

NEW ZEALAND NOTES

- Peter Chandler and Dave Smith

Mason's Glowworm Caves and Waitomo Flooding

Flash is the operative word! Flash flooding of caves in the Waitomo area has been the scene this winter, regardless of upstream protection areas. Andrew Matthew, a professional cave guide from Australia, who battled clearing logs and debris in Mason's River Cave after flooding, reports that he could not believe how different New Zealand's wet caves were and nature's effects on them, compared to the generally dry caves of Australia. He said he would have liked to take photos of the debris and logs that crashed through the walkways of the Mangawhikau River Cave. The catchment area had some of the highest levels of rainfall ever recorded and flooding levels in the lower catchments matched those of forty years ago in 1958.

The environmental issues that relate to what happens in caves in wet areas like Waitomo with its eighteen hundred mm plus rainfall makes interesting reading and sometimes a difficult life for commercial operations in the caves. The plus side for the environment is that operators are made very aware of the need for effective management of upper catchment areas and the need to protect stream margins.

Winter floods are a major factor in destroying man-made structures in caves and have done so in Masons Caves this year. They have now been replaced. The river carries silt, shingle, logs, debris and animal corpses that have fallen from cliffs and trees in the upper catchment areas. The only benefactors are large bloated eels that have a banquet at such times. It is only the husbandry of the commercial operators that maintains the image of the *clean green* New Zealand. The rate of flow and the channels within a river cave constantly change in response to nature's deluge of water. The issue is how do we slow the process, that has such a major effect, as mountains endeavour to move to the sea. The ecosystems within river caves are the secondary phase that are changed, modified or destroyed by the general use we make of land resources.

We suggest that existing limited resources currently used in the interests of downstream land protection be shifted from lower to upper catchment areas. Standard conservation methods such as retiring land on steep slopes, creating wide protection zones along all watercourses and the use of varied patterns of tree planting should also have priority. The wholesale planting of a single silviculture such as exotic pine trees will only have a short-term palliative effect if not combined with other measures. The implications of wholesale harvesting have yet to be assessed.

Let us be grateful for the rain we have and the trees we can grow faster than most places in the world. The poverty of drought would be a far worse option.

Wiri Lava Cave

After decades of effort Auckland's Wiri Lava Cave has finally received statutory protection. At 300m in length, this is New Zealand's longest known lava cave. The cave sits in a quarrying area in an industrial part of South Auckland. The land containing the cave has passed to the Department of Conservation and is now a Scientific Reserve, a designation that formally permits public access to be controlled. While becoming conservation land is not a panacea to all the conservation issues at the cave, it is a huge step.

Conservation Minister Nick Smith signed the gazette notice right in the cave, noting "too often we limit our conservation horizons to the trees and the birds that make our country so unique. Protecting caves below ground is unusual but no less important."

Congratulations are due to the many individuals and groups that have been pursuing protection of this site for a long time. In particular, tribute is due to Les Kermode. Les' paper in the 1997 Waitomo ACKMA Conference Proceedings provides a critical look at the extremely long and twisted road towards looking after Auckland's lava caves.

Waitomo Glowworm Cave

Kate Banbury continues to improve resource systems at the cave. The climate measurement system still needs tweaking (setting up such a system is not an event but a journey). The fan times for the dry bulbs have been increased which has changed the temperature and humidity readings. Several data spike problems have been traced to line noise, and rock temperature sensors have been resealed to give more expected readouts.

A new system for monitoring the glowworm population is being investigated. While the old quadrats will be continued, a new system will hopefully (one day) see periodic wide angle photos from a fixed boom in the grotto analyzed by computer for number and intensity. A student will shortly start looking at the distribution of aerial and benthic insects along the Waitomo Stream.

The first winter's data from the automated CO₂ system has highlighted some interesting issues, such as rapid CO₂ build-up when the Grotto entrance is submerged and the lack of overnight CO₂ removal on mild winter nights. While these are predictable and not

unexpected effects, it is nice to have pretty graphs and big data files to quantify them. The data will now be analyzed and management procedures modified to cope with these situations.

Black Water Rafting

At BWR, the School Holidays were noted for Australian visitors, "Ski Fever" packaged school groups based in Ohakune, and including a BWR1 trip on an off day, although the snow on Mt Ruapehu this season was dismal to say the least. And now, we are right into the summer season, with school camp visits to Waitomo weekdays and lots of Free Independent Travellers and Kiwi Experience Bus Backpackers, every day.

Recently, we had a British Film crew shooting for a Children's program entitled "The Really Wild Show" All went well except the producers expectations that the group of cavers should end up in the Glowworm Grotto in the Glowworm cave! A recent article in the American "Travel Holiday" Magazine on Waitomo was disappointing in its failure to differentiate between the caving products in Waitomo.

The NZ version of the "Getaway" TV show did run an excellent day-family-train journey to Otorohanga, the Glowworm Cave, Rabbit World and the KiwiHouse. Danni Minogue, starring in the *Grease* musical, said over television: "A Black Water Rafting Tour was the one *must do* for her stay in New Zealand."

In the SFRITO (Sport, Fitness and Recreation Industry Training Organisation) newsletter, Van Watson (BWR Operations Manager) reports: *According to Van it can take a guide up to a year to be signed off as "fully competent" on a 15 credit unit. Having 10 staff enrolled for off-job training prompted Black Water Rafting to find a training provider for water safety training. They asked Terry Glenister, a SFRITO Registered Assessor operating under the umbrella of the Taranaki Regional Sports Trust, to put together a relevant training and assessment program for them. Starting with the unit standard "Respond to an Emergency in an Aquatic Environment", Terry developed a package involving a pool session and a training*

block for a low-light stream passage scenario, followed by on-site assessment in Black Water Rafting's cave streamway.

The Sir Edmund Hillary Outdoor Pursuits Centre's "Risk Management Course" provided another opportunity to expand staff training. Two guides had enough background and experience to be assessed and gain unit 451 during the week long course; two others returned to the workplace with assignments and information on areas where they needed more learning. "We involved them in exercises where we would normally have taken the easier option of using senior guides," say Van. "It meant we broadened the training and experience of more of our staff." The trainees will be reassessed for the unit and more staff will attend the next course.

Not all guides will take the path to a National Certificate but, as Van says, if the training they are doing is linked to a national standard, then Black Water Rafting now has guides that are not just skilled – they're also qualified.

Comings and Goings

NZSS recently held a successful AGM in Palmerston North. Next year is the fiftieth anniversary of the Speleo Society's birth and will be appropriately celebrated in Waitomo. Ben Bunting and Jon Terry are now the Conservation Officers, as Megan Hieatt has disappeared to work for DOC in Haast (towards the end of the world at the southern end of the West Coast).

Waitomo was delighted to host a visit from ACKMA member Mia Thurgate, of Jenolan Caves, recently. Mia spent a week looking at and discussing various karst issues and field-testing the products of some of the operators (such as the Glowworm Cave, Black Water Rafting and the Waitomo Tavern).

The proposed new centrepiece glowworm display at the Waitomo Museum has been the victim of "scope creep" and now the whole display area is being redesigned. Peter "a girl's best friend" Dimond, the museum director, has just returned from a visit to various museums, caves (Cheddar and Wookey Hole) and young ladies in Europe.