

SOUTH WALES CAVING CLUB



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NO. 88

NEWSLETTER

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Cover Photograph - 'Pollnatugha' Entrance pitch (Ireland) by Clive Westlake.

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LES QUATRE COINS DE LA FRANCE

In February of 1976 I'd met Claude Chabert of the Speleo Club de Paris who was caving in South Wales. I took him on a 'through trip' in O.F.D. via O.F.D. I, which greatly impressed Claude, so much so that I was invited over to France any time to see some of their caves. The week I eventually spent in France had no desperate epic trips but was a pleasant experience caving with the French.

Paris, being in utter chaos, was full of little 2CVs rushing about madly. When I met Claude there everything was in the height of confusion, passengers from our coach were discharged into the street while the busses completely blocked the road. After a quick luggage free-for-all I found myself being driven across Paris to pick up Claude's girl, Nicky, and straightaway south.

The little blue 2CV bobbed and popped throughout the night. Nicky slept on the rucksacks at the back and the three of us who'd had a long day already, spent an even longer night. At one point I remember a sign saying Bordeaux 330 km - I closed my eyes and dawn came as we travelled down one of those long straight roads. I'd got a cold by this time and Claude reckoned it was Joan of Arc's curse on the English! We kept on south.

Provisions were bought at Orlon which marked the foothills of the Pyrenees. It was a great tonic to drive up the beautiful valleys, particularly after our prolonged overnight drive, the fresh atmosphere was wonderful. The meadows were full of flowers over which the mountains stood majestically. We arrived at St. Engrâce a village just below the snow line where Claude met his friends and made introductions. With rucksacks we set off in wet snow towards the hut where we found a dry corner to bed down. My last memory of the day was a lingering smell of carbide, onion soup, and people talking excitedly.

The next day was to be for the P.S.M. Me with my little carbide lamp and these people with giant-sized versions!

The E.D.F. tunnel was traversed to the 'Sal Verner' which I'd seen before; yet its dimensions left me amazed still. It was 'inner space', night with all the stars turned out. "Ou sont les Etoiles", someone said. The group moved off upstream slowly, stopping now and again to admire the grand views. Huge boulders were strewn across the floor and much fun was had climbing these. Now and again the river came into view - a considerable torrent which had to be forded several times.

Eventually, after long hours 'underground hiking' we arrived at our destination, the Lepineux Chamber, where the old shaft dropped from the surface. It was also Lubens one time resting place.

One could just make out a great crumbled heap of rocks, which climbed up to where presumably the shaft came in. At the bottom of this we sat, had lunch, took the usual photographs and departed for the surface.

Unfortunately Claude had to return to Paris the next day but he arranged to me to visit Nimes in the S.E. of France as a guest of the

Speleo Group d'Ardèche. I spent the next night at a little Basque hamlet and then moved on to Nimes where I found two members of the Speleo club waiting for me. We arrived at their house in a spectacular thunder storm, after which I gave a lecture on Ghar Parau and OFD!!

Next morning we had breakfast on the balcony with a view of distant vineyards climbing the hills. It was truly mediterranean and sunny.

We explored several caves on the great limestone plateau of the Ardèche, much of which is liable to severe flooding and several cavers have died because of this. I visited the Grotte Alvenac, the tourist cave, but got no further than the tourist trail as permission to go further is rarely granted.

I thanked my friends for their hospitality and continued my odyssey north to Paris - and Claude's flat. After another lecture on O.F.D. and Ghar Parau, this time to the Club Alpine Français, we spent a day down Challe caves, to the south east of Paris near Sens Sur Yanne.

The cave was in someone's back garden; on changing Claude walked across the lawn to a 'wishing well' guarded by two gnomes - this was it! There was an iron ladder down the entrance shaft for 110' into a streamway which was blocked a few feet upstream by a wall. We climbed this and continued. The water was warm and the walls were smooth and slippery; being chalk one soon got covered in a sticky white mud. Climbing needed care as the holds were completely untrustworthy. We continued like this for 2000' to a sump, then explored a high level route until foul air became a hazard.

We arrived back at Claude's parents absolutely covered in chalk mud - my hair stood on end with it! After a bath and a huge meal (which Claude called a snack and took two hours hard work to eat) we made our way back to Paris and a pub crawl. C'est la vie!

Back at work in Manchester on Monday I felt stiff as a board!

HARVEY LOMAS.

* * * * *

Extract from B.B.C. Radio programme during November, Top of the Form, between two Swansea valley schools, one not a thousand miles from Ystralyfera.

Question: 'What is Speleology?'

Answer: (after pause for thought)

'The study of children at play!'

SO NOW YOU KNOW!

SMITH'S FRACTURED LIMBS

Over the past eighteen months or so, we have visited the Club on a number of occasions to hammer rocks and take away mountains of samples, which, naturally, has attracted the attention of several members. We hope in the next few pages to outline what's been done and what we have found out.

