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The ACKMA Journal

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FRONT COVER: Lilly Petrovic, Dirk Stoffels with Iain (Lost World guide) on Lost World caving trip. Photo: Flynn (Lost World guide)

BACK COVER: 2013 Waitomo conference attendees. See page 38 for attendee names. Photo: Steve Bourne

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FROM THE EDITOR

The 2013 ACKMA Conference had everything that you would want in a conference on cave and karst management. The breadth and quality of papers was excellent; pre conference touring and caving superb; meals, accommodation and entertainment spot on; the local community friendly and welcoming; and organisation throughout ran to time without issues. Libby Chandler and her team deserve high praise for their efforts to showcase Waitomo and host such an excellent conference. Andy Eavis, President of the International Union of Speleology stated in summary remarks that the conference was one of the very best cave conferences that he had ever attended - high praise indeed. The unfolding of events with Les Wright going missing during the conference, and the very worst result announced on Friday evening, cast a black shadow on a great week. Mary Trayes offers a brief insight into Les' career in this journal. Our thoughts are with his partner Deborah Carden and family.

This journal is a celebration of the Waitomo Conference, the 20th Australasian Conference on Cave and Karst Management. Several members have provided reports on their experiences. I hope this journal provides a souvenir for those who attended, stimulates interest in Waitomo in those who could not make it, and shows the Waitomo community the impact they made on ACKMA.

Rohana Bell, Tour guide, The Capricorn Caves

When asked to write about my very first ACKMA conference it was difficult to know where to start as the experience was so diverse and so varied. The large amount of activities on offer was impressive and the people involved in the conference were welcoming and friendly.

I enjoyed the papers in the mornings, hearing about others people experiences and adventures was very inspiring. There were so many people with vast amounts of knowledge who were happy to share their expertise with our group. As a younger member of our team at Capricorn caves I wasn't sure how we would be received, but we were welcomed very warmly and it was nice to hear positive and encouraging comments. As a tour guide I also found the papers based around the tourism industry as a whole quite educational and helped give me a better understanding of the tourism industry on global scale. It gives me a better appreciation for what we do as tour guides and for the people we work for. I was proud to be included in this conference and glad that I was given the opportunity. I hope other Employers would consider encouraging there staff to join ACKMA and attend conferences as this was a great team building experience as well.

The tours and afternoon activities were amazing and it was exciting to go and see other cave systems. The guided tours of the Ruakuri Cave and the Aranui Cave were spectacular, both so different but equally as impressive. Even the scenic walk around the Ruakuri

bush walk was breathtaking, the amazing guides at these caves made it very memorable. I noticed there was a huge amount of support from local companies and businesses and the generosity they showed by donating their time and resources to the conference. They also offered some amazing deals on the adventure caving options and went out of their way to accommodate us. I really believe that this shows the people and the companies involved in ACKMA really get behind the organisation and support these conferences.

I thoroughly enjoyed my first ACKMA conference it was fun, educational and a great learning experience. I look forward to attending more of these over the years and that really is the triple bottom line.

Lucas Zielke, Tour guide, The Capricorn Caves

What a thrill! As a group of caving guides from Capricorn Caves Rockhampton, whose "normal" idea of caving involves squeezing yourself through tight nooks, crannies throughout a cave, we didn't really know what to expect with the Black Odyssey tour. With nothing but excitement and adrenaline pumping us up for the trip, it was easily one of the most daring activities of the week. A series of overlapping, zigzagging tunnels, taking us 30 metres off the ground, from where we then hook onto established ropes and "make" like Spider-man, through the cave system. Not to mention, Abseiling a Swing and a few Flying Fox Zip-lines to get your heart rate up. Whilst being incredibly enjoyable, it was also technically, mentally and physically challenging. The Black Odyssey tour was an amazing and unique way to travel through the cave.

The design of the tour, how it is run and presented and the outstanding staff, made this adventure what it was and you couldn't ask for anything more.



*Some first timers; Jordan Wheeler, Amanda Hinton (second conference), Lucas Zielke, Rohanna Bell.
Photo: Steve Bourne*

Cathie Plowman, ACKMA Fellow, Tasmania

David Merritt had us clapping together to illustrate how glowworms synchronise their lights. Paul Williams gave a superb presentation on speleothem research and climate change. Cave guide Hiria Love lifted us high into the ceilings of the Glowworm Cave with her singing of Pokarekare Ana. These are just three very memorable parts from the recent wonderful conference at Waitomo.

Thanks to everyone who prepared a presentation as they were all great, likewise the organisation of trips, meals, hospitality, the staff at the Waitomo Hotel, the Glowworm Cave, the Legendary Blackwater Rafting Company and all the venues where we were hosted. I can't mention everyone, but they were all terrific.

I can't write about the whole conference, so just a few snippets.

Ruakuri Cave was 'under construction' when David (Butler) and I last visited Waitomo in 2008. The end result is a credit to everyone and terrific. I love the 'raw' feel of the cave, creating an experience where people can enjoy the underground, but where the cave has not been overly lit. You can't but be impressed with the spiral ramp descent, but the development also provides an extended underground experience without steps and that is accessible for those with mobility issues. Well done to all the team.

Mangapohue Natural Bridge is just beautiful. We saw the arch as part of the Caves to Coast afternoon that include Piripiri cave, Marokopa Falls and Marakopa Beach with the nice black sands typical of the west coast of New Zealand.

Pre-conference caving. The Legendary Blackwater Rafting Company made all their adventure tours available throughout the conference for the chickenfeed price of \$20.00 which included hot soup and toasted bagel

afterwards. The guides were helpful and friendly and accommodated everyone. I did the Black Labyrinth (twice!) which is the original Peter Chandler invention of floating through Ruakuri Cave on a rubber tyre tube with the lights of thousands of glowworms above. (Make sure that you tell your friends to do this and not to be intimidated by 'leaping off waterfalls' adventure marketing. It was easy. One group member did it with a walking stick.)



Wapuna Cave. Dave Smith and Peter Chandler took a group of five of us to this very pretty stream cave in the very upper section of the Waitomo valley, stopping to show us the two local very flashy cavers' huts on the drive there. Most of the trip meant wading in water, getting up to the waist in places, and even higher when I attempted the 'duck under'. The water was not warm, but no colder than Croesus Cave (my yardstick). Being in the water, meant we were up close to delicate straws and other beautiful features. For those of us who didn't 'duck under' the return trip up the stream gave us beautiful reflections that we hadn't had on the downstream

walk.

Mangapohue Cave. Angus Stubbs led us through this delightful stream cave beneath his family's farm. There were huge numbers of glowworms nice and low in the cave, so for the two hours or so that we were in the cave, we had many splendid sights of them up-close, their threads being particularly lovely when someone further away shone their torch on the threads. All very beautiful.

While my piece ends here, it was just the start of the conference.

In closing, our thanks to our Waitomo hosts especially for such a great event and also to all the ACKMA people who attended for their friendship and energy.

Coming Events

2013: 21-28 July	International Congress of Speleology, Brno, Czech Republic
2014: May	ACKMA Annual General Meeting and Cave Guides Workshop Yarrangobilly, New South Wales
2014: November	International Show Caves Association, Jenolan Caves, Australia
2015: October	ACKMA Conference, Naracoorte Caves, South Australia
2016: May	ACKMA Annual General Meeting and Cave Guides Workshop, Rockhampton, Queensland
	Do you know of an event that may interest ACKMA members? Please send to publications@ackma.org

PRESIDENT'S REPORT

Dan Cove

I have absolutely no doubt that this Journal will be rich with articles praising the 20th ACKMA Conference held in beautiful Waitomo, and with good cause! It was an extraordinary week, and one of the most well organised conferences I have had the good fortune to attend. All credit to the organising committee, as 'Waitomo 2013' has certainly set a benchmark for future ACKMA conferences to aspire to. Yet, running parallel to the conference, we cannot forget the tragic events that led to the untimely passing of Les Wright. Others will write more eloquently than I about Les, but it is important to acknowledge that throughout the conference the thoughts of all attendees were always with Deb in hoping for the best, just as I am sure that the thoughts of all ACKMA members remain with her now following this loss.

The conference also saw Peter Chandler step down from his position as President of the organisation, and I offer the thanks of all members to Pete for his leadership. In many ways Pete reminds me of the old saying describing BHP as "the quiet achiever". He is the most modest of men, but clearly has contributed so generously in bringing his enormous knowledge of cave management to ACKMA. I would also like to personally thank Pete for his support and encouragement, and in providing so firm a foundation for an incoming President.

I am hopeful that the next few years will be positive and productive ones for our organisation, just as I am certain that they will be demanding. The environmental and conservation movement in general, of which cave and karst conservation is very much a part, does face a challenging future with social attitudes more fluid than they were a decade ago. This poses a challenge to ACKMA; to maintain a leadership position in advocating for conservation values and to build public support and awareness. Simultaneously ACKMA's network of show caves face the challenges of transitioning economies and volatile markets, whilst simultaneously seeing the opportunities of growing inbound travel and the great underlying strength of nature based attractions. These are challenges, and opportunities, that I firmly believe an organisation such as ACKMA should confront. It is a part of the organisation's basic charter that we should attempt to influence positive change rather than passively react to it, and I am certain of the strength of the organisation and of its members in this regard.

I am also pleased to report on the first initiative of the new executive committee; a resolution that ACKMA will provide a financial contribution to the purchase of the Scrubby Creek property encompassing the Scrubby Creek cave in the Buchan region of Victoria. The property was purchased in May 2012 by the Rimstone Cooperative, a group originally founded by the Victorian Speleological Association. Rimstone Director, and ACKMA member, Nick White gave a most educational

presentation regarding the purchase and significance of the cave at Waitomo in May. Following the conference, a recommendation was raised within the committee that ACKMA consider a contribution to the purchase fund. Expert advice was sought regarding the natural values and level of significance of the area, and the advice received supported the proposal. With due consideration of the underlying financial strength of ACKMA currently, a contribution of \$2,000 to support this purchase was agreed to and authorised by the committee. All members of the committee agreed that this positive move was consistent with ACKMA's core values, the objectives of the organisation and the responsibilities of the committee as established in the rules of the Association. It is a proactive move to support cave conservation principles and practices, and a clear statement of ACKMA's position on such initiatives. The committee is now consolidating this experience into a set of clear principles and procedures which may be applied to any possible future submissions for like funding

I am looking forward to continuing to work with the committee into the future and commend them for the energy and enthusiasm that they have already demonstrated in the short time since the conference.



*Dan Cove addressing the conference at Waitomo 2013.
Photo: Steve Bourne*

SCRUBBY CREEK and PURCHASE of the PROPERTY by the RIMSTONE COOPERATIVE LTD.

Miles Pierce and Andy Spate

Geological context: Andy Spate

The Buchan limestones largely occur on prominent ridge flanked by the twin lateral streams of the Buchan (western) and Murrindal (eastern) Rivers. High on the ridge is an area known as 'The Potholes' - a series of essentially vertical caves largely terminating well above the base levels provided by the Buchan and Murrindal Rivers. A decade or so ago, an unusual, high-level active streamway was discovered leading east from The Potholes - the Elk River Stream that Nicholas showed at Waitomo. This runs towards Dalleys Sinkhole - an extensive river cave at the level of the Murrindal River - presumably the Elk River discharges thereabouts. But it is still (I think) well above the river level.

