklebiddy, WA, I was not too fit and out of caving practice, besides I’d been to the bottom in ‘77. Having never flown the kite before, and with the crowd of potentially “too helpful” onlookers down the cave, I could quietly give it a go with no risk of embarrassment if it blew off

over the horizon or tied me up in knots. I gave the kite a burl and it flew fine.

Later that day while the keen ones were down in Capstan Cave (6N50), I pottered around the back of the ute with me electric drill getting the camera and ancilliary junk holder together so as nothing could drop off. 350 grams of SLA battery from 100 metres doesn't auger well.

A few days on, I spent a pleasant afternoon in the sun at Mullumalang Cave (6N37), I much improved my flying skills and confidence, having kept a two litre Patra bottle of water aloft for a considerable time in a goodly breeze. This flying also had a bonus for the others — up near the Kestrels about 6 km to the north, they could see what direction home was.... (in case their GPS failed?).



Flying the kite at Wigunda Doline. Photo by Rudy Frank.

On the way home we lunched at Koonalda Cave, (5N4), by which stage the whole system was reasonably set up. I was keen to get a shot, but the main limitation with kite photography raised its ugly head. Little or no wind, no flying! So inspite of knowing it was hopeless, I tried with some frustration to get it up -- hoping in vain there might be a bit more breeze higher up.

That afternoon setting up camp near Clay Dam Doline (5N16), a good breeze sprung up.

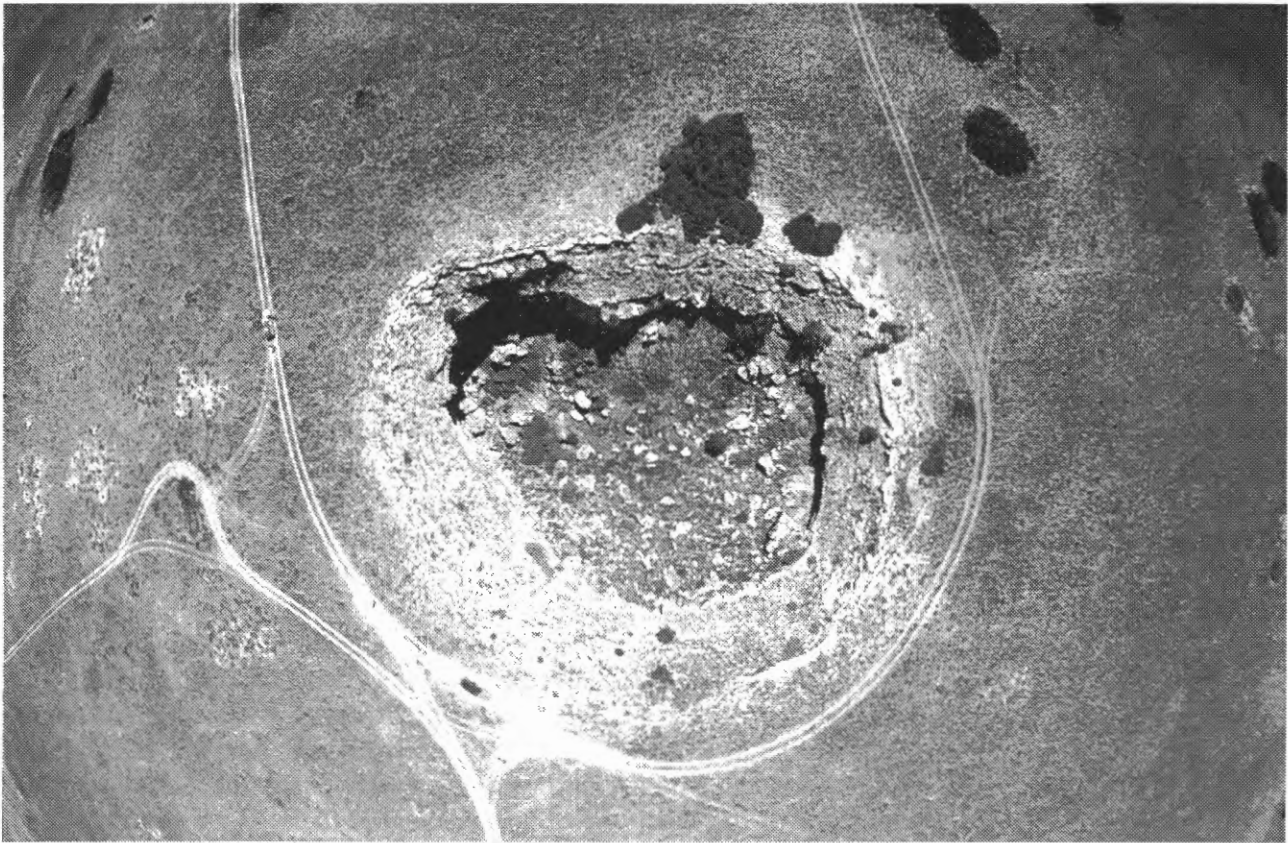
In a fit of enthusiasm, Daryl — with great faith — bolted his video to the kite. I offered lots of care but no responsibility, so away we went. Made some quite unsettlingly interesting dynamic viewing of the 'evil gullet' of a hole that Clay Dam Doline is.