These investigations are the direct result of observations made during an early trip to Smith's Armoury, when it was noticed that the low entrance crawl was apparently floored by sandstone. Simple investigations on samples showed that the material was not sandstone but a form of dolomite (Newsletter No. 58). Trips to other parts of the cave showed that similar beds occurred in Second Oxbow, Maypole Inlet Mainstream area and separately in Lake Passage, Dan-yr-Ogof. It was many years before I made the opportunity to investigate these beds again; in fact, April, 1975, when helped by Bob Picknett, I sampled the Mainstream beds close to Maypole Inlet. The fresh surface of these beds is very different to those in Smith's Armoury, but chemical analysis showed them to be dolomitic in nature, although of reduced and more variable magnesium content.

About this time, Bob Charity who is a work colleague and doing 'O.U.' Geology, became interested in what I was up to and prepared petrological sections of my samples, mouthing the incomprehensible jargon of limestone petrologists such as 'bio-intraspararenites' etc. We ultimately decided to investigate these beds more fully together and from this has developed an extensive programme of research into the geology of the area around Penwyllt and the cave.

I suppose it was inevitable once the mesma of Smith infected Bob's blood that the programme should completely outgrow our original ideas but it was not our original intention; especially as Bob had not done any previous caving!

Stratigraphy

We have taken samples of every bed in measured sections from the major Quarry exposures around Penwyllt and prepared thin sections of each sample, amounting to over 600 slides so far. The beds have subsequently been classified according to standard petrological terminology. Using these measured sections and location knowledge, we have compiled a composite geological column of the Holkerian zone of the Dinantian limestone (that which has in the past been known as the Seminula S₂ Zone) and a copy of this together with our interpretation of how the various exposures fit together is presented in Figure 1. A detailed account of the stratigraphy as worked out by us is to be published in the B.C.R.A. Transactions in September. We have also sampled most of the Courceyan (old Cleistapora K Zone), Asbian and Brigantian stages (old Dibunophyllum D_{1,2-3}) of the area, but these are still being processed.

This has been done with the dual purpose of obtaining a detailed stratigraphic column of the area and also to define the dolomitic areas of the sequence.

What has emerged during the fieldwork is that the upper passages of the cave are all located near the top of the Holkerian zone in a group of relatively pure oolitic beds and that one of these beds contains the

/.....

Figure 1

Holkerian Stage Limestone, Penwyllt.

KEY: ~ Stylolite, ● Coral, ⊕ Brachiopod, ∩ Fossils (Undifferentiated)

▨ Calcite Mudstone

▤ High Calcium L'stone

▧ Dolomite

▩ Arenaceous L'stone

Palintraspararenites (2m)

Intrabiospararenites with secondary ooid clasts at the top. (5.2m)

Intraspararenites/rudites with varied secondary clasts but predominantly biotic (18.8m)

Composita ficoides

Oointraspararenites (3.75m)

Intrabiospararenites/rudites generally arenaceous (6.2-7.1m)

Intrabiospararenites (2-5m)

Intrabiospararrudites, in part wedge bedded and laminated with shale/calcite mudstone (5-11.2m)

Lithostrophia spp.

Intrabiospararenites, pelagic basally with thin dolomitic beds (15.1m)

Syringopora spp.

Intrabiospararenites, extensively dolomitized and arenaceous split by a thick conglomeratic calcite mudstone. (4.3m)

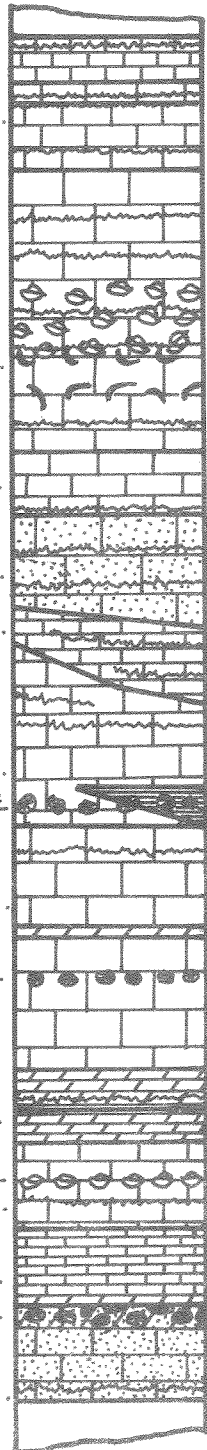
Composita ficoides

Intrabiospararenites (3.2m)

Oointraspararenites (4.8m)

Lithostrophia martini

Oointraspararenites with secondary biotic and pelagic clasts. Beds arenaceous and capped by a coral bed in micrite that is dolomitized (6.1m)



Thick to very thick bedded.

Thin to very thick bedded.

Medium to very thick bedded.

Thin to medium bedded.

Medium to very thick bedded.

Cwm Dwr Quarry

WERN QUARRY

WEICHBIDGE QUARRY

PWILL BYTTE

QUARRY 'B'

TWYN Y FFORDD QUARRY

TWYN DISSENTLE QUARRY

WISBY KNOLL QUARRY

primary roof tube for a large area of Top Entrance Series from the Big Chamber right to Gnome Passage and elsewhere. There is also a further series of oolitic beds about 35 metres above the main dolomite beds and possibly, the series of passages that run along the streamway at high level are also developed in these oolitic beds as the streamway is about 30-35 metres high. This begins to suggest a degree of stratigraphic control on the caves development. However, much more field work is required to prove this hypothesis and to evaluate the importance of speleogenetically favourable beds throughout the cave.

