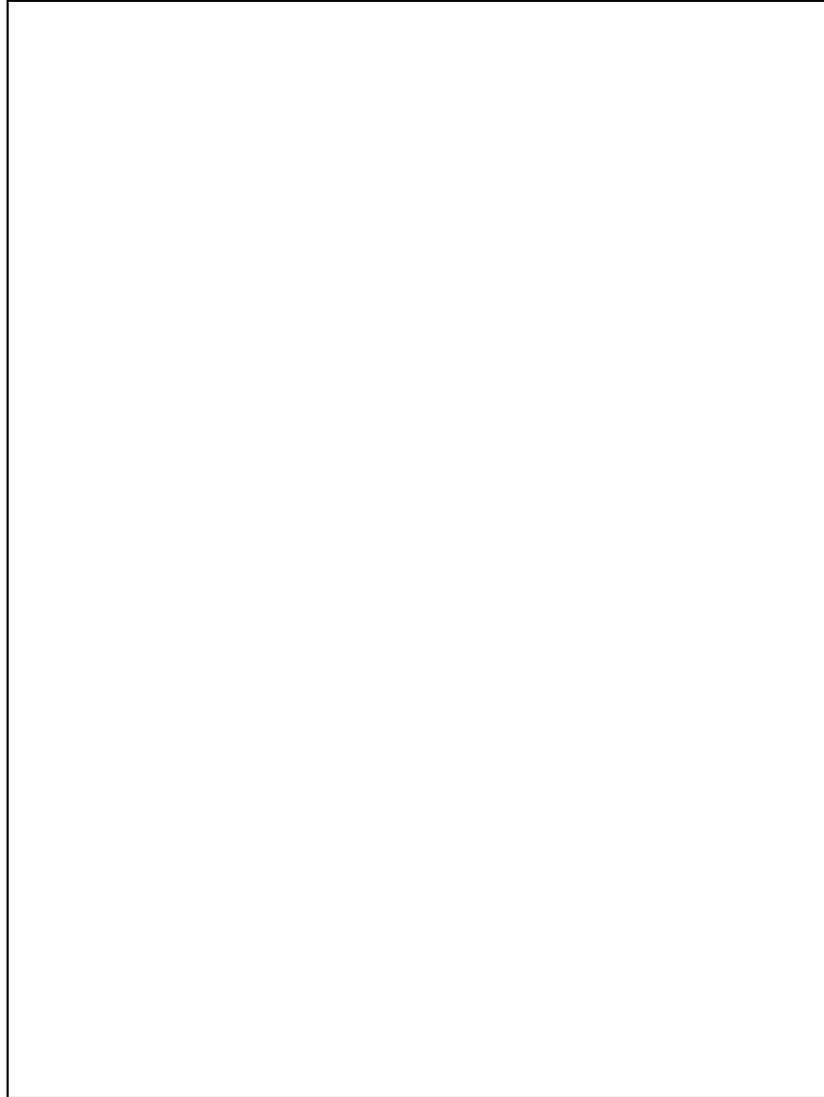


Hong Meigui Yunnan 2002



Cave expedition to Yunnan Province, China

12 August – 2 October 2002

Final Report

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1 Hong Meigui Yunnan 2002: Introduction

Summary

Hilary Greaves
Expedition Leader, Yunnan 2002

Yunnan 2002 was a 4-man, 8-week expedition to the north of Yunnan Province, China, affiliated to the Hong Meigui Cave Exploration Society. The expedition looked at substantially new potential caving areas, carrying out a large amount of surface reconnaissance work across a wide area of the province, with a particular interest in areas with depth potentials in excess of 1500m.

The expedition had its work cut out. Topographic and geological maps suggested several areas as potentially interesting from a speleological point of view, but for the vast majority, very little more was known by the caving community or by researchers at the Yunnan Geographical Institute. It was a case of looking and seeing, and the small and highly motivated team spent most of its time travelling in separate teams of two for efficiency's sake, walking the mountains and valleys and riding the bus routes to piece together a caver's assessment of the area.

The expedition's major success story lies in a mountain range 10km west of the town of Zhongdian. Following early signs of promise in this area, Yunnan 2002 devoted some 64 man days — over a third of its manpower — to this mountain range. A lack of detailed maps, steep ground, high altitude and a large area to cover combined to make reconnaissance in this area, as in so many others, extremely hard work. The rewards lie in two caves found at an altitude of 4200m, one still going as of October 2002, and a large resurgence at the level of the Jinsha Jiang (Yangtze) some 2200m below, leaving extremely exciting exploration prospects for 2003. We will be back!

Expedition aims

1. To carry out a general reconnaissance of North Yunnan, identifying mountain ranges that are likely to contain substantial cave systems.
2. To carry out a detailed reconnaissance of one or more mountain ranges that appear promising as a result of (1).
3. To begin exploration of cave systems discovered in promising areas.
4. To facilitate a return expedition in 2003.
5. To develop further links with interested Chinese parties.

Expedition members

HG	Hilary Greaves	Leader
RG	Rich “Adrenaline Rush” Gerrish	Medical Officer
GL	Gavin “Beast” “Robot” “Machine” Lowe	Treasurer; Gear Officer
PS	Paul Swire (Beardy)	Map & Survey Officer

Guides

LH	Liu Hong
WXG	Wang Xiao Gang

Thanks. . .

. . . to Oxford University Expeditions Council, the Mount Everest Foundation, the David Hood Award and the UK Sport Fund, for financial support; to Duracell, for sponsorship in kind; to Mountain Equipment and Dragon Caving Gear for discounts on equipment; to Steve Roberts, for acting as Home Agent; to the Nu Jiang tourism authorities, for their help and hospitality; to the owners and staff of the Milk River Guest House in Zhongdian, for letting us leave our kit everywhere for weeks on end; to Wang Xiao Gang of Startrekking in Kunming, for showing us holes in the ground; to Andy Eavis and the rest of the committee of the Ghar Parau Foundation, for planning advice; to Pete O’Neill, for survey books; to Paul Windle, for help with metalwork(!); to Ben George, for floor space and for acting as our poste restante station; to Erin Lynch, for keeping the Hong Meigui Cave Exploration Society running; and to Liu Hong at the Yunnan Geographical Institute for everything, not least for putting up with us once again.

2 Expedition diary

12/08	HG, RG	Leave LHR.		
13/08	HG, RG	Arrive HK; meet Ben; pick up batteries.		
14/08	HG, RG	HK to Kunming.		
15/08	HG, RG	Meet Liu Hong.		
16/08	HG, RG	Night bus to Lijiang.		
17/08	HG, RG	Delayed in Lijiang.		
18/08	HG, RG	Delayed in Lijiang.		
19/08	HG, RG	Meet WXG; Lijiang to Guli; C4-1 found and bottomed.		
20/08	HG, RG, WXG	Four caves: C4-2, C4-3 found; C4-4 found and bottomed; C4-5 inferred.		
21/08	HG, RG, WXG	Guli to Zhongdian.		
22/08	HG, RG	Bus recce Zhongdian–Deqin.		
23/08	HG, RG	High altitude recce from Deqin pass.		
24/08	HG, RG	Deqin to Benzilan; recce north of Benzilan.		
25/08	HG, RG	Benzilan to east of Shentu; recce up tributary; to Zhongdian.		
26/08	HG, RG	Admin in Zhongdian; night bus to Kunming.		
27/08	HG, RG	Meet Liu Hong and Isa.		
28/08	HG, RG	Night bus to Zhaotong.		
29/08	HG, RG	Night bus to Chengdu.		
30/08	HG, RG	Night train to Kunming.	GL, PS	Leave LHR.
31/08	HG, RG, GL, PS	Meet in Kunming.		
01/09	HG, RG, GL, PS	Meet Liu Hong; night bus to Zhongdian.		
02/09	HG, PS	Bus recce Zhongdian to Weixi.	RG, GL	Recce route to mountains west of Zhongdian, attempt #1.
03/09	HG, PS	Bus Weixi-Judian; walk/bus/hitch to Xian Jing; find C3-1.	RG, GL	Attempt #2.

04/09	HG, PS	Hitch Xian Jing–Zhongdian.	RG, GL	Attempt #3.
05/09	HG, RG	Walk to Camp 1.	GL, PS	Attempt #4.
06/09	HG, RG	Day recce from Camp 1.	GL, PS	Recce peak due west of Zhongdian; find C3-3.
07/09	HG, RG	Dismantle camp; return to Zhongdian; night bus to Kunming.	GL, PS	Zhongdian to Luoji.
08/09	HG, RG, LH	Night bus to Liuku.	GL, PS	Walk towards Sanjiangkou; abort and return to Luoji.
09/09	HG, RG, LH	Meet tourism officials; visit showcave.	GL, PS	Luoji to Qiaotou.
10/09	HG, RG, LH	Baoshan bank run; LH leaves.	GL, PS	Recce valley upstream from Qiaotou.
11/09	HG, RG	Delayed in Liuku.	GL, PS	Recce near Qiaotou; bus to Lijiang.
12/09	HG, RG	Begin 3 day guided recce; up hill to village; explore and bottom A7-3.	GL, PS	Bus to Baoshan.
13/09	HG, RG	Explore and bottom A7-4.	GL, PS	Ferry across Jinsha Jiang; walk/hitch to Cuiyu.
14/09	HG, RG	Explore and bottom A7-5.	GL, PS	Bus to Lijiang.
15/09	HG, RG	Rest day in Liuku.	GL, PS	Night bus to Kunming.
16/09	HG, RG	Laowu Dong.	GL, PS	Collect gear from Liu Hong; night bus to Zhongdian.
17/09	HG, RG	Rest day in Liuku.	GL, PS	Rest day Zhongdian.
18/09	HG, RG	Laowu Dong.	GL, PS	Recce NW of Zhongdian; establish Camp 2.
19/09	HG, RG	Survey day in Dali; night bus to Zhongdian.	GL, PS	Move to Camp 3; recce NW from camp.

