

to C-73. I hadn't been to this cave for quite some time and was curious to see how dry it was since we hadn't had any significant rains in 2001. It was also likely to contain troglofauna so would be a good opportunity to collect, especially another male of the undescribed, or so I thought, blind cave spider common in some of the caves. In fact the spider has recently been described by Mike Gray and Judith A Thompson as *Bengalla bertmaini*. Many spiders were seen in the cave but none proved to be males. I collected several specimens of cave cricket and cave cockroach (*Nocticola?*). The cave soil was very dry in places and the fauna was seen and collected only from a small damp area at the far reach of the cave near some drain holes. The temperature was low, a mere 24.5° and relative humidity only ???.

Exiting the cave, we were greeted by a light sprinkling of rain. Unfortunately not much at all.

## **Trip Report to C-105, The Gnamma Hole**

By Paul Hosie

This is a very interesting sister site to Dozer Cave (C23) and a masochist's dream !!!

The solution tube entrance through dense conglomerate rock is . . . tight. Those of slightly portly or herculean proportions should avoid this cave. A gravity assisted descent is possible, but the exit with one arm above the head and one below whilst prussicking through the restrictive rock tube should be reserved for complete masochists and/or those of diminutive frames !!

The attached map shows the layout of the cave and should



Paul Hosie entering C-105, The Gnamma Hole

give an indication as to the site access difficulties. The diver abseils 9m straight down into the 5m diameter lake chamber and perches on a rock in approx 1.5m of water. Gear is lowered and donned

whilst prussicking gear is left on line. The water quickly dirties from the disturbed silt mound underfoot. It is advisable to stay off the bottom as long as possible in order to avoid silting up the site before entry (floating or using an inflatable mattress to assist gear donning could help).

The conglomerate rock of the dry bell chamber continues underwater to approx 5m depth where soft chalky limestone is encountered and a more typical sinkhole collapse is realised.



Darren Brooks standing over the entrance to The Gnamma Hole

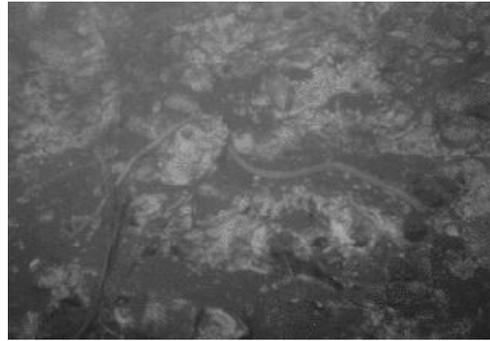
The silt mound chokes the floor in the three possible leads from the entrance sink. To the SW lies a silted up chamber that leads towards Dozer cave (some 50m away). To the NE lies a low flat silty tunnel lead that penetrates some 7m before the silt floor chokes the passage (see photo). To the North lies a small domed chamber within the conglomerate rock that has an aven (approx 70cm diameter) leading upwards at a 45 degree angle. Silt & mud that has come down the aven has

formed a silt cone beneath it. There is no known feature on the surface matching this Aven.



Silt Floor in The Gnamma Hole

It is possible that following high rainfall influxes through the Dozer/Gnamma system that the silt will be re-positioned such that the conduits may become passable. Darren Brooks has visited the site over a period of three days following cyclonic rains during



First known underwater photograph of the blind eel *Ophisternon candidum* in The Gnamma Hole

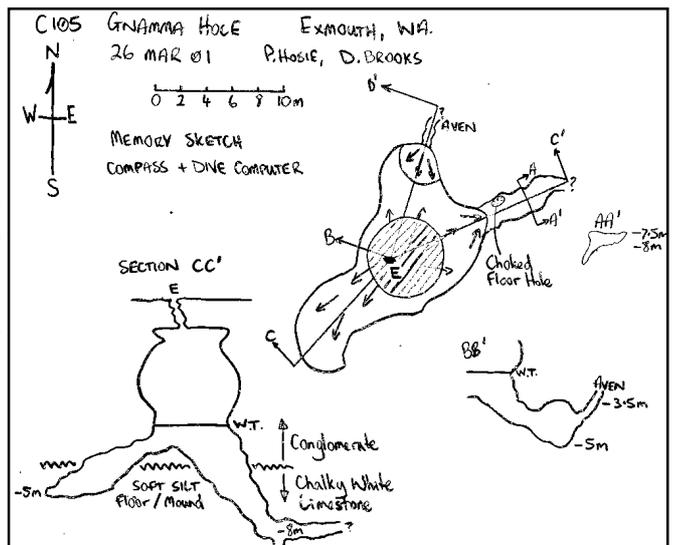
which a continuous flow of water of stream size entered Dozer Cave and caused the water in Gnamma Hole to boil continuously. Midget cave divers would be most beneficial !!