The following day at Wigunda Doline (5N-147), we were waiting unawares, an incoming front caused a highly variable breeze, occasionally dropping to very little, causing me to either run like buggery or haul in the line to keep camera aloft and not crashing into the doline or onto Daryl's new Prado. Had we been there an hour later, we might have seen kite and camera head for the horizon as the front struck.

A later Nullarbor trip up Old Homestead way, flying with a beautifully smooth wind on high and virtually none at ground level, as the wind waned a little the camera would gracefully descend to sit on the ground, look around a little, then nonchalantly slowly rise again to the heavens.

Later the same day it was a dullish cloudy late afternoon — but I predicted that as the sun approached the horizon the campsite would come a blaze as the sun's setting rays shone through beneath the clouds with rich tones of red and long deep shadows: possibly a stunning image. However I had not counted on the 10 or 15 metre high "ridge" a kilometre to the west, which as the sun set, cast the whole camp into deep shade, bar for the brilliantly lit, top of Ken's plane trailer.

Later that evening, under the influence of a full moon (and ??), various light



Wigunda Doline. Photo by Rudy Frank.

emitting devices were hoisted into the heavens, some falling from grace and hitting the ground a little bent. Later yet — boys will be boys — “Didn’t you have a flash on your flying camera, well I’ve got a good flash slave...”, “And so have I!”. So various adults were seen wandering around the campfire in the semi dark with cameras and flashguns mumbling f-stops and distances, I got kite and camera up again and much flashing ensued in the moonlight, unfortunately to cover for errors of judgement I put on the fisheye lens, so the objects of interest were a bit small in a large black image.

Travelling back home Marg, Daryl and I dropped in at Fowlers Bay, maybe no caves, but a fine limestone clifly coast with some real cute examples of multiple mini blowholes in the rock platforms. At Fowlers Point, perched atop the cliff are the remnants of a stone structure likely to have been a 19th century whalers’ lookout, of interest to a colleague. Great potential for an aerial image, so we packed lunch and you guessed it — 6 or 8 km later not a breeze. As I recall Daryl had a snooze in the sun while I waved a monopod in the air and Marg pushed the button.

Archaeologically, at the end of 1999 I spent a season both in Jordan and Cyprus with either no

wind at all or a little at the wrong time, getting no images. Fortunately in December 2000 in Cyprus I managed out of two flying sessions to get adequate shots in B&W and colour. The poor buggers holding/positioning the kite had an interesting time being encouraged across ploughed fields dodging ancient olive trees, fording shallow streams and weaving through orchards. Illustrative of the many variables and serendipitous nature of kite photography, in each case only one image out of about 10-odd covered exactly the area required.

While kite photography can get a quite vigorous (lay out 200m+ of line, run back tie on the kite, let it up a bit, hang on the camera, continue letting it up as you walk/jog back 200m, move the lot to where you want it, take a photo, tie off the line, pull down the kite as you walk another 200m, detach camera, bag up kite, walk 200m to end of line, remember you left the line reel 100m away etc.) I feel kite photography, Nullarbor (lack of trees) style, has excellent potential for quality armchair caving. You potter out to your favorite piece of karst landscape with a comfy chair, a good book, lots of fine teas and coffee and hope for a good breeze.... “Hmm... maybe in a day or two...” then move on to another site and repeat the process.

More seriously though I'd love to be at the top of the Nullarbor cliffs with a stiff northerly blowing, sending camera and kite out to sea and get some interesting images of the cliffs.

PS. Just recently I have rearranged the remote control with a Futaba T2ER radio control system, again a disposal item from the same mob, whilst bulkier gives a better operating range; 400m+. Eventually this should let me both fire and rotate the camera both for framing and also taking oblique photos while camera is aloft.

Equipment

Camera: Pentax ME Super (a great workhorse camera, this particular one a bit battered having fallen off a motor cycle and over-exposed by a stop) with motor drive and a Sigma Ultra Wide 18mm lens, set to an aperture to give an automatic shutter speed ~ 1000th - 2000th sec.