20/09	HG, RG	Admin day in Zhongdian.	GL, PS	Recce SSE from Camp 3; dig C3-21, C3-22.
21/09	HG, RG	Bike recce south of Zhongdian.	GL, PS	Return to Zhongdian.
22/09	HG, GL	Walk to Camp 3.	RG, PS	Walk in and establish camp at Camp 4.
23/09	HG, GL	Dig C3-22.	RG, PS	Rain stopped play.
24/09	HG, GL	Snow recce.	RG, PS	Surface recce; push C3-3; return to Zhongdian.
25/09	HG, GL	Return to Zhongdian.	RG, PS	Rest day in Zhongdian.
26/09	HG, RG, PS	Walk to Camp 4.	GL	Walk to Camp 4; find and push C3-4.
27/09	HG, PS	Survey C3-3, C3-4.	RG, GL	Surface recce/carry.
28/09	HG, PS	Drop C3-7, C3-11; surface recce.	RG, GL	Dig, push and survey C3-4.
29/09	HG	Surface recce; find C3-14, C3-15, C3-16.	RG, GL, PS	Rest day at Camp 4.
30/09	HG, GL	Dig, push, survey and derig C3-4; return to Zhongdian.	RG, PS	Derig camp; return to Zhongdian.
01/10	HG, RG, GL, PS	Kit sorting; expedition dinner.		
02/10	HG, RG, GL, PS	Night bus to Kunming.		
30/09	HG, RG	Kunming to Hong Kong.	GL, PS	Kunming to LHR.

3 Areas investigated

Cave indexing system

As the expedition was investigating a wide area with which we had little prior familiarity, a crude initial indexing system was adopted for assigning numbers to caves. Map 1 (Appendix B) provides the key to this system, as well as an overview of the area: the first cave found in square A7 was indexed A7-1, the second cave found in square A7 is A7-2, the first cave found in square B2 is B2-1, etc.

Zhongdian

(64 man days; see map 2, Appendix B)

To the west of the town of Zhongdian lies a large mountain range, spanning some 50km from north to south, 15–20km east to west. We believe (based on geological maps and first-hand inspection) that these mountains are a mixture of dolomitic and carboniferous limestone, and that the potential for deep caves here is significant.

Area 1 — north The northern area contains several steep peaks and large limestone cliffs. The surface is conspicuously dry, even after heavy rainfall, indicating underground drainage and thence the existence of caves. However, initial inspection (from Camps 1, 2 and 3) found no open cave entrances with any significant length.

Area 2 — mid Reconnaissance from a high level camp in Area 2 (Camp 4) proved much more fruitful. Two significant caves were found and explored. C3-3 (“Beardy’s Dong”) terminates with a depth of 20m and a survey length of 75m. C3-4 (“Gavin’s Dong”) has been explored to a depth of 37m and a survey length of 175m, and was left at a draughting calcite squeeze requiring hammering; digging will be necessary beyond the squeeze.

C3-3 and C3-4 are very close together, separated by less than 10m at their closest point, and may connect with digging. Such a dig would be a worthwhile project to provide an easier entrance to C3-4 if C3-4 were to go deep.

Several further entrances were found and logged on the plateau southwest of C3-3 and C3-4, but none led to significant cave passage.

Area 3 — south South of the area boundary, one cave was found and logged: C3-1, a large resurgence cave. This cave has not yet been explored, but the size of the water outflow and cold draught indicate substantial cave development in this area. The mountains above this resurgence were not investigated in 2002 due to time and manpower constraints.

Liuku and south Nu Jiang

(22 man days)

In the Nu Jiang valley, the expedition worked with the tourism authorities of the town of Liuku. All our work was within 30km of Liuku itself; more northerly parts of the Nu Jiang valley, which stretches up to the towns of Fugong and Gongshan, have not been investigated.

We were shown several caves at or near river level, and three entrances in the mountains. We also spotted, from vehicles, two (fairly small) resurgence caves that we were unable to investigate. None of these caves hold obvious great

promise of length or depth. We were also told of several more caves known to the locals, that we were not shown due to lack of time.

The area was striking in its steepness, with high ground sharply divided by many tributary valleys, and in the wide spacing of its caves. A return trip to the area could well prove fruitful, but we feel that the task would be prohibitively difficult unless local guidance of the kind we were fortunate to have in 2002 was once more available.

Xiaozhongdian

(4 man days)

In Xiaozhongdian the expedition worked with Wang Xiao Gang, a self-employed tour guide based in Kunming. Xiao Gang showed us five caves known to him from the contact his work gave him with local peoples. Two of these caves (C4-2, C4-3) appear promising prospects for exploration, with a depth potential of approximately 300m; the area drains to the nearby Xiaozhongdian Ho. The promising caves were descended only to depths of approximately 5m in 2002, due to a lack of proper vertical equipment carried during this part of the reconnaissance.

Deqin pass

(4 man days)

15km south-east of the town of Deqin, the road from Benzilan to Deqin goes over a mountain pass at approximately 4200m altitude. In this area, the mountains appear to be limestone, and on initial inspection look promising from a speleological point of view. However, closer inspection revealed a limestone cap a mere 400m thick, the mountains underneath being of impermeable rock (hence the resurgence B2-1).

Benzilan

(2 man days)

Mountains around the town of Benzilan appear to be limestone. A brief reconnaissance trip up a tributary valley, half an hour's walk north of the town, was inconclusive.

Shentu

(2 man days)

Just south of the town of Shentu, and on the opposite bank of the Jinsha Jiang, steep limestone hills show no obvious surface drainage, but no resurgence

caves have been found. A return may be interesting, although the steepness is an inhibiting factor.

Luoji

(2 man days)

This area lies on a tributary to the Jinsha Jiang, which joins the main river near the second bend, at Sanjiangkou. The area contains only small patches of limestone near valley level. The mountain to the north of the river looked very interesting, but very hard to access. To the south of the valley, in the triangle also bordered by the Jinsha Jiang and the road to Bai Shui Tai, is another range of mountains that looked very promising from a distance, and is worthy of further investigation.

Sanjiangkou

(2 man days)

Sanjiangkou lies at the second bend of the Jinsha Jiang. Locals at Luoji and Baoshan talked of a large resurgence cave near Sanjiangkou, which is probably worthy of further investigation. An attempt was made to access Sanjiangkou from Luoji, but this proved impractical: the road along the valley marked on the maps does not exist; the alternative involves about 2000m of ascent. Locals at Baoshan described it as being a five day walk from there.

Qiaotou

(2 man days)

Qiaotou lies at the west end of Tiger Leaping Gorge, where the Xiaozhongdian Ho meets the Jinsha Jiang. Recces in 2001 had suggested that Tiger Leaping Gorge itself contains little limestone, and no significant resurgences. In 2002, a brief reccé was made from the Xiaozhongdian Ho valley onto Haba Xue Shan. The limestone appears to start several hundred metres above valley level, at an altitude of about 2800m. At lower levels, there are a number of surface streams, but these appear to be local surface run-off. It is interesting that we have not yet located any significant resurgence from Haba Xue Shan; the surface streams are insufficient to account for the amount of rain that must fall on the mountain.

Baoshan

(2 man days)

Baoshan lies just above the Jinsha Jiang, on the inside of the second bend. Beardy and Gavin undertook a bus reccé from Lijiang to Baoshan via Mingyin.

The area en route appears to contain only small patches of limestone, dipping very steeply or vertically, separated by large bands of impermeable rocks.

Narnia

(2 man days)

Narnia (phonetic spelling; correct Pinyin spelling unknown): Narnia lies on the other side of the Jinsha Jiang from Baoshan, and about 8km further south. A very brief recce was made to this area. It appears to be worthy of further investigation, particularly around the valley further south, leading to Cuiyu.

Judian to Weixi

(4 man days)

A bus journey along the road route from Judian to Weixi and back provided superficial inspection of the area. No limestone was spotted and the area is not recommended for further investigation.

4 Cave locations and descriptions

A7-1, Showcave near Liuku

Location: Located next to the road, on the west bank of the Nu Jiang some 1 hour's drive north of Liuku.

Description: Fossil entrance by roadside; water drains underneath road via separate passage. A complex system. Some routes have been concrete paved.

