Plymouth Caving Group

Newsletter and Journal
April 2020

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Contents

Contents 2
1. Foreword 3
2. Editorial 4
3. General Information 5
4. Membership 5
5. The Forum 5
6. Devon and Cornwall Underground Council 6
7. Club AGM 7
8. Christmas Meal 2019 7
9. North Wales 8
10. Coronavirus 16
11. Armchair Caving on youtube 16
12. Mining Terms (2) 17
13. Evening Trip Report – South Bedford Mine 18

1. Foreword

Welcome to the PCG newsletter number 168. I hope this newsletter finds you all safe and well at home in these unprecedented times with the country in lockdown as a consequence of the Covid 19 pandemic the like of which we have never experienced in our life time.

The first casualty of the pandemic has been club trips and social events which have been suspended over the last 6 weeks or so.

This edition of the newsletter has been a long time in the making, and I would encourage the membership to contribute articles for inclusion in future publications be them your own experiences, or relevant technical articles. We do have some material towards the next instalment and hope to be able to publish a newsletter bi-monthly whilst we are still in lockdown.

Maybe whilst we are unable to venture out, we will have some time to research possible new venues to explore when we are eventually able to venture outside again when it is safe to do so. There is a wealth of information available in the old club newsletters and publications which most are now available online via the forum and members section of the website.

If there is any venue member specifically wish to visit, please raise it with the meet secretary or one of the committee, we will endeavour to arrange a trip if it is at all possible.

Finally stay safe in these difficult times and we look forward to seeing you again once the restrictions are lifted and some sort of normality returns.

Dave Warne

2. Editorial

Welcome to the latest newsletter. Currently our activities have been curtailed following the Covid 19 lockdown. So for now we just have to dream about going underground.

Your contributions would be most welcome as this will allow us to share information and photographs of club trips and make the newsletter relevant to our membership.

Apologies for not getting out a Newsletter to you for nearly 12 months, over the next few months we will be sending out regular newsletters as a means of keeping in touch with member during the Coronavirus lock-down

Please pass any comments on to me if there are any items that you would like me to cover.

If you have any ideas for new places to visit or would like the club to organise any training sessions eg SRT please let me know

Bernard Page

3. General Information

If you've not been caving before, the basics you will need are:

- Old Warm clothes (e.g. track suit bottoms and sweat shirt)
- Footwear, wellies are best (trainers are not recommended)
- An old boiler suit, good as your outer layer, but don't worry if you don't have one.
- Helmet and suitable light are required. These may be hired from the club or borrowed from other members.

This gear will be enough for starters, as you progress you will probably need to get more specialised equipment. Talk to other cavers about what you should get and where to get it from.

4. Membership

Your green BCA Membership/Insurance cards are now available. David Jean has posted them to those of you who provided a stamped addressed envelope and will have them to hand out at the next few PCG trips as well as at the PCG Committee meetings. If you are unable to get to the venues for the club trips and you wish to have your card you can send a SAE to David at 13 Tor Road, Hartley, Plymouth PL3 5TE.

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5. The Forum

The Members forum can be found on the group's internet site https:plymouthcavinggroup.org.uk in the Members pages drop-down menu. Only members can access this area using a user name and password. If you are unable to log on or have forgotten your log in details please contact Dave Warne who should be able to help resolve any problems.

There are a number of sections that could be of interest to members. Please take a look through and post you own comments if you have anything that may be of interest to other members.

Main sections of the forum are;

- Club Activities
- Documentation Repository
- Club Business
- Forum Rule
- Archive

In recent years use of the forum has diminished, however it still provides valuable information that will be of interest to new and longstanding members. This includes surveys and publication about caves and mines in the local area, some great background reading for future trips after the lockdown

6. Devