SPELEO SPIEL

Newsletter of the Tasmanian Caverneering Club

ESTABLISHED 1946

P.O. Box 416, Sandy Bay, Tasmania. 7005

Registered by Australia Post – Publication No. TBH 0201

NEWSLETTER OF THE TASMANIAN CAVERNEERING CLUB

Newsletter Annual Subscription $15.00, Each $1, Non-members $2.00

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EDITORIAL

This is the second of two issues concerned with the December 1987/ January 1988 TCC expedition to Precipitous Bluff. Our last Spiel was devoted to the events both above and below ground, in this issue the topic is slightly more scientific, hopefully without being too involved. The results of our finds plus surveys show the work that was done to be valid. Elsewhere in this issue is a dedication to those who helped us, knowingly or otherwise. Without the computer expertise of Stuart Nicholas the surveys would not be up to the standard that they are.

Another expedition is already planned for this coming December/January, two groups will be flying in over a 20 day period to find more cave and "finish off" what was set in progress on the last trip.

The karst area to some degree is still of an unknown size, and the hydrological potential with water flowing off the BP dolerite capping is huge. This year will see more man hours in the field and under it than the area has had since the first early explorations of the 1960's.

Hopefully in 1989 another issue of Speleo Spiel will have more than the limited information contained in these two editions.

TREVOR WAILES

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HOMEWARD BOUND: CONCLUSION: A SUMMARY PRESENT AND FUTURE!

TCC Expedition to Precipitous Bluff

28 December 1987 to 9 January 1988

Surveying in Xymox

Expeditioners: Trevor Wailes, Chris Davies, Lew Mitchelmore, Nick Hume and (briefly) Phill Hill.

Cover Picture: Surveying along the Bauhaus connector passage, into Xymox.

The TCC Strategic Withdrawal....

Nine days of Nick trying to dissolve himself in the lake, Lew catching flies for Chris to hang perpendicularly and myself contemplating my ever expanding navel due to the copious quantities of pasta and rice and more pasta consumed. All this during an apathetic internment in some of Tasmania's most picturesque South West. Now we were about to commence the famous TCC withdrawal..... This consisted of drinking tea, burning expendables, drinking tea, packing surplus stuff in old rucksacks, drinking tea, cleaning up our campsite mess and that of passers by, more burning, more tea..... ad nauseam. A final trek through the rainforest was made to stash the surplus/spare gear in a cave and a last cup of tea was had. We were ready to make a move to rendezvous with the "Margaret B", that vagrant wanderer of the high seas.

Before our planned sea voyage we had some white water rafting of our own to do. The ever faithful rubber duck was ceremoniously launched and our outward bound gear loaded, then unloaded at the discovery of a leak. This duly patched we re boarded and made vague attempts to steer this unwieldy craft into a half metre slop. The high wind we hoped would blow us down the lake served only to swamp the duck with half metre waves. After thirty minutes and 200 metres of swearing at the wind, each other and the waves, we considered our position. We had to walk down New River Lagoon - well it was quicker: the lagoon is flat and the wind was behind us. The eventual paddle, wade and rock hop wasn't so bad although Lew looked tired after his hard work.

A short stop at Prion Beach campsite while waiting for Lew who arrived and disappeared again. Nick left us to dissolve more of himself. Lew reappeared mumbling something about water, water everywhere! Where is it? We were gone.... An hour's walk to hopefully find the "Margaret B" rolling gently on the ripples of Rocky Boat Inlet....

My sturdy, all purpose, orange walking wellies (price $15) had heaps of tread left on the sole, but my feet were wearing a little thin as we rounded the last hill to start the downward trek to Rocky Boat Inlet. Chris and Nick reccied for the track down while I waited for Lew who finally arrived craving water. It didn't take long to realize our fears of no boat => plenty walk. The surf was breaking on the reefs that guard this small bay although closer in beyond the cobble beach all was calm. Evening was closing in with a threatening stormy sky.... the "Margaret B" was gone or yet to arrive.

We bivouacked next to a small creek. Nick dissolved more of himself while Lew squeezed two hundred weight of brackish New River Lagoon water from his sleeping bag, clothes, cooking pans, food and so on. I contemplated a pair of multipurpose orange staggering wellies (price $15) and Chris picked pieces of thorn and gorse from his upper legs, lower legs and bum. More pasta, some tasty freeze drieds, surf on the cobbles, a broken sleep with Devils calling in the background and some unwelcome visitors in the food bag.

Dawn..... a calm sea.

Lew: "Where's Mick and the "Margaret B"?
Chris: "I arranged for him to meet us Wednesday night!
Nick: "Oh, I arranged for Thursday morning. What's today?"
Trev: "Friday! Let's have a fire!!!"