A7-2, Resurgence near Liuku

Location: Prominent resurgence about 30m above road height spotted on opposite bank, between Liuku and tyrolean.

Description: Unexplored.

A7-3, Kuli Dong

Location: 0486523 2874191 1686m.

Description: Eight metre entrance pitch leads to fault formed rift with two short crawls at far end.

A7-4, Ye Mao Dong

Location: 0489963 2872103 1989m

Description: Large entrance continues as large dry horizontal passage to end in calcite chamber. Partway along, a hole at base of left hand wall leads to further passage and a 6m blind pitch. Some (just) possible ways on beyond the pitch head have not been exhaustively investigated; very little draught.

A7-5, Budi Dong

Location: 0490013 2873758 2039m.

Description: 60m blind shaft, split partway down by boulders.

A7-6, Laowu Dong

Location: 0503579 2860577 2073m.

Description: Entrance at top of small maize field. A short scramble down over boulders leads to dry horizontal passage, 5m wide by 5m high. Following the passage round a right hand bend leads through shallow static pools to a duck under calcite. Beyond the duck, easy walking passage continues for 100m, to a T-junction with a large stream passage. [Downstream, the passage sumps after 70m.] A boulder floor is crossed to gain the upstream end of the junction. The streamway is followed for 90m until the water emerges from underneath a boulder choke. [Routes through the boulder choke can be found but] the easiest way on is by climbing up over the boulders. The passage is split by floor-to-ceiling rock, with left and right forks rejoining after 40m in a large dry passage. Crossing a cracked limestone slab floor leads to a boulder passage and a scramble down followed immediately by a scramble up. In this region and beyond, several holes in the floor and some climbs have not been investigated. The passage continues for a further 40m to a 2m climb up at a 90 degree right hand bend where the passage temporarily narrows. Emerging at a sharp left hand bend, the passage continues over boulders for a further 60m to a 3m climb up, beyond which the explored route quickly terminates among boulders, with no apparent draught.

B2-1

Location: 0506849 3136260 4231m (20m accuracy).

Description: Small resurgence 20m uphill from the road, at base of limestone cap. The resurgence has not been inspected from close up and may not be enterable. (GPS point is on road.)

B2-2, Cave of the Lion's Eye

Location: 0502076 3139587 4488m.

Description: Visible from the road, located in a small limestone outcrop on the grassline, just below a rock arch. Alcove, 3m high, 2m wide, 4m deep.

B2-3

Location: 0502289 3139923 4575m.

Description: Small rock shelter.

B2-4

Location: 30m on a bearing of 301° from B2-3.

Description: Small rock shelter.

C3-1

Location: 0585854 3038290.

Description: Large resurgence cave approximately 30m above the road. Route from road to entrance has been paved and artificial stairs put in place. Two entrances. Water flow estimated at 250 l/s issues from the lower entrance. Upper entrance is dry passage approximately 10m wide, and was followed for 30m. Locals report that the dry passage soon connects to the water, and that the cave continues for “half a day’s journey” to the end.

C3-3, Beardy’s Dong

Location: 0557180 3075262.

Description: Entrance is at the bottom of a shakehole. Ducking through the entrance leads to a chamber 5m across. From the opposite side of the chamber, the way on is a descending passage, with loose rocks on floor, leading after 15m to a 4m pitch. The pitch can be rigged from 2 naturals (backup) and a thread and bolt (Y-hang). From the base of the pitch there are two ways on.

The first way on, continuing in the same direction, is a 4m wide rocky passage that descends slightly for 25m to a chamber. A floor slot on the right hand wall of the chamber leads to a small chamber 2m across. There is a climb up which has not been investigated.

The second way on from the base of the pitch doubles back under the pitch into a 1m wide passage. This leads after 6m to a steep and loose slope down into a small chamber. Traversing at the height of the top of the slope gains a rift on the opposite side of the chamber, which is currently blocked with boulders but may be diggable. Descending the slope, instead, gains the floor of the chamber, where boulders on the right hand wall may also be diggable. (These digs are approximately 5m from the closest points of C3-4, and connection would provide an easier entrance to the latter.)

C3-4, Gavin’s Dong

Location: 0557135 3075135 4221m.

Description: Entrance is a (large-)body-sized tube that slopes downhill for 4m to a 1.5m climb down. [The obvious way on, continuing in the same direction as the entrance tube, is a 2m wide passage. This gradually widens to 3m wide, and terminates 10m from the climb.]

The main way on is found by doubling back under the climb down and ducking through to the head of a 5m handline climb down into a chamber, 2m x 7m in floor dimensions. [At the near (east) end of the chamber, a small passage leads to a 4m free climb down into a second chamber, 3m across. A squeeze leads to a small boulder chamber, and from here a way down between boulders leads to a light connection with the second chamber.] At the far (west) end of the chamber, a short dug crawl leads to the top of a handline climb down of 3m, with a squeeze at the top. The climb drops onto a ledge at the head of a 10m pitch.

The pitch drops into a 5m diameter chamber, from where a tall calcited rift leads off. After 10m, the only way on is a dug crawl at floor level, under a dribble of water. The rift continues with several constrictions, until after a further 50m it reaches a 3m climb down into a chamber.

[The chamber extends to the right for 10m, to the base of an inlet.] A slot in the left hand chamber wall leads to a narrow low rift passage. After a few metres the rift hits breakdown but wriggling through an excavated hole at head height gains a small chamber. From here there are two ways on. The first is a climb up on the left to a draughting calcite squeeze which is at present too tight. The second follows the right hand wall over a boulder ledge to a second draughting calcite squeeze. This squeeze is (just) passable, but breakdown 0.5m beyond the squeeze needs digging.

C3-5

Location: On a bearing of 150° from intersection of path and treeline at UTM 0557508 3075024 4117m (12m accuracy).

Description: Small hole visible about 20m up from base of cliff; may or may not be a cave. May be climbable.

C3-6

Location: 0556804 3074840.

Description: Dig in boulders. Space seen beyond.

C3-7

Location: 0556249 3074555 4307m.

Description: 3m climb down in squarish cliff hole leads to boulder slope. At the bottom of the slope, a chamber on the right has no way on. On the left, a window at the top of a boulder slope leads to a tall hading rift. The rift leads to a vadose trench followed by a junction. Left from this junction leads to a choke, while right leads to a daylight aven.

C3-8

Location: 0556278 3074658.

Description: Dig in boulders. Space seen beyond.

C3-9

Location: 0555944 3074627.

Description: Choked stream sink.

C3-10

Location: 0555507 3074632.

Description: Choked stream sink.

C3-11

Location: 0555281 3074810.

Description: Located at base of cliff. 15m blind pitch.

C3-13

Location: 0556358 3074928.

Description: Choked entrance.

C3-14

Location: Towards the west end of a large flat bowl. 0555470 3074514 4343m.

Description: Small stream sinks into rocks.

C3-15

Location: On a hilltop, just to the NE of an apparent fault line. 0554903 3073941 4308m.

Description: Easy climb down into narrow trench, from which slot 2m high by 0.5m wide leads to a small chamber. A tube in the roof leads up to a skylight (probably too tight).

C3-16

Location: 0555809 3074204 4348m.

Description: Boulder choke in a small shakehole. Space visible between boulders. Appears to choke 4m in; may be diggable.

C3-17

Location: 0550813 3088037 4256m.

Description: Small alcove at the top of a scree slope. A tube at the back of the alcove terminates after 4m.

C3-19 and C3-20 are located just below a ridge. They are reached by traversing south from UTM 0552909 3086258 alt 4289.

C3-18

Location: The first entrance.

Description: Easy dug squeeze leads into about 8m of ascending passage, ending in chokes. No way on.

C3-19

Location: Just south of C3-18.

Description: Diggable entrance, but there seems to be a complete mud choke ahead.

C3-20

Location: Just south of C3-19.

Description: Large walk-in entrance. No way on.

C3-21 through C3-25 are in a valley containing three lakes, with a sink at the bottom, and two yak-herders' huts. UTM 0552582 3086376 alt 4150m.

C3-21, The Stream Sink

Location: At bottom of lower lake.

Description: Large sink taking about 20l/s of water. The sink was dug for a bit, but it needs a crowbar and a sunny day.

C3-22, The Dig

Location: At bottom of valley running SE from huts, where water sinks in wet weather.

Description: Dig in shakehole. Drafts slightly. At one stage this was about three metres deep; then it all collapsed.

C3-23

Location: Near prayer-flag on ridge above huts.

Description: Rift drops about 2m to rock and bone choke. The rift is diggable, but the choke seems to continue down for quite a long way.

C3-24

Location: Just downhill from C3-23.

Description: A shakehole, with a bedding which was dug for about a metre, until good sense prevailed.

C3-25

Location: Ten minutes downhill from the huts, the path skirts round a large doline. On the other side is a large entrance.

Description: An awkward climb up through shrubs leads to a steeper climb, which has not been ascended: above is a skylight and a rift going off; the rift appears to end, but this has not been verified.