Snippets from the Ether

Brian Clark appointed to manage Mulu Caves

Brian Clark has been appointed Manager of the renowned Mulu Caves in Sarawak from early in 2002. A recipient of the Public Service Medal, for many years Brian has been Manager of Naracoorte Caves in South Australia, overseeing major improvements in the infrastructure and interpretation facilities and, most significantly, the inclusion of Victoria Fossil Cave into the Register of World Heritage Properties. Only a few years ago Mulu was a three-day journey upriver from the nearest town of any size. Now readily accessible by air, it is one of Malaysia's premier attractions. Containing some of the world's finest caves and the largest cave chamber, Mulu is also a World Heritage property and will benefit greatly from an experienced manager like Brian. Our congratulations!

Death of George Huppert

We are saddened to learn of the death in a car accident in Arizona, of George Huppert, Professor of Geography at the University of Wisconsin. A caver for over 40 years, George continued an active involvement in the affairs of the National Speleological Society and was a Vice-President of the American Cave Conservation Association. Several ASF members met George and his wife Betty Wheeler at the recent IUS Congress in Brasilia and on the accompanying field trips, which they left early to return to the USA for a Board Meeting of the ACCA. The accident occurred on his way to a Cave and Karst Management Symposium at Tucson.

Film: Kodak E200 colour slide.

Remote Release: Rhino "car security/locking type". This activated a wee reed switch wired to a motor drive, powered by a 12V 0.8 AH SLA battery. Range ~ 100m.

Release Confirmation: A small flash was fitted to the camera to give visual indication of a successful release.

Kite: "Flowform" 2.2m. x 2.2m. parafoil(ish) type by "kites4kids.com.au".

Line: ~ 250m 3mm nylon cord, mostly tip recycled.

Weight: A revised system without the 12V SLA battery weighed in at 1.7kg.

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In The Pipeline

April 2002

NSW Speleological Council Meeting

Place: To be held at Jenolan Caves, the school house at the number 2 carpark.

Date: Saturday 13th April 2002, 10am - 4pm.

Contact: Megan Pryke [REDACTED]

Tenth International Symposium on Volcanospeleology

This is the first announcement to be made and more detailed information will be sent out later. The symposium will take place in Reykjavík, two days are intended for sessions on volcanospeleological issues, an excursion to the Reykjanes peninsula is being planned and additional cave trips will be organized. The final itinerary will be released soon. Those who are interested are encouraged to contact Sigurdur S. Jónsson, chairman of the ISS, <ssjo@os.is> to be kept posted on further development. The ISS and the symposium are being supported by:

- National Energy Authority.
- University of Iceland.
- Nordic Volcanological Institute.
- Icelandic Parliament.
- Icelandic Institute on Natural History.

A Note from the Publisher

This issue has been printed on gloss art paper which gives better quality pictures. To fund this and occasional colour covers we need advertising revenue, thus we require an Advertising Manager. Expressions of interest should be directed to Angus Macoun on [REDACTED].

UNDER WAY

24th Biennial Conference of the ASF
Bunbury, Western Australia
2–8 January 2003

Incorporating 3rd Australian Cave
History Seminar
and 6th Australian Karst Studies
Seminar

Visit the conference website:
linked to the ASF site, or

telephone [REDACTED]
email [REDACTED].net.au

NULLARBOR TALES:

**or, Why you might want to drive to the next
ASF Conference**

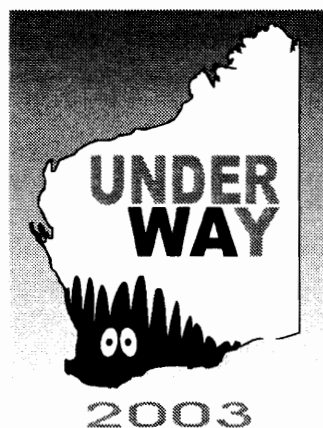
Are you coming to Bunbury for the Under Way conference next January? If you've been wondering whether to make the big road trip, here are a few stories to encourage you. Whether you're into "tourist" caving, exploration or scientific research, the Nullarbor offers something for everyone – and for a remote location, it seems pretty rich in activity and excitement!

Conference caving coordinator Jay Anderson (tel [REDACTED]) will be happy to facilitate pre- or post-conference caving on the Nullarbor for those who would like to meet out there. We understand some of the South Australian cavers have already expressed interest in getting a group together. So come on – cross the Nullarbor and check things out "Under WA"!

A CONFERENCE EXPERIENCE

by Vicki Bresnan.

Bang! New Years Eve fireworks in Sydney for the new millennium.



