

KUBLA KHAN CAVE - MOLE CREEK

An Attainable Goal for Visitor Proofing and Restoration Work

by
Henry Shannon
U.Q.S.S.

The main damage in Kubla Khan Cave is in the tracking of mud over originally clean flowstone in the upper levels. The source of the mud is mainly in some short sections of mud floored cave linking longer sections with continuous travertine floor. It is proposed to construct an elevated track over the natural mud areas, to be made of a non-corrosive steel mesh which is obtainable locally. Once the mud source is isolated, volunteers with scrubbing brushes can work on the damaged areas with reason to hope for a permanent improvement in the cave as the reward for the effort involved.

The inadequacy of gating and access restriction as an approach to protecting the cave is discussed in terms of the cave's past history, and some criticism is made of the philosophy behind this approach.

Kubla Khan Cave at Mole Creek, Tasmania, possesses a reputation as the ultimate decorated cave in Australia, and because of this reputation it gets a special type of visitor pressure. People who want to visit the cave want it badly, and will not be deterred by legal and physical obstacles to their entry so long as its reputation as something extra special lasts. Obstacles such as locked gates have been tried for the upper entrance on several occasions, but the locks have never lasted for long. The popular myth in Tasmanian caverneering circles is that a lock on Kubla Khan has a life expectancy of three weeks.

Both the entrances require vertical caving techniques so those visiting the cave are technically competent if lacking in care in the matter of tracking mud over flowstones. The nature of the damage occurring is what one expects from the rougher edges of Australian caving - virtually no deliberate breakage, the odd broken travertine formation in vulnerable spots, but lots of mud on originally virgin flowstone.

The common approach of official cave controlling authorities in Australia has been to restrict access to decorated caves by a permit system, and it is possible that some such arrangement may be imposed now that there is a Kubla Khan Cave State Reserve. However this approach is not likely to keep out a fringe visitor determined on the caving experience of a lifetime, arriving on the spot and faced with what is probably his once only chance to do the trip. Furthermore, the cave is in easy reach of a public road and is remote from the two tourist caves, where the staff which would be responsible for policing the area are based. The cave areas where permit access restrictions have been technically successful have had access routes that are easily supervised, and a visitor population captive through interest in repeated visits to the area.

In any case, there are ethically dubious aspects to the access restriction approach; it is always in danger of edging into hostility to the cave using public and may be less a means of rationally utilizing the cave, and more a substitute for a real conservation policy. Access restrictions tend to restrict access to organized conforming bodies plus outright pirates, and exclude a middle ground of bona fide but less formal potential visitors less good at paperwork. Particularly if a notice provision is included, it becomes possible to leave people seething with a sense of injustice on being unexpectedly excluded. Harm may come to the cave because the access bottleneck produces larger parties, which always seem to do worse than two trips of half the size.

The administering authorities can develop a resentment of cavers simply because they become a source of extra work. And at the end, does a party with a permit really smear much less mud around the cave than a party without one?

Fortunately for cavers the matter is not in our hands, except for some temptation to play sycophant. It is proper for us to think rather in terms of doing some work on our own account, inside the cave, than can effectively armour the cave against unintentional visitor damage. Track marking and guidance signs are a start, but I contend that the real situation in Kubla is like the situation on the Overland track, where people have gone around the edges of boggy spots so that the bogs are now 10 metres wide, and restoration work has begun by placing boardwalks across the bogs. We should look on the rest of the caving public as potential friends who would do the right thing if gently coaxed along, but must address ourselves to the central problem - that of mud tracking and to bear in mind that the cave must cope with the kind of visitor who is not up to our ideal standard of care. It can be assumed that they won't deliberately break anything, but it will not occur to them that they should always be judging where they put hands and feet.

So a form of fully defined track is needed. From time to time the comment comes up at A.S.F. Conferences that tourist caves are the best conserved caves in Australia, with the counter argument that tourist development itself is the greatest damage, and often tourist tracks are a defacement equivalent in area to wall to wall graffiti. But a track once in does protect the remainder of the cave.

I think a compromise is possible. A track which maintains far more wilderness character than a tourist track allows for, but which is just as effective in protecting off track areas.

To find what is needed and what is possible it is necessary to look over the usual route through the cave looking at the problems rather than the pretties and specifically how the mud got where it shouldn't be.

Trips starting from the lower entrance normally head for the Pleasure Dome, with its enormous area of clean orange flowstone. Very few visitors do not observe the boots off and clean gear rule (now stated in a sign). But muddy footprints appear from time to time. But as the flowstone is subject to seasonal flushing, supplemented by a few volunteers known to bring a scrubbing brush and fill up a bash hat with water from the River Alph, the area is holding out quite well. The main problem is the changing area itself which could benefit from a grating to bridge the mud to the river.

Less often, the lower entrance is used for the start of a through trip. This involves scaling a wall which is usually done by a skilled climber who takes up a ladder for use by the rest of the party. The passages through to the Great Khan are muddy and cavers arriving are muddier than those who came in the top way.

As a suggestion then, through trips should be run from the top entrance and should miss out on the Pleasure Dome unless clean gear can be contrived.