C4-1, Mingjun Cave

Location: In the side of a cliff face flanking a waterlogged meadow. 0585854 3038290 3250m.

Description: Three muddy climbs down end in a 1m deep static pool with formations in the ceiling.

C4-2, Guli 1

Location: 0585506 3036122 3145m.

Description: A small stream passes through shrubbery to sink in a pit, 3m diameter. The stream side of the pit is an earth slope, too steep to climb; approach

from the far side of the pit. Belay to tree and descend to a boulder ledge, about 10m above base of pit. From the ledge it is possible to step across under an overhang to gain a slope down towards the base of the pit, last 2m vertical. The base of the pit has not been reached but a slot at the base of one wall takes the water and looks enterable.

C4-3, Guli 2

Location: 0585041 3036281 3185m.

Description: Short climb down and walk around corner leads to a chamber and the head of pitch (chossy). The pitch has been descended for 5m but continues. Rocks rattle for four seconds.

C4-4, Guli 3

Location: 0585220 3036212 3186m.

Description: Body size hole on grassy bank opens out to 6m pitch. The pitch lands in small boulder chamber which slopes down to low arch and crawl through to small mud floor passage rising steeply to the left. A climb down to the right soon becomes too tight but to the left a small chamber with crystal pool and stal boss can be gained. A tight hole in the floor of this chamber opens out onto a 4m climb with little obvious prospect which has not been entered.

C4-5, Gorge resurgence

Location: In side of cliff, on a bearing 294° from viewpoint at UTM 0585873 303500, bearing 262° from bridge in gorge at UTM 0585964 3035068. Water issues from the cliff (seen from viewpoint on opposite bank).

Description: The entrance itself has not been seen.

5 Personal stories

Four caves and an adrenaline rush — Tuesday 20th August

Rich Gerrish and Hilary Greaves

(Rich) I opened my eyes slowly, sleep still clouded my vision but I could make out the sunlight streaming into the room and my ears had no problem picking up the sound of knocking at the door. I sat upright and was greeted by the beaming smile of “the manager”. He was only 29 years old but looked closer to 40. He mimed that he had prepared something for us to eat and accompanied it with a stream of language I couldn’t understand, before disappearing off again into the courtyard. We had no idea what the fella was supposed to be manager of and nor did we know his name, but that didn’t seem to matter.

After changing into my warmest clothes I followed the manager across the courtyard. The village looked more like a commune than anything else. Identical

buildings on four sides, each containing several living quarters, surrounded a garden with flowers and a plaque. In one corner was the gated entrance and in the other, the communal toilets. Outside some of the doorways sat old men with leathery faces, they puffed away on cigarettes and eyed us with a degree of fascination.

Myself and Hilary entered a room identical to the one we had just left and greeted the manager's wife, who was preparing breakfast, and Xiao Gang, our Chinese contact who had brought us to this strange place.

Perched high in the Tibetan foothills that spill southwards into Yunnan, we were the first foreigners to have entered the village. Judging by the number of disfigured faces, I doubt if many people pass in or out of this place at all. A tiny gene pool and little chance for a spouse outside the immediate family.

We breakfasted on baozi (steamed bread dumplings), hot yak's milk, and yoghurt that bore a closer resemblance to smoked cheese. We packed our bags with the small amount of equipment we had brought the distance and greeted the arrival of more locals carrying hawser-laid rope, with a mixture of excitement and trepidation.

(Hilary) I hadn't really expected us to be a small party going to the caves, but as the 11 of us strolled down the track towards the meadow, I reflected on the excitement we were generating and wondered what the locals thought of us, what we were about — two strange white-skinned foreigners turning up and wanting to be shown some holes in the ground. If they were curious, they couldn't ask and we couldn't tell; maybe a good thing.

As we walked, I listened to the upbeat banter I wished I could understand, and within minutes we were at the first "half an hour away" cave [C4-2], where a small stream sank. Rich and I crashed enthusiastically through the undergrowth, following the water. Xiao Gang and the locals were close behind us. Soon we were standing on the edge of a small pit, the earth in front of us too steep and crumbly to climb. "I think need things" — Xiao Gang. Unable to see where the stream went, we were already regretting not having brought Things on this lightweight recce of ours.

The locals' thick hawser-laid polyprop, though, sufficed for an initial look. We belayed to a tree and Rich lined me down a steeper but less earthy climb on the far side of the pit, to a ledge. From there I was able to traverse round and climb down on handline — not quite to the bottom of the pit, but far enough to see the stream disappearing into a human-sized keyhole opposite. Going passage!!

*Not knowing our precise location, or having a decent map, at this point, was tortuous. We were navigating by 1:500,000 TPC chart and hadn't worked out the correspondence between our GPS coordinates and the map grid, and neither Xiao Gang nor the locals had yet pinpointed us on the chart. We had come in search of *The Deepest Cave In The World*; the depth potential here was either 1000ft or 8000...*

(Rich) Unable to descend any further with the equipment we had reluctantly but excitedly derigged believing we had just been shown the entrance to a 1000m+ deep cave. The entourage gathered up its various bits of gear and headed off again to cave number two [C4-3]. A short climb down and a walk around a daylight corner took us to the head of a very chossy pitch. Having lifelined Hils last time around it was my turn to be lowered into the abyss. I tied the rope into my makeshift harness, checked my head torch was secure and gingerly climbed the slippery walls taking care to kick loose rock down before me. Each time a rock fell from beneath me it crashed and rattled for four seconds into the black void below and off to one side of me. Having reached the first ledge we took stock of the situation. I was very glad to hear Hils' words of wisdom. "Given that the stones fall for such a long time we can be certain that we haven't got enough equipment to descend the next pitch, which, due to the size of stones that have fallen down we can also be certain will be big enough for us to follow if we did have the right equipment. Bearing that in mind there really is no need for you to descend any further." Hils barely finished her last sentence before I was eagerly scrambling back up to the safety of horizontal ground. Two caves, two promising leads, one more to go. What a day!

(Hilary) Cave #3 [C4-4] was strongly reminiscent of Tormenta in the Picos — no stream sink, no doline, just a cheeky little hole on a grassy slope, threatening to swallow your ankle as you strolled along the path. The difference was that whereas Tormenta would blow blades of grass back up into your face, #3 defiantly refused even to deflect breath. . .

Still, we were here. And we had polyprop. And there was another convenient tree just uphill of the entrance. And it was my turn.

The first couple of metres were easily climbable, but beyond that, the shaft belled out. It was either sacrificing Rich's thermal and back-skin to a lowering operation (and figuring out later how to get back up), or nothing. I nobly chose nothing.

It transpired that "the manager" had already been to the bottom of this cave, and the locals were having none of our wussy Western belaying methods. They took the rope and one tied it around his waist to be lowered down hand-over-hand by the others. Rich's eyes lit up: "I fancy that."

(Rich) Seeing the locals lower each other to the bottom I couldn't maintain my desire to get underground any longer and motioned for them to let me down. I felt surprisingly secure being lowered hand over hand by the villagers. When I had untied the rope I ran off into the black space like a school boy. The cave was well decorated with stalactite formations and mixed in with the rocks on the boulder floor were the bones of a yak. Being careful not to break any of the formations or bash my helmetless head on the roof I ducked through short crawls to investigate the passages beyond. The cave was quite small and it didn't take long to follow all the leads to their termination. Satisfied that I had seen enough

I headed back to the shaft of sunlight that would bear me to the surface.

On the walk back to the village for some lunch we mused on our next course of action. It was clear in my mind that we should go and look at the nearest gorge in search of a resurgence, or at least to record the elevation that would help us determine the area's depth potential. Xiao Gang related our wishes to "the manager" and our afternoon plans were agreed.

(Hilary) It was a baking hot afternoon and the altitude, though not extreme, had been noticeable as we'd walked the gentle slopes of the morning's tour. We didn't know exactly how far we'd be walking that afternoon, having received two answers "two and three kilometres" and "seven and eight kilometres" to our query of how far the gorge was. I debated what to take with me, settling on the safe option of my standard day pack, waterproofs, first aid kit, survival bag and the like. As we walked down the steep winding path into the gorge, I thought of the return journey and was glad I wasn't carrying any more.

Soon we were at the bottom of the gorge, standing on a wooden bridge, no railings protecting us from the vast brown swirling torrent that rushed beneath our feet. Now we knew (more or less) where we were on the map, and it was clear that the morning's caves couldn't be much more than 300m deep. Win some, lose some.

Still, it would be interesting to see any resurgence. The path continued from the bridge, into the vegetation on the far river bank. I asked the manager (via Xiao Gang) whether the path ran alongside the river, or climbed the bank. He replied that it went upstream to a waterfall.

This turned out to be true only in some fairly twisted sense. As the locals scrambled up the bank, up rotten tree trunks and loose mossy slopes, Rich and I, mindful of the raging torrent increasingly far beneath us, of the precarious nature of every hold we had and ultimately of our own mortality, were definitely the limiting factors in the party's speed. I was at the back, and one of the locals assigned himself a role as my minder. He offered to take my featherweight pack. I struggled not to laugh. "This [pointing at my daysack] no problem," I tried to explain in broken Mandarin, "this [pointing down slope and at the latest clump of moss in my hand], problem."

