Figure 8 is from Lynds Cave at Mole Creek and displays a major crack in massive flowstone induced by a magnitude 4-5 quake with its epicentre at Lake Mackenzie not far from the cave. The quake occurred on 24 September 1997 at 3.30 am on a Sunday morning.

The National Library's invaluable Trove lists some locals as sleeping though it, but others said, "his mother started the washing machine"; "it was UFOs"; "toys fell over"; "my chess game was ruined" and "plates and pictures fell off shelves and walls". It was alleged that the quake was felt in New Zealand.

Cathie Plowman remembers the quake:

I remember the earthquake VERY well. It was in the very early hours of a Sunday morning in 1997. I was in David's then house in Launceston and woke in the darkness to the sound of what seemed like a truck about to come through the wall. I can still relive the event in my mind as if it was yesterday.

And there was a minor quake at Yarrangobilly a few days before ...



Earthquake cracked flowstone at Lynds Cave, Mole Creek (photo—Dave Gillieson)

..... but I am

looking forward to further cave/earthquakes tales from Australia and New Zealand in the next Journal.

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Around the show caves

Peter Chandler, NZ V-P, reports on events in New Zealand and at Waitomo:

New Zealand has just passed a year since the COVID-19 virus pandemic forced the country into a restrictive level 4 lockdown, one which effectively meant no cave visitors until times permitted us to resume life at level 2 restrictions. So, since May 2020, this is how it has been for us.

After the initial wave of Kiwi visitors getting out and about in mid-winter, things have changed to a steady diet of school holiday and long weekend visitors together with a trickle of Kiwi road trippers, many of them retired, in between.

The lack of international visitors has been especially noticeable over the peak visitor season (November to April). At a guess, this means cave operators are operating at 5% to 15 % of their normal visitation levels. This is a huge downturn for an industry which has grown steadily over the last 50 years – one which, of course, has had its ups and downs throughout this period.

Although it has, perhaps, been toughest on food, transport, information and accommodation providers, the five cave operators in Waitomo have been eligible for a STAPPS (strategic tourism asset protection) grant to assist their survival. In addition, the Otorohanga Kiwihouse has received funding. However, this funding did not include the Museum or Glowing Adventures.

The Waitomo Caves Museum is only open for postal services on weekdays – staffed by Bridget Mosely plus volunteers (plus Toni Hawkes Board and volunteers on weekends). The Waitomo Hotel and Roselands are closed.

At Spellbound, we have moved our office closer to the cave; this appears to be well received by our Kiwi customers. With the continuation of some Waitomo village pickups, this gives us 195, 145 and 85 minute tour options for clients. Taking one or two customers on a tour rather than setting a minimum number seems to be working OK but limiting departures on the really quiet days combined with letting others join on the tour if they arrive in time.

At THL, the Waitomo Glowworm Cave and Black Water Rafting, some staff are employed on 'jobs for nature' with the Department of Conservation. This scheme means they can be recalled for cave tourism, but do conservation work otherwise. Caveworld are also doing this and Kiwi Cave Raft Guides have been volunteering at the Kiwihouse.

Meanwhile, over the last 10 days or so, much of NZ has been basking in an Indian summer, caused by the stationary high-pressure system associated with the extreme rainfall event in eastern Australia.

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There is government talk about travel to and from Australian states, even of resuming flights to Hobart. Joinder of the Cook Islands and Nuie in the Pacific has also been

We all need to be positive about the ability to attend the delayed Wellington NSW conference and the Takaka, South Island, New Zealand Conference in May 2022. More details about the latter follow in the next journal.

Finally, a successful book launch was held at Waitomo, on 13 March, for Van Watson and Paul Caffyn's 'The ist market. search for the deepest hole in the world', their deepest, darkest 1973 Papua New Guinea expedition.....

David Smith reports from Wombeyan introductory 15 minute conservation and history tour Caves:

are operating at 50% capacity for camping. Hard-roofed tween the groups. With halved tour numbers, there is accommodation is also available at a reduced capacity obviously a limit at 50% of our capacity. The tour groups (extra cleaning days between occupancies). At present, complete a lap of the cave before the next group moves there are no caves opened to the public for inspection, through. This avoids clashes on the narrow stairwells but this is due not only to COVID-19 restrictions but also thus maintaining our compliance with the 2 m² rule. ongoing repairs to fire and flood-damaged infrastructure; rock-fall issues; and fire-affected asbestos water lines in the day use areas. Some Wombeyan images below:



Todd Kearns reports from Ngilgi Cave (Margaret River, WA)

Ngilgi (meaning good spirit of the ocean in Wadandi Boodja) Cave is located on the northern end of the Margaret River Region, some three hours south of Perth. Over the past year, with two COVID shutdowns bringing major restrictions in tour capacity (with the need to comply with a 2 m² social distancing rule), we have had to change most aspects of our operations to meet government COVID regulations and a vastly shifting tour-

To meet the 2 m² distancing COVID regulations, we have altered the flow of customers through the cave. After the spiel, pre-COVID, a "free-range chicken structure" was in place for the tours. Now, we keep the guests moving in Wombeyan and Abercrombie Karst Conservation Reserves the same direction; asking them to keep six steps be-

> We have had to endure the loss of international and interstate tourists. This has resulted in very low visitation, outside of boom school holiday periods. Cruise ship and tour bus trade has completely stopped. We have reacted to this by offering 50% discount to locals, when Perth was in lock down and unable to travel to our region, along with other changes to our ticketing structure.

> Over the past 10 years we have grown our education portfolio to include fully guided geology and chemistry-based tours, ones which link to the school education curriculum. This portfolio has been essential for our survival over the past six months. The schools' camps are making up for lost time during the shutdowns and are booking more tours at an unprecedented rate.

> The biggest opportunities the lock downs provided were rare days with no humans in the cave and an opportunity to undertake major conservation works. We also took the opportunity to refurbish our ticket/souvenir shop. The facelift (and revised retail layout) has seen a significant increase in sales.

> Here in Western Australia, I acknowledge, and am grateful for, the fortunate position we find ourselves compared to our cave brothers and sisters in the eastern states. We are thinking of you and wish you well for the future.

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