Trips from the Top Hole entrance must pass the squeeze where the various attempts at locking have taken place. The strong, erratic draught is very noticeable. It would be possible to put a sealed door at this point if it is deemed desirable to restrict moisture loss from the cave (most discoverers note that caves appear to dry out after they become frequently visited, thus a correction is needed if the apparent original state is to be maintained. On the other hand if moisture and permanently wet flowstone area is increased there is a greater problem with bonded mud on flowstone).

From the squeeze the cave goes down by three pitches which require vertical caving gear. The natural belays are fairly reasonable except on the last pitch, where wall bolts could be used to establish a route where less of the formation would be trodden on. It is all floored with reasonable dry flowstone. From the foot of the pitch another drop goes down to a cavern with four pools, which could be used as a people cleaning area before going on into the rest of the cave. The normal route is a climb over damp to dry travertine and this type of going is typical of most of the cave from here on. The caving is technically quite difficult. Until I saw the cave myself I did not understand why the locals do it with boots on. There is a great deal of mud tracking, but it is amazing to find that only two smallish sections of mud floor between here and the Great Khan area, plus the branch leading to the Dulcimer via the dug tunnel, are the sources of practically all the mud. Mud from the Great Khan area itself is responsible for messing up the flowstone fed from the Jade Pool overflow. This is the worst affected area in the cave. The tragedy of Kubla is that for lack of a mud free route over a bare 50m or so of passage, the whole of the flowstone floored area is now muddied up. Still, even the Jade Pool flowstone might be restored with resort to a grinder, as the continuously active nature of the flowstone which is responsible for the mud bonding problem also means it can rebuild itself. The rest of the flowstones merely require scrubbing brush, water and lots of work, as practically all of it is the non-bonding type.

Just at the end of the section of near-continuous flowstone floor there is another set of pools which could be used to clean up people, boots etc.

The idea I developed during my visit was that if a clean route could be bridged across the mud floored sections, linking up via the flowstones to washing pools at either end, it would then be practicable to clean up the flowstone route with a reasonable prospect of its staying clean. It is only the feeling that it was futile that has deterred cavers from this kind of work. Doubtless perfect restoration won't occur but it should be possible to remove the mud that is loose and being shifted ever further on people's boots.

Some forms of protection which have been used before, e.g. sheet plastic (Silverfrost Cavern, Jenolan) or rubber mats (Buralong Cave, Jenolan) can't generally be used in Kubla Khan because

the ground is rough and/or sloping and/or slippery, although plastic sheet might work in the Dulcimer tunnel (At present the Dulcimer tunnel should be off limits). Anything not firmly attached is unsafe and ineffective.

In thinking of tracks for speleologists in caves like Kubla Khan I keep coming back to the ideal of a slightly raised steel mesh type track which ideally should have a floating and sculptural quality about it. In this I am influenced by Elery Hamilton-Smith's lyrical description of the tourist track in Jeita Cave in the Lebanon. This is a curving concrete structure of considerable beauty in its own right, elevated above the cave floor and constraining the tourists by the drop at the edge. An ideal material would be stainless steel, perhaps with a hammock of poly type bagging underneath to catch dirt. Something rotproof and corrosion resistant is essential. The attachment of the path to the ground has to be firm enough to make it safe, but ideally should provide little disturbance of the ground. This is one advantage of the elevated type of track since the support trestles touch the ground at only a few points, and if ideas change in the future the apparatus can be removed leaving little damage behind it. However, I do not think it possible to make a path over rough ground safe without some holes drilled into rocks with bolts placed and guys tensioned up with for example rigging screws, in the way a mast is held up by the shrouds on a small sailboat. In soft ground, driver rods and base plates would be substituted.

I used to dismiss the idea of stainless steel mesh as a pipe dream because stainless steel was expensive, but it happens that a form of stainless steel mesh in 1.5 x 0.4m units is available as scrap from the Port Latta pelletizing plant of Savage River Mines at \$1.00 a length. It is less than ideal in that the surface is slippery and may need artificial roughening, and its strength is limited so it might have to be used with closer spacing of trestles or used in double layer arrays. But there are enough local welding experts around to cope with this work.

The present concept for the cave restoration and protection work is to go in scrubbing down the cave and construct the bridges across each mud section as each one is reached, meanwhile marking out a clear route in much more detail than it has at the moment. If the mesh track proves a great success it may be extended further than just over the muddy bits. But it is that critical 50 metres that matters most, and if it transforms the situation to the point where a hundred visits to the cave do less damage than one does now, I will be content.

The proposal has been well received by all local caverneers I have spoken to about it, and by the guides at King Solomon's Cave. I have not broached the subject to Tasmanian Government authorities owing to a certain feeling that the government is not to be trusted on any such subject. It is obvious to me that all Australian cavers have a right to be consulted on what is after all a cave of national importance. It is, therefore, essential to test the feeling of the whole country on the matter, which is best done at the national forum provided by the conference. A consensus is needed, and I am not prepared to risk giving offence by proceeding without that consensus.