(Rich) After much sketching around on steep moss we finally came to the view point. My first thought was "We risked our lives to see that." Impressive though the waterfall was it was distant and barely visible behind a heavily vegetated buttress. Slowly however, the cogs in my head whirred — DOES NOT COMPUTE — where was the water in the fall coming from? My highly developed speleological mind eventually got it. Although we couldn't see it the water was obviously issuing from a resurgence [C4-5] halfway up the gorge wall! We fixed our position on the GPS and took a bearing and estimated distance to the top of the fall.

With our work finished we reluctantly accepted the fact that we had to return

to the bridge. Fortunately the way they chose to go back was slightly less scary, although only just. Xiao Gang and the boy were waiting for us at a convenient spot not far from the path. As I stepped beside them I felt excruciating pain above my ankle. “Aaaargh!!!” I lifted up my leg and swatted the offending hornet that was curling its abdomen viciously into my sock. Out shot hands to stop me from falling down the now non-existent cliff. I could see the air now filling with dozens of angry black and orange stripes. “No, no!!!” I screamed “Aaaargh!!!” swatting another hornet from my other leg before charging off at breakneck speed through the undergrowth. The others followed soon enough and we were all pelting headlong down the path flailing our arms and cursing as we desperately tried to lose our assailants.

(Hilary) It soon transpired that everyone had suffered the same fate. There was relief that the swarm was over but, for Rich and I at least, fear of an aftermath to come. The sum total of our experience of anaphylactic shock was stories from friends and an episode of 999. How long did it take to kill you? Quite a while, Rich thought. How long to render you incapacitated? Not long.

Xiao Gang turned round. “I think I need cream.” I got out my hill first aid kit and fed him Piriton. Rich and I took some too; the locals declined. Before I had time to repack the kit, Xiao Gang was on his feet and pointing up the hill. “I go, okay, I think I no good, I need sleep.”

By the time we caught him up Xiao Gang was staggering, supported by the manager. He sat down, waving a hand in front of his face, “I no see.”

Rich and I looked at each other, then Rich took off his bumbag, thrust it at the other villager and took off up the hill.

(Rich) Rich actually ran round the next couple of bends feeling fit and energetic with the urgency of the situation. After a short distance though the pounding in my head, weak wobbly legs and painful hyper-ventilating lungs forced me to stop. I sucked and blew at the thin mountain air until I could struggle on a bit further. Again I had to stop. This time I sat until I had recovered properly. I thought of Xiao Gang and selfishly wondered how I would feel if I didn't make it back in time. Would I blame myself for not being quicker. Pushing negative thoughts aside I carried on at a more sustainable fast walk. Arriving at the village, I offered a few hurried “Hello”s to perplexed villagers, knowing I couldn't explain what had happened, and burst into our allotted room. I picked up the first aid kit and plunged inside with my hand trying to sort through the dressings, rehydrats and antimalarials for what I wanted. My head thumped violently, I couldn't think straight and my hand sifted vainly through the same dressings, rehydrats and antimalarials. I panicked, thinking that maybe we had left a vital component of the adrenaline kit out: “Stop, breathe, think!” I told myself and then emptied the entire kit onto the floor. Syringes... ampules... sharps... antiseptic wipes... and... and... and... gloves! I thought back to the training course and ran through the procedure in a flash confirming that I had everything. As I put

what I wanted into the bag, leaving the rest strewn across the floor, the manager's wife rushed in. The look of panic and urgency on my face had obviously transcended the culture and language barrier, the whole village knew that something was up!

My ego and inhibitions vanished, I flapped my hands by my sides and made buzzing noises then stabbed my leg with my index finger making screams of pain each time. I stopped, said "Xiao Gang, urgh!", stuck my tongue out to one side, closed my eyes and lolled my head around letting my body slump. I pointed at the gorge before repeating my charade again. She seemed to understand so I took off with the adrenaline kit as fast as I could. The going was much easier on the way down and I had to dig my heels into the gravel and mud of the path to prevent myself skidding off the sharp bends above steep drops. Relief consumed me when I caught sight of The Manager. He and the young man were helping a sick but obviously conscious Xiao Gang to walk. I slammed on the brakes and caught hold of a passing tree, stopping dead and panting hard.

(Hilary) Xiao Gang, the manager, the young villager and I had made slow but steady progress up the hill, the two villagers half-carrying Xiao Gang while I followed with five walking poles, two cameras, my daysack and Rich's bumbag. Xiao Gang alternated between needing to rest and wanting to hurry back to the village. He took several breaks and more Piriton. The young villager lagged behind to take a piss and once I realised what was happening I lay the poles and gear unmissably across the path and went to pick up his half of Xiao Gang. I wasn't sure how much use I'd be as I was starting to struggle with carrying myself. . . Fortunately, no sooner had I got to Xiao Gang's side than he needed another rest, and collapsed on the ground.

I assessed my own condition. My limbs and face had swollen up and I couldn't breathe through my nose, and I felt a bit weak and light-headed. I couldn't tell how much of the latter was down to altitude though. I took my second dose of Piriton. Xiao Gang noticed this and heard my noisy breathing, and told the young villager to go ahead with me back to the village, but I stubbornly wasn't having any of it, figuring (if that's the word) that I at least could still walk unaided. . .

I have never been happier to see Rich. Xiao Gang and the villagers started off again. I, meanwhile, felt myself losing it. I tried to get up but now dizziness overcame me and then I was lying on the forest floor, the branches above me no longer distinct brown and green but a fluid mosaic, dotted with specks of green and yellow. I heard Rich move and felt myself sliding; I was lying on steep ground. "Put your leg back, I was leaning on that." I could hear my speech slur slightly. I cursed myself for not keeping a grip — I didn't believe there was no psychological component to my timing, I had been able to walk until there had been someone to look after me — as I debated whether to keep fighting, or close my eyes and welcome unconsciousness.

My dizziness subsided and I was overcome by a more immediate problem. I

rolled to my knees. “I need a shit.” “Tough shit Hils, you’re not having one, let’s go.” Rich had hold of my arm and was trying to drag me uphill. I shook him off. “Nah, Rich, it’s really uncomfortable.” I understood what he meant, but what I meant was: it’s either these leaves or my underwear, and I know which I prefer. “I won’t be long, I won’t go far.” Not much chance of that anyway, I thought, stumbling past a couple of trees in a fairly straight line.

“Okay Hils, I won’t look but you have to keep talking to me.” “Er, well first I’m untying my trousers...” “I don’t want to know what’s happening, tell me a story!” ... “Hils! Tell me a story!” ... “Hils!! Talk to me!” My creativity is not at its all-time pinnacle right now. “When I was a young man, I carried my pack.” “Okay, go on — and I waltzed my Matilda all over — go on...” “From the.” “Hils! Keep talking! Hils! What’s next?” “Nah, Rich, it’s okay, I never knew this line.” “From the Murray’s green basin, to the dusty outback.” “The, uh, I mean, I.” “Waltzed.” “My.” “Matilda.” “All.” “Over.” “The.” “War.” Fuck, that’s better.

Rich grabbed my hand as I got back to the path, and I leant on it slightly as we moved up the hill. Rich carried on with the song and I joined in where I had enough breath, where I could be bothered and where the line seemed amusing at the time. “And for seven long weeks I kept myself alive...”

(Rich) The first thing I noticed on arrival was that Hils looked pretty bad, her face was all puffy and her arms had come out in a rash. She remained more coherent than Xiao Gang however so I checked him first. He was still conscious so I was reluctant to give him the adrenaline shot and satisfied myself with finding his pulse. This was a fruitless task though. With my own heartbeat pounding in my head I couldn’t tell if I had found his pulse or not. Hils tried and could not find it either. Xiao Gang was adamant he was okay and despite urging him to rest he carried on with the villagers’ help.

When Hils tried to get up she slumped to the floor again, her eyes closed. She was incoherent so I squeezed her hand and told her to stay with me. She mumbled on whilst I put on the surgical gloves and carefully unpacked the sterile needle and syringe and assembled them ready for use. I was damn scared, and tried to recall everything from the first aid course, which was ironically the time Hils had passed out on me because I was inserting a needle in her arm. I paused wondering when I should give the injection, now, or could that be counterproductive, later, what if it was too late...

In the end Hils solved my dilemma. “I need a shit.” Despite having initial reservations about her state of mind it seemed to do the trick. Afterwards she was more coherent, was able to walk and with relief I was close to being certain that the danger, for her at least had passed. The next we saw of Xiao Gang was him walking unaided, double relief. After a lunch of yak’s milk and sweet tea Hils and Xiao Gang crashed out. I was still on edge with worry, wanting to keep an eye on them both in case they deteriorated. In the end the fatigue of the

afternoon's events drew across me and I collapsed on my bed, exhausted to the core.

Friday the thirteenth and all that — Friday 13th September

Beardy

Background Leaving Zhongdian, Gavin and I had spent a week investigating several mountain ranges to the east and south in order to assess their potential, as areas to investigate for deep caves.