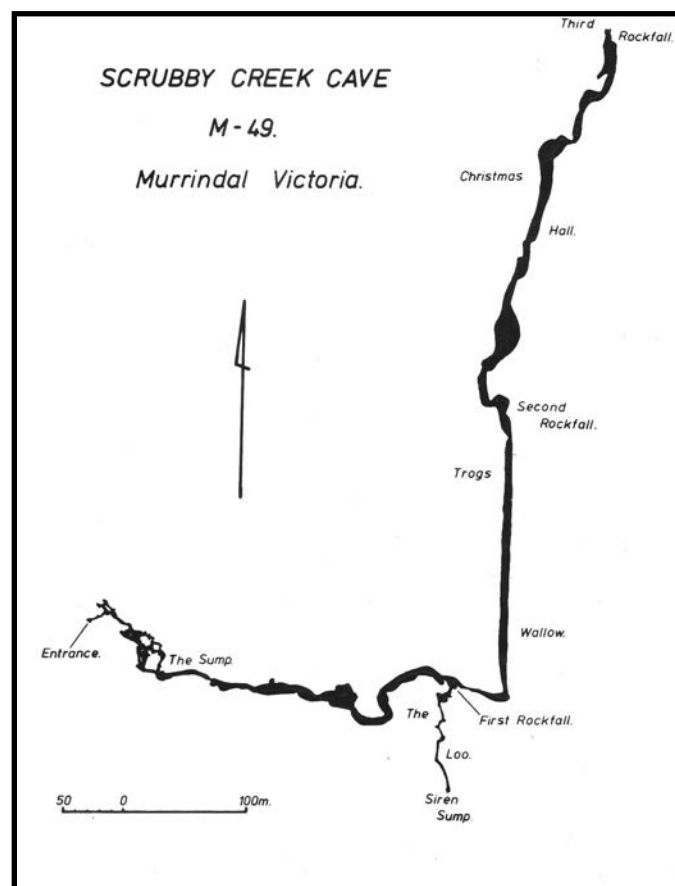
I would have been tempted in the past to infer that much of The Potholes water would have run toward Scrubby Creek Cave which lays a few tens of metres above the Buchan River base level but the discovery of the Elk River indicates otherwise. North and uphill from the dry valley above Scrubby Creek lay the 'fossil' Dicksons Caves. There is little else in way of caves/potholes etc between Dicksons and the Scrubby Creek resurgence - mostly bare grazed country. Dicksons Caves lie outside the Scrubby Creek acquisition and may - or may not - be an abandoned high level part of the Scrubby system.

Scrubby Creek Cave: Miles Pierce

Scubby Creek is a minor tributary into the Buchan River at Murrindal, approximately six km north of Buchan in Victoria's East Gippsland Region. The short creek runs along the contact of the Buchan caves limestone with the older Snowy River volcanics, with its upstream extent is normally dry. Scrubby Creek Cave (3M49) is a perennial outflow cave that resurges from a small limestone bluff and descends to enter the nearby lower section of the Scrubby Creek watercourse. The dry weather outflow may include seepage water that otherwise would drain down the upper reaches of the surface creek. During other than high-flow wet weather conditions, the resurgence water is typically supersaturated, resulting in extensive tufa terraces on the surface descent to the creek.

The resurgence and the distinctive tufa terraces were first recorded in 1907 by A E Kitson and in the 1930's the inveterate early Buchan caves explorer, Frank Moon, unsuccessfully attempted to free dive the outflow. It was not until some thirty years later that members of the Sub Aqua Speleological Society (a predecessor of the Victorian Speleological Association (VSA)) after also unsuccessfully trying to dive the resurgence, excavated a small entrance higher up in the limestone bluff and gained access into the cave. Over a number of successive trips, SASS members succeeded in passing

'the sump' and pushed the cave to a final third rock fall, about 1.1km from the entrance. Whilst the latter rock fall remains the upstream termination, VSA members have over succeeding years added several other extensions so that the total know length of passage is now around 1.5km.



A 50m long low passage, 'the sump' is encountered early on and although the true 'roof sniff' section is confined to a relatively few metres at times of lower flow, the fully sumped-off area is wide and any attempt to free dive it in panic is likely to end in disaster. VSA have instituted a system requiring a leader with proven experience in negotiating the sump to be a part of any party intending to go through 'the sump'. Upstream of 'the sump' the stream passage opens up and generally follows the dip of the Buchan limestone until the first rock fall is met. Shortly afterwards, the cave passage makes a right-angle turn where a large gour dam across the streamway has created a 150 m long passage section with deep silt and mud over which the the water flows. Known as 'Troggs Wallow', it was particularly difficult and hazardous to negotiate in the early days and is still an exhausting challenge. The second rock fall marks the end of the wallow, after which quite large passage opens into 'Christmas Hall', the site of an epic

exploration camp led by Elery Hamilton-Smith in 1962. Another 100m on, the impenetrable third rock fall is encountered with the perennial stream emerging from its toe.

Just beyond the first rock fall, a side passage, first entered in 1971 and named 'The Loo', runs southward for about 65m followed by a 100m long dangerous water filled section with an air space under no-flow conditions as low as a few centimetres in places – 'Siren Sump'. A non-negotiable section then links to a nearby swallet cave, appropriately named Storm Water Tunnel (3M43). This swallet terminates a local surface catchment area to the east and is intermittently active during sustained wet weather and storms with its inflow then mixing with, and usually greatly augmenting, the perennial flow that exits from the Scrubby Creek Cave resurgence.



*A view across the property.
Photo: Miles Pierce*

Scrubby Creek Cave is one of the longer stream caves in the Buchan – Murrindal area and is of State significance, which is further augmented by its associated tufa terraces. The cave generally follows the limestone bedding along its dip and then along the strike with this structural influence clearly evident. There are good sections of speleothems and the generally supersaturated perennial stream flow means that the 'calcite rafts' floating on the slow moving water surface are an attractive feature for the lead members of a visiting caving party.

VSA has enjoyed a long term good relationship with the landowner's family and in 2011 cavers were given 'the inside running' to purchase the freehold grazing allotment that contains most of Scrubby Creek Cave, the tufa terraces and the boarding part of Scrubby Creek itself. The property also contains other related and unrelated caves and karst features with some potential for further cave discoveries.

ACKMA Fellow and VSA Life Member, Nicholas White, acting in his capacity as a director of Rimstone Cooperative Ltd. spearheaded a plan to acquire the land with the aim of securing its important karst values and maintaining responsible access. Rimstone Cooperative is a Community Advancement Society that has owned and operated Homeleigh at Buchan for the accommodation of its members and the caving community for 38 years and includes in its aims supporting speleology. By means of donations from many Victorian cavers and persons interested in cave and karst conservation from outside the state, and supplemented by a number of individual loans, Rimstone entered into a contract to acquire the 42 hectare (105 acre) freehold allotment, and took possession of it during last year. Whilst the property title has been obtained, substantive loan sums remain to be discharged.

Rimstone's ongoing plans are to manage the property as a cave and karst conservancy whilst continuing to allow grazing on an agistment basis. It is intended that VSA will continue to manage the Scrubby Creek cave leadership scheme. Steps will be taken to exclude stock from the tufa terraces and a program set up to manage weed eradication. Later, a 'karst walk' may be established that could include the attractive naturally vegetated Scrubby Creek water course that forms the western boundary of the allotment and runs down to the Buchan River.



*Christmas Hall, Scrubby Creek Cave
Photo: P J Ackroyd, July 1996*

TONY CULBERG OAM



In the 2013 Queen's Birthday Honours list, announced on Monday 10 June, Tony Culberg was awarded an Order of Australia Medal. The citation is "for service to the community of Tasmania".

Tony adds that his service has also been to the world of caving in Australia.

An early event was the cave-in at Church Creek Caves, in the Blue Mountains west of Sydney, in August 1969. This area, close to the better known Colong Caves, was subject to a mining lease, to quarry limestone to make cement, in a factory at Maldon, on the then outskirts of Sydney. Church Creek is a tributary of the Kowmung River, at that time the only unpolluted river flowing into Warragamba Dam, the main water supply for Sydney.

The cave-in was a variation on a sit-in, a popular form of protest in the late sixties. Tony led a group which occupied the site for 9 days. The story made the TV news on all 4 Sydney stations. At the end of this trip he met Ian Wood, a member of UNSWSS and keen on ASF.

At Ian's invitation, Tony attended the ASF Conference in Tasmania at the end of 1970. This conference, incidentally, saw the first discussion of single rope techniques in Australia. All vertical caving up till then had been done with ladders and safety ropes – Mini Martin, Midnight Hole, Khazad Dum, Argyle Hole and Keller's Cellar on Mt Anne.

In the early seventies, Tony was involved in the Bungonia Caves campaign. Church Creek was saved, but at the expense of Bungonia, where the existing quarry was to be enlarged.

At the end of 1973 Tony became Secretary of ASF and moved to Tasmania in March 1974 for the caving. He continued as ASF Secretary for 6 years and also took on the role of managing ASF Newsletter, including addressing and posting and selling advertising. In this time ASF ran the Second Conference on Cave and Karst

Management in Tasmania. Tony was part of the organising committee, together with Roy and Andrew Skinner and Greg Middleton.

Tony also had a role in the Tasmanian Education Department, which was developing guidelines for Outdoor Education, including bushwalking, canoeing, rock-climbing and caving. The recommendations of the caving sub-committee were gazetted by the Education Department. Tony led school based caving trips for several years.

Tony represented TCC at Tas Police Search & Rescue liaison meetings and led some S & R Training exercises in the Ida Bay area with Tas Police in the eighties.

In 1990 Tony started Exit Cave Adventure Tours, to show the ordinary public the beauty of Tasmanian Caves. Arising from this he also became Treasurer of the Tasmanian Licensed Guiding Operators Association, an industry pressure group. This sought to improve standards for the public which participated in what is now called extreme sports – rafting the Franklin River, Cradle Reserve walks, caving etc.

Tony's present involvement in caving is at the administrative level, rather than active. He is a Director of the ASF Gift Fund, was treasurer for the 14th International Symposium on Vulcano Speleology, held at Undara in 2010, convener of the 19th Conference on Cave and Karst Management, held at Ulverstone in 2011. He is currently helping STC revise its constitution as well as keeping an eye on the statutory obligations of ACKMA.



L-R Cathie Plowman, Arrigo Cigna, Tony Culberg, His Excellency, The Governor of Tasmania at the opening of the 2011 ACKMA Conference in Ulverstone.

Photos: Ross Anderson

ON APPROACHES to SUSTAINABLE DEVELOPMENT

Patrick Nykiel

From the Editor:

Patrick Nykiel first attended an ACKMA Conference in 2009 in Margaret River, Western Australia at the age of 15. Patrick is now studying sustainability at university and I had several conversations with him at Waitomo, regarding his thoughts and current academic views on sustainability and sustainable development.

I would like to have a nit-pick about the way Sustainability was portrayed at the Waitomo Conference. Sustainability is firstly a very lofty term which is often thrown about with little understanding and has unfortunately led to a degradation of what it implies. The traditional definition of sustainability refers to a state in which economic, environmental, and social considerations are completely satisfied in such a way as they can be maintained indefinitely. I feel it is necessary to emphasise that there is more than one approach to analysing sustainability, more than one definition, and then there is Sustainable Development.

Sustainable Development is what most people usually mean when they say Sustainability, the term was coined by the Brundtland Commission in 1987 in *'Our Common Future'* to describe an approach to development that would ensure the needs of the present were met while ensuring the ability of future generations to meet their own needs. The key difference between Sustainable Development and Sustainability is essential the scale, one refers obviously to development while Sustainability itself is more of a utopian end-state/goal.

At the Waitomo Conference the buzzword and theme of the conference was Triple Bottom Line; this was I feel erroneously linked with Sustainability and the Three Spheres Model of analysis without explanation. The concept of Triple Bottom Line was proposed by Elkington in 1997 in his book *'Cannibals with Forks: The Triple Bottom Line of 21st Century Business'* as a method for encouraging sustainable development in a capitalist system. The Triple Bottom line is a simple framework for analysis which asks that the social, environmental and economic costs be considered in a cost benefit analysis. I should also emphasise that there are a number of other analysis frameworks such as the Three Spheres Model which requires that the interactions between the environmental, social and economic be considered; a point that the Triple Bottom Line does not consider. My personal preferred framework is a variation on O'Connor's Tetrahedral Four Spheres Model (2006) which makes the assumption that political forces drive the interactions between the three spheres. By analysing the interactions between the three spheres in the context of the political forces which drive regulation, the likelihood

of maintaining the sustainability of the development can also be interpreted. In simpler terms the tendency for political forces to mess things up is also included in the analysis within the fourth 'P' of politics (after people, planet, and profit).

In conclusion, Sustainability is a massive concept which I have barely touched upon here with strong ties to the infinite complexities of systems thinking. Use of the Triple Bottom Line analysis framework for determining Sustainability is merely one approach of which there are a number of arguably far more thorough methods. I would also stress that defining approaches and analysis frameworks should be used when discussing the sustainability of things due to the many interpretations of approach, framework and sustainability. Above all, a project cannot be considered Sustainable simply by conducting a brief analysis using any framework model, the label can only be applied with an in depth understanding of all possible impacts and requirements for a project. A project may show elements of Sustainable Development but I know of no project, business, model, or system which is completely Sustainable.