All too soon it was over to arrive back in Perth to the *Australian Caver* and an application form for the conference in Bathurst. I had never been to a conference and then my husband said "you should go to that it will be

interesting for you". What more does one want - green light means go. I was excited by the prospect of caving in another state and meeting other cavers from other clubs on the eastern seaboard. A fellow SRGWA club member (Norman Poulter) suggested a car going over. How nice, a 6 day conference with a few days post caving has turned into a 5 week trip, I wonder if I've still got the green light. Yes! Miles of support from my husband or perhaps he just wanted peace.

The thought of travelling all the way by road was very exciting. I have been across the country before. Flying, on the train one way or the other and, in my youth, hitch hiking when it was all a dirt road. My awareness is a lot different now than it would have been in my youth and I will be seeing things differently. The year passed by quickly and it was time to leave.

We visited caves on our way across the Nullarbor. The desert isn't as it sounds, barren and sandy. No! it has an awful lot of vegetation and being one enormous karst area some wonderful caves to visit. I had never seen the cliffs of the Great Australian Bight. That was a big bonus. We visited Max Meth Ceduna (CEGSA) and June & George McLucas in Adelaide, where we stayed for the night. They made us feel very welcome. We drove through the lovely vineyards of S.A to Naracoorte, vines as far as you can see. The wonderful town of Mt Gambier, and on to Princess Margaret Cave, Tower Hill nature reserve and Mr Eccles National Park. A swim in an extinct Volcano (before my time) and endless amounts of wheat belt and farm country before arriving in Sydney to have Xmas with Norman's family and friends. A stay for a couple of nights in the Blue Mountains on the way to Bathurst visiting the Wentworth and Victoria Falls to finally arrive at

the Conference venue at All Saints College.

I had a wonderful week Heard a lot and learnt a lot and met a load of great people I would never normally have met had it not been for the conference. I even managed to enter the prussick challenge and grab myself a third place. Abercrombie and Jenolan were just mind blowing for me having only caved in W.A. It was such a wonderful experience. The post caving lead by Angus Macoun was great. Thank you, Angus. It was over all too soon and we headed back to Perth in some disgustingly hot weather visiting Wellington Caves and more Nullarbor caves on the way back across the desert.

It's now for SRGWA and co host WASG to host the next conference and I feel so excited for all of you who may decide to travel by road to this great state of ours.

I could think of nothing better than caving on the Nullarbor. The vastness of the countryside, the nights spent under the stars, what a great place! Then, travelling from the Fyre Bird Observatory down to Esperance, maybe take in Wave rock on the way across to Albany, our tree top walk in Walpole and the wonderful Pemberton forest area before arriving in Bunbury. The travelling could take in so much.

I have so many wonderful memories. Damn! I wish I were you lot coming this way for the conference.

NULLARBOR HOLE-HUNTING

8-15 April 2001

by Fran Head and Ian Collette

Party: Bob Kershaw (leader), Tony & Anthony Pezzutto, John Redpath, Lloyd Robinson (ISS) Ian Collette, Max Hall, Fran Head (WASG)

In March, we were fortunate enough to receive, via Max Hall at Balladonia, an invitation to join a Nullarbor expedition being organised by members of the Illawarra Speleological Society, some of whom we had recently met at the ASF Conference. (Clear proof of the advantages of networking!) The Illawarra Speleos had two main objectives for their expedition:



Would you buy a used cave from these men? The Nullarbor mafia: left to right (standing), Tony Pezzutto, Lloyd Robinson, Ian Collette, Bob Kershaw, John Redpath and Max Hall, and (kneeling) Anthony Pezzutto. Photo by Fran Head.

- To thoroughly explore the area around Mullamullang for new 'holes', and in particular to investigate any possibility of 'pushing' the south doline of Mulla itself; and
- To locate on the ground, and explore and survey where appropriate, a number of previously unknown dolines and karst features in various areas recorded on GPS from a light aircraft by Max Hall.

Although we had no hope of staying for the whole time – the ISS group was away from home for a month all told – we were able to scrape together enough leave days to join them for a week over Easter.

8 April: Having travelled the previous day from Perth to Norseman, our first act on the 'Nullarbor proper' was to call at Balladonia and 'check in' with Max, who was not due to join the group for a couple more days. They have a great little 'visitor centre' now at the roadhouse with heaps of information about all aspects of the Nullarbor – definitely recommended if you haven't previously seen it. Next we took a stroll to the water in Cocklebiddy Cave and a gander at the entrance to Murra-el-elevyn, followed by a drama at Cocklebiddy Roadhouse where the newly acquired and perfectly behaved Troopie refused to re-start. Dead – no spark of life! Visions of camping at the roadhouse while parts arrive from stations west.... Ian and the local mechanic poked at the electrics, changed fuses, cleaned contacts and so on, and eventually there was a miraculous resurrection. [It turned out to be an inaccurately

installed immobiliser, but this was not diagnosed until some weeks later.]