Initially we tried to investigate a promising looking mountain located some 55km due east of Zhongdian (marked as 14101ft alt on TPC Lat 100°19'E Long 27°50'N). A bus took us to Luoji and a short walk the following day gave us tantalising views of this spectacular hill but we found that access from the west (and later from the south) was a major undertaking. We decided to leave this hill as a large question mark and look for easier picking elsewhere. However, we were told that there were large caves at the eastern end near a village marked Sanjiangkou, access to this point maybe easiest from the east or even from the north. On our return to Zhongdian, we noted an interesting looking mountain (marked as 15505ft alt on TPC Lat 100°08'E Long 27°40'N) but we were unable to investigate it in any detail.

Our next target was Haba Xueshan. The 2001 reconnaissance trip had made a brief foray here and on this occasion we investigated the lower slopes of the mountain, on its southeast flank, for 10km north of Qiaotou. But saw nothing that indicated the presence of caves on this flank, at least for the first 500m above the Xiaozhongdian Ho.

Next on our list were two areas, the first was inside the great loop of the Jinsha Jiang, an area close to Baoshan, a small Naxi village some 125 km north of Lijiang (Lat 100°20'E Long 27°32'N). This was found to be comprised of large blocks of limestone interspersed with large bands of impermeable rock. There is the possibility of deep caves here but the presence of metamorphic rocks put us off. Our final area is described below and is the hills on the east side of the Jinsha Jiang towards Lugu Hu. Again the geology in this area appear quite complex but the area that looked the most promising was around Lat 100°30'E Long 27°32'N.

Our Tale The tale begins early on Thursday 12th September 2002. Gavin and I are up with the larks and head to the Lijiang Northern bus station, where we had been told that we could catch a bus north to the tiny village of Baoshan. On asking every official at the bus station, it became apparent that no bus to Baoshan left from here. We set off around town, hoping to find the mythical bus, and were very lucky to find it parked on an ordinary street corner, some three hundred metres north of the bus station. There was only one bus a day and it

appeared to be ready to leave. We jumped aboard and squeezed into a small seat amongst all of the luggage in the central aisle. After a short wait of about twenty minutes the bus set off. We were soon aware that something was not quite right as we headed in to a residential estate and stopped to drop off some groceries. Next we headed into a DIY market and picked up twenty boxes of tiles, then to a glaziers for ten panes of glass, to an agricultural shop for a sack of rice and a sack of chicken feed, next to a garage for a few containers full of petrol. With all these “safely” stored on board and the passengers buried under the mounds of luggage the bus set off, just stopping three or four more times to buy oil, clutch cables and say hello to a few friends. After about three hours we finally set off on our way north towards Baoshan.

The driver was, however, to be forgiven. We had to drive through an area of National Park, and upon entering he sped through the no entry lane (for locals only), which meant that we avoided a hefty park entry fee. We had soon passed Jade Dragon Snow Mountain, and left the tarmac roads. The area became more interesting with lots of limestone visible, but unfortunately it appeared to be regularly mixed with large bands of non-karstic rock. We managed to lose the rice and chicken feed and soon stopped for an hour for lunch. After this, even more people crammed into the bus, as we flew along the very bumpy mud tracks, winding up and down great tracts of hairpin bends. Late in the afternoon we pulled into a small village and unloaded the tiles and glass. A group of school children boarded the bus, but were soon hastily removed, by a large group of local men running a trekking firm. The rear half of the bus was then filled to the roof with rucksacks and the locals used all available standing space. The bus set off again (minus the school children) and passed through some impressive scenery, half limestone, half-volcanic rock. Every mile or two the bus stopped and yet more locals squeezed into the bus, everyone grinning. Soon it appeared that nobody else could board the bus but they still did. As evening approached, one group finally got off the bus giving us a bit more room, and shortly after we arrived at the road head, the end of a very interesting eight-hour bus ride.

It was a stunning place and we had to walk for twenty minutes down into the village. We stayed with a local family rather than in the guesthouse and we discussed our plans with them. They knew of a one cave, some two hours walk from the village; it was described as a 10m diameter dry cave that went into the hillside for 100m where it ended. We decided that this wasn't worth the four-hour round trip. Originally we had wanted to walk north from here to Sanjiangkou, where we had heard that there was a large cave. They had heard of the cave there, but explained that it was a four-day walk from here to Sanjiangkou. He told us that we could get to Lugu Hu in two days. This could be done either by getting the bus back to Lijiang and then another one out from there, or by getting a boat across the mighty Jinsha Jiang and walking to Narnia (the next village) where we could catch a bus to Lugu Hu. We decided on the latter route, as it seemed more adventurous. The following morning we were up early, and

after breakfast our local guide took us down to the river where he shouted across to his friends on the far bank. After a few minutes we saw a small figure emerge from a house, some 150 metres above the river, with a large dinghy on his head. He ran down through the paddy fields and was soon launched into the river. He paddled a long way upstream before frantically rowing across the torrent, ending up several hundred metres downstream. Gavin and our luggage went across first, followed shortly afterwards by our guide and myself. We paid our ferryman and set off up the hill, Gavin and I with large packs and our guide in a vest.

After a cup of tea at a farmhouse, we bade farewell to our guide and set off towards Narnia, arriving there after a pleasant walk of about two hours. As we walked through the village all the local children came and followed us, and a large crowd gathered in the village square, with us as the centre of attention. After much gesticulating we gathered that there was no road here, and the locals said it was a two-day walk to the nearest road. We declined their offer of food and a place to sleep and set off with the bit between our teeth, sweat dripping off our foreheads as we climbed a large hill in the blazing sunshine. We found a small patch of shade in which to eat a small lunch, and then set off again in the vague direction of Lugu Hu (our map at a scale of 1:500000 being useless). During the afternoon we passed several groups of workers, all sitting in the shade, sheltering from the scorching sun. The workers would all offer to carry our sacks, but pride forced us to politely decline their offers.

We had now passed into an area of limestone and all the streambeds were bone dry. By mid afternoon we'd drunk the last of our water and things were beginning to look a bit on the desperate side. We had no idea where we would next find water or civilisation. So we kept on heading south, resting every now and again, trying to reduce our water loss. But as soon as we had walked a few hundred metres the sweat would pour off us. Then, after several long hours without water, our morale was boosted, as we could see in to the next large valley and see a river. We carried on and passed several locals coming in the opposite direction, one of them on a horse. After a final climb we began to descend steeply into the valley. Gavin sped off, desperate for a drink. The path lay through thick shrubbery, and I wandered obliviously past him as he climbed down to the river to fill his bottle. In a matter of minutes I had forded the river and strolled into the local village, where the whole village turned out to see me. I was confused, as I couldn't see Gavin anywhere, but that aside, I set about trying to buy a cold drink. It took over fifteen minutes to get a can of pop due to my poor grasp of the language. At this point Gavin arrived, still waiting for his iodine to take effect. We sat and guzzled two cans of pop each. Whilst enjoying our drink, a man came over and asked us (in sign language) where we were going. We said either Lugu Hu or Lijiang. He said that was where he was going, and offered us a lift in the back of his large truck — an excellent stroke of good fortune, as there is probably only one of these each week to this tiny village.

We threw our sacks into the back of the truck and climbed aboard. Gavin

trod on one sack that squealed and wriggled very loudly; it contained a large pig! There were about eight of us in the rear of the truck, everyone sitting on the sacks of rice and peanuts. We were driven for about four hours initially, down large hairpin bends where the truck suffered a large blow-out. We passed through some very spectacular and interesting karst as we descended towards the Jinsha Jiang. Here we turned eastwards up valley and soon left the limestone. Eventually it turned dark and the truck carried on into the night, bouncing over the dirt track. Eventually we arrived at a small town, Cuiyu, where we were very thankful to be shown to a guesthouse and taken for tea at a late night eatery. The following morning we managed to catch a bus back to civilisation, thankful not to be still wandering the arid hills in desperate need of a drink.

Defeat — Monday 23rd September

Hilary Greaves

Outside the rain
Fell dark and slow
While I pondered on
This dangerous but irresistible pastime.

It isn't dark, actually. It's 6pm and we're sitting in a wooden hut, 4100m up in these limestone hills. It isn't irresistible, either. We've been successfully resisting it since 1pm. It is raining though. It's also fucking cold. Both of which go some way towards accounting for our ability to resist.

"If this dig goes, it deserves to go down in the annals of speleo-history." First thing this morning, I pondered this remark and couldn't help laughing inwardly at the situation as Gavin and I headed down from our hut to the dig site [C3-21] 50m away. Gavin and Beardy found this site a few days ago. Rich dismissed it with the comment "If I wanted to dig, I'd go to Mendip." I quite fancied the idea. To be brutally honest with myself, it was one of the best leads we had. And there wasn't much point digging on Mendip if you were trying to find the deepest cave in the world. And if it went... I laughed out loud. "I would LOVE to have dug open the deepest cave in the world."