*Patrick abseiling in Zweihollen, Waitomo.
Photo: Sasa Kennedy*

WAITOMO 2013: “SWEET AS”!

Steve Bourne

“Sweet as.” This is the best way to describe the 20th Australasian Conference on Caves and Karst Management held at Waitomo Caves, New Zealand from 12-17 May 2013. For those uninitiated in Kiwi slang, “sweet as” means “great” or “excellent” and is also used to confirm that something is okay. The conference was outstanding in every aspect; pre conference caving and tour, presentations, meals and accommodation, transport, caves and post conference tours. Waitomo had previously hosted conferences in 1985 and 1997 and the conference hosting experience certainly shone through.

A group of people arrived early in New Zealand to participate in the pre conference options of caving or a geothermal tour hosted by Greg Martin.

On Friday I participated in the signature Waitomo adventure cave – the Black Odyssey. It is easy to see why this is so popular. The tour consists of dressing in a wet suit, suitably cold and wet when you put it on as they never dry out, leaping into very cold water, and floating down stream in the dark. Add in a couple of leaps of waterfalls to ensure you are wet all over and you have had a great experience! This description does not do the tour justice. The guides do a fantastic job to raise the excitement level from the moment you meet them and maintain this throughout the trip. Expert in assessing fitness and competency levels, they do a great job of allowing you to have an adventure without feeling like the trip has been sanitised too much. Of course we need to keep our visitors safe, which they did, but the feeling of freedom was very well done. Floating gently in your inner tube gazing up at glowworms on the roof was a great way to start the Waitomo experience. I understand that around 27,000 people participate in this blackwater rafting experience each year, which must be the most popular commercial adventure tour by quite some distance in Australasia.



Mary McCabe takes the plunge.

Photo: BWR guides

On Saturday the group was offered a choice of three wild cave tours; Waipuna, Rumbling Gut or a vertical cave. I asked Dave Smith if I could have a short trip, water about knee deep maximum and not too strenuous. When he said I should go in his group, I suspected the cave might exceed the criteria I had given him. This proved to be correct. Our group consisted of Dave Smith and Pete Chandler as leaders, with Brett Dalzell, George Bradford, Cathie Plowman, Patrick Nykiel and me. The short 45 minute walk through the forest led us to a small stream emerging from a cave. Already outside the parameters I set Dave, we were all wet to the waist just getting into the cave. Waipuna is a stream cave about three kilometres long. Mostly we were walking in knee deep water or less, with one very large chamber of spectacular decoration. We passed under a large tomo (entrance) which Dave advised we



ACKMA crew ready for the Black Odyssey tour.

Photo: BWR guides



Brett Dalzell, Patrick Nykiel, Pete Chandler, Steve Bourne in Waipuna Cave.

Photo: George Bradford



George Bradford abseiling out of Waipuna Cave.

Photo: Steve Bourne

could leave the cave by, or forge on ahead to the sump. This implied much deeper than knee deep water, but we were all keen to press on. I had never been through a sump before, no such thing in Naracoorte, but was keen to give it a go. Pete Chandler went through first, I followed and then George. Cathie made a valiant attempt, in fact probably did it twice, almost making it through before turning back. Although it was only a metre or two long, the very cold water made it feel longer. Pete, George and I pushed on towards the exit and the others returned to exit via the previously mentioned tomo. We had a another section where we were wet to the chin strap, followed by a swim and a climb up a waterfall. As we neared the exit the way on became less obvious and we spent a few minutes trying to find the right path through the rocks. Through a narrow fissure we were rewarded with a magnificent view across a heavily vegetated valley. Dave had assured me that we would be basking in sunlight and warming up while we rigged for the 5 metre or so abseil, but remarkably the cliff was in total shadow with a cold wind blowing in. The sun must have changed direction!? An hour or so walk back through the dense forest to meet the others completed the trip. It was a fabulous cave trip for a dry caver like me.

Three more trips were offered on Sunday. One group headed to Zweihohlen, another with Angus Stubbs to his family farm and the third group; Dave Smith as leader, David Wools-Cobb, Tim Moulds and me went to Hollow Hill Cave. This cave has restricted access with a maximum of four people per trip. It has been heavily used in the past. Track marking and restricted numbers have very much reducing impacts. In fact, in most areas, remedial work and time have repaired much of the early impact and the cave has some spectacular speleothems. The glowworm display is probably without equal; the main passage is enormous and had the feel of a Nullarbor size cave passage. One feature was a mud floor, which apparently was completely walked over in the past but now is track-marked. It has excellent mud cracks and drip holes. This cave met all of the criteria I had set Dave the previous day and like David and Tim, I felt privileged to have visited the cave.

The rest of the conference goers arrived Sunday afternoon with much catching up with old friends and meeting new ones.



Above. Tim Moulds at the entrance to Hollow Hill Cave.

Below left. Dave Smith, David Wools-Cobb, Tim Moulds walking towards Hollow Hill Cave.

Below right. The value of track marking! Hollow Hill Cave.

Photos: Steve Bourne





*Dave Smith amongst some of the spectacular Hollow Hill Cave formations.
Photo: Steve Bourne*

The local Maori people conducted a whakatau (welcome ceremony) at the Waitomo Glowworm Caves Visitor Centre. Those who attended the conference in Westport six years ago will remember his cultural welcome. Our excellent conference handbook provided us with an explanation of what was to occur and its meaning, with Joe Harawera (ex Department of Conservation and now storyteller of international repute) assisting and leading the ACKMA contingent. The handbook provided the following;

A *mihi whakatau* is a greeting of welcome to *manuhiri* (visitors) who are accorded the status of *tapu* (sacred) by the *tangata whenua* (home people). The purpose of the *whakatau* is the coming together of the two groups to unite as one whereby visitor status of *tapu* is transformed to a state of *noa* (common, free from *tapu*) through various processes that take place through the ceremony. Local elder Tama Amohanga conducted the welcome and Dan Cove responded on behalf of ACKMA. After the traditional *hongi* (the touching and pressing of noses - the Maori equivalent of a handshake), we enjoyed a fine meal on the decks of the Visitor Centre.

The first session Monday was expertly chaired by John Ash. John began by introducing the strategic planning that is underway for Waitomo and invited everyone to provide feedback on their thoughts for the future of the



Joe Harawera responds to the welcome on behalf of ACKMA.

Photo: Steve Bourne



*Dan Cove and local elder Tama Amohanga with the traditional hongi.
Photo: Steve Bourne*

village. We were reminded of the work Elery Hamilton-Smith was commissioned to do in 1993, which sent me scurrying to the library to locate his report (ACKMA Journal No. 13 December 1993). Some of the recommendations put forward by Elery have been implemented including;

- A greater diversity of attractions
- An emphasis on cultural communication
- Shuttle transport, and
- A wider choice of accommodation and eating places.

Some of the ideas remain challenges and will no doubt emerge again during the current round of consultation.

Local Mayor Brian Hanna provided a local government welcome and demonstrated a strong understanding of the stewardship and management of karst landscapes.

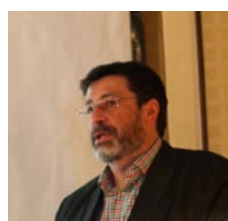
Dave Bamford was the first keynote speaker, displaying a passion for the outdoors, caving and mountaineering. Dave provided an overview of key market influences and had some important messages, perhaps the most important being that a balanced approach to development is required. He championed the importance

of understanding the role of traditional owners, empowering Iwi (New Zealand) and Indigenous people (Australia). He predicted that many protected areas in Australia will be privatised and managers will need to embrace a partnership approach, and advocated a mentoring approach for small business. Tourism is seen as a development tool and economic transformer, with both New Zealand and Australian Governments investing heavily in developing new products in natural areas. His talk was quite relevant with discussions about privatising Jenolan Caves ongoing and possible other cave sites as well in the near future.

Grant Webster, CEO of Tourism Holdings Limited (THL) was our second keynote speaker with *Creating Unforgettable Holidays – Profitably*. There are many aspects to the THL operation, including campervans, accommodation and visitor attractions. THL is the operator of the Waitomo Caves. Grant's presentation of the THL operation provided many interesting facts and figures, and showed how THL is using this information to guide its business and maintain a strong presence in the tourism market place, meeting the challenges presented with the speed of change. THL has invested heavily in Waitomo outlaying NZ\$13M for the Waitomo Caves visitor centre, which gives THL access to other areas of business within their portfolio. One interesting point from Grant was that 47% of travel research starts on a smart phone, with 62% of people continuing their research on another electronic device. I think this demonstrates that businesses need to ensure they have an adequate IT presence that is smart phone friendly, as many travellers make their decisions on the run. Grant also provided some interesting discussion on the emerging tourism market from China, and how businesses need to prepare themselves to cater for this. Grant left us with five key messages:

- Don't ignore traditional markets and their value
- Presence counts in all markets
- Retain 80% and adapt 20%
- Consider all of Asia
- Learn, learn, learn...

The first two papers elicited some discussion about tourism companies using a natural area to the possible detriment of the resource, in line with our conference theme of People, Planet, Profit. Grant suggested that private companies need to have the right intent and the government agencies and the public have a role to keep them responsible for their actions.



Peter Douglas from the Ruapuha Uekaha Hapu Trust completed Monday morning's papers giving an overview of the issues and challenges facing the Trust and its future direction. The Trust's website www.ruht.co.nz contains comprehensive information on the trust including a detailed historical

account of the Waitomo Caves area. It is well worth the time to explore this site. The Trust's long term aspirations include resuming the operations of Waitomo



*The view on the way to Mangawhitikau Cave. Snow-topped Mt Ruhapahu is just visible on the horizon.
Photo: Steve Bourne*

Caves when the current lease with THL expires in 2027. Peter highlighted the importance on ensuring that the necessary knowledge and skills exist within the Trust's people to guarantee the long term sustainability of the Caves' operation.

On Monday afternoon we split into two groups with one group heading to Mangawhitikau Cave for Pete and Libby Chandler's Spellbound tour and the second to Aranui Cave and the Ruakuri Karst Walk.



Above. Pete Chandler (by the stream) the (almost) great eel hunter. L-R Kirsty Dixon, Dave Merritt, Andy Spate, Ted Matthews, Judith Dixon, Regina Roach, John Brush, Marj Coggan look on.

Left. Spellbound Tours provide all visitors with an afternoon tea as part of the tour package. Mangawhitikau Cave is at the end of the valley behind the group.

Photo: Steve Bourne





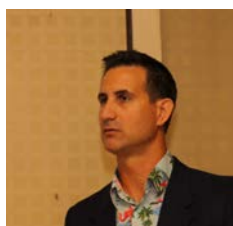
Andy Spate was the lead keynote speaker on Tuesday morning with *The international and National significance of Australia's karst landscapes*. Andy's assessment of World and National Heritage, Ramsar, National Landscapes and Geoparks revealed many have

karst values, even if they are not explicitly mentioned in the relevant nomination. It is interesting that the national karst assessment which several ACKMA members were a part of, has not been finalised despite being prepared for several years, when the equivalent palaeontological assessment has been published and is readily available on line. It would be useful to see the karst assessment reach this point too.



Paul Williams presentation on the Geological background of karst in New Zealand gave an introduction to the karst of NZ. It was an excellent tour from north to south New Zealand, explaining the limestone deposition and subsequent karst development.

Like Australia, New Zealand has a diversity of karst with its caves preserving a rich archive. Paul's presentations are always entertaining and engaging and this was especially so.



Daniel Hikuroa then took the conference closer to its theme with *Going deeper – the quadruple bottom line – People, Planet, Profit, Papatuanuka*. Daniel proposed that *Papatuanuka* might be added as the fourth bottom line, representing culture. He explored the challenges of measuring social

and environmental impacts and whether these could have a financial value placed on them. Another challenge is there is no universal standard with an index approach. Daniel took us on quite a ride, introducing the concept of *mauri*, a Maori concept for the potential for life, and his *mauri* model assessment tool. I was quite interested in the concept and looked up Daniel's website to discover more about this;

<http://www.maramatanga.co.nz>. It is well worth a look.