What is certain is that the streamway is rapidly running out of speleogenetically favourable limestone, because the dolomite beds are at most 10 metres above the basal Lithostrotion martini coral bed which is close to the base of the Main Limestone. Figure 1 shows that it is probably only 6 metres from the Courceyan zone and many of the intervening beds are highly arenaceous. According to Keith Ball (Newsletter 67), the L. martini bed appears in the streamway, so parts of the streamway could, like Dan-yr-Ogof River Cave, be almost at the base of the Main Limestone.

Further samples from Smith's Armoury proved interesting as their texture is very different to those in O.F.D. II streamway. Petrographic and x-ray examination showed them to be mainly dolomites with some inclusions of arsenopyrite, whilst geochemical staining shows minor traces of magnesite generally between crystal boundaries. This latter mineral is like arsenopyrite, extremely unusual in limestones excepting by secondary replacement. The inclusion of these minerals gives a valuable lead to the origin of the several dolomitized horizons in the Holkerian zone, probably being by hydrothermal injection. This view is also supported by the existence of galena infilling fractures in Dan-yr-Ogof 2 and as a whole, these occurrences may be closely associated with the mineralisation further westward at Horeb Chapel. Outcrops of the dolomitic beds show them to be moderately consistent in thickness throughout the district. This somewhat contradicts previous thought, that the dolomite lay as irregular lenses and shows them to exist as a more solid marker band of varied geochemical composition throughout the area. The dolomites of the Holkerian appear to effect bedding at three horizons some 6m, 16m and 26m from the base; the first such bed being the L. martini coral bed, whilst the second is the major set covering in all some 4 metres of bedding with the upper being an insignificant 50 cm thick. The dolomitic beds are a pre-dominant feature throughout the Courceyan stage over the whole of the South Wales Coalfield including the North Crop around Penwyllt. Re-resolution of bedded hematite and iron rich beds of the lower Courceyan may explain the numerous secondary ferroan calcite veins in the Upper Courceyan - lower Holkerian stages which give indication that we are probably considering a rising hydrothermal. Incidentally, there are a significant series of resistant and partly dolomitic beds along most of O.F.D. III streamway, indicating that most of that part of the cave is in the same horizon and that the Smith's Armoury locality represents a pocket of exceptional enrichment, possibly associated with the major faults east of the Armoury.

Structure

Interesting though the lithological and stratigraphic studies have been, the most enlightening discoveries have been in connection with the structure of the area.

The outstanding structure of this area is undoubtedly the Cribarth Disturbance which has been studied in detail by Weaver (1975) but significantly, little attention has been paid to the area lying to the south east of the disturbance. The general structure has been assumed to be a uniform southerly dip of around 8° , but a glance at either the 1" Geological Survey map or, at Paddy's map (Newsletter No. 76), shows the dip is far from uniform with readings from almost level to 20° being recorded, in directions well away from south. The significance of this was lost to us until we collated all the structural detail obtained whilst collecting our stratigraphic samples. At first we didn't believe it, but the evidence became so overwhelming that it could not be ignored. It indicated the existence of a series of low amplitude southerly plunging anticlines; the axes of which coincide with the major series of high level passages of the cave. Namely, Entrance Series, Railton-Wilde/Waterfall Series, Cwm Dwr Smithy area, Top Entrance series and the high level passages off the O.F.D. III streamway. Once the observation was made, the evidence compounded with visual evidence of the features starring cavers all in the face in HOBBS QUARRY! Also later seen visually in Weighbridge Quarry when double checking out field data. These anticlinal-synclinal structures which are of low amplitude may well be a result of primary stressing prior to strike-slip faulting in the area. The jointing noted in surface exposures is complementary to these structures and also mirrored in many in-cave localities which have allowed their course to be accurately plotted.

The next point is likely to be controversial as it goes against the accepted views of people who have studied the cave before. We have found very strong evidence that the principle linear north-south passages of the system, especially in O.F.D. I and Top Entrance series and O.F.D. III streamway, are aligned to north-south orientated fractures. These are usually either very minor faults with throws of a few centimetres, but occasionally larger or, more commonly, tension fractures with no downthrow. The majority of faults which cross passages either align with the passage further on for quite long stretches as in the O.F.D. III streamway, or are en echelon tear fractures which are subsidiary to major fractures which control the passages. The en echelon fractures are often ignored for the simple reason that they don't 'go', i.e. they don't penetrate the rock on any continuous basis. The majority of these fractures are calcite infilled and predominantly run north-south. However, close to the streamway, a complementary set of fractures occur in an east-west direction, but of lower frequency and also two very low frequency sets at intermediate sheer angles to the principle sets. This is the form of structure one would expect on theoretical grounds over synclinal-anticlinal structures. This is contrary to Paddy's view (1969 p. 30) that the minor faults to the north die out southerly and to Glennie's opinion that the cave developed randomly in a limited range of beds aligned with dip and strike. These directions it is now seen, coincide with the directions of the major fractures.