Four hours later, we were both pretty cold. Shortly after the rain started to fall, I was digging and Gavin was hopping up and down on the grass, trying to keep warm. "If it gets too cold and wet we can take a break you know." I took pity on him and swapped places. Being at the dig front was definitely the cushy job — you were out of the wind and (just) the rain. Out on the surface proper the clag whistled through the bowl, the rain continued to fall and I pulled my muddy ex-orange survival bag tighter around me. Gavin told me to give a shout if it got too miserable, but I didn't mind this kind of grimness too much — as long as all I have to do is sit still and be miserable, I'm not that miserable.

Suddenly Gavin shot upwards like a caterpillar on speed. A split second later I could see why, as a torrent of rocks landed where his legs had been. The whole dig had collapsed. What had been a rather unstable right-hand wall was now the floor, and what had been a half tonne boulder sitting on a thin layer of earth sitting on said unstable wall was now a half tonne boulder sitting on a thin layer of earth that was now the ceiling of our dig and was sitting on...??

It was lunchtime anyway, so we adjourned to the hut with the grand plan of figuring out a plan once we'd warmed up a bit.

This, however, took longer than expected. We climbed out of our mud- and rain-soaked oversuits and soon were drying our arses over a fire. Outside the rain fell... light and quick, and the wind still whistled. We shivered in our still-damp clothes. The prospect of climbing back into the wet rags that steamed by the fireside and heading back out to either dig grew increasingly grim.

Several hours later, I wonder whether we're being soft. It's squalid, sure, but we're cavers, and digging is what we've climbed this mountain, with crowbar, bucket and hauling gear, to do. And my disinclination to go once more into the breach doesn't stem from any fear of hypothermia, or the like, just that it's unpleasant. I think that most of the unpleasantness is a barrier we'd have to break through — leaving my fireside seat where I'm swaddled in now-dry clothes and a sleeping bag and almost warm enough for comfort, and changing back into wet gear to go back out into wetness. I know that once we were out there, if we were to get that far, it wouldn't be as bad as the moment of transition. Yet still the prospect fills me with dread and revulsion. I take some comfort in the fact that Gavin is no more enthusiastic than I am. I may feel I'm being soft, but I think that most people who know Gavin, including myself, would figure that if anyone would withstand the squalor and keep on digging, Gavin would. So the fact that he shares my frame of mind exonerates me to an extent. We went up the hill for a 4-day digging trip and only did 4 hours' digging, yeah, I know it's crap, but look, it was so grim even Gavin couldn't face carrying on.

Now I sit by the fire as the dusk draws in. Gavin's in his pit and is answering "Yes" to "Are you asleep?" A minute ago I considered suggesting an evening digging trip, but I decided that the chance of having my bluff called, although infinitesimal, was too high. And so another day on expedition draws to a close.

Gavin's Dong — Saturday 28th September

Rich Gerrish

Another morning at 4000m, cold and wet. I eat my sloppy foul tasting noodles reluctantly. The day before we explored Beardy's Dong to its conclusion, pushed Gavin's Dong to a choke and found a couple more entrances on the plateau. Gavin was off back to his Dong before I even cast aside the rest of my breakfast and resigned myself to feeling hungry. Beardy and I were to drop these two

new entrances and see where they got to, Hils was off to do another recce and hopefully find some more entrances.

On the walk up to the plateau we battled with the now familiar hardship of working at altitude. Ten paces, stop and rest, ten paces, stop and rest... The weather today actually seemed to be an improvement on the recent unending rain by actually taking breaks of remaining overcast and dry. As we neared the top of the hill Gavin surprised us all by coming back in the other direction.

“It’s gone!” He said matter-of-factly.

“What, your dig?” we chimed in disbelief.

“Of course, don’t look so surprised.”

So we all stood around and tried to reorganise ourselves as we now had a cave that was open, drafting like a good’un and needing people and tackle to go and push it. As my caving kit was already up the hill and having spent yesterday doing a surface recce I was first in line for a trip underground, behind Gavin of course who having broken through deserved the right to go and explore the caverns measureless to man that must lie beyond... Hils and Beardy therefore would go drop these entrances that I had found the previous day, I was needed to put some bolts in at Gavin’s dig and Gavin would join me later after he had been back to camp to pick up his SRT gear. Sorted.

I dropped into the entrance of Gavin’s Dong and immediately noticed the draft, “Very interesting,” I thought before starting to shiver, “bloody cold mind.” Down the entrance came the first squeeze and climb that turned out to be a little exciting to the uninitiated. Belling out below the narrow section it was a bit of a shock to slip through and find myself a considerable distance from the floor with no easy way down. I sketched it together and was soon on the floor straightening my gear.

I crawled forwards and soon found Gavin’s dig that was now a slot with the cold air blasting out from below. Picking out a good chunk of rock I began hammering the bolt hole. The way on itself was pretty small and whilst I hammered I wasn’t totally sure if I could get through with my vertical gear on. After tightening the bolt and clipping the rope in I had nothing left to do than test my theory. After a couple of attempts and the removal of some gear I finally slid through the slot and climbed down to the floor. Following the loose rocks down to the lip of a very loose pitch it looked like the cave had finally broken into much bigger stuff. Whilst I sorted out some belays Gavin arrived and soon I was putting in another bolt over the new drop whilst Gavin shivered on the ledge.

After the first bolt was in I was knackered from the exertion of bolting at altitude and Gavin looked hypothermic so I suggested we switch roles for the second bolt. When that was in and the rope secured we were down the pitch with excitement rising. At the bottom a tall rift dropped away from the far side of a small chamber and we dived into it at different levels to find the way on. The rift itself was pretty drippy and we were soon quite wet as we thrutched up and down and looked at several impenetrable calcite slots that blocked the way

on. “Knackers,” I thought, the slots all looked like they needed a drill and some bang, neither of which we had. Whilst Gavin bashed ineffectively at the most promising slot with a bolting hammer I decided to go and move some rocks in order to keep warm. Back along the rift a fair way and down at floor level I found the perfect place and began my digging. It soon occurred to me though that this dig looked far better than all the others and despite being further back than all the rest still took part of the draught. After a short time I had an opening that looked passable. A bloody great icy drip kept plopping in totally the wrong place though. I imagined myself laying in the rift, stuck and struggling to get through with icy water trickling down my neck. “No thanks.” I kept digging for a while longer until Gavin got fed up with his dig and came to look at mine. He was soon inserting himself into the gap and once through helped to clear out more rocks from the far side. Perfect.

“Does it go Gavin?”

“Well, I haven’t been here before.”

“Wait for meeeee!!!!”

Gavin had waited for me on the far side and let me take the lead into the new stuff. The rift continued meandering and the character seemed to change again into a much more fractured rock. Splitting up at one point where the way on was not obvious I soon found myself behind Gavin as he excavated yet another blockage. It didn’t take long though and we were soon climbing down more rifts into what appeared to be a chamber.

We stood side by side in the chamber, it appeared to close in at the mid point and widen out beyond whilst simultaneously appearing to drop over a lip as well. Some water tricked down the far wall and we both thought, “Pitch?”

Gavin had already picked up a rock and said, “Listen to this.” The rock sailed out into the dark and over the lip. We waited anticipating the sweet sound of silence as the rock fell into the deep chasm followed eventually by the deep rumble as it impacted onto the boulder pile 200m below. . . Not so unfortunately, no sooner had it dropped over the lip than we heard the sound of it landing on the floor. “Bollox!”

Sure enough the chamber was just that, the far end of it was choked with sharp rocks and had no way on. Back at the rift we could see the continuation of it along the wall of the chamber and we reluctantly inserted ourselves back into the tight confines of rock. Shortly I was at yet another dig but seeing that it wasn’t a significant blockage I began tearing at the rocks and letting them drop to the floor. I pushed through, dropped down from the ceiling, which was filled with nasty boulders to the floor and came across yet another blockage. . .

I looked at Gavin. We were both shivering; this cave really was quite unpleasantly cold. We decided to jack at this point and headed out quickly trying to warm up. It didn’t work though. The altitude meant that exertion had to be followed by rest and rest was inevitably followed by hypothermia, nice. Back at the pitch we surveyed through to the breakthrough point that Gavin had dug out

that morning and then made our exit. Below the entrance squeeze I had picked up some dried fruit and rice cakes to take out of the cave but having no place to put them I just stuffed them inside my oversuit. This was a big mistake, as I climbed up to and inserted myself into the narrowest part all the food bunched up around my waist belt causing me to become stuck. After much swearing, cursing and thrutching I finally battered my way through the constriction and out of the cave, exhausted.

Gavin was on the surface and already stripping off and getting into his walking gear. I decided to get changed in the relatively comfortable surrounds of the entrance chamber of Beardy's Dong and bidding him farewell told him to push off and head back to camp as soon as he was ready.

I changed quickly but my lightweight approach to the expedition meant that the underclothing I wore for the cave was also my warm clothes for the surface, only now they were wet. . . Just as I was about to head off Hils returned from her recce looking thoroughly cold and miserable too. Together we pushed off back to camp and with the exercise I soon began to feel more human. I swore I would never return to Gavin's Dong, far too cold, far too tight, bloody miserable in almost every way, if that was the deepest cave in the world someone else can go explore it.

Of course, time dulls the memories of hardship and leaves you only with rose tinted spectacles. Yep, Gavin's Dong has to be one of the hardest short caves I have ever done on the grounds of altitude and temperature alone. If it does go deep it will become a very serious proposition for whoever that team may be and I for one am desperate to be on that team. Looking at the area it is easy to believe that the deepest cave in the world could be found there. One thing is for sure, the deepest cave in the world is never going to be easy and jacking because the going is tough just isn't an option. I'll be back to push this cave as hard as I can but I may pack some extra thermals next time.

6 Medical report

Rich Gerrish, Medical Officer

Medical incidents worthy of comment were recurrent minor Acute Mountain Sickness, experienced by all members of the expedition, and severe allergic reactions resulting from a hornet swarm on one particular occasion. Each of these is described in more detail below. Other than AMS and allergic reaction, medical problems comprised the usual expedition ailments: blisters, small cuts, bruises, sun burn, headaches, minor burns and hangovers. None of these seems serious enough to warrant further comment.

Acute mountain sickness (AMS)

Overview AMS was the main medical condition experienced on the expedition. Despite never causing a serious medical emergency, its minor symptoms undoubtedly affected the overall performance of the expedition, through reduced physical capacity and morale.

Acclimatisation Due to the fact that we were conducting a reconnaissance, making many short trips to varying altitudes, we spent very little time deliberately acclimatising. This was less than ideal, and we are currently rethinking acclimatisation procedures with the specific aims of Yunnan 2003 in mind.

Symptoms experienced The following symptoms were observed frequently, and were attributed to mild altitude sickness:

- Headache
- Fatigue
- Loss of appetite
- Dizziness
- Difficulty sleeping
- Euphoria
- Feelings of “drunkenness” and light-headedness

Severe allergic reaction

The most serious medical situation that we encountered involved two severe allergic reactions (one expedition member, one guide) to multiple hornet stings. The incident is described in full below.

In the light of this incident, we were careful to carry an adrenaline set with us at all subsequent times. Future expeditions to this area would be well advised to follow a similar policy, primarily due to the remoteness from hospitals and the short time frame required for a person to become seriously ill as a result of an allergic reaction. (NB: people who have suffered from an incident of this nature in the past are often affected more seriously on subsequent occasions by stings, and should therefore be particularly cautious.)

Medication record

Date	Illness/injury	Casualty	Medication
21/08/02	Allergic reactions to hornet stings	WXG	2 x 2 Piriton
		RG	1 x 2 Piriton
		HG	2 x 2 Piriton
		HG	Needle, syringe, opened but unused
22/08/02	Continued allergic reaction	HG	2 Piriton
24/08/02	Continued allergic reaction	RG	2 Piriton
		HG	1 Piriton
27/08/02	Continued allergic reaction	RG	2 Piriton
01/09/02	Continued allergic reaction	RG	2 Piriton
23/09/02	Headache (AMS)	HG	400 mg Ibuprofen
22–28/09/02	Blisters	HG	Zinc oxide tape

Incident report

Hilary Greaves

Date 21/08/2002

Time 1545 hrs

Party 6 in total: HG (Hilary Greaves), RG (Richard Gerrish), WXG (Wang Xiao Gang), V1 (first villager, the manager of the village), V2 (second villager), V3 (third villager, a boy of around 10 years).

Location UTM 47R 0585964 3035068 3015m, west bank of Xiaozhongdian Ho.

Description of incident

- While descending through vegetation towards the river, the party was swarmed by hornets. Each member of the party was stung between 1 and 15 times. The potential for allergic reactions to develop was noted.
- As the party started up the path east of the river, WXG complained of feeling ill and needing to sleep.
- Three members of the party (RG, HG, WXG) took 2 Piriton tablets each.
- The party continued up the path. WXG's condition deteriorated: he was unable to see clearly, and staggered as he walked.

- RG went ahead to fetch the adrenaline kit from the village, about 15 minutes up the hill.
- V3 walked on ahead.
- WXG became unable to walk unsupported, and was helped up the path by V1 and V2, followed by HG. The group took frequent rests.
- V1 and V2 appeared in good health. HG's face and limbs began to swell up, and she complained of finding breathing through her nose difficult and feeling slightly weak and dizzy.
- WXG and HG took 2 more Piriton each.
- RG returned with the adrenaline kit.
- V1 and V2 helped WXG further up the path.
- HG's condition deteriorated. She was unable to walk and complained of feeling dizzy and nauseous, and being unable to see clearly.
- RG opened the sterile packaging of one needle and one syringe and prepared to administer adrenaline, but was reluctant to give the injection unless absolutely necessary due to his lack of formal medical training.
- After approximately one minute, HG's condition improved, and she was able to walk.
- RG and HG met V1, V2 and WXG at the top of the bank. WXG was walking unsupported.
- The party returned to the village. HG experienced intense itching for several hours. WXG felt unwell until the following morning. Both RG and HG experienced itching for the following 7 to 10 days.

7 Summary of accounts

Gavin Lowe, Treasurer

All figures in UK pounds.

Expenditure

Expedition expenditure

Gear		
Rope	157.63	
Rigging gear	91.81	
Surveying gear	115.00	
Stove	40.32	
Misc	16.15	
Subtotal	<hr/>	420.91
Maps		250.48
Prospectus + interviews		145.00
Photography		65.98
Medical		259.19
Insurance		104.00
Publications (estimate)		100.00
Misc		8.87
TOTAL		<hr/> 1354.43

Kitty expenditure in China

Food, drinks, etc	375.93	
Accommodation	123.62	
Local transport	65.12	
Inter-town transport	367.45	
Equipment	31.43	
Equipment shipping	68.85	
Guides, porters	33.07	
Misc	10.97	
TOTAL		<hr/> 1076.44

Personal expenditure

Flights and other travel		
Flights to Hong Kong (x2)	949.00	
Flights to Kunming (x2)	1324.60	
Hong Kong ↔ Kunming (x2)	236.51	
Buses etc. in UK	100.00	
Travel subtotal		<u>2610.11</u>
Medical		71.00
Personal gear		1600.00
Visas		120.00
Guidebooks		60.00
TOTAL		<u>4461.11</u>

Summary of expenditure

Expedition expenditure	1354.43
Kitty expenditure	1076.44
Personal expenditure	4461.11
	<u>6891.96</u>

Income

Grant income		
Oxford University	1819.62	
UK Sport	750.00	
David Hood	750.00	
Mount Everest Foundation	700.00	
Subtotal		<u>4019.62</u>
Personal contributions 720 x 4		2880.00
Bank interest		4.52
TOTAL		<u>6904.14</u>

Summary

Total expedition income	6904.14
Total expenditure	6891.96
Surplus	<u>12.18</u>

(Surplus passed to Hong Meigui Yunnan 2003 Expedition.)

8 Expedition song: Three Thousand Metres

To the tune of “Fifteen Years”, with apologies to The Levellers

I never was a clever man
Said the man in the caff with the map in his hands
He’s trying his best to understand
Yunnan’s geology
Though the caves in Spain
Have kept him sane
It’s time to seek a deeper plane
He’s packed his kit, and take it
To cave The Chinese Way

Chorus:

And the bullshit in the members’ kitchen
All kicks off when he gets in
The cave three thousand metres deep
Is just three weeks away

He knows that it’s his destiny
To lose potential energy
His knack for serendipity
Will stay him on the path
So after the flight
In the dead of night
He lay awake on a bumpy ride
The easy life, he’s sacrificed
For subterranean dreams

(Chorus)

A Additional useful GPS points

Within each area, GPS points are listed from north to south. Due to the nature of the GPS equipment used on the expedition, altitude readings may be inaccurate by several hundred metres and are included here only as a rough guide.

Nu Jiang

Location	East	North	Altitude
Tyrolean river crossing	0484983	2877184	861m
First mountain village (VIL1)	0486789	2874991	1618m
Second mountain village (VIL2)	0489195	2873234	

Guli recce

Location	East	North	Altitude
Bus drop-off	0587687	3038926	3294m
Guli village	0586190	3035908	3199m
Gorge (bridge)	0585964	3035068	3015m

Zhongdian – Deqin recce

Location	East	North	Altitude
Deqin pass, bus drop-off for B2-2	0500761	3139905	4357m
Shentu tributary recce, 100m before upstream limit	0538475	3117625	1831m

Zhongdian recce

Location	East	North	Altitude
Col	0560339	3090205	3597m
Huts1	0556604	3088353	4066m
Huts2	0555052	3087050	3892m
Camp 2 (Cairn Junction)	0554086	3086823	3900m
Bowl	0552582	3086376	4150m
Camp 3	0552582	3086376	4150m
Camp 1	0556876	3084381	3630m
Camp 4	0557909	3075830	3989m

Other points

Location	East	North	Altitude
Luoji	0618620	3075614	2155m

B Maps

Map 1: North Yunnan and cave indexing system

Map 2: Zhongdian mountains