And so it was that the sun was setting as we left Madura Pass with some ancient and cryptic directions to Mullamullang Cave. These ultimately proved to be accurate notes of a direct, if somewhat adventurous, route – apart from the bit that said ‘0.6 km’ where it obviously meant 6 (if not 9)! The moon rose in time to reassure us that there was definitely no turnoff among these bushes and rocks, so we gave up blundering around on foot peering at the ground and just drove on down that fenceline. Eventually a perfect track appeared which took us straight to the ISS campfire, where we gratefully consumed their leftover dinner.

9 April: Discovered we had arrived just in time for a ‘play day’. The group had already been in this area for some days, working very hard at exploration and digging without result, and now they were ready to be tourists. Fran is claiming the title of first caver to go into Mullamullang with a walking pole, and boy did it help on that interminable boulder slope entry. She was very happy to have the chance to go as far as the Coffee & Cream and Salt Cellars – what beautiful, unusual formations – and was impressed by the strength with which the cave ‘blows’ where the roof briefly dips to a crawl. The rest of the party continued on to White Lake, while Lloyd, whose actions constantly belie his 70+ years, preferred to spend the day alone working on his dig, which he believes holds out good hope for a future breakthrough into a southern extension of the cave.

10 April: Today the Troopie came into its own as we packed in the entire group, plus gear, and took off cross-country to investigate a couple of features Max had noted from the air some kilometres to the east. The abiding memory of this morning is of a landscape alive with kangaroos. It seems these animals are not used to seeing vehicles, because they all took off rather than watching us pass; the first to move would set off those a little further away, and so on, until the whole scene was moving – wave after wave of kangaroos on either side just bounding along parallel to the car with great speed and stamina. Lloyd and Fran were beside themselves.

Max’s aerial observations proved very accurate. As we left the vehicle at a fenceline and set off on foot, his readings led us first to a large

doline/sink (6N1977) with some promising quandong trees and rocks, but no actual hole beyond some animal diggings. Further on, a low ridge with plenty of surface limestone appeared hopeful but yielded nothing, while the actual feature Max had seen (6N1978) proved to be a small limestone cave with a narrow opening uncomfortably situated under some prickly bushes. Enthusiastic party members carried out a fair amount of gardening and digging, but although the cave was breathing, it did not appear to have much potential for extension.

Driving back to camp, we reflected how promising the entire area looked, if one had forever to explore it! We stopped en route at a known shaft (6N73) and sent the youngest member down to explore. Although the hole was blowing, Anthony reported that the shaft went down some 18 m only to choke off, yielding nothing but two dead snakes and a thong. We took his word for it and went home for tea.



We send Anthony down 6N73 – memorable for its two dead snakes and a thong! Photo by Fran Head.

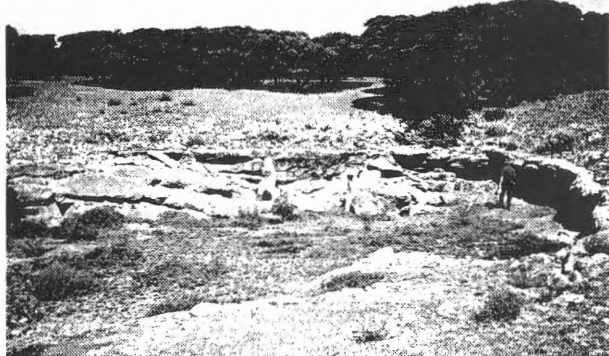
11 April: ‘Changeover day.’ Struck camp and learned a slightly longer but less adventurous route out to Madura Roadhouse, where bodies and clothes were washed, food consumed and Max Hall collected. Max then led us some 40 km west on the Roe Plains along the track which follows the base of the scarp, where we made camp in one of many groves of tall timber that grow in the runoff area. The main hazard here is finding anywhere to pull off the road without spiking a tyre – as Lloyd discovered to his cost – and you may also be sharing your campsite with a fine collection of spiders, scorpions and snakes. A late afternoon scramble up the scarp gave a wonderful view of trees rolling as far as we could see in the direction of the ocean.



Our campsite on the Roe Plains gives a whole new meaning to the word 'Nullarbor'. Photo by Fran Head.