Paul Hosie exiting The Gnamma Hole

The most unusual aquatic troglobyte was seen at Gnamma Hole in Mar 2001 – the blind eel (see photos/gallery). A small white eel with light brown speckly spots

along its 30cm body. The eel's body is approximately 1cm in diameter, it has a tubular type of mouth and no eyes. It is adapted to feed on the tiny troglotic crustaceans that inhabit most of the caves containing water in the Cape Range region. Many of the troglotic blind gudgeon fish are also resident here.



Thanks go to Darren Brooks for co-ordinating and assisting with the cave diving efforts. Anyone considering caving or cave diving in the area is strongly encouraged to contact him before their visit. [dbrooks@westnet.com.au](mailto:dbrooks@westnet.com.au)

**Trip Report to C-215**

Text by Paul Hosie

Photos by Dean Slater & Paul Hosie



The 450m hike to the C-215

From beneath a shroud of fig trees on a karst ridge near Exmouth lies the concealed entrance of cave C215. This multilevel cave has speleothem decorations and fig tree roots all the way down & into the water

table. At the bottom level of the dry cave, a mud floored passage leads to a root choked canal beyond which now lies the longest underwater passage in a Cape Range cave.

First dived by Andrew Poole in the mid-90s, the underwater passage was extended some 10-20m where submerged speleothems are seen and a restriction encountered. The author was fortunate to have been given the opportunity to dive this passage in April 2001 & managed to pass the restriction and extend the length of underwater passage to approximately 100m. This dive traversed a shallow passage heading North at an average depth of -3m with dimensions of 1.2m x 1.2m. After 100m the shallow passage dropped through two floor holes into a horizontal phreatic conduit at a depth of -9m. With the passage continuing to the North and floor holes to deeper levels seen, the shallow passage was surveyed and plans for a return visit made.



Heading down to the water

The return to C215 by WASG members Dean Slater and the author, along with fellow cave divers Karl Hall & Craig Challen took place over the last weekend of June 2001. The three divers, using small sidemount cylinders and a larger reel of line, extended the -9m passage by 180m before having to turn around at 1/3 of their gas supply. The average passage depth was -9m with dimensions of approximately 3m wide x 1.5m high (very nice !). The floors of the passages consist of fine, dark brown silt which once disturbed, reduces visibility to 1m or less. A fresh/saltwater interface (halocline) was encountered at approximately -10m. Many Bell Rooms, or Avens (3m<sup>3</sup> average)



The Pack Rats: Craig, Dean, Karl and Paul



The divers head off (into the soup!)

The next day's visit saw each diver carrying three tanks apiece, with one tank being dropped off approximately 150m into the cave. 30m from the previous day's end, a large (5m<sup>3</sup>) chamber was ascended into, the ceiling being at only -6m depth. Beyond this room, a tortuous, low wide passage at -10m was squeezed through for a distance of 20m to reach what was to be the terminal room. Terminal Room 2001 is a large 7m<sup>3</sup> room which sumps into silt and impassable horizontal fissure at -14m on it's far side. The total length of submerged passage had been brought to 315m.



*Milyeringa veritas*

The existence of both fresh and saltwater in the cave makes this an anchialine cave - favoured habitat of the remipede, found in the Southern hemisphere only at nearby Bundera Cenote. Although the remipede was not sighted in C215, it is hoped that future visits to the site will reveal them.



Karl happy to be wet

Many troglotic shrimp and blind gudgeon fish were seen in all parts of the underwater cave.



Laying line

The surface contours above the cave's passages were mapped using GPS, but there was little correlation between surface features & cave passages. The cave appears to be a joint controlled fissure system heading NNW towards the ocean. C215 will be worth re-diving following the next set of cyclonic rains - who knows, it may be even longer after a good flush !?! Sincere thanks to Darren Brooks for arranging site access and assisting with the dives.