There is one major problem yet to be investigated, but on which we have opinions and that is the reason for the existance of the streamway with its general NE - SW trend, and why it appears to act as a barrier to development down dip. There are two possible reasons, either it follows the line of a synclinal structure similar to that already proved for Dan-yr-Ogof by Alan Coase (1977), or a major fracture may exist close to it on the same general heading which has acted as a hydrological barrier. The latter view is supported by

Weavers' work which shows a major NE - SW fault cutting through the cave but well to the west of the stream (with significant hade, this could occupy the required position at depth). We cannot say that there is any major evidence north of the streamway in the Top Entrance Series to support the existence of this fault at a high angle of hade. The former idea has, however some support from isolated surface dip readings, but a structural survey of the O.F.D. II streamway will decide the issue.

Finally, regarding the excavations in progress for the upstream end of Cwm Dwr. The location is a major anticline just to the west of the dry valley containing the sinks makes it a very likely spot for cave development and there are plenty of N - S faults and joints in that area as well. So keep digging and let's stop Hobbs before he finds it first!

Acknowledgments

Throughout this work, we have received considerable help, advice and encouragement from Drs. A.C. Dunham and A.E. Adams of Manchester University, and Trevor Ford. We have also had useful discussions and information from Alan Coase, Paddy O'Reilly and Bill Little. For all of these we are most grateful.

Noel Christopher & Bob Charity.

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THE ANNUAL CAVING CLUB SKIING WEEKEND (NEW ZEALAND)

Friday night, and we are bowling north along state highway One bound for a weekend's climbing on this the Annual Wellington Tomo Group skiing weekend. "We" consists of, Chris Moore a Wellington caver, Bob Renshaw lately arrived from Craven Pothole Club, and me. The venue is the Lodge of the Royal Forest and Bird Society which is on the lower slopes of Mount Ruapehu, which is the largest of the three Volcanos making up the Tongariro National Park in the middle of the North Island. We arrived about 11 p.m. and the rest of the party towed each other in over the next few hours.

By daybreak next morning we are already trudging up past the silent Ski Tows, a social call at the Tararua Tramping Club Ski Lodge is rewarded with a cup of tea, so we repeat the procedure at the New Zealand Alpine Club Hut at 6,500 feet. No tea is forthcoming here so we strap on crampons and step bravely out past the last Poma Lifts. The snow is hard with a coating of ice, I don't know or care what the skiers think of it but it is absolutely superb for crampons. By 10.30 a.m. we are at the col at 8,600' looking down on the Crater Lake; it appears to be filmed with a yellow-grey scum, rather different from photographs I have seen which usually show it a bright green. Still the sun is hot, the wind is almost non-existent and we turn our attention to the peaks that surround the Crater. To our South West is Paretetaitonga at 9025' and up this we set. The going now becomes very steep and I make frequent halts to call attention to the scenery. This however, is so fantastic that my delaying tactics go unremarked.

Some seventy miles to the West the cone of Mount Egmont stands clear and white, while just seven miles to the North the 7,700' Mount Ngauruhoe is belching out ominous puffs of brown smoke. Standing on the summit is breathtaking and we photograph each other in classic Alpine poses while a floatplane from Lake Taupo banks and circles us. We wave our ice axes and shout friendly advice to the tourists above. Strange that this huge playground of a mountain should be holding the bodies of two N.Z.A.C. climbers missing for eight weeks; we are obviously very fortunate with the weather. We descend Paretetaitonga and start up a snow ridge which joins two unnamed peaks to the true summit. The unnamed peaks are fairytale castles of sastrugi ice (or that's what Chris calls it!), huge pale blue piles with vertical cliffs on the crater side. By 12.30 we are eating our lunch on the summit at 9175', the wind is bitterly cold and clouds have covered the lower slopes, also a circle of steam has appeared in the lake so we make our way back to the col where five climbers are making their way up.

Back over the skyline and down to the seething fashion show below we once again strike lucky at the Tararua Lodge where we remove our crampons. This is possibly a mistake as we descend the final ski slopes with none of our former grace.

Nothing planned for Sunday, perhaps I'll get up about 10? I've found a nest of little toboggans, I might take one up to the ski runs and make a nuisance of myself. It seems I have hardly fallen asleep, warm and self satisfied when Chris is shaking me awake. "It's six o'clock, not a cloud in the sky, never a better chance to climb Ngauruhoe",Oh dear!..."what does Bob think?" he says .."what does Mike think"Oh hell!. By eight o'clock we are walking in from the Mangatepopo Hut at 3,800' and by nine we are standing on the



Bob and Chris on Mt. Ruapehu with Mt.
Ngauruhoe in background.