Lots of really useful things got burnt..... excess clothing, sand shoes, rubber duckies, old rucksacks, combs, spare tooth brushes, wet suits, old batteries, Holy socks and so on. Bush walking is great fun - see the country side, enjoy the fresh air, meet interesting active mainlanders doing the South Coast Track in $BIG worth of new gear. The TCC withdrawal frowned on this. One can't look at the country side like a passenger in a car because you walk into logs and bogs, trip over, lose the track and the fresh air is tainted with the smell of digested freeze drieds. and that is saying nothing about the pong of fermented bog you picked up as you were distracted watching the last glimpse of PB as it disappeared behind a nearer rise. The only T-shirt you haven't burnt is now covered in shit from the bog, stinks and is starting to resemble armour plating. The mainlanders collect old beer bottles, tin cans and other refuse and transport it to such beauty spots as Cockle Creek, or hopefully the Mainland. They are thus able to show their bemused friends Tasmanian trophies and photos of Tasmanians bush walking. Fifty or sixty kilometres in a pair of bright orange wellies, price $15....

The weight handicap for the TCC withdrawal run was as follows:

Nick Hume:	12.5 gram
Trevor Wailes:	15 gram
Chris Davies:	1 hundred weight
Lew Mitchelmore:	40 kilogram (first day 2 cwt; mostly water..)

Rocky Boat Inlet to Lion Rock in a day was a good effort; over the South Cape Range on a hot day while trying to keep up with Nick Hume was a painful and futile effort. The few vistas we stopped for proved magnificent and to walk the track at a more leisurely rate would be a very picturesque experience. As the day progressed we settled into an order related to our individual speed to weight ratio. Nick lead, going flat out uphill, with the rest of us plodding on behind. Some of the sections between the breaks were quite prolonged but we were all within about 15 minutes of each other. Some of the views of the coastline were exceptional. From the high point of the South Cape Range one could look back as far as the Iron Bound Range (west of New River Lagoon and beyond where we had been) and out to sea at the islands off Prion Beach. Deadmans Bay on this very clear sunny day was a memory to treasure.

The climb up to this point had been a misery, the only consolation being that the track was very dry and easily negotiable. Both Nick and Chris had walked the track before and both were surprised at its good condition. Without the benefit of this, the TCC withdrawal would have taken much longer.

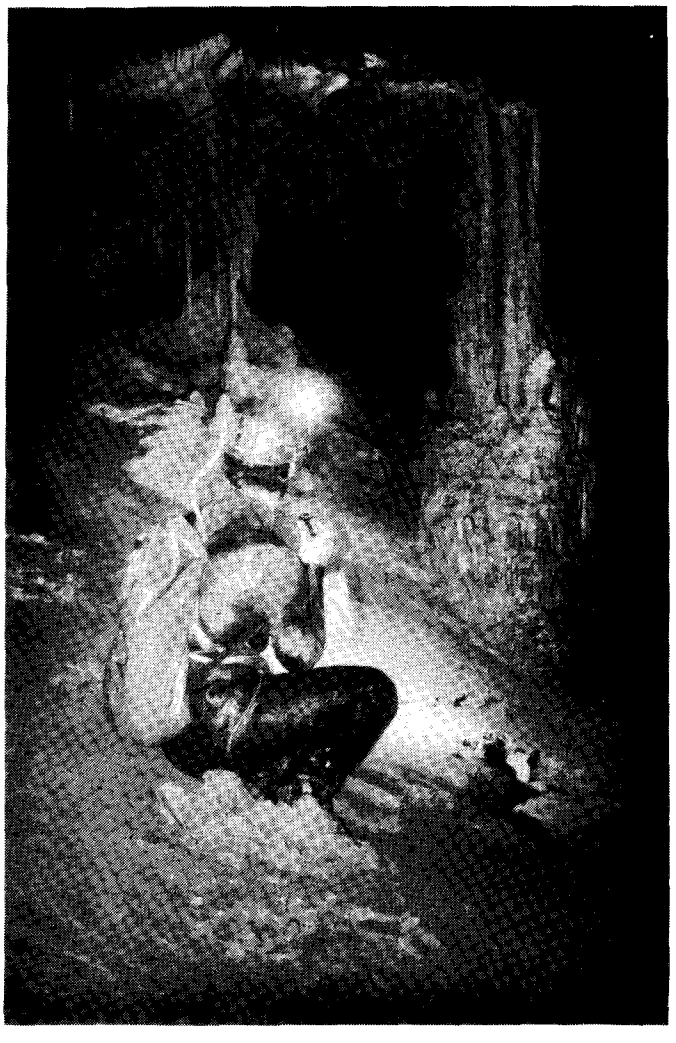
At South Cape Rivulet a brief halt was called to discuss the venue for our second night on the track. Lion Rock was voted for, being about 5 kilometres further along the beach and cliffline and only about two hours from Cockle Creek. By the time campsite was reached we had all had enough. Hot and exhausted we cooked tea, erected our shelters and relaxed. It

had been a hard day covering over 30 kilometers of beach cobbles and precipitous track.

More mainlanders were present at this rather plain camping site. The majority hid in the bush,and only occasionally emerged for menial tasks like washing dishes or teeth. The bolder one openly sought out old beer bottles and rubbish, declaring them to be his and that he would carry them out! As for us, we were more concerned about the beer that had been in the bottles, the fact that the Dover Hotel had gallons of the stuff and that's where we'd be tomorrow.

Tomorrow arrived, we packed, cleared up and I put on my socks (all of them). My $15 orange all purpose stout walking wellies still had heaps of tread left on them, my socks had much less and my feet virtually none. In fact the white inner tube was poking through in a couple of places, but I thought for a two hour walk I would do without plasters. This turned out to be a mistake, however our trek was eventually completed and we assembled at Cockle Creek..... Civilization - houses, cars, mainlanders waiting for Tag Along Tours and native Tasmanians, some of whom were gracious enough to give us cups of Milo and others gave us a lift on the back of a flat tray truck to Dover. At Dover our cars were picked up and driven straight to the pub. After a fortnight away and only one half day of rain it was time to get wet on the inside.....!

Trevor Wailes



Stefan Eberhard with formation above Low Life in Quetzaleoatl Conduit 1986 Photo: N Hume.

PRECIPITOUS BLUFF KARST - SOME OBSERVATIONS

At the time of writing, neither the surveys from the 1986 expedition, nor those of the more recent trip have been drawn up. Their absence makes any sort of conclusion about our explorations in the Precipitous Bluff karst rather difficult. However, from a perusal of the raw survey data together with local knowledge, several interesting inferences and speculations can be made.

The water entering the downstream sump (Floating Anxiety) in Bauhaus is certainly the same as that emerging from the upstream sump (Black Curtains) in Cueva Blanca. The two appear to be less than fifty metres apart and the water volume plus the character of passage in the area of the sumps in both caves concord well.

At its highest explored point, the stream enters Bauhaus through a dolerite-pebble blockage in Screaming Stals. This corresponds to a region of increasingly angled passage accompanied by aven development and may well represent a confluence of drainage from surface holes along the Xymox gully. Numerous other feeders add to the streamway along its meanders, the watercourse approximating the direction of slope above.

The passage is mostly easy going, hampered in a few places by highly angular and deeply incised rift, necessitating soggy crawls. Much of this can be bypassed in larger upper level development, a complex of oxbows truncated by a high solution rate of the pure limestone. The streamway enlarges significantly at the connective junction below the massive entrance chambers of Bauhaus / Xymox, indicating further drainage entry from the separate Bauhaus gully.

Downstream from this point is very pleasant indeed. Ascending sidepassages and the disappearance of the draught above breakdown in the passage rift, both suggest small surface connections below the track ridge into Bauhaus, an area worthy of some exploration. The streamway changes in character and direction about a hundred metres before Floating Anxiety, becoming more north-westerly with a steeper gradient reflected in linked steps of swirlpools.

The abrupt right turn of the sump chamber is duplicated in Black Curtains on the Cueva Blanca side. This similarity of alignment may well belie a closer proximity of both sumps than the fifty metres I have indicated. There is no upper level bypass rift here (hence the lack of draught) reducing the prospects for connection to one of diving.

Within Cueva Blanca, the stream quickly resumes a westerly course and presumably would have exited the cave from its present fossil resurgence entrance (some forty metres above the level of the plain) in former times. However it is now intercepted by north easterly bearing canyon (Inundation) via a five metre waterfall before sumping yet again in a lake series.

What happens beyond this point is a bit of a mystery. Inundation appears to run parallel to the stream in Damper Cave, though it is some hundred metres into the slope from this cave's entrance series. It is unlikely to be a separate system of drainage, for there is no other known resurgence north or south of the Damper vicinity. Most probably, the waters continue north easterly for

several hundred metres to linkage possibilities further within Damper. A change of direction in the sump headwall to the right of the lake series, plus a baffling draught nearby, strongly suggest a connection. Drawing of the survey relationships will help clarify this and may lead to the discovery of more passage, either by puzzling out the draught or by diving.

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Noteworthy from a perusal of the 1:25000 scale maps and aerial photographs, is the linear association of many surface features. One prominent alignment of depressions extends from east of Elusive Bluff through Bauhaus / Xymox to the blocked dolines NNW of Damper Cave and arguably beyond to sinkholes near the mouth of New River. A second and parallel alignment is also evident downslope from this within the Quetzalcoatl glade, inclusive of PB3 and PB's 204, 205, 206 and 207. This is also continued in the main drain of Damper, albeit with a reversed direction of drainage flow to Quetzalcoatl Conduit.

This is good evidence for joint slippage structures, parallel to a continuation of the transcurrent Lake Edgar fault (Corbett, 1970, Burrett, 1981). Both structures follow a bearing of approximately 305 degrees magnetic and meanders within the cave development (along these lines), tend to be restricted to between 290 degrees and 320 degrees magnetic. This is borne out in the ancient upper level borehole of Bauhaus / Xymox, as well as in Damper Cave. They run more or less cross-slope, slightly downhill of a right angle to the system of gullies and ridges descending from the summit area of PB.

Without this form of explanation, the major lines of cave development at PB would misleadingly suggest a radically different surface morphology at some time in the past. Instead, enlargement has proceeded along these structures by an interception of normal downhill water flow. Strong aven development throughout the fossil course of Xymox and repeated in Quetzalcoatl Conduit, attest to this.

In fact, Bauhaus / Xymox appears to be an older equivalent of the present Quetzalcoatl drainage glade and may well have itself occupied a position at or near the plain / slope juncture at some stage. The borehole passage in Xymox is impressive and bears witness to a once considerable flow of water. It is made more so by extensive floor collapse into mid level rift, formed by downcutting in pursuit of the retreating water table. The same rift may give "underneath" access to the unexplored remnant of borehole within Bauhaus itself. Whether this simply leads back to the undescended drop at the northern extent in Xymox, or continues to barrel on north westerly is open to conjecture.

Below this upper level is the massive entrance chamber of Bauhaus, overlooked by the New Order shaft. Together with the collapse of the huge Bauhaus doline (offset from the main cave), it indicates fortuitous enlargement at the confluence of two major gullies and the fault structure. The coincidence may well be unique to the area as surface exploration has turned up nothing else of comparable size.

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Also visible from the photographs are the cessation of clear gully delineations along the limestone contact zone. The 1973 expedition found a minor pothole, Severance Cave (PB201), at just such a gully terminus to the immediate north of the contact on the summit track ridge. This carried a small trickle of water and finished in a flattener at -60 metres. An unexplored entrance was also found in the next gully north again, this line receiving the larger waters draining the western exit chasm of PB summit (JSSS 1973).

Both caves are probable feeders to the stream in Damper Cave and hint at additional source caves in the gullies further north. These perhaps are unlikely to be very much larger than Severance Cave. However, enlargement along a fault structure, similar to Bauhaus, isn't entirely out of the question.

Further exploration along the contact zone, together with some surface surveying, would be desirable in determining the source hydrology of all the known systems. This includes the area to the south of the summit track ridge. A foray high on the slopes beyond Xymox during this most recent trip yielded some minor holes and outcroppings of rillenkarren. Beyond the most southerly point reached, the flanks of Elusive Bluff accepts drainage that certainly enters the system along the Quetzalcoatl glade. Although difficult of access, a number of sinkholes are evident on the bluff's western side.

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Something of a side issue is the question of whether shelter caves exist in this karst. Attempts to find archaeological sites by the HEC (1983) in ameliorating impending losses on the Franklin River and later, by a team from the Australian National University, weren't successful. The known entrances of Damper Cave and Quetzalcoatl Conduit are unsuited, lacking as they do dry level areas within the zone of illumination.

Extensive hinterland occupation by aborigines occurred during the last ice age and one such site is known from a cave in the nearby Cracroft Valley. It is highly likely that these valley migrations included New River. The tea tree / bauera "lawn" on the plains south of Damper suggest purposeful burnoffs for encouraging grazing animals. Evidence for these burnoffs was found in the daylight holes of Cueva Blanca during this expedition. The whole area is known to be otherwise unfired for several hundred years (Mosley, 1973).

Collapses along the subterranean water course extending from Elusive Bluff to Quetzalcoatl Conduit have created opportunities for shelter in the form of exposed stream passage. Such places may be worth closer scrutiny in future.

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It is highly likely that Christmas of 1988 will see a return expedition to the PB area by TCC. We have derived sufficient local knowledge over the last two years to make such a venture worthwhile. There is a feeling however that most of the "easy stuff" has already been found.

Foremost among the epics planned is a push/survey in the Lowlife Extension of Quetzalcoatl Conduit, probably with some diving gear in tow to link the line of holes along the glade. The diving gear could also be useful in downstream Cueva Blanca in an effort to bridge the gap between this and Damper Cave. Physically connecting Cueva Blanca with Bauhaus would also be satisfying and will involve little additional effort. These and the other projects alluded to in the text offer sufficient scope to occupy a stay of at least a week and possibly longer.

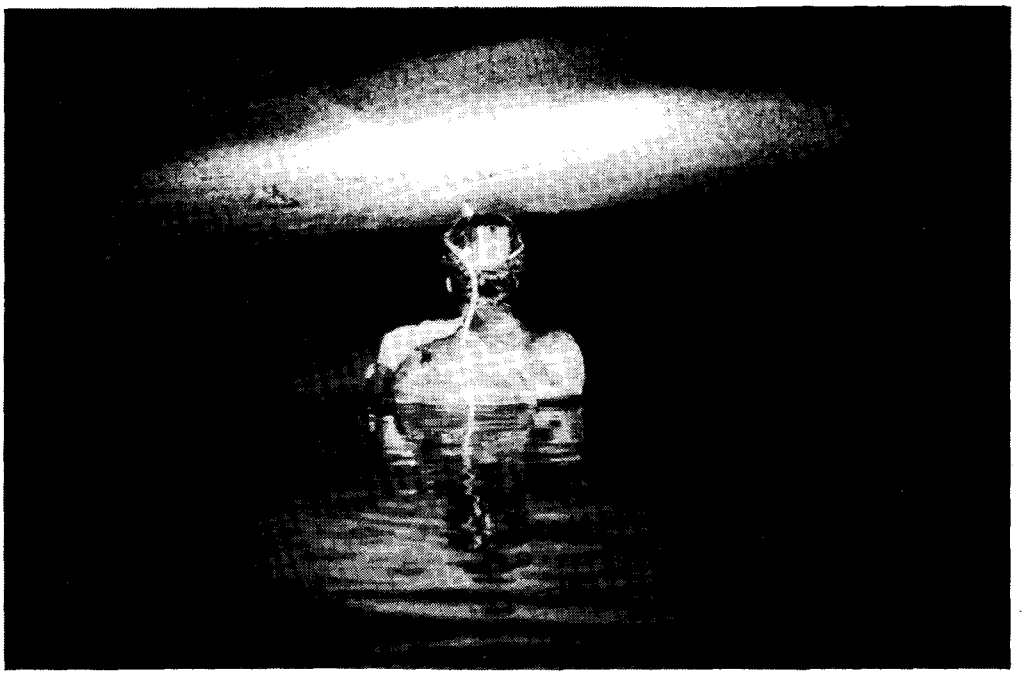
SUMMARY

The recent expedition cleared up most of the lead checking and surveying left over from the 1986 reconnaissance. Importantly a surface survey was concluded linking the entrances of Bauhaus-Xymox with Damper Cave, Cueva Blanca and Quetzalcoatl Conduit. Aside from providing a basis for exploring possible connections between these caves, this work has given detailed insight into a system of hydrology for the area that was hitherto unknown.

In addition, some original cave discovery was embarked upon, yielding Screaming Stals (in Bauhaus), Xymox, as well as the vertical caves Orpheus and Nick Cave. Several lesser holes were looked at and tagged and the area south of the summit track ridge was accounted for by surface exploration. This was achieved over a period restricted to somewhat less than six full days.

That the expedition occurred at all was largely due to the coordinative perseverance of leader, Trevor Wailes. He was severely tested during the troubled lead-up to our departure. Chris, Nick and Lew also demonstrated admirable patience during this time, which just goes to highlight the difficulties of getting to such a remote caving area. The uncertainties of boat access can only be blamed on the atrocious sea conditions prevailing on the south coast. Our "captain" Mick Garland, displayed very good seamanship to get us there, as it was. To Trev go many thanks for a thoroughly enjoyable trip. Thank you too, Stuart for processing the survey data on your SMAPS software, without this help we would still be floundering "in the dark"!

Nick Hume



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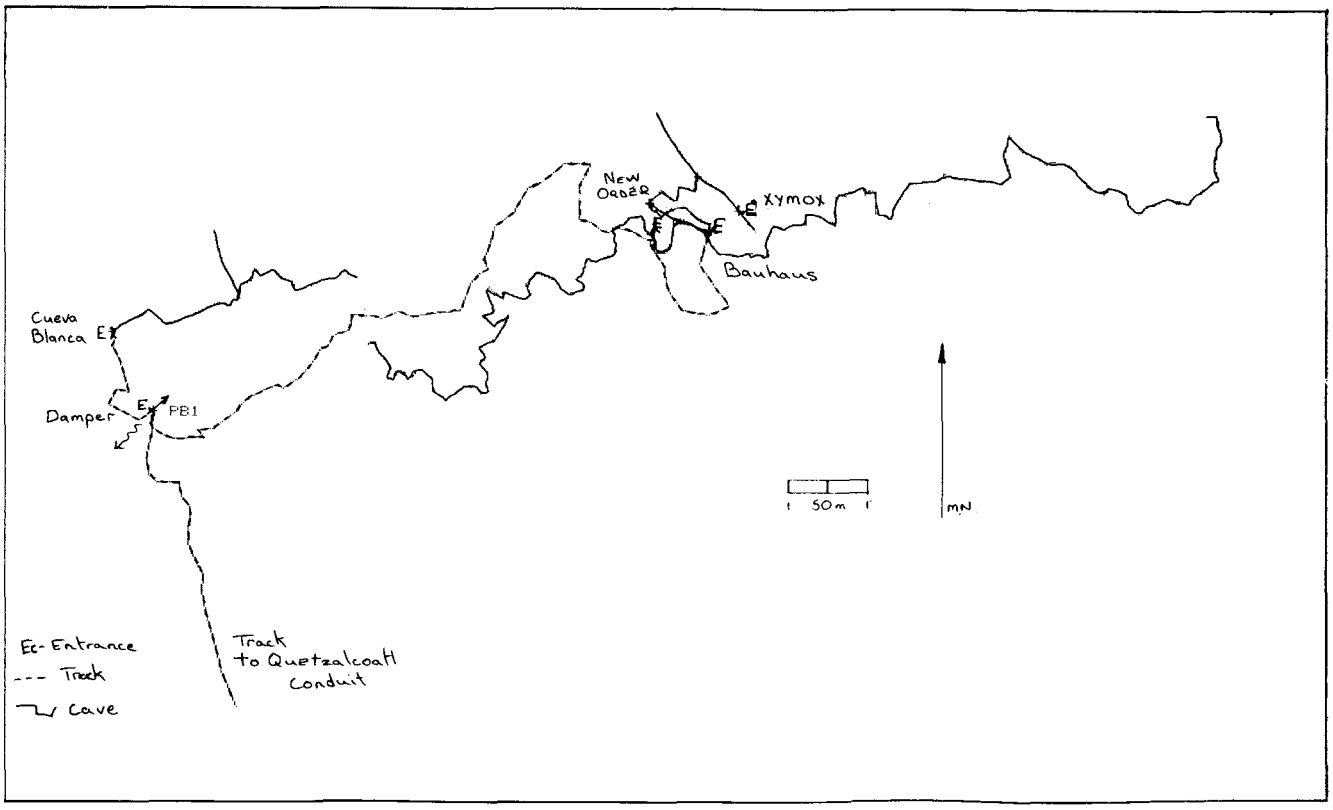
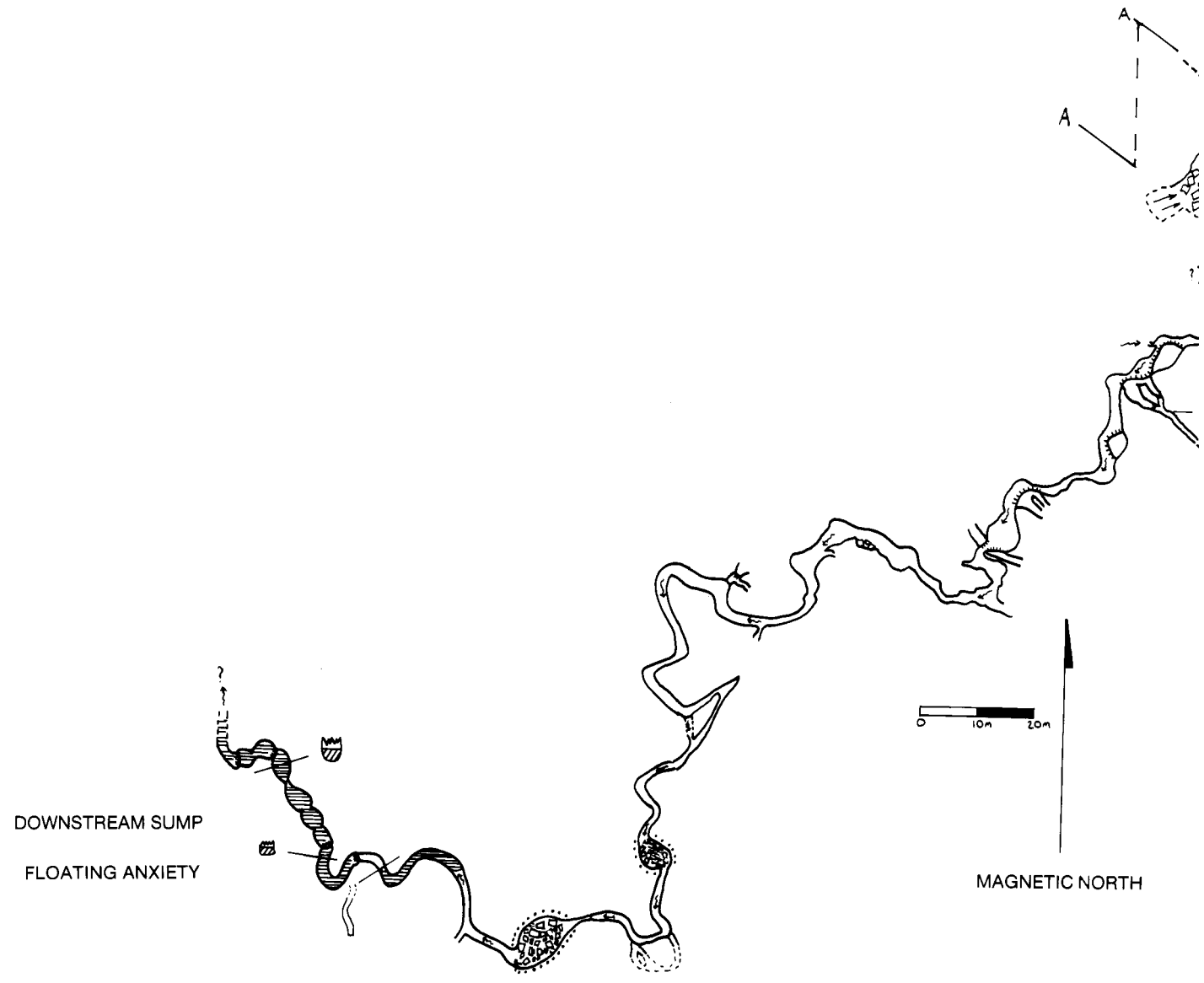


Area map from SMAPS 3 computer programme. Lack of data for Damper Cave 1 km long prevents showing the plan, only the entrance and initial direction of passage is shown.

Opposite: Stefar Eberhard in the 'endless' canal Quetzaleoatl Conduit 1986. Photo: N Hume.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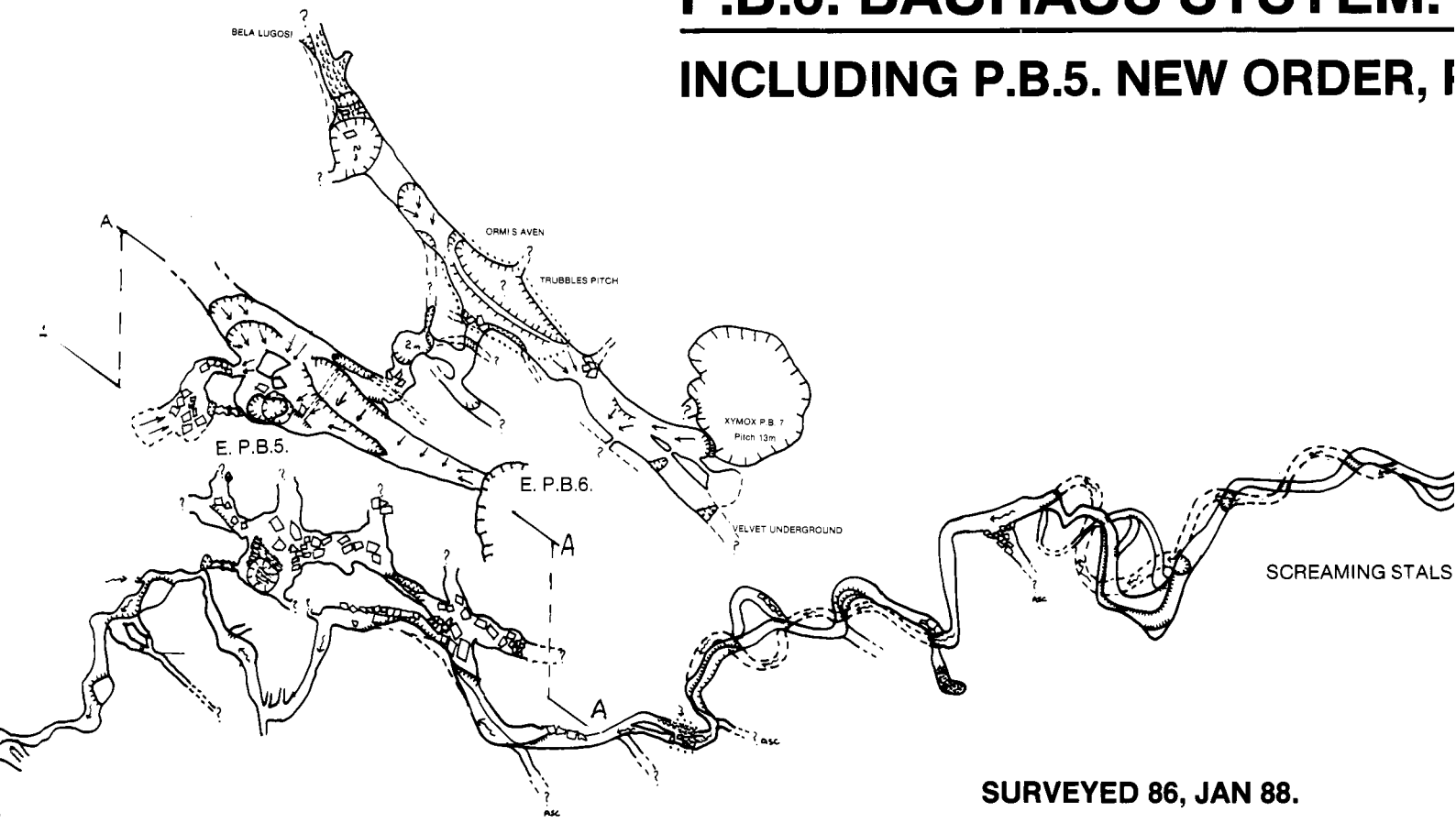
P.B.6. BAUHAUS SYSTEM.

INCLUDING P.B.5. NEW ORDER, F



SURVEYED 86, JAN 88.

A.S.F. GRADE 5 : 4

T. WAILES

C. DAVIES

L. MITCHELMORE

S. EBERHARD

N. HUME

DRAWN: T. WAILES

NETIC NORTH

NOTE: ENTRANCE SECTION UPPER LEVEL HAS BEEN DI

TEM. PRECIPITOUS BLUFF

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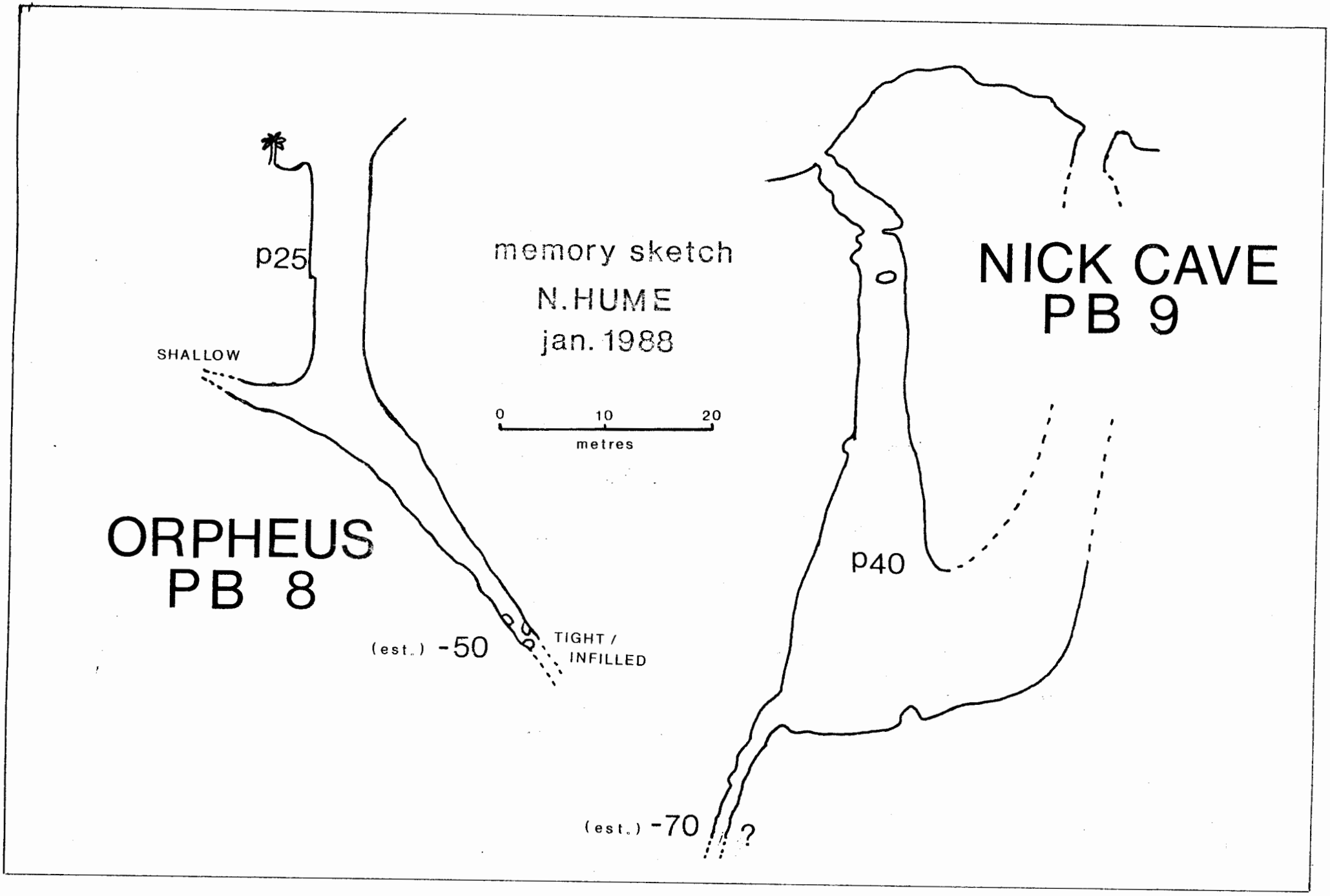
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