



## A VISIT TO STARLIGHT CAVE

– Steve Bourne

A view looking in from entrance of Starlight Cave



Starlight Cave has been a cave I have desired to visit for many years, but have never made the time to get there. I have always known it as the second cave that the Southern Bent-winged Bat used as a maternity site, and apart from its location on the coast at Warrnambool, Victoria, knew little else about it.

At the recent Australasian Bat Society Conference, I convened a workshop on the bat which has recently been listed as critically endangered (as reported in ACKMA Journal 70).

A list of actions was developed by a small working group, including securing the protection of Starlight Cave. The cave is located on private land and had recently been sold with the new owner the proprietor of an earthmoving business. Lindy Lumsden reported to the group that heavy equipment had been used over the cave's surface, so an investigative trip was required. Another suggestion was investigating the feasibility of re-roofing Thunderpoint Cave, another known maternity site that had collapsed.

Andrew Hansford and myself met with Lindy Lumsden and Tony Mitchell, both DSE employees, at Warrnambool. Unfortunately Andy Spate could not make the trip and missed a great adventure.

We met at Thunder Point Cave which is a sea cave virtually in Warrnambool. Tony was equipped with a wetsuit and able to access the cave from the seaward side. I investigated the 'collapse' and realised that access was possible via this entrance, and although about twelve metres above the water, it was relatively safe and easy within the small pipe.

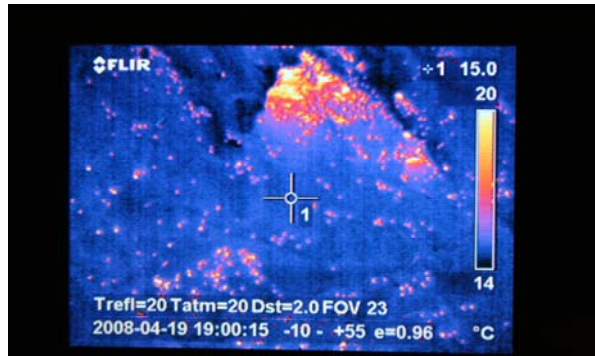
Tony later climbed in and surveyed the twin pipes including the maternity site, now the residence of feral pigeons. We all agreed it would be difficult and expensive to block the two collapse points, but given the dynamic nature of the site and its low degree of suitability as a maternity site, efforts could be best spent elsewhere.



Bat researchers Lindy Lumsden and Tony Mitchell in Starlight Cave

From there we went onto Starlight Cave, a few kilometres east of the city. What a surprise! The landowner had been using heavy earthmoving equipment in the paddock above the cave again, this time to within less than a metre of an entrance. One doubts he knows the cave roof is one metre thick and then forty metres to the cave floor! He had given permission for us to access the cave via his land, but frustratingly was unavailable to speak to.

Thermal imaging camera  
vision of bats in Starlight Cave



This unavailability had been frustrating Lindy for sometime. We kitted up and made our way down the cliff face at about 4 pm and along the shore to the cave entrance, not taking much comfort from the fact the last trip spent the night in the cave trapped by a high tide. We were assured the tide times had been checked. The cave entrance is large with a short, slippery climb to reach it with a spectacular view of the Southern Ocean.

One of the objectives of the visit was to test a thermal imaging camera Lindy had hired for the weekend, at a cost of \$5,000 for an \$80,000 camera! The results were outstanding! At forty metre ceiling heights, individual bats could be determined, even their fur temperature and that of the rock adjacent to them. This is one outstanding piece of equipment and I want one for Naracoorte! The camera also has the ability to take still images and record onto a digital video, which we unfortunately did not have. Some images of the ceiling were taken with a regular

digital camera using long time exposures and 'painting' with torchlight, with excellent results.

I was amazed at the size of the cave and somewhat perplexed as to how such a large cave had formed there. It would have been great to have more time and light to look around however our presence was disturbing the bats. After some more thermal imaging work as the bats exited the cave, we followed suit around 8 pm.

The visit was a valuable learning experience. The two maternity sites for the bats are quite different, Bat Cave at Naracoorte is substantially warmer with higher humidity, although ceiling temperatures are difficult to determine when they are forty metres up. Starlight has a free flow of air through from the cave entrance to multiple small entrances above the two maternity chambers.

After this visit it was apparent that the landowner's activities were endangering not only the cave but his life as well. I spoke to various sections of the Department for Environment and Water Resources in Canberra responsible for administering the EPBC Act seeking some direction on the level of protection the Act provided this species and responsibilities of landowners. There are obviously still some grey areas that need resolving, but the follow up was a letter to the Starlight Cave owner stating that if any damage was caused to the cave that he could be liable for up to \$5 million fine. This progressed the issue somewhat with meetings held with DSE staff, DEW and the landowner. I think a pleasing result with long term protection for the cave is not far around the corner.

## COMING EVENTS

– Elery Hamilton-Smith

In particular, this list covers events of special interest to researchers and managers. If you are interested in any listed events, contact Elery Hamilton-Smith on: <elery@alphalink.com.au>.

2008: June 10-14	International Symposium on Society and Resource Management, University of Vermont, Burlington VT, USA.
2008: June 16-21	International Karstological School 'Classical Karst': Karst Sediments, at the Karst Research Institute, Postojna, Slovenia
2008: July 20-25	Australian Earth Science Convention, Perth, WA.
2008: Aug 6-14	IGCP Session on karst aquifers at International Geological Congress, Oslo, Norway
2008: August 17-20	Inaugural Global Geotourism Conference, Fremantle, Western Australia
2008: September 1-5	International Symposium on Vulcanospeleology, Jeju Island, Korea
2008: September 21-26	International Symposium of Subterranean Biology, Fremantle, WA.
2008: September 21-24	Multi-disciplinary Conference on Sinkholes and Karst, Tallahassee, Florida
2008: October 5-14	A Just and Sustainable World – IUCN World Conservation Congress, Barcelona.
2008: November 24-28	Australian Protected Areas Congress, Twin Waters, Queensland
2008: December 1-5	Healthy Environments, Healthy People, Merida, Mexico
2008: December 3-5	Tourism and Hospitality Research Conference, Hammer Springs, NZ
<b>And Looking Ahead:</b>	
2009: January 5-9	KarstAway – 27th ASF Conference, Sale, Victoria
2009: January 5-7	Mauritius Conference on sustainability
<b>2009: May 3-9</b>	<b>18th ACKMA Conference, Margaret River, Western Australia</b>
2009: May 12-17	Hypogene Speleogenesis and Karst Hydrology of Artesian Basins, Ukraine
2009: July 19-26	International Congress of Speleology, Kerrville, Texas
<b>2010: May</b>	<b>ACKMA Annual General Meeting "Week", Mulu Caves, Sarawak, Malaysia</b>
<b>2011: May</b>	<b>19th ACKMA Conference, Tasmania</b>