Bob Renshaw 'Craven Pothole Club' on
summit of Mt. Ruapehu

extinct south crater of Tongariro at 5,400'. The last time I stood here was with old Sospan Saunders in '74. Crossing the saddle that joins Tongariro to Ngauruhoe we strap on the crampons and, ignoring the route up a rib of bare rock we select the longest, steepest snow gully and kick out. I feel fit today. God, but it's good to be a Roughie-Toughie caver far away from those poovey skiers. The slope gets steeper and steeper and I begin to revise my self-opinion, but by 10.10 we are at the crater at 7,500'.

The brown smoke of yesterday has been replaced by a continuous white smoke which makes it difficult to see anything of the large crater. An attempt to circumnavigate the crater fails when Bob and Chris are nearly asphyxiated by fumes on the downwind side; I am unaffected, which serves them right for getting ahead again. We shelter behind a block of ice to eat our lunch and discuss the relative sizes of N.Z. and U.K. peaks. "What is the highest peak in England?" I ask Bob, and he unhesitatingly replies "Snowdon" and then realises his mistake and says "Oh no it isn't, it's Ben Nevis". Oh well, down we go and near the saddle we meet the same climbers that we met yesterday on the col. They tell us that they didn't reach the summit of Ruapehu as the crater lake started to bubble and fume causing them to change their plans.

The trip home is uneventful. Chris's car cassette churns out non-stop folk, and Bob says "I think I'll write oop trip for Cloob Bulletin back home".

What a good idea Bob.

MIKE COBURN.

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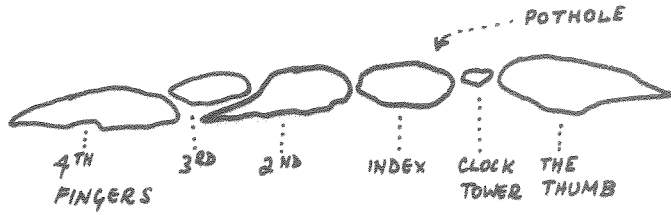
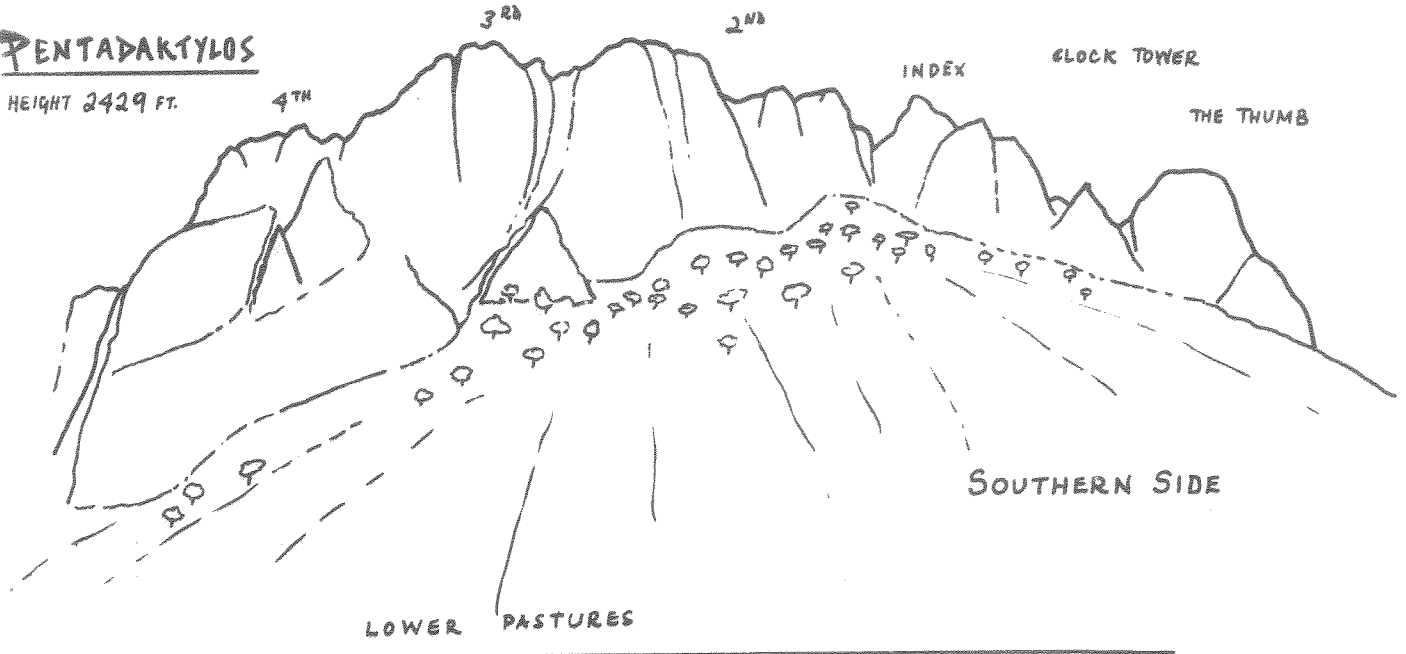
"Classic Alpine Pose" on Paratetaitonga.