12 April: Just how many trees became clear this morning as we set off in pursuit of more of Max's 'holes'. Accurate GPS locations and compass bearings are one thing, but we had to travel much further than the crow as we zigzagged through dense ti-tree thickets, mallee and assorted shrubbery. Right on time we crossed the line of the Overland Telegraph and were interested to see that communications still follow the same route, though in the form of a subterranean optic fibre cable, while pieces of history are lying around freely available in the guise of insulators and sections of wire from the old telegraph. (One of those handsome metal poles would look good in the backyard too.)

Our first feature for the day was a broad shallow doline which had fallen in a little more deeply at each end to offer cave entrances (6N1950 and 1951). The western end actually had little you could get into, but a duck under the overhang to the east revealed a reasonable sized chamber, with an entrance smelling of bats and two twisty solution pipes through which the midday sun was creating attractive effects of red-gold light.



Checking the doline for entrances at 6N1950, on the Roe Plains: Photo by Fran Head

We discovered that one tapering corner of the cave went down to water by the time-honoured method of walking into it, but there seemed only a slim chance that this water would 'go'.

A short distance east we found 6N1952, a slightly larger and deeper cave offering a genuine 'through trip' between its two doline-edge entrances. This went down some 5 or 6 metres to rather more promising water into which Lloyd could plunge his cave probe without finding bottom. Bob, a conscientious leader, was ensuring that line surveys were done as we went.

An odd feature of the Roe Plains, which had been visible from the scarp, was the occasional enormous clearing. We would suddenly burst from the thick scrub or woodland into a paddock – a clear area of coarse grasses several hundred metres across. No one could account satisfactorily for this phenomenon.



Taking measurements at the eastern end of the 'gour pool' cave. In the foreground is the bridge collapse, 6N1953. Photo by Fran Head.

Our final destination, a couple of kilometres further east, turned out to be a long, skinny rock-rimmed doline reminiscent of a huge gour pool. At one end the collapse had left a handsome bridge (6N1953), while the other end produced

an entrance and some passage (6N1954). As sunset was now close, there was a dilemma – survey now, or get home in the light? In the event we did neither. As sketchy measurements were being taken, someone strolled over a small ridge and found another entrance. A quick look suggested further exploration was necessary as the two might join, so the decision was taken that the trek would have to be repeated.

Setting off quickly, we soon discovered – ‘oh no!’ – more limestone and a crevice (6N1955) which might repay digging one day, but not today. Before long our headlamps came into their own. Negotiating this vegetation was scarcely more difficult in the dark than by day, but it was a bit of a slog, especially the three-kilometre route march after we hit the track. No one complained of insomnia after their 20 km circuit.

13 April: With bodies still tired and the temperature climbing firmly into the 30s, this was a day of serious reading, writing and conversation. In the relative cool of late afternoon we all scaled the scarp to look for ‘Cologna Rockhole’ as marked on the map – inexplicably failed to find it, but enjoyed a stroll over the open grazing of the Hampton Tablelands, which are in such contrast to the thick vegetation just below.

14 April: Most of the party drove down the track to a point directly opposite the ‘gour pool’ cave, and walked in to resume where they had left off. In the event, after digging it was found that the two leads did not join, though the line survey indicated they must overlap on different levels. The more easterly entrance (6N1953A) went down to muddy water, while 1954, which remained higher, was very dusty and appeared to have high levels of CO₂.



*One of several small ‘gnamma holes’ at Cologna Rockhole, which is one of a regular series of rockholes along the scarp of the Hampton Tablelands.
Photo by Fran Head.*

Back at camp, Max was fixing things on his truck and prospecting (without success) for vehicular access to the telegraph line. Fran, who had done something nasty to her back, gently explored and found Cologna Rockhole at the head of a very beautiful rocky gully still damp enough to attract quantities of bird life. As well as two or three ‘gnamma holes’, unfortunately uncovered and suffering from slimy green algae but probably still good enough to save your life at a pinch, the area showed signs of regular visitation in the past – various dry stone walls, a bush pole frame for a shelter or tent, and a large rusted leaf spring.

15 April: All good things must come to an end! The rest of the group was to visit various rockholes along the scarp, and then continue exploring in the vicinity of Skippy Cave, but it was time for us to return to Perth. There we discovered one lasting memento: in the time-honoured Max Meth tradition of tagging anything which is not totally flat, ISS kindly tagged the Troopie, which is now identified as 6N IS010X.

Thanks guys for allowing us to be part of your expedition. We had the best time, and we’d love to do it again sometime!

MEANWHILE, UNDER WATER...

Just after Christmas 2001, several willing WASG “mules” (Dean Slater, Kylee Draper and Jeong-il Moon) were on the Nullarbor in support of a Trimix Divers trip organised by Paul Hosie. As well as visiting Tommy Graham’s Cave, Cocklebidy and Weebubbie, they went notably to Mullamullang, where the dive exploration was highly successful.