Dan Cove's contribution was *Exploring cultural heritage values of karst: the development of Indigenous tours, walks and displays at Jenolan Caves*. This paper was delivered with the usual polish we expect of a Dan Cove presentation. Dan gave an honest evaluation of the Jenolan Caves

site and how it played to its strengths and overlooked the lesser values. Quite a natural thing to do when the current products were doing well, so why bother developing new options? The exploration phase of developing the Indigenous tours and products was

interesting, especially dispelling the myths that little was known about the cultural heritage. A good lesson in looking back to the primary literature and not making assumptions. Dan's overview took us through the process of engaging with the relevant Indigenous group (Gundungurra Tribal Council) through to the development of the phone app, cultural trail, guide training and authentic tour experiences. Dan's key take home points from the experience were that long term sustainability relies on support from the broader community. Continual development and introspection are important to maintaining the triple bottom line in any tourism business.



Given the circumstances that were unfolding, Deborah Carden did an amazing job presenting her paper *Beyond the Master Plan – Naracoorte Caves World Heritage Area, South Australia*. This work is close to my heart as a previous Naracoorte Caves manager and wanting to see the site take steps

to move to a new level of presentation. Deborah outlined the master plan process to re-energise the site, with the goal to be a market leader by providing exceptional experiences. As with most (all?) government operated caves, the South Australia Government is exploring partnerships with local government, private operators and the community to assist with realising management objectives. Deborah invited me to provide a summary of how the Naracoorte Lucindale Council (my employer) is seeking to strengthen ties with the Naracoorte Caves to increase community benefits from having a World Heritage site with the council district.

A second Paul Williams paper was titled *What Waitomo speleothems tell us about environmental change*. Once again, Paul's energetic presentation was engaging and he described how speleothems may be used to inform us about past climate. With climate change now a major area of interest for many and speleothems able to



ISCA President David Summers with Debbie Ray in Aranui Cave.

Photo: Steve Bourne



provide so much information, Paul's look at the recent past, just the past 2000 years, was most interesting.

Prior to dinner on Tuesday evening, we were treated to an extraordinary performance by the Waitomo Caves choir in the Cathedral Chamber of Waitomo Caves. Conference organisers kept this very quiet and had everyone gather at the visitor centre prior to leading us into the cave darkness. Once everyone was in place, the choir began singing in the darkness with the lights slowly raised. The choir is world famous and we were grateful for their coming together for a short performance for our conference. Afterwards, we floated out of the cave in boats under the glowworms – what a fabulous experience!

Above. Aranui Cave.

Below left. Lucas Zielke, Jordan Wheeler, Amanda Hinton, Rohana Bell in Aranui Cave.

Photos: Steve Bourne

Below right. Waitomo Caves choir.

Photo: John Ash



At dinner, guest speaker Andy Eavis, president of the International Union of Speleology, addressed the group. He started with an extraordinary presentation by his son Rob, a collection of 100s of images stitched together backed with music, plus a



presentation of how he began caving and his successes around the world. This was so good that I felt sorry for Troy Watson who was the second speaker after dinner. I need not have, as his 15 minute video of caving in Stormy Pot on the South Island, New Zealand was breath-taking. Storms, snow, ice, 500+m underground for 8 days, exposed climbs - talk about caving on the edge!!



Wednesday's first offering was from Julia James, Sasa Kennedy and Craig Barnes on *Ecotourism in two karst areas in Madagascar, presented by Julia*. The magnificent landscapes of the Tsingy de Beharaha National Park and Ankarana National Park made for excellent viewing and Julia's

descriptions of the parks ensured that Madagascar is now on my "bucket list". Julia and her co-authors concluded that ecotourism is benefiting the two parks, their surrounds and the people and that it is sustainable.



For me, Sasa Kennedy's paper *Show caves of Southern Spain: how differing approaches to the triple bottom line affect both the show caves and the visitor experience* was the standout paper for the conference. This is no reflection of the quality of any of the papers, but Sasa's work was right on the conference theme and a great presentation.



Arthur Clarke then took us on a tour of Paradise Cave, Vietnam. The decoration in this cave is just mind-blowing and Arthur had many excellent images taken by Dave Bunnell. Another one for the bucket list!

Andy Spate presented his and daughter Jess's work on cave visitors around the world. Andy had sent several hundred emails trying collect long term visitor statistics from show caves around the world. He presented a data set of 56 show cave operations representing 104 caves. The analysis involved normalising the dataset to show increase/decrease over the past 10 years. Although preliminary, the data demonstrated a number of factors affect visitors to a site, with many easily traced to world events such as SARS, Iraq invasion, September 11 attack, and local events eg tourism awards, fuel prices. This is a valuable piece of work and I encourage all sites to provide Andy with their data (contact email inside front cover).

Andy Eavis provided an overview of the International Union of Speleology (UIS). The UIS holds a congress every four years with the 2013 event in July in Brno, Czech Republic. As at 1 June, there were 28 Australians

and 6 New Zealanders registered, a strong contingent among the 955 total registrations. Andy presented a promotional video for the 2013 Brno congress where the theme is Where history meets the Future. Australia is bidding for the 2017 international congress which would be a real coup for speleology in Australasia. Andy then took us on a pictorial journey with some extraordinary images showing the diversity, the biggest, deepest, longest caves around all continents. For keen cavers it was tantalising to think that 25% of limestone areas in the world have not been visited by speleologists, and that in Britain, the largest, longest and deepest caves have all been discovered in recent years.

ACKMA AGM

The AGM was a quick affair with the usual AGM business completed. All positions were elected unopposed with the ACKMA committee now:

Dan Cove	President
Andy Spate	Australian Vice President
Neil Collinson	New Zealand Vice President
Dave Smith	Executive Officer
Sasa Kennedy	Committee
John Brush	Committee
Tim Moulds	Committee
Steve Bourne	Publications Officer

The meeting also elected Julia James elected as a Fellow of ACKMA and awarded Gartrell and Steve Bourne Life Memberships. Citations will appear in the next journal. The locations for future AGMs and conferences were set by the committee and will be;

- 2014 Yarrangobilly Caves New South Wales.
- 2015 Naracoorte Caves, South Australia
- 2016 Capricorn Caves, Queensland.



New life members Grant Gartrell (left) and Steve Bourne (third from left) with President Peter Chandler and new Fellow Julia James.
Photo: Kirsty Dixon



Left. Tony Green waits for ACKMA members while his sister Leanne calls the group in.

Right. Ann Augusteyn, Judy Christensen, Leanne and Ann Musser in Maniopoto's Cave.

Below. The quarry surrounding Maniopoto's Cave.



The Cave Guides Workshop will be held in conjunction with the Yarrangobilly and Capricorn Caves meetings as it was in Mole Creek Tasmania in 2004. This provides some efficiency in that only one host site is required each year and allows for some cross over in attendance.

On Wednesday afternoon, I was part of a group that visited Maniopoto's Cave. We were hosted by Tony Green and his sister Leanne, who provided a traditional welcome to the cave. The cave is significant in Maori culture, as the home of Maniopoto, a great warrior. Quarrying has removed limestone from three sides of the cave with some restoration work undertaken to ensure the cave's integrity. The group had some discussion regarding possible further work that may assist the preservation of this important site



Thursday morning was science morning, displaying the diversity of knowledge, skills and interests that make up ACKMA. Tim Moulds was the first paper, presenting a *Preliminary survey of the invertebrate fauna of the Gunung Mulu World Heritage karst area, Sarawak, Malaysia*. This

work was undertaken by Tim with the assistance of Ross Anderson and Jay Anderson, and Patrick Nykiel. Tim provided an overview of invertebrate studies undertaken

at Mulu starting with the Royal Geographic Society expedition in 1980. For such a significant location, there is quite a remarkable gap in research effort since the 1980 expedition in cave fauna given the caving effort and other biological research. Phillip Chapman's 1982 biospeological study was only comprehensive study with Tim's team an effort to update into a modern context.



Troy Watson showed he is not just an awesome caver, but also a keen and competent researcher with his paper *The longitudinal response of benthic invertebrate communities to caves*, an investigation into major variables driving benthic communities and diversity as streams flow into

caves. His investigations improve the understanding of benthic invertebrates with a nice experiment which demonstrated how an increase in artificial food and habitat source affects abundance. His work also created food webs for cave and external stream environments and demonstrated caves are dependent on and highly connected to surface streams. His powerpoint presentation was most creative and kept everyone engaged.

Glowworms are more diverse than we thought: cave and forest-adapted species in Australia was the title of Dave



Merritt's paper. Dave's introduction was interactive, seeking applause before he started and managing to get ACKMA members to clap synchronously. The purpose for this became apparent later in his talk. His research showed synchronisation

between glowworms glowing and peaking together, and interestingly this occurred late afternoon in the dark zone. Other colonies peak at different times. Dave has worked with a number of students to develop experiments to demonstrate how glowworms use circadian rhythms to synchronise their maximum light output which may increase the effectiveness of the light output to trap prey. The next phase of the experimentation to prove the hypothesis is to determine whether the prey is attracted by the increased light output.



Travis Cross presented his and Dave Merritt's work titled *Glowworm photo monitoring in the Waitomo Glowworm Caves, New Zealand*. Travis gave an overview of the huge decline in glowworm numbers caused by a change in doors to the cave and the ensuing research which identified the causes. This led to reinstating an

airtight door and a management regime to keep temperature, humidity and carbon dioxide within acceptable levels for glowworms. A photo monitoring program has been put in place to which is revealing variations in light intensity across days and months, which would be expected, but perhaps surprising variations in light intensity at similar times annually. Travis has had a number of issues with the monitoring equipment and question time revealed a number of solutions that had been found elsewhere to resolve his issues. Such is the value of sharing knowledge at an ACKMA conference!



Matt Gillies presented the results of his Masters thesis with the *Effects of visitor numbers and ventilation on CO₂ levels and air moisture content in the Waitomo Glowworm Caves*. His research explored the relationship between visitor numbers, CO₂, air temperature and airflow. Matt

posed that management standards and practices could be tailored for specific areas of a cave. His paper (and Travis's) clearly demonstrated the need to maintain a close watch on factors that impact on the glowworms. Fitting with the conference theme: you must look after Planet or there will be no Profit as for Waitomo Caves, no glowworms will mean no People!

Travis and Matt's attendance at the conference was supported by the ACKMA Life Members Fund. Past President Peter Chandler informed the conference attendees the scholarships were made available with a

generous donation to the fund by Derek Mason and named the Peter Dimond Memorial Award. Some members will recall Peter was a driving force behind the establishment of the Waitomo Caves Museum and sadly passed away in December 2002 while ACKMA President.



Chris Hendy rounded out science session with *Towards managing the carbon dioxide partial pressure in caves*. Chris is a chemist who has worked on cave chemistry for over 40 years. He described the process of calcite precipitation and the role of partial pressure of CO₂ determining whether calcite is precipitated or dissolved extremely

well, many cave guides would find his explanation useful. The conference handbook also included this as well. His work sought to identify sources of CO₂ additional to other than that attributable to cave visitors. He provided some fascinating case studies at the Glowworm Caves and Ruakuri Caves.



Van Watson, Mary McCabe, Trish Deer at the entrance to Ruakuri Cave.

Photo: Steve Bourne



L-R. Tom Summers, Manuwai Wells, Philip Woodward, Travis Cross, Benjamin and Geoff Deer at the entrance to Ruakuri Cave.

Photo: Steve Bourne



All too quickly Friday came around. Susan White provided some interesting discussion in her paper *Speleothem science and minimum impacts: why one sample is not a good idea*. The Australian Speleological Federation (ASF) has developed the Science Minimal Impact Code, available for

download from www.caves.org.au. I noted the following statement from Susan's presentation: "The tension between conservation of the cave resource and the need/want for timely scientific information of increasing reliability by management and the desire for scientific groups to further their research." Sue spoke of the need for a register of samples taken from caves so that duplication and removal of unnecessary speleothems is avoided. She noted that the removal of a number of stalagmites from one cave is more useful for climate modelling than the removal of a single stalagmite from multiple caves, and the issue of research groups communicating with each other prior to publication. Her paper provided some important points for managers to consider when managing research impacts in their caves.



People, Planet, Profit..... Palaeontology! Anne Musser gave an overview of how fossils are used in interpretation in Australian caves and plans for their use at Jenolan Caves. She outlined the three main initiatives for 2013/14 including product development, marketing and delivery of palaeo-

based tours at Jenolan. After her talk, Dan Cove responded to a question regarding how the stories might be developed as funding for research will be required. Dan has built a business case to support the research and product development, demonstrating that science can be part of achieving the triple bottom line. Anne's enthusiasm for developing a fossil-based tour will add to the suite of Jenolan experiences.