Two unnamed peaks on Ruapehu

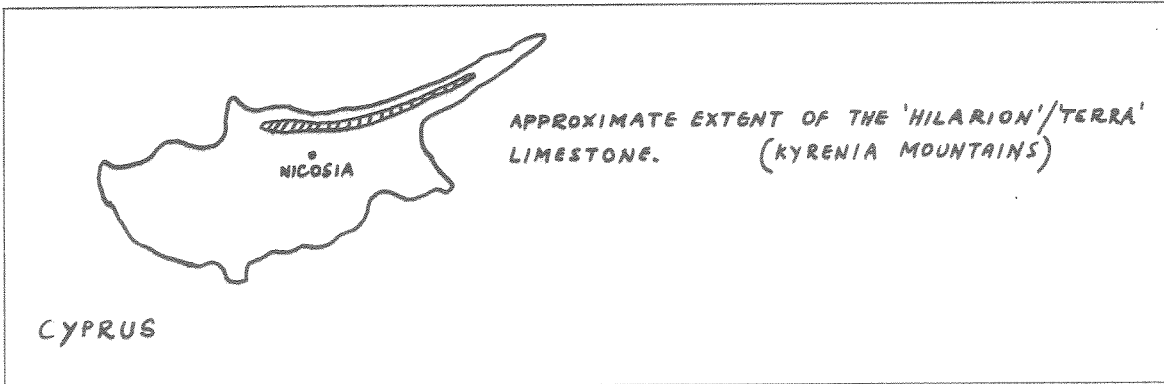
PENTADAKTYLOS

HEIGHT 2429 FT.



PLAN VIEW
NOT TO SCALE

B.T.G.



PENTADAKTYLOS POT

From 1970-72 I was based on Cyprus; during the period I made several climbing trips to the impressive Kyrenia Mountains on the north of the island.

The Kyrenia Range stretches along the northern coast of Cyprus (see map) for approximately 50 miles; the whole range is precipitous and narrow, it forms a natural barrier between the sea on its northern side and the dusty plains of the Mesaoria, which surrounds Nicosia, on its southern side. From the various summits you can look across to the coastal hills of Turkey, only forty miles away. The whole range offers a wealth of climbing possibilities and, in addition, it does have some caving potential.

The mountains are mainly composed of two basic rock types:

1. Hilarion Limestone - Upper Cretaceous to
Upper Carboniferous
2. Terra Limestone - Lower Miocene to
Upper Cretaceous.

in addition there is a small amount of igneous rock. The whole area has been very heavily faulted, most of the faults running along an approximate east-west axis.

The most jagged peak of the range is Pentadaktylos (Five Fingers). Local legends inform us that the peak was formed when the Greek hero Dighenis vaulted across the range to Turkey, leaving behind the imprint of his hand. (Shades of the Mabiginion - Boyo!). Over the years Pentadaktylos mountain has attracted many British climbers based in Cyprus, perhaps the most famous being Sir John Hunt; at some stage one of these parties must have re-discovered the existence of the five hundred feet deep Pentadaktylos pothole, on the north side of the peak (see sketch); the pothole appears to be formed along a fault plane and descends in a series of pitches, some free, some in narrow rift type passageways. The entrance is inconspicuous and may require some searching to locate but, in the summertime especially, it emits a very strong draught of cold air. Because of the arid nature of the surrounding countryside the pothole has very little water in it. I do not believe the pot itself offers much in the way of further possibilities for exploration, but the area may still have one or two secrets to yield!

Unfortunately, because of their commanding position, the mountains are an important military strategic area, consequently movements are restricted and there are several "NO-GO" areas. Since the recent Turkish invasion of this part of Cyprus the area may now be completely sealed off? If and when the Cyprus problem is solved it is perhaps worthwhile remembering that this area is worthy of a visit, and I personally look forward to the day when I can wander off into a Mediterranean sunset clutching my bottle of local wine and well thumbed edition of Lawrence Durrell.

B.T. JORGENSEN.

.....

ORE AND ALE IN THE NORTH

Conditions were perfect, wet and misty with darkness rapidly closing in, as the Rover ghosted to a halt with the engine off and only side lights showing. Within seconds four helmeted, darkly dressed figures had bundled out of the car and had disappeared through the steel grill at the roadside.

Thus a team of S.W.C.C. mining commandos started another underground venture in the Northern Pennines. The target on this occasion being the Neutsberry Haggs Horse Level near Alston. The team were Rod Stewart, John Stevens, Stuart Walker and myself. We were finishing off a brief holiday looking at mines in the area; the most recent of a series of visits made in the last few years by various permutations of club 'miners'. These have been a direct result of Paul Tedd's involvement in a tunneling project in the area which made accommodation and local knowledge available to us.

Here follows a brief account of some of the sites which we have visited. The accounts start with the most northerly sites and end with the most southerly. The areas in question are essentially parts of Northumberland, Cumberland, Westmorland and County Durham which form Teesdale, Weardale, the South Tyne and its tributaries and the Pennine Escarpment overlooking the Eden Valley. The Penrith and Teesdale 1" maps cover the area, as does the new 1:50000 sheet 91.