Paul notes the discovery of several previously unrecorded passages and chambers, including 50m of passage with spectacular decoration. In his own words:

“The most amazing thing about the passages below 4m depth is the crystal. All surfaces of the passage are encrusted with brilliant white, short, sharp crystal protrusions. Each small point was noted to be hollow. There are areas where the crystal is tinted yellow as well, which I presume indicates the presence of sulphur compounds. It’s breathtakingly beautiful when everything you’re looking at and surrounded by is crystal - I believe this submerged passage is unique so far in this country.”

Down Under All Over

Speleological Research Group of Western Australia (SRGWA)

Much has been happening within SRGWA since the last contribution to DUAO in 2001 despite the temporary lack of insurance. Following the completion of the Labyrinth Cave (6Au-16) survey, team leader Michael Bradley seemingly had the map drawn up within a couple of weeks. Several new extensions had been discovered during the course of the survey, several as a direct result of the continually falling water-table. The cave once boasted numerous shallow lakes but had been dry for more than a decade until the discovery of a small lake in a new extension.

The long-running Giants Cave (6Wi-21) dig was excavated another metre or so during the latter part of the year. Several trips will be scheduled during 2002 and it may figure in post-conference field trips of the forthcoming UNDER WAY Conference.

A small party ventured to the Nullarbor during summer, mainly to initiate a survey of the Mundrabilla Station research cave, 6N-327. A "stick survey" had been conducted in part of the cave, the day after it was first entered in 1997 and formed the basis of this new, detailed survey. The entrance chamber turned out to be quite extensive, divided into three sections by rockfall while the lower level was found to be an enormous phreatic chamber separated into passages and chambers where the soft sediment floor had risen to meet old calcite decoration or dipping ceilings. Over a four day period, about 800m of passage/chamber was mapped and 90 *Tartarus* spiders of all age groups and both sexes were counted, making the population in this cave, the Nullarbor's largest. The survey continues.

A further three days was spent at Mullamullang Cave (6N-37) in order to conduct a fauna survey in the cave. The resident land manager had asked the party to remove the "REDUCE SPEED" sign (a left-over relic from the 1966 Mullamullang Expedition) from the "Dune" area of the cave. He claimed that to "denigrate such a magnificent natural phenomenon with human graffiti is hypocritical to the responsibility we have of ensuring the cave's conservation". With a fair amount of difficulty, the steel sign was removed to the Madura Roadhouse rubbish dump.

A 19 hour trip to "The Dome" and right-hand extension was interesting to say the least. Survey markers along the main passage received a blue self-adhesive reflective "dot" to bring them into the current colour scheme of markers developed in Western Australia. As the party passed "The Drop-off", they kept a lookout for fauna and a live adult cockroach with a missing hind-leg was observed foraging amongst rocks between Stations 5-6, mid-way between "The Drop-off" and "Camp 1". Two late-juvenile cockroaches and an unhatched egg were later seen on or adjacent to the "track" in the "Dome". Sadly however, no evidence could be found in either the "Dome" or the lake at the base of the Dome's rockpile, of the spider *Tartarus mullamullangensis* adding to the speculation that the spider is extinct from that region. It is still recommended that visitors do not enter the "Dome" in line with fauna recovery resolutions initially passed at the 1991 ASF Conference. Before a firm statement can be made as to the spider's existence in the cave, a careful search of the lakes, moist regions and other likely habitats along the main passage between "The Drop-off" and "Dome" must be conducted - an arduous task. Numerous photographs of the gypsum hair in the right-hand extension were taken before the day was complete.

Following a hot and windy rest day, a long half-day was spent photographing in the Salt Cellars of the Easter Extension culminating another successful trip although the party deviated to watch soaring eagles at Peak Charles National Park (SW of Norseman) on the way back to Perth.

Please note that SRGWA has changed its official address to:



This address will also service the forthcoming 2003 "Under WAY" Conference.

The Group also has a new website address at:
<http://people.mail2mc.com.au/~wayne/srgwa/index.htm>.

you can use it or the ASF's to link into the **Under WAY** Conference website.

Norman Poulter OAM

Southern Tasmanian Caverneers (STC)

Speleo Spiel is the newsletter of Southern Tasmanian Caverneers. It's produced roughly bi-monthly. We are currently setting up a system to provide free, electronic copies. (Printed copies are still available - for a fee.) Any interested person is welcome to subscribe. Whenever we have a new Spiel ready, we'll be sending an email with a link to the Spiel's location. Subscribers can then download a copy.

