# MANAGING AN ARTIFICALLY BUILT GLOWWORM CAVE

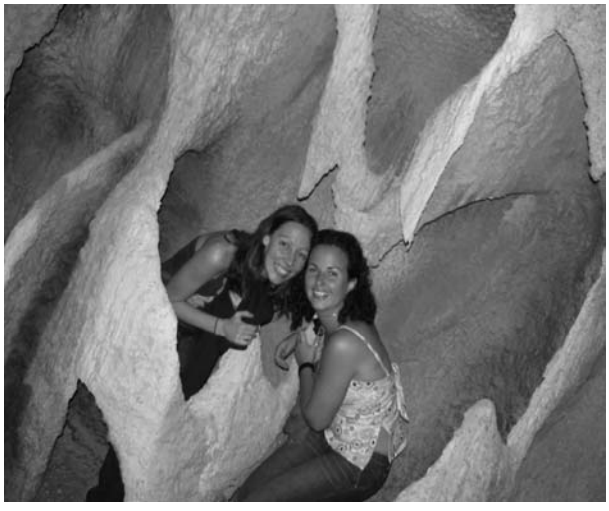
- Claire Baker

Life has changed dramatically for me during 2004. In April I finished my PhD on Australian glowworms (*Australian glowworms: Identity, distribution, diversity and management*) and began looking for a postdoctoral project to take on. I was enjoying the relaxed change in pace from the final months of my PhD write up, when things suddenly got hectic again.

I was offered a position on Tamborine Mountain (in the hinterland between Brisbane and the Gold Coast, Queensland) that seemed a little too good to pass up for someone who'd worked themselves into a glowworm niche over the last few years!

The position I have taken is a managerial role in the development of an artificially built glowworm cave at an established winery, Cedar Creek Estate Vineyard and Winery. At the time of appointment, the cave was in the final stages of major construction and the owner needed the know-how to turn it into a habitat for glowworms (yes, the glowworms are real!!).

Initially we needed to make some major changes to the layout of the cave. An additional two walls were built to stop air movement through the cave and the glowworm habitat needed major adjustments to the heating and misting systems to allow my little glowing friends to survive. It was also a goal to make the cave self sufficient, in terms of glowworm breeding and feeding.



Clair Baker and friend Jo in the 'cave'.

The artificial cave chamber

## Information on the Cave

The cave itself is truly remarkable! The construction company, 'Rocksolid Concepts', specialise in environmentally-themed habitats and according to the proprietor of the company, our glowworm cave is the best thing they have built in his twenty years of experience (of course he wouldn't be lying to me about that!!).

The glowworm cave is comprised of two chambers, interlinked by tunnels. The first cave is the presentation chamber (or *Cathedral Cave* in our wedding promotions), where we will be showing an audiovisual display. The reasons behind this are two-fold.

Firstly, we need to get the visitor's eyes adjusted to the darkness to enable them to see the glowworms at their best. Secondly, the tour is also aimed to be an (interesting!) educational experience for our guests and we have done this through a presentation outlining reasons for building the artificial cave, showing the construction of the cave, and then some information on glowworms, including talking about the applications of glowworms in the world of biomedical research, their general biology, threats to glowworms and aspects of my own research.

The presentation chamber is a work of art. It is complete with man-made stalagmites, stalactites, flowstone and many other concrete based 'speleothems' modelled on natural limestone cave formations. There is also a beautifully lit stream with a waterfall within this chamber.


Below – Claire Baker building the cave!

During the audiovisual display, the lights in the chamber are slowly dimmed, and upon completion of the film, the tourists move through the next tunnel into the 'Glowworm Cave'. This section of the cave is 32m long, with a one meter concrete path through the middle. The path is lit by small, red LED lights that visitors walk on without damaging.

Surrounding them is a mini-galaxy of glowworms. The glowworms have been bred from a small number of larvae taken from privately-owned rainforest in the surrounding district. It is planned that once a year other collecting trips will be done to ensure the cave population is not genetically inbred. So far, the glowworms are very content and breeding well in the perfect conditions!

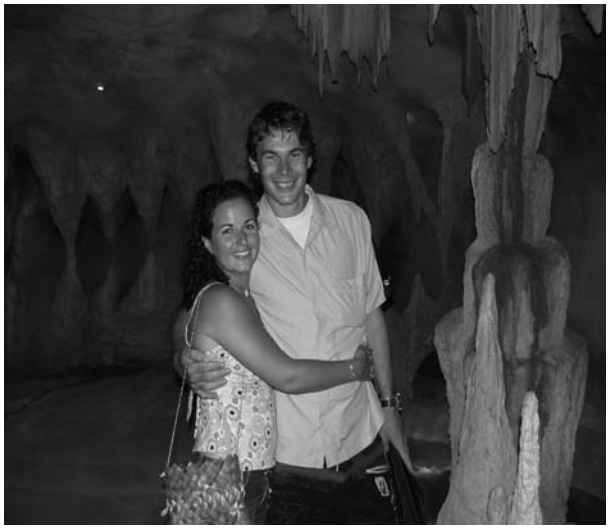
**Benefits of the Cave**

Glowworm tourism is on the rise in Australia, as is nature-based tourism in general. More and more tourists are visiting our National Parks as a recreational activity and this increase has impacted on how natural areas are managed for a sustainable future.

The concept of the artificial cave was initiated by local National Parks personnel in 2001, as they were concerned at the large numbers of tourists visiting the local parks at night, specifically to view the glowworms.

We have since had our local National Park office shut down and now rely on officers from other Parks for maintenance of the seven sections of Tamborine National Park on the mountain. As you can imagine, this is putting even more pressure on these delicate habitats. Our cave will provide a daytime, all-weather, guaranteed glowworm experience, and aims to alleviate some of the pressure on our local National Parks after dark.

Happy tourists next to a 'column' in the 'cave'



**The Future**

We now have a very large and happy colony of glowworms residing in the cave. The cave is on the verge of opening. We are aiming for the caves to be an environmentally friendly, educational experience for our visitors, many of whom are international travellers.

If you are in the area, be sure to pop by and see the Tamborine Mountain Glowworm Caves at Cedar Creek Estate Vineyard and Winery. I would love to take fellow ACKMA members through our one-of-a-kind glowworm cave!

My contact details have also changed since the last ACKMA conference and I can now be reached at work on our universal email:
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or directly on <bugsyclaire@yahoo.com.au>
Website: <www.cedarcreekestate.com.au/gwc>

The construction - Mt Tamborine Glowworm Cave