

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 whakataua (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 whakataua* 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 *whakataua* 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 hongī.
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 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.

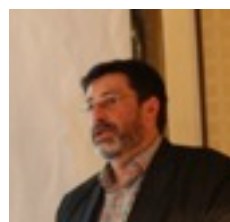
Dave Bamford was the first keynote speaker, displaying a passion for the outdoors, caving and mountaineering. Dave provided an overview of key market influences and had some important messages, perhaps the most important being that a balanced approach to development is required. He championed the importance

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



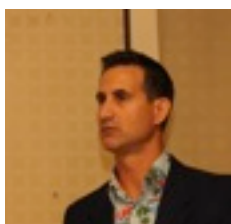
Andy Spate was the lead keynote speaker on Tuesday morning with *The international and National significance of Australia's karst landscapes*. Andy's assessment of World and National Heritage, Ramsar, National Landscapes and Geoparks revealed many have

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.

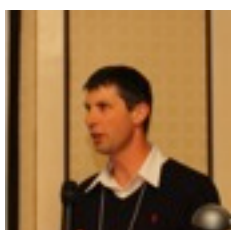
Like Australia, New Zealand has a diversity of karst with its caves preserving a rich archive. Paul's presentations are always entertaining and engaging and this was especially so.



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;

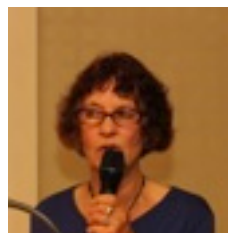
<http://www.maramatanga.co.nz>. It is well worth a look.



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.

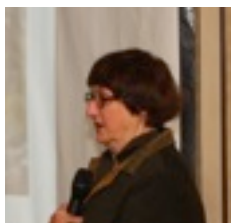
Photo: John Ash



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.

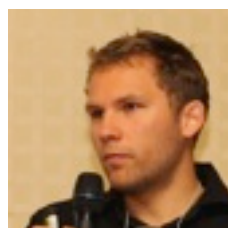
On Wednesday afternoon, I was part of a group that visited Maniopoto's Cave. We were hosted by Tony Green and his sister Leanne, who provided a traditional welcome to the cave. The cave is significant in Maori culture, as the home of Maniopoto, a great warrior. Quarrying has removed limestone from three 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

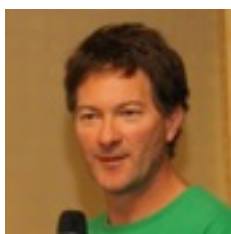
caves. His investigations improve the understanding of benthic invertebrates with a nice experiment which demonstrated how an increase in artificial food and habitat source affects abundance. His work also created food webs for cave and external stream environments and demonstrated caves are dependent 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



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.



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.



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



Moirá Lipyeat, Tom Summers, Dave Smith

Photos: Steve Bourne