Anyone wanting to subscribe, send a blank email to:

[REDACTED]

The STC website is at:

[REDACTED]

There are some old Spiels there. (But the links are broken at present. Replace 'scaving' with 'stcaving' to fix them.). Also, STC maintains an email listserver which can be subscribed to at:

[REDACTED]^u

Ric Tunney
Secretary
Southern Tasmanian Caverneers.

2001: a cave odyssey Proceedings

Extra copies of the proceedings of the 23rd ASF Conference may be ordered by contacting Jodie Rutledge on [REDACTED] \$15.00 cost includes both a printed copy and a CD for orders received before the end of April with printing strictly limited to this number. From 1st May only CD's will be available.

ASF Codes in PDF format

The following codes and guidelines of the Australian Speleological Federation are now available in PDF format on the ASF web site (www.caves.org.au) for easy downloading and printing:

- Code of Ethics and Conservation.
- Minimal Impact Caving Code.
- Minimal Impact Rescue Code.
- Cave Diving Code.
- Free Diving Code.
- Cave Safety Guidelines.
- Cave and Karst Terminology.

Commonwealth Government meets Insurance Council of Australia

According to news reports early in January, the Commonwealth Government had a high-level meeting with the Insurance Council of Australia early in January, specifically to discuss the effect of the spiralling cost of Public Liability Insurance on community and volunteer organisations. This is the first sign that the Federal Government is taking the issue seriously; we are aware that some of the State Premiers have been making noises.

Bullita Cave reaches 85km

Participants from 4 states on the 2001 expedition pushed the total length of the system to 85km. Released in 2001, the Draft Plan of Management for Gregory National Park recognises that the Park's karst and cave systems are of national scientific interest and significance and incorporates recommendations for their management submitted by Canberra and Top End Speleological Societies.

Tourist dies in Thai cave

A 23 year old Dutch man died when he fell 20 meters in a cave in Thailand in late November. Pellikaan Pascal Carlos Estel was on an 'adventure caving' trip with 5 other Dutch tourists and a Thai guide when he slipped on the lip of a waterfall in 'Waterfall Cave' near the village of Ban Tham, Mae Hong Son province in northwest Thailand. The body recovery took two days and was led by John Spies, a local caver and ex-patriate Australian, and assisted by some local villagers and the Thai Border Patrol Police. The event was covered by the Thai newspaper and TV news. Submitted by Terry Bolger
Sources: John Spies & Dean Smart (personal communication), The Bangkok Post, Channel 7 News (Thailand)

Issue 157 Please Note

The editor will be overseas for the months of April and May. Please submit contributions for the next issue (no. 157) to Angus Macoun at

[REDACTED]

Future arrangements will be advised as soon as possible.

Helictite

Journal of Australasian Speleological Research

Owned and published by the Australian Speleological Federation Inc.

Publishing papers, reports, abstracts, reviews and news of the scientific study of caves and their contents, including the history of caves and technical aspects of cave study and exploration, **Helictite** covers the region of Australasia - Australia, New Zealand, the near Pacific islands, including Papua New Guinea, Indonesia and Borneo.

Since its establishment in 1962, **Helictite** has been instrumental in raising the profile of Speleological exploration, investigation and scientific research in Australia and surrounding countries. One of only four or five similar journals in the world, it has also greatly enhanced the reputation of Australasian Speleology in the international arena.

A volume of **Helictite** is currently published annually, made up of two issues. It is only available via postal subscription. The rates are quite reasonable, at AUD\$25 for Australia and New Zealand, and AUD\$27 for other international destinations. Subscriptions for Volume 38 (2002) are now being accepted. Subscriptions may also be paid for up to two years in advance. Most back issues are still available and article reprints can be ordered.

Contributions are welcomed by the editors. Authors may submit scientific papers, reports, abstracts, reviews and news. This may also include comprehensive descriptive accounts of the exploration and morphology of individual caves. Authors do not need to have a scientific background to contribute; quite a number of recreational cavers have written articles of lasting significance. All articles are refereed by two Speleologists with expertise in the particular area, and edited to meet usual scientific standards. The editors will advise and assist prospective authors as necessary.

Helictite now has a presence on the Internet. There are a number of useful web pages available at [REDACTED]. Various topics are covered such as information for subscribers, news, administration, information for contributors, obtaining back issues, the history of publication, indexes, tables of contents and abstracts.

For further information contact Susan White, [REDACTED]
[REDACTED]

A subscription form can be mailed out on request, or obtained from the web pages.

Back Cover

"Great Nowranie Cave
Entrance Portal."

Photo by Stefan Eberhard.