Tim Stokes last ventured to an ACKMA conference in 2007 when he attended the Westport conference. This time, Tim presented *Geologic, Geomorphic and Hydrologic constraints for karst landscape evolution on Vancouver Island, British Columbia,*

Canada: A new approach and potential applications, work undertaken collaboratively with Carol Ramsey and Paul Griffiths. Tim's presentation, outlined the planned research program on Vancouver Island in British Columbia. He summarised previous research and gave an excellent overview of the geological setting on Vancouver Island. Tectonic uplift, isostatic rebound, sea level change and glaciations are just a few of the influences. Tim is seeking to understand how each contributes to, or constrains karst development. The knowledge will aid in forest karst management and reduce poor decision making.



Peter Crossley's paper *The Auckland lava caves: The problem of having caves in a city* was an eye opener. It was only recently that I learnt of the lava caves under Auckland and Peter's presentation showed the extent of the basalt and caves, and the relationship to major infrastructure and suburbia.

He showed a number of the caves, their entrances, and land tenure and issues. Many entrances are manholes in road reserves, carparks and sidewalks – it must be interesting for local council workers ensuring they know what each manhole is for! Some are *waihitapu*, places where Maori are buried and unfortunately the world wide problem of rubbish dumping in holes in the ground has occurred in several of the caves. Peter hosted a post conference trip and John Brush's report appears elsewhere.



Nick White's presentation *Scrubby Creek Cave acquisition, Murrindal, Victoria*, co-authored with Daryl Carr, told the story of the Scrubby Creek Cave acquisition by Rimstone Cooperative. Having been through a similar experience driving the purchase of Sand Cave, Naracoorte, I thoroughly enjoyed

this. Raising the necessary funds is a challenge whether it is the public or private sector and it is a credit to Nick that he was able to drive this project and achieve the purchase. The purchase is still \$30,000 short and donations are still being sought. The form is available on the ASF website at www.caves.org.au. Nick also provided some interesting thoughts on various management models including establishing a conservancy with an example from Hawaii. After the conference, the ACKMA Committee held a discussion and has agreed to donate \$2000 from ACKMA towards the purchase of Scrubby Creek Cave.



And so it came to the last paper, Scott Melton's contribution *Digital Media (a modern conundrum in an ancient landscape)*. Scott's presentation really resonated with everyone at the conference. Digital technology has had a major impact on the way cave tours

operate; Scott identifying slowing of tours (leading to missing future tours or transport), excessive flash, trip hazards, irritation to others, and inattention to commentary as impacts of the digital revolution. I learnt a new term; the "selfy" – taking a photo of one's self. Scott posed whether ACKMA should develop a policy regarding the use of digital media. Tom Summers responded to Scott's talk saying we should embrace the use of digital media as all images taken become promotional images for the site. Food for thought....



So ended the 26 conference papers. John Ash summarised the week and it was universally agreed the papers were of a very high standard – a credit to all the presenters. There was a tremendous breadth of papers but

all managed in some way to link back to the conference theme of "People, Planet and Profit". During the course of the week, Papatuanuka and Palaeontology were added as an extra P with John adding Prioritise in his closing remarks. I unfortunately had to leave the conference Friday afternoon to start a weeklong tourism promotion in Auckland, but felt sure a seventh P was added that night – Party.

The conference was an absolute credit to the organisers; Conference Convener Libby Chandler ably supported by Dave Smith, Peter Chandler, John Ash, Greg Martin, Van Watson and Angus Stubbs. The program was as busy or relaxed as you wanted it to be with so many options it was impossible to attend them all. Reflections of a number of activities have been provided by other conference attendees.

One of the many features of the conference was the way the Waitomo community embraced ACKMA. The warmth and friendliness was genuine and we felt like part of the community by week's end. One member managed to take a fishing trip, a round of golf and a morning's hunting with new found friends, and even managed to come to the conference for a full day in his busy schedule of extracurricular activities. Talk about Priorities!



Dinner at the Waitomo Caves Visitor Centre



Moir Lipyeat, Tom Summers, Dave Smith

Photos: Steve Bourne

ADVENTURE CAVING in WAITOMO

John Brush



L-R. George Bradford, Hans Loder, Cath Sellars, Dirk Stoffels, Lily Petrovic, Marj Coggan, John Brush enjoying the wet section of the Black Abyss tour.

Photo: BWR guides

Waitomo is world famous (at least in New Zealand) for adventure caving activities and with the ACKMA conference in town, it was reasonable to assume delegates would take on an underground adventure or two, especially with some of the operators offering very special prices. No doubt the trips were largely for research purposes, but who could ignore the opportunity for some fun, excitement, rewarding experiences, blood-pumping thrills, truly awesome descents, mind blowing heights, breathtaking challenges or a high Rambo rating? Or so the glossy brochures suggested.

There are five organisations* in and around Waitomo area providing commercial adventure caving activities and four of these offered generous discounts to ACKMA delegates, ranging from the absolutely free tubing trips offered by Cave World along the stream in Foot Whistle

Cave, to a flat \$20 fee for any of the 3 trips offered by the Legendary Black Water Rafting Company (Black Labyrinth, Black Abyss and Black Odyssey - all in Ruakuri Cave) and to 50% discounts (resulting in prices ranging between \$87 and \$233) for trips offered by Kiwi Cave Rafting into part of the Mangawhikau system and by Waitomo Adventures into Lost World, St Benedict's Caverns, Haggas Honking Holes and Tumu Tumu Cave.

Quite a few of these trips attracted ACKMA delegates, mostly on the Friday during the pre-conference caving trips or on the following Wednesday during the optional activities afternoon. However, a few dedicated souls quietly snuck away from the formal presentation sessions to undertake additional underground research activities.

On the pre-conference Friday, about 15 people rolled up to the Black Water Rafting Company base ready to experience any one of the 3 trips on offer. I have been told the 3 hour Black Labyrinth rafting (ie on truck inner tube) trip was a lot of fun. Some others delegates attempted the challenging Black Odyssey trip high into the roof canyons of Ruakuri and thought it was a fantastic trip but, as experienced cavers who were used



*John Brush in action.
Photo: BWR guides*

to rope work and high traverses, they did not think of it in terms of “mind-blowing heights” or “extreme traversing”.

I was among a party of 7 who took on the 4 hour abseiling, water-leaping, tubing and waterfall-climbing Black Abyss trip. It was all great fun. However, what I enjoyed most was when we all linked our tubes together, turned off all lights and snaked our way along the streamway as we drifted with the current under a low tunnel of glow worm lights. Magic. At one point, it seemed to be happening in slow motion until the guide realised someone, who shall remain nameless, towards the rear of the human chain had grabbed onto a rock projection and was holding the chain motionless in midstream.



*John Brush emerging.
Photo: BWR guides*

Lights on again, more floating, some wading, a wet crawl and then we climbed a couple of thundering waterfalls to emerge in thick forest at the bottom of a doline. Kitted out in wet suits, the trip was not as cold as I had expected. I think Cath Sellars was the only one who



*Jumped or pushed? Dirk Stoffels in full flight.
Photo: BWR guides*



*A pensive Phil McGuinn on the Black Odyssey trip.
Photo: BWR guides*



*The impressive rigging at Lost World.
Photo: John Brush*

shivered her way along the stream, but she still seemed to enjoy the overall experience.

A few days later, along with Phil McGuinn, Dirk Stoffels and Brett Dalzell, I returned to BWR to tackle Black Odyssey. This trip has been available for just 6 months and as a consequence all the equipment and rigging still looked very new. The size of bolts used for rigging points is very reassuring and with 3 cows-tails attached to 2 separate safety ropes (allowing a minimum of at least 2 points of attachment at any given time), it all felt incredibly safe. The trip starts off in a very comfortable manner along the metal and plastic elevated walkways of the show cave part of Ruakuri. Soon however, we were hanging off ropes a giddy 50 cm above the cave floor. That, we were told was just a test. As everyone passed, we were soon onto the serious stuff. That basically meant a series of ledge traverses, via ferrata (i.e. walking on metal pins mounted on the cave walls) sections, an abseil, 3 flying fox (zip line) rides, a rope swing around a corner and two ladder crossings (just like they use to cross giant crevasses in the Himalayas – except that crampons are not required in Ruakuri).

The next day I joined a small team (Dirk Stoffels, Lilly Petrovic, Laura Dawson and Greg Middleton) for the 100 metre abseil trip into Lost World. As this trip is billed as being suitable for people who have no previous abseiling experience, it was interesting to see how people were belayed. Rather than the usual top or bottom belay, an

ingenious safety mechanism is used. We each had our own abseil rope and rack as well as a cows-tail that was attached to a locking mechanism operated by a guide. Up to four clients abseil together attached to their guide's safety device. If tension is placed on the cows-tail (i.e. if anyone gets more than a metre or two below their guide), the rig automatically locks, as I discovered when I got a little enthusiastic. So there was no chance of an uncontrolled descent. However, once one of the guides was on the bottom and was available for a bottom belay, some of us were allowed to unclip from the other guide's locking device and free abseil to the bottom.

As the Lost World chasm is surrounded by thick vegetation, it is hard to gauge its size – it is perhaps 50m long and 10 m wide at the surface, but as it overhangs on all sides, the floor area at the bottom is larger than these dimensions suggest. The walls and the bottom are covered with all manner of greenery and a hovering mist provided an eerie backdrop to our descent and scramble across the bottom. After posing for photos we headed into the underground proper. The stream we crossed was surprisingly small for the amount of noise it generated in the chasm. Before long it was time to climb a 30m fixed vertical ladder. After catching our breath, there was some traversing, more climbs on ladders, a bit of scrambling and then back to the surface through another entrance a couple of hundred metres from the



*L-R. John Brush, Laura Dawson, Iain (Lost World guide),
Greg Middleton. Lost World cave tour.
Photo: Flyn, Waitomo Adventures guide*

main chasm. A longer trip that involves heading upstream all the way to the stream sink is also available.

After 3 adventure trips, all involving vertical rope work, with two different companies what conclusions can be drawn? All the trips were pitched as exciting, adrenaline-pumping experiences suitable for reasonably fit people with no previous caving or rope experience. Most of the promotional imagery suggests companies are primarily targeting 15-30 year olds, and the language used in feedback comments suggests this is who they are mostly attracting. But how was it for a grumpy (ie discerning) 60+ year-old caver? Pretty damn not bad, I have to say.

Each of the trips felt very safe and was immensely enjoyable. Tubing under glow-worm displays, underground zip lines and walking along (near) horizontal suspended ladders were all wonderful and interesting new experiences for me.

On each trip we had 2 guides. They were invariably personable, alert, attentive, competent and well trained in the use of nearly all of the gear. The exception, perhaps, was in the use of the cameras they carried and used frequently. The adventure companies are very efficient at getting images off the cameras and onto big

screens in the office and then on to memory sticks for clients to purchase (although very generous gifts were made to ACKMA parties). If only the quality of the images was better. Now, I admit there are serious limitations on what can be achieved on the run with a point-and-shoot camera in a large wet passage. However, as some of the shots were nice, it shows that it can be done. My gripe is that if a little more care was given to framing shots, and also a little more time was allowed for the camera to focus, more pleasing results could be captured more frequently.

The equipment was generally of a very good standard, apart from the lights. All companies appear to use similar lights and while these appeared to be robust and waterproof, they did not produce much light. They were adequate for seeing the way forward immediately in front, but were hopeless for illuminating the cave in general, or so it seemed to my old eyes. I was told the dim lighting was intentional – it prevents inexperienced people blinding others when they faced them and also stops people wandering off. As a caver, I like to see all of the cave passage that I am passing through, so after the first day, and with permission, I used my own helmet and light. Some others did likewise.

Are there impacts on the caves? Of course there are. Opening up a cave for adventure activities does result in a range of impacts and some of these are permanent. Even if all of the installations (for example, rigging, platforms, ladders, slides and weirs) are removed, the worn trails and bolts (or bolt holes) will remain. However, as clients are generally kept to specific routes, the area of impact is limited. Additionally, relatively few of the caves in the Waitomo area have been opened up to adventure caving, at least so far. On balance, a cursory examination suggests the caves I visited appear to be bearing up pretty well and the benefits of having a broader cross section of the general public having some knowledge of, and perhaps affinity with, caves should not be ignored.

What is on offer at Waitomo is not unique, but is certainly an eye-opener from an Australian perspective. Some of what we experienced during the ACKMA week would be impractical or impossible in the Australian context. However I believe it has certainly given some cave managers something to go home and think about. Is that right, George and Don?

All in all, we saw some incredible things and shared some wonderful experiences. On behalf of all delegates who participated on the trips, I would like to thank our guides and also the operators who supported the ACKMA conference with these special trips.

*The fifth operator, Greenglow, is a small family-run business operating from a country home about 20km out of Waitomo (and a little closer to Te Kuiti). Greenglow provides low-key, tailor-made trips into the nearby Mangarongapu Cave.

ACKMA 2013 CONFERENCE WAITOMO NEW ZEALAND PRE CONFERENCE TOUR

Tony Culberg

The pre-conference tour started on Friday 10 May from Waitomo. The tour was led by Greg Martin and attended by Pat & Tony Culberg, Greg Middleton (all from Tasmania), Regina Roach (Yarrangobilly), Tom Summers (Texas) and Don Haider (Malaysia).

The itinerary had been sent well before and suggested we would reach some serious altitude and that warm weatherproof clothing would be needed.

The trip left on time and our first stop was at Pureora. We walked on a new forest interpretation track of about 950 m in an old logging area. This short track is beside the start of an 84km cycleway which heads south almost to Lake Taupo. This was rebuilt by the NZ Department of Conservation (DOC) and is designed to allow enthusiasts to explore some old logging areas. Private operators will be encouraged to provide services – relocation back to the start, tenting, catering, rather like the organised walks such as the Milford Track.



L-R. Pat Culberg, Tony Culberg, Regina Roach, Greg Middleton, Don Haider at the entrance to the Totara Walk

Our next stop was at the geothermal area of Orakei Korako. This is relatively little known geothermal area, fairly close to Taupo. It is administered by a Maori Trust and has a well maintained visitor area, including a toilet block, a sealed car park and the mandatory souvenir and coffee shop. Access to the geothermal stuff is across the lake, via a launch. The entry fee is \$NZ 36.00 per person. The map is comprehensive and the walking track is well maintained, being board walk for 97% of the route. There were some short sections of not yet gravelled track, and signs directing the visitor not to leave the boardwalks!

This area is well worth visiting – it has everything that Rotorua has, except a high geyser, without the crowds and the hype. You can make your own pace and take as

Top. Orakei Korako Geothermal Valley.

Middle. Geothermal activity, Orakei Karako.

Bottom. Sinter flakes, Lake Rotokawa. L-R. Dr Harry Keys, Greg Middleton, Regina Roach, Tom Summers, Pat Culberg, Tony Culberg, Don Haider.

Photo: Greg Martin

many photos as you want. There is no guide to keep the group moving. When you have seen enough, and at least an hour is needed, the launch is summoned and you are returned to the car park, through the souvenir shop, of course.

Our next stop was to collect Dr Harry Keys, principal volcanologist for DOC. Harry took us to a recent geothermal power station which has a new design, in that it injects the used, cooled water back into the ground. The first geothermal station at Wairekei did not do this and over 60 years the ground has sunk and the wells collecting hot water have had to be moved, at least twice. It is hoped that the re-injection of used water will extend the life of the site. Behind this power station there is another geothermal area. At one stage DOC intended to open this to the public, and some infrastructure is in place, mainly consisting of treated pine barriers to control traffic. These have all deteriorated over time.

Harry took us on a grand tour of this area showing us all kinds of geothermal features. Harry also used his handheld gas analyser to demonstrate the various levels of hydrogen sulphide gas, aka rotten egg gas, and the first thing visitors to Rotorua notice. One becomes immune to the smell after a very short time, so a gas detector is vital. The area had been a sulphur mine/quarry in an earlier life and some of the works were still visible. We were shown some magnificent sulphur crystals.



*Sulphur crystals.
Photo: Greg Martin*

Saturday dawned a little brighter and Harry, who lives in Taupo, rejoined us for the day. Our first stop was to view Mt Tongariro, where there had been volcanic activity last November. Harry explained the strategy DOC had adopted to manage this, as there had been damage to a hut high on the mountain. We were given a full description of the detection and warning systems in use, and shown photos of various incidents. We returned to the Desert Road and headed south, buying some lunch on the way. We headed up an unmade road, through the



*Dr Harry Keys describing eruption activity.
Photo: Greg Martin*

NZ Army live firing range, and up the side of Tongariro. We were given detailed descriptions of the various ash layers and of the types of erosion which occur. After an incident with the gate to higher levels – we could not open it! – we retreated to a dry creek bed for lunch. This had a magnificent cross-section of ash layers, clearly showing the various types of material emitted during an eruption, or over a series of eruptions. During lunch the significance of the various layers was explained.

During our return to the main highway, we stopped and observed some carbonised tree trunks which had been flattened by the blast from an earlier eruption. We also stopped at an elevated lookout to observe the volcanic plain. Greg Martin gave good directions to a party of Japanese tourists who were heading to the various sites where the movie, *The Lord of the Rings*, was filmed. Pat and I were pleased to see Asian tourists away from their tightly run tour groups and away from the standard tourist traps. Our experience is that many Asian tourists are afraid to stray from the highly organised resorts.



*Don Haider viewing an active crater.
Photo: Greg Martin*



*Mt Ruapehu, Tongariro National Park.
Photo: Greg Martin*

We continued to Waiouru, the major town in this area, with its military museum and Army base. We also stopped at Tangiwai, the site of a rail disaster on Christmas Eve 1953. A lahar took out the railway bridge at the moment a train was on it, with 151 passengers killed. Harry explained the civil engineering response to this event, and proudly pointed out that the measures had averted a similar event in the last twelve months. Embankments were built, the road bridge was raised by 2 m and steel crumple barriers placed on the upstream side of the piers. The result was that the 2012 event did not cause any serious damage.

Then on to a small town, Ohakune, where we turned north to cross to the other major North-South highway State Highway 4, where we turned north to our second night's accommodation, in the Skotel at Whakapapa village on the side of Tongariro. This claims to be the highest hotel in NZ. En route we stopped at a quarry, which produces scoria in varying sizes and colours for garden and other landscaping use. Harry explained that this was the actual crater of a small volcano.

Sunday saw us dropped off higher up the hill for a walk back down to the Skotel, along a well-made track past the Silica Rapids. This walk took Tom and Tony the full, allotted 2 hours – Tom commented that at 78 he was unlikely to ever get back here again and he would take

every photo he could. Others completed the walk in less time. The rapids are well worth the effort, being yet another form of flowstone, this time made of aluminium silicate.

Sunday afternoon saw us at Huka Falls, a most spectacular cascade on the Waikato River, just north of Taupo. Across the road is a newly developed tourist area, called The Craters of the Moon. The entry fee here was \$8.00 and again there were excellent boardwalks, again with the imperative direction to not stray from them! A quick look at the scrub with numerous steaming fumaroles and pits confirms that the instruction is warranted. This area is a direct result of the slow collapse of the underground caused by the extraction of hot water for the 1950s' geothermal power station.

It is quite a contrast to be exploring an area which is changing as you look at it. NZ is so unlike Australia, where there are rocks, in WA, from 4 billion years ago, and where the younger stuff such as the Murray River's big bend at Morgan is older than almost all of NZ.

Our sincere thanks go to Greg Martin for his hosting and to Harry Keys for his enthusiastic, technical commentary. It was way better than Geothermal Science 101 and it was a real pleasure to have an expert available, especially as he was still packing to be on a plane to an overseas conference on the Sunday.

WILD CAVING: MANGAPOHUE CAVE

John Brush

Another day and another pre-trip briefing at the HTG Cavers Hut. On this fine Sunday morning, what could be better than a leisurely trip through a nice stream cave on the Stubbs family farm. Or so Angus Stubbs was suggesting.

A short time later, six of us (Cathie Plowman, David Butler, Brett Dalzell, Cameron James, John Brush and Marj Coggan) headed off to the farm with Angus. Here, he borrowed his father's ute to save some paddock walking. A kilometre further on, we left the vehicle at the edge of the grassy paddocks and headed into the thick bush. Angus explained that the rugged karst terrain with its thick cover of native bush at the back of the farm was covered by a QEII open space covenant. This is a terrific system New Zealand has for protecting privately owned lands that have significant natural or cultural values. A QEII covenant is a legal agreement between a landowner and the Queen Elizabeth II National Trust. It is entered into voluntarily by the landowner and binds current and all subsequent landowners in perpetuity. The covenant is recorded on the land title.

It was just a ten minute walk along a rough path through the lush bush to the cave entrance. Initially the cave was a nice walk-through size, 1-2m wide and 2-5m high. There were many wetas in the outer section, lots of glow worms and quite a few moa bones. These were mostly on ledges, put there out of harm's way whenever Angus came across one exposed in the cave gravels. Angus said the cave was about a kilometre long, and about half way through, its character changed, the roof got lower and the water got deeper. At one point we were meandering through a forest of stalactites that extended to within a few centimetres of the water. Throughout the cave, all the rocky surfaces that were often water covered were coated with a black manganese layer.

Navigation in the cave was easy. We just followed the stream and we emerged from the lower entrance after a really pleasant two and a half hours underground. Angus took us on an extended walk back to the vehicle, taking in a deep karst canyon and a lookout at a high point on a ridge. Then it was back to his house for a welcome cuppa and, when they dropped in to say hello, his parents.



Cameron James and glowworms in the streamway passage.

Photo: John Brush

CAVING with WAITOMO ADVENTURES: ST BENEDICTS CAVERN

Sasa Kennedy

This 4 hour tour with Waitomo Adventures is promoted as a dry adventure in a highly decorated cave,. My tour ran with 7 clients and 4 guides, two of whom were training as a result of modifications to the flying fox (zipline) rigging and procedures. One of the clients was a 67 year old woman suffering from a degenerative disease, who was trying to pack as many adventures in as possible while she still could. It was her third caving adventure in as many days, having never been in a cave before. Sure, she needed a bit of help and occasionally slowed things up a little, but what an inspiration! The other clients, all Australian, thought so too.

St Benedicts Cavern is an enjoyable commercial adventure trip, though only about two hours are spent in the cave - and most of that is spent waiting to abseil or take your turn on the flying fox. Like the other two dry adventures I did in Waitomo it was more about adrenaline on ropes than actually caving, but great fun regardless.

Prior to entering the cave the group had a "dry run" roping practice on a gentle slope. A good idea as rack descenders can be confusing for beginners and when abseiling in the cave you are largely out of sight of the guides. Guides were very careful with safety checks and putting clients onto ropes.

The entrance pitch was a 20m abseil down a beautiful pancake limestone tomo, followed by a scrabbly but fun 30m pitch. The guides wisely chose an experienced abseiler to go in first as the wait at the bottom of the



second pitch was quite lengthy, which might not work well with a first time caver.

Next obstacle, within sight of the pitch was a log balanced across an abyss, with handlines for safety. It would be very easy for the first abseiler, sick of waiting, to wander off here and get themselves into trouble, but I behaved myself.

The rest of the trip is mainly just scrambling over rocks in an open phreatic chamber until the flying fox take-off platform appears in front of you. While waiting to go on the zipline a nice snack of cordial and chocolate is served.

The zipline is located in a highly decorated and stunningly beautiful chamber. In a way it is a shame to fly through it so quickly, though there is plenty of time to gaze from afar as you await your turn on the flying fox.

The thought of swinging and breaking a formation was constantly with me as I flew across the chamber, but it was quite a buzz to see all that crystal zoom past. Then time to admire some nice rimpools, flowstone and stals in varying shades, as others caught up.

Then a quick photo opportunity and a short scramble to the airlock and it was all over bar the drive back to the well-appointed gearshed.

The clients all loved the trip, though personally I could have survived without quite so much cave fantasy. The guides did a great job maintaining a positive vibe and reassuring clients along the way. Highly recommended.

CAVEWORLD TOURS: FOOTWHISTLE TOUR

Sasa Kennedy

It was late afternoon and our guide (also the cave owner), Ross, was very attentive to his group, beginning with a welcome and some interesting interpretation of Maori indigenous plant use as we made our way down to the cave.

Footwhistle Cave is not highly decorated on the whole, but has a rather nice stream flowing through it. The entrance is lit by candles, to allow your eyes to adjust more readily to the dark and better appreciate the glow-worms. A nice touch and quite romantic, though some delegates on Monday's tour noted that candle wax had dripped on the



formations. This had been cleaned up by our visit on Tuesday – good work Ross.

The main attraction is the glow-worms, which, however, are less abundant in this cave than in some of the other Waitomo caves. Ross provided some interpretation of the glow-worms and also a demonstration of the various types of cave illumination that have been used through the ages when we reached the end of the cave. This was a nice point of difference from the other glow-worm caves.

Footwhistle cave is definitely best seen at dusk, departing the cave after nightfall. As you leave the cave you climb up steps through a narrow canyon. The canyon walls are studded with glow-worms, merging seamlessly into the starry night sky. An unexpected and magical experience.

WILD CAVING: ZWEIHOHLEN CAVE

Sasa Kennedy

Participants: Travis Cross (leader), Cath Sellars, Phil McGuinn, Patrick Nykiel, Dirk Stoffels, Lily Petrovic and Sasa Kennedy.

The day started with a pleasant sortie through the Ruakuri Reserve, looking for the entrance amidst a maze of tracks.

Zweihohlen refers to “two holes” or entrances. The upper sections of the cave are used by schools, scouts and other similar groups for adventure caving; access here is easy, requiring no vertical techniques. As such, it was interesting to see the range of management techniques used to minimise mud tramping, control erosion and generally protect the cave.

At the entrance to the cave is a metal stairway, which prevents erosion and also catches a lot of mud, before it enters into the dark sections of the cave on boots. This is soon followed by two boot wash stations. These have been used in studies to measure how much silt and organic material would be brought into the cave without them.

Shortly after, sandbagging has been used to prevent further deterioration where a deep trough has been worn by passing cavers. Though rather unsightly, it does seem to be doing its job.

Unusually for an undeveloped cave, galvanised handrails are used in a few places, more to protect some rather attractive stalagmites than for the safety of visitors. Though visually intrusive they do serve a useful purpose. Lack of a minimal impact ethic in some previous users can be seen where mud has been thrown at some features in this top part of the cave.

Travis reported having had to “mend” a few features, including a delicate shawl/straw and a large formation

high up on the wall, which had been smashed into fourteen pieces. Excellent repair work!

This upper section of the cave is looking a little the worse for wear (it reminded me a little of B4-5 at Bungonia, which has similarly unrestricted access), with compacted soils and erosion gullies, so it was good to see some active management of these issues. It was also pleasing to see that some delicate formations and dramatically large ones, such as the Birthday Candle, seem to have survived the wear and tear. There are some very pretty pool crystals along the track and groupings of shawls and flowstone to please visitors. As this part of the cave is mainly walk through, with a few easy crawls, it is easy to understand its popularity as a beginners’ trip. We had fun with a taped downclimb, but this could be avoided by less experienced groups.

While waiting to descend a 7-8m pitch into the lower sections of the cave we detoured to look at a crystal roof etched with mud cracks. A fun abseil, tight at the top and opening out into a stream passage below, required a bit of thought to avoid landing in the water. Requiring rope skills, this part of the cave is less trogged and quite lovely. From here we followed the stream, mainly ankle-deep but up to the thighs in places. Mostly the passage was wide and high but as we got closer to the resurgence it narrowed and got lower. The limestone in this passage was absolutely beautiful, with pancake layering washed and showing a lovely golden hue. We saw some wetas and a cave spider in this section of cave.

Eventually the cave emerged into the forest. Travis kindly collected the bus so we could walk the Ruakuri Track through the reserve. A relaxing but very interesting trip.



Boot wash station



Travis Cross admiring Zweihohlen decoration.

Photos: Sasa Kennedy

WILD CAVING: RUMBLING GUT CAVE

John Brush

As we came to appreciate, Kiwi cavers don't tell you everything up front. The 'secret' email sent by Dave Smith to his kiwi caving mates, two of whom were to be our trip leaders for the day, said of the proposed Rumbling Gut trip "promote as a short trip". At the morning briefing in the HTG Cavers Hut, the advice was "mostly walk-through, good decoration, nice stream and basically a dry cave". That sounded good. No mention of the traverse across a deep plunge pool on a wobbly chain, or of the tricky climbs for those with short legs or of the Last Minute Squeeze where, in 1994, a woman was trapped for 16 hours and where on our trip, one of the locals decided to turn back.

climbs, climbs over waterfalls, chimneying, high climbs and traverses to avoid streamway constrictions, scrambles over slippery flowstone and the odd awkward squeeze to an area of rockfall. Near here we stopped to admire and photograph the spectacular decoration in Peter's Palace. Later, we continued over more rockpile and back to the stream which in that area was reminiscent of Coppermine Cave at Yarrangobilly, at least until we came across that dodgy chain. No mishaps, fortunately, so we continued up the streamway, over or around the odd waterfall or two and then out into a deep, muddy doline in a patch of pine trees.

A most enjoyable day, thanks Rich.



*Marj Coggan in Peters Palace.
Photo: John Brush*

Rumbling Gut is part of the Waipapa Road System, a series of stream sinks, dolines and stream caves along Waipapa Road about 20km southwest of Waitomo. From the road, it was just a short walk to Phosphate Pot, where we entered the system. Initially we meandered along narrow stream fissures, not unlike some of the plateau stream caves at Yarrangobilly. Soon, we were at the infamous Last Minute Squeeze and only then did Rich Kersel, our party leader, tell us about the rescue efforts back in 1994. At this point Stan, the other local, became concerned about his recently-injured fingers decided to turn back, as did Lilly Petrovic who was nursing a sore thumb. Dirk Stoffels tried the squeeze and failed, so he too headed out. They later walked around and entered Rumbling Gut from the stream sink entrance from which the rest of us hoped to emerge.

Led by Rich, the rest of us (Sasa Kennedy, Phil McGuinn, Marj Coggan, Cath Sellars, and John Brush) continued on. There were handline-assisted fissure



*Sasa Kennedy assisting Marj Coggan with a tricky climb
while Rich Kersel looks on.
Photo: John Brush*

By SLOW BUS from WAITOMO to AUCKLAND: The ACKMA POST CONFERENCE FIELD TRIP

John Brush

Fish and chips in a remote and sleepy coastal village, rain, thundering waterfalls, a disappearing lake that hadn't, showers, a breakfast cruise around beautiful Raglan Harbour, drizzle, a wet and windy walk to a deserted black sand beach and an evening visit to a stream cave, such was the first two days of the post conference field trip. There were some experiences to treasure as our group of some twenty delegates from Australia, New Zealand, Malaysia and the United States meandered along the slow and scenic route from Waitomo to Auckland, expertly chauffeured by Pete Chandler and Dave Smith.



Cath Sellars, George Bradford and Hans Loder making out it's just not happening.

Photo: John Brush

There was more limestone than you could point a calcitic finger at: around the northern side of Raglan Harbour, underneath the lava flow at the far end of the black-sand beach at Waikaretu, on the slopes around - and presumably beneath - the enigmatically-named Lake Disappear and in the hills near Nikau Cave and Café, which was to be our overnight base.

Nikau Cave and Café, an easy 90 minute drive from Auckland, is operated by Anne and Philip Woodward on the family farm. Anne manages the food and accommodation side of the business while Philip runs adventure-style trips through a stream cave on the property and, judging by the Sunday afternoon crowds, he also knows how to make a decent coffee.

Late in the afternoon, when most were relaxing over another latte, or something stronger, Philip started organising gear for the caving trip. "It is not a cold cave and I am going dressed just like this" he said, pointing to his shorts, polo shirt and sandals. "If you want shoes there are some over there" indicating a door labelled 'First Aid Kit' and, appropriately, 'Shoes'. I changed into



Top. L-R. Ann Musser, Regina Roach, Sasa Kennedy, Dave Smith, Philip Woodward (note caving footwear), George Bradford in Nikau Cave.

Middle. Stream passage and decoration.

Bottom. Sasa Kennedy admiring the cave.

Photos: John Brush



shorts and T-shirt and chose shoes from Philip's large collection. As an afterthought, I also put on a thin polar fleece jacket. As we headed off on the short walk to the cave entrance, I noticed Philip was now wearing a thick polar fleece over his shirt. Perhaps this is another example of kiwi cavers never giving Aussies the full story.

We entered Nikau Cave close to the stream resurgence and met the stream at the bottom of a muddy slope. The cave, once known as Mannering's Cave, is the best part of a kilometre long and the route through the cave just follows up the stream. Most of the trip is easy walking in shallow - up to knee deep - water, but in one place there is a low water crawl and in a couple of places there are boulders to scramble over. There is some attractive decoration along the passage and also in an upper level chamber that we could see into but did not enter.

Towards the upstream entrance, there is a large chamber with rim-pools and massive flowstones, but at first we could not see this as we entered in darkness. Philip had us turn off our lights and inch forward along the stream in total darkness to prepare our eyes for the impressive glow worm display in the chamber. It was not hard to imagine it was a clear starry night until someone turned on a light. We could then see we were in a large chamber with a few large rocks and fallen lumps of flowstone in the stream. At the end of the chamber, Philip has installed a short section of walkway and a few



Top. L-R. Ann Musser, Sasa Kennedy facing camera and Regina Roach in Nikau Cave.

Above. Waikaretu beach walk.

Photos: John Brush

steps to ease the way out of the cave and into the bushy stream sink.

On behalf of the nine field trippers who went into Nikau Cave, I thank Philip for his generous offer to show us through his cave.

THE ACKMA 2013 POST CONFERENCE FIELD TRIP SUB-URBAN INVESTIGATIONS in AUCKLAND

John Brush

During the recent ACKMA conference, participants were treated to a spectacular range of cave and karst features in and around Waitomo and, towards the end of the post conference field trip, a lucky few were able to take a look beneath suburban Auckland. No limestone in sight, but the city is built on or around 50 volcanoes and some of those had lava flows that formed caves – or lava tubes.



*Peter Crossley.
Photo: John Brush*

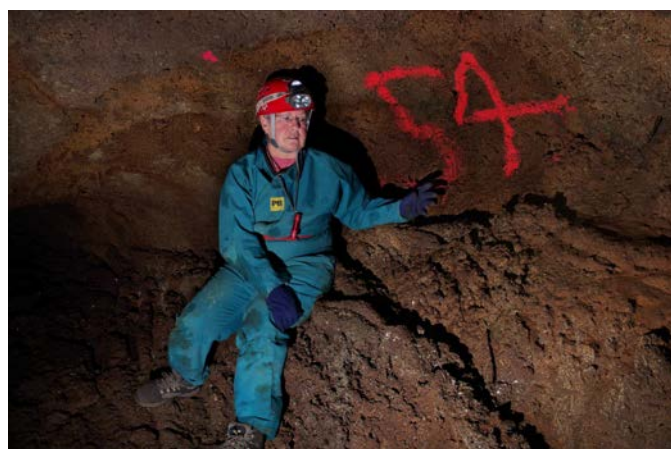
Most of Auckland's volcanoes were active 24,000 -35,000 years ago and it is likely many of the lava tubes that formed in the flows collapsed ages ago. In more recent times, numerous lava tubes have been badly damaged or destroyed by quarrying, by road works, or to make way for buildings. Too often, the tubes that remained were regarded as convenient rubbish dumps or drains for stormwater - or worse. For too long, lava

tubes were not officially recognised even though some were of deep cultural significance to local Maori and others were of special scientific interest. It is only in recent times that any of the caves beneath Auckland have had some form of protection or official status and this is in no small part due to the efforts of local caver Peter Crossley who has been striving to save, document and protect the caves.

We were fortunate to have Peter as our guide for our two days in the Auckland area.

Our first stop was a former quarry site once operated by NZ Railways. Only two caves survive here. At the first, Rumley Cave, we were met by John McClaren, a Department of Conservation (DOC) officer and by Malcolm Paterson, a representative of, and heritage officer for, the local Maori Ngati Whatua Orakei hapu (clan), who welcomed the party and offered a traditional blessing.

Rumley Cave is a low tube hidden beneath a small cast iron manhole cover that was obscured by illegally-dumped rubbish. Soon, everyone was moving up slope to the more spacious and interesting Wiri Cave. This 290m long cave is arguably the most spectacular lava tube in New Zealand. It is now a site of special scientific interest and is protected by a heavy metal gate and a restricted-access permit system. That it survived at all is amazing. It has quarry workings on three sides and works for a new road were in danger of taking away the inner end. Even after the significance of the cave was officially recognised, professional surveyors contracted by the Government left their mark with survey stations cemented to the lava floor and huge bright red station numbers spray painted on the walls.



*Mary Traves finds a survey station.
Photo: John Brush*



*Lilly Petrovic in Wiri Cave.
Photo: John Brush*



*Greg Middleton at the entrance to Kitenau Cave.
Photo: John Brush*

Wiri is almost intact with a good range of lava features. Beyond the entrance, it has almost no breakdown, no washed-in sediment and appears to have suffered little damage, apart from the survey markers.

Although many Aucklanders have done their best to obliterate their caves, Peter took us to a leafy suburb where Sean and his wife Annie are very proud of the cave in the backyard of their home on Landscape Road. They even bought the adjoining block to secure the entrance and squeezed a small grant from the local council for safety works. Like many caves in Auckland, this too had once been used as a dump – as evidenced by a cone of building rubble beneath a now-blocked entrance some distance into the cave. Carl is using local volunteer labour to slowly remove the rubble.

Cave is one of the most notable caves in Auckland once you get beyond a low crawly bit just beyond the 3m entrance pitch. This cave was discovered in 2006 when local utility workers broke through into the cave. After lengthy discussions, plans were approved to put a lid on the cave and the concrete base for the lid incorporates, at Peter's request, eye bolts for attaching a ladder. If only Peter had remembered to bring the ladder on the day of our visit! Noticing the gathering crowds on her nature strip, a helpful neighbour kindly offered to fetch a step ladder from her garage, but one or two of our party quietly said "Shhhhhh! Thanks, but no thanks. Don't tell Peter, but we've seen (or crawled) enough for one day". And so the manhole cover was replaced and our vehicles headed off in various directions to find accommodation for the night.



*Landscape Road Cave.
Photo: John Brush*



*Don Haider thinks twice about a crawl in Landscape Road Cave.
Photo: John Brush*

Not far away in another leafy suburb, we stopped at the kerbside and watched in amazement as Peter used his special master key, sometimes known as a jemmy, to deftly remove a manhole cover on the nature strip along Kitenui Road. By many accounts, the 250m long Kitenui

Next morning, a select group (Pete Chandler, Greg Middleton, Marjorie Coggan and John Brush), met up with Peter Crossley at Devonport Ferry Terminal on the north side of Auckland Harbour for the short 15 minute trip out to Rangitoto Island. At just 600 years old,



*Peter Crossley, Marj Coggan and Pete Chandler
Photo: John Brush*



*Marj Coggan in Kermies Cave.
Photo: John Brush*

Rangitoto is the youngest volcano in the Auckland area. The island is a popular walking spot and the 1-hour climb to the crater rim provides spectacular views of the nearby city. As pleasant as it was sitting in the sun admiring the view, the bush and the bird life, we were soon dragged away by Peter. He was on a mission and before long we were thrashing through thick bush over rugged terrain on the remote eastern side of the island. "Kermies Cave is just 100m ahead", he said at one point. It might as well have been 100km for the progress we were making. As we slowly got closer, Peter's GPS started sending us around in circles and then Pete C found a pit several metres deep and maybe 5m across. Peter said unless it had a thick rope hanging down into it, it was not what we were looking for, so forget it. Nevertheless, ACKMA Cave, as we unofficially dubbed the find, was soon fully explored. Although there were only short sections of intact tube on either side of the collapse pit, it was interesting in that the feature had not been previously recorded by local cavers. Peter later concluded our find was in line with the trend of the lower end of Kermies Cave.

Continuing to circle with the GPS, we soon located the two entrances to Kermies Cave. The promised thick rope was there and was of welcome assistance in climbing into the cave. Down-flow from the entrance, there were some nice flow lines, levees, benches and lava "tide-marks" and the floor was rough a'a lava. Towards the up-flow end of the cave, most of the cave lining had broken away to reveal the yellow, red and black lavas and scorias through which the cave had formed. Very pretty, but loose.

After leaving Kermies, we headed for the public access caves on the island. DOC has erected signposts and constructed rough tracks to several caves, but we chose the direct route through the thick bush. The caves appear to be a popular attraction and in spite of this they seemed to be in reasonable condition, aside from minor littering and mud tracking. We first visited Kermode (or North Cave), which has a nice lava fall, followed by quick trips through Southern and Middle Caves before heading downhill to the wharf to catch the last ferry of the day. All in all a most interesting day. Thanks Peter.



*Greg Middleton in the new ACKMA Cave.
Photo: John Brush*



*Marj Coggan in Kermies Cave.
Photo: John Brush*

WILD CAVING: RANGITAWA CAVE

David Wools-Cobb

As part of the ACKMA pre-conference caving, and not being quite ready for the title of "Arm Chair Caver" I had signed up for a vertical trip into Rangitawa Cave.

The party consisting of David Butler, Tim Moulds, Cameron James & me, hosted by locals Travis, Neil and Chris all met at the HTG hut. I must say this hut is a bit too luxurious for us Northern Caverneers (which anyone who has seen our hut in Mole Creek will understand).

Travis had kindly rigged the four exit pitches previously to make the trip possible, which was much appreciated.

The cave is about 12 minutes drive from the hut, on private property. David Butler and I were a bit concerned when all the locals were donning wet suits and had brought along one for Cameron and Tim. In Tasmania we only wear a wet suit when it's REALLY cold; we Tasmanians were going to tough it in thermals. We walked down to the large doline (tomo) , about 10 minutes from the cars, however it took the locals quite some time to decide where to rig from, for the 85m (estimated by me) pitch. Initially we had a hand line which became more of an abseil to the main rig point. Who-ever was in front of me yelled out that "take care.....there's a little "nick" in the sheath of the first rope: when I got there about 2/3 of the sheath was frayed and as we saw later with each subsequent pass all the sheath became removed for about 50cm!!!!



Photo: Tim Moulds

The pitch head was a big tree, with the majority of the pitch being against the face; a pleasant drop with a sloping ramp about 6m from the bottom before the final drop. Using a rack, I had to add an extra bar about 2/3 of the way down. Some of us had carried car tubes to

assist with a swim later, however it was decided than just one would be needed. We all grouped up at the base for a drink and snack, and then a further 12m abseil down an unstable rock pile with a short vertical component, ending up in a pool of water. This required each caver to retrieve the tube from the previous caver's throw, then swim/float/climb along a wall in deep water for about 10m. I'm not sure the tube kept me any drier!

A mere 10m further on and that was the end of the horizontal caving for some time, as we'd come to the first pitch heading out. This was about 10m up with a very awkward pitch head: I watched how Tim struggled at the head, but frankly didn't do it all that much easier myself. A further 15m through a very muddy rift brought us to the second pitch, part of which was a small waterfall, so it was impossible to stay dry whilst waiting for the pitch to be free. This was about 30m, and was hard work after the first 20m (some of us not as fit/young as we'd like?).

The pitch head on this was excellent and easy to step off into a long meandering high rift. Eventually I came to a cave pack hanging over a tiny hole in the side of the passage, so assumed this was the route. This side passage became serpentine and quite tight in places, with a few awkward climbs causing me to doubt my interpretation of the hanging pack, however eventually I came to a rope indicating the next pitch, a 15m easy prussic. Shortly after that was the final 10m pitch out, however it required a climb up over a challenging lip, which fortunately Tim was available for an extra hand-hold. This pitch was directly in the stream way, so we all got quite wet. Once outside, Tim & I waited for quite some time- two of the group had been de-rigging as they came out. Others in front of us had gone around to the entrance pitch to retrieve the rope.....so we had an easy time of it. Fifteen minutes back to the cars ended a very enjoyable vertical trip. Many thanks to our hosts for sharing a good fun cave.

Back Cover: 2013 Waitomo Conference

L-R. Standing: Dave Smith, Grant Gartrell, Travis Cross, Greg Middleton, Van Watson, Nick White, Sasa Kennedy, Dan Cover, Barry Richard, Andy Eavis, Andy Spate (partially obscured), Steve Bourne, Tim Moulds, Pete Crossley, David Summers, Kerryann Flohr, Haydn Stedman, Scott Melton, Patrick Nykiel, Pat Culberg, Celina Yapp, Cath Sellars, Ian Millar, Sam Webb, Dave, Rowling, Benjamin Deer (front), Mark Gibson, Siobhan Carter, David Head, Mary Trayes, Arthur Clarke, Chris Hendy, Mary McCabe, Phil McGuinn, Lillian Eavis, Rauleigh Webb, Judith Dixon, Ted Matthews, David Wools-Cobb, Tony Culberg, Trish Deer, Matt Gillies, George Bradford, Ann Augustyn, Dale Calnin (mostly obscured), Tim Stokes, Judy Christensen, John Ash, Angus Stubbs, Ann Musser, Greg Martin, Geoff Deer, Cameron James.

L-R. Kneeling: Regina Roach, Troy Watson, Dave Merritt, Julia James, John Brush, Marj Coggan, Pete Chandler, Libby Chandler, Lyn Stedman, Kirsty Dixon, David Butler, Cathie Plowman, Susan White, Moira Lipyeat, Tom Summers.

A TRIBUTE for LES WRIGHT: 1950 - 2013

Mary Trayes



This year's ACKMA Conference at Waitomo was overshadowed by the untimely passing of Les Wright, partner of ACKMA delegate Deborah Carden. Les went missing on the first day of the conference and was not found at Pureora Forest (south of Waitomo), until the end of the week by which time he had died of exposure having been lost in the dense forest for four nights. Local Search & Rescue teams worked hard to find him once his car had been located but as Les was lightly clad their work was cut out and they found him too late.

Although he resided at Punakaiki on the West Coast of the South Island, New Zealand, Les had met a number of conference delegates at different times including the 2011 ACKMA Conference in Tasmania, the 2012 AGM weekend at Wee Jasper and at Naracoorte in South Australia where Deborah has been managing the World Heritage Park over the past four years, and where Les had made many visits.

He first came to the West Coast in 1973 and spent his early years building a house, raising a family and worked at the local radio station. Then during the 1990's he branched out on his own, becoming a heritage consultant to such organisations as the Historic Places Trust, NZ Archaeological Association, Department of Conservation and local councils. He also served a term on the Tai Poutini – West Coast Conservation Board, an advisory group to the Department of Conservation where his knowledge and skills were put to good use.

In his 'spare time' Les wrote, or collaborated with others, on a number of West Coast history books and edited the large body of work Moira Lipyeat had gathered together about the history of caving in New Zealand. This was published in 2003 as 'Delving Deeper,' a book many of us have a copy of.

Living at Punakaiki with Paparoa National Park at his back door, Les was a keen natural historian and conservationist who knew the Bullock Creek caves very well. Xanadu Cave, with its top-level maze, was his favourite and many, many people have enjoyed a 'Les led' trip into the cave with some time spent in the 'humming passage' where his excellent singing voice reverberated really well.

Other things Les was involved with were quarterly publications of the tourism advertiser 'West of the Alps', and running 'Green Kiwi Tours,' a small business where he had a concessions to take people into Xanadu Cave and on walks and nature tours in Paparoa National Park. As a member of the West Coast Alpine Club, the New Zealand Speleological Society and Coast Cave & Vertical Rescue he was also often in demand for leading trips or his local caving knowledge.

At Les' funeral at Holy Trinity Church Greymouth at 11am on May 25th, tributes poured in from all sections of the community with some 'large as life stories coming from his extended family, the 'Friends of Waiuta' (an old goldmining town), the West Coast Alpine Club and ACKMA member Moira Lipyeat, who had made the long road trip home from the Waitomo and then over from Christchurch especially for the funeral.

The first verse of Samuel Taylor Coleridge's poem 'Kubla Khan' was read at the end of the tribute by local caver Warren Smith and twenty-seven cavers formed a guard of honour for Les as he carried from the church at the end of the funeral service.

*In Xanadu did Kubla Kahn
A stately pleasure-dome decree:
Where Alph, the sacred river, ran
Through caverns measureless to man
Down to a sunless sea.*

This short note from me is a thank you to ACKMA members for your support during the days that Les was lost and your condolences after his body was found. Over four days and nights we and LANDSAR never ceased being hopeful of finding him alive. He fell during Thursday night, was knocked unconscious and died from hyperthermia. Special thanks to John Ash and Mark from Spellbound who took Les and me from Waitomo to Taihape as part of our journey home.

Regards,

Deborah Carden



*Les on Tantanoola Caves walk 2010. Photo: Mary Trayes.
Les in Big Arch, Oparara 1998. Photo: Kevin Dash*