1: THE BLACKETT LEVEL

Portal at 678'OD in Allendale Town (NY 837560). This level was driven between 1855 and 1903 to drain mines in the East Allen Valley and to prospect for new veins. The total length driven being 4.68 miles. There are a series of shafts along the line of the level:

- a) Studdon Dene Shaft: not found on surface.
- b) Holmes Linn Shaft: 200' deep in poor condition, at NY 840523.
- c) Sipton Shaft: 300' deep in good condition but capped with iron nails. NY 846498.

We have been able to traverse the first 6000' of the level before being stopped by bad air shortly after meeting a thin coal seam a small distance beyond Studdon Dene shaft which ventilates the first 5300' of the level. For its first 800' the level is in boulder clay and has been superbly lined with drystening (A common technique in the area). Following the boulder clay the level is in shale and sandstone. There are a series of falls holding back water which make a wet suit necessary. This first section of level was driven from portal and shaft at the same time and such was the precision of the surveying that no discontinuity at the breakthrough point could be seen; only a mark on the west wall and the change in shothole direction.

We have been able to identify Holmes Linn and Sipton shafts on the surface, the latter being a prospect for future trips as it was used to work several veins off the level in the post-war period.

2. NEUTSBERRY HAGGS HORSE LEVEL

Portal at 1250' OD by the roadside between Neuthead and Alston where rails cross the road. NY 767450. Total length 20790'. Last

worked by Vieille Montague Zinc Co. in 1920s. We have not been able to traverse more than a $\frac{1}{2}$ of the above distance but we got as far as workings on the High Raise Vein as far as we could tell. The mine is complex with further entrances which remain to be investigated.

3. SMALLELENGH LEVEL

Portal at 1580' OD NY 788429. Last worked by Vieille Montague Zinc Co. in 1920s. The most extensive underground work which we have been able to enter in the area. The level is first followed due east for a great distance (1500' +) passing many cross cuts into 'flats' and straw strewn chambers (stables or storage rooms?). Over this section the drystone lining has often collapsed and it is necessary to crawl. Many entrances to lower levels are passed during this section but none have been descended.

Where the level meets the Handsome Mea vein it is possible to turn south (the north turn being run in) and follow the vein for a great distance. At one place we were able to climb down well preserved wooden ladders to lower levels of work.

4. PHOENIX HOTEL, STANHOPE

Very straightforward northern hotel serving excellent draught Camerons beer and traditional meals at reasonable prices. Much to be recommended.

5. COLDBERRY MINE

NY 942290. Last worked in 1938-9 by English Lead Mines Exploration Ltd. Massive substation buildings on the site are assumed to date from this period. We have only been able to enter a few older high level workings.

6. THE TALBOT, MIDDLETON IN TEESDALE

A 'local'. Good for dominoes and Camerons beer.

7. THE ROSE AND CROWN, RONALDSKIRK

Pricy, posh but worth it for the superb Theakstons on draught.

8. MURTON MINE & HILTON MINE

NY 7622 area. Hilton mine on the S.E. side of Hilton beck. Murton mine on the N.W. side of the beck. Situated on Warcop artillery range - we usually ignore the red flag but watch out for M.Ps! We have only explored Hilton mine at all fully and we find it rather boring being room and pillar work utterly devoid of tat and very much vandalised by rockhounds seeking fluorite cubes of which no good specimens remain.

9. THE MARSTONS PUB IN HILTON

Friendly landlord with specimens and maps of interest behind the counter. Palatable, if pressurised Marstons Burton Bitter.

10. LUNEHEAD MINE

Portal at 1375 OD. NY 846205. Long wet level (1500' +) gives access to interesting area of partly natural caverns. The drainage of

the mine is particularly interesting as some of it is natural drainage in the limestone. Total accessible length over 10,000'. Wet suit necessary.

11. HOTEL ON NORTH SIDE OF A66 IN BROUGH

Fairly posh but serves tasty Vaux bitter from electric pumps. Very welcome when ones' transport is dead by the roadside.

OTHER SITES VISITED WITH LITTLE OR NO UNDERGROUND WORK ACCESSABLE

SWINHOPE BURN MINE

NY 825465. Fairly recent working, capped shafts. Short, much older, wet level entered. N.B. Lower down the burn at 1262 OD is Swinhope Horse Level which we have not yet visited.

DUBBYSIKE MINE

NY 784 328. By banks of Cowgreen reservoir. One run-in shaft visible.

COWGREEN MINE

NY 795320. Run-in shafts and levels; little of interest.

SILVERBAND MINE

NY 703318. New work of some sort just starting (February, 1977). Aerial ropeway marked on map has gone. Last worked in early sixties.

OLD WORKS ON NEWBIGGIN COMMON

NY 905315. Area between beck and road investigated. A few very old levels entered. Little of interest.

LOGESIKE & MARLBECK MINES

NY 955294. Extensive spoil but no way underground found, except for a mysterious padlocked green wooden door in the hillside which seemed to be connected with water supply rather than mining.

To conclude, I would like to thank all those who have been my companions on the investigations.

BOB HALL

References

- 1) Duham. Geology of the Northern Pennine Orefield Vol. 1. H.M.S.O.
- 2) Moldywarps Speleo. Group. Survey of Lunehead Mine.

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RULES GOVERNING ACCESS TO OGOF FFYNNON DDU I

1. The leader is responsible for his party at all times and must check that the party is suitably equipped for the trip contemplated. If, in his/her opinion, this is not the case he/she is required to refuse to lead the party.
2. All parties shall be accompanied by a leader appointed by the SWCC.
3. The book is to be signed at Yr Grithig, showing the party, destination and purpose, if relevant.
4. The destination board at the H.Q. must be used.
5. Any person using acetylene lamps shall carry a suitable container to bring out the spent carbide. The leader shall see that this is done.
6. The party shall be subject to a maximum of six, excluding the leader, but for parties containing novices this should be reduced to at least one competent person per two novices. If one person in the party does not know the cave then the party shall consist of at least three people.
7. Leaders should bear in mind that the streamway may rapidly become impassable during periods of heavy rain. In wet weather this should be remembered, especially if there is more than 150 m.m. of water on the "Step."
8. The escape route is quite exposed and a leader should be satisfied that all members of the party are capable of crossing the traverse before committing himself. If there is any doubt, then the whole party should be roped over using two Karabiners on a waist length, which should be carried for this purpose.

THE AIRY FAIRY TRAVERSE IS OUT OF BOUNDS TO NOVICES.

9. The Canyon and Annexe are to be preserved as far as possible; for this reason parties will be limited to one leader per two experienced cavers only. No work is to be done which may change the environment without the consent of the owners.
10. No work is to be done which may endanger other cavers. Any digs shall be left in a safe condition.
11. Leaders are expected to see that no damage is done in the cave. Any accident or damage is to be reported to Mr. Barrows.

12. Any apparatus seen in the cave is not to be tampered with.
13. The position of leader may be withdrawn at any time by the owner of the cave, without reasons being disclosed, or by the Committee, when reasons may be disclosed.
14. Leaders must remember at all times that O.F.D. I occupies a special place in the history of Welsh caving and in the history and development of S.W.C.C. For this reason, and because the cave is remarkably well preserved, leaders must take every conceivable precaution against litter dropping, damage to formations etc. Failure on the part of the leader, who is entirely responsible for the actions of all members of a party, to observe this is sufficient reason for the leadership to be withdrawn under Rule 13..
15. Instructions from the owners of the cave regarding car parking and access to the cave entrance are to be followed at all times.
16. O.F.D. I leadership requirements must be complied with in the case of a party entering the cave from O.F.D. II or Cwm Dwr.

INSTRUCTIONS TO DUTY OFFICERS

Remember: the decision of the Duty Officer is final, subject only to appeal to a Committee member.

- DUTIES
1. Maintenance of Club Rules and supervision of running of the H.Q.
 2. Administration of destination board system.

In order to do this:

There should be a Duty Officer available from Friday night until 6 p.m. on Sunday.

It should be made clear who is the Duty Officer.

The Duty Officer's keys should be kept safe.

All cave keys are kept in the cupboard under No. 8 stairs.

O.F.D. I key - available to O.F.D. I leaders only.
O.F.D. II key - available to all S.W.C.C. members, holders of a current permit and to W.S.G. members on production of a membership card.

Cwm Dwr key - available to all bona fide favers, but should be returned before the party go underground.

Tunnel Top key - available to all bona fide cavers.
Dan yr Ogof) - available to all S.W.C.C. members and D.Y.O. guest
Tunnel Cave) leaders. Permit cards must be handed in at D.Y.O. office.

Llethrid) - available to all bona fide cavers.
Tooth Cave)

Agen Allwedd available to S.W.C.C. members only.

ALL KEYS SHOULD BE SIGNED IN AND OUT, AND CHECKED AT THE END OF THE WEEKEND. REPORT MISSING KEYS TO THE SECRETARY.

Pant Mawr may be visited by parties with a permit from the Secretary, or with permission from the Duty Officer.

Club Tackle, except the Pant Mawr rawlbolts, is only available to members.

Money should be collected, the sheet CLEARLY signed and both returned to the Treasurer within one week of collection.

CLUB NOTES

UNPAID SUBSCRIPTIONS

Some 34 outstanding subscriptions for 1977. Your attention is drawn to Rule 4C of the Club Constitution.

CHANGES OF ADDRESS

Mr. and Mrs. R. Flaherty,
The Railway Inn,
Neath Road,
Ystradgynlais,
Swansea.

Mr. R. Crace,
21 Tudor Way,
Southgate,
London, N14 6PS

Mr. B.T. Jorgensen,
Service Flat,
The George Centre,
North Parade,
Matlock Bath, Derbys.

BIRTHS

Our heartiest congratulations to Ken and Alison Maddocks who are now the proud parents of a little girl, Anest Branwen, born on 10th November. Hope the hard (labour) was worth it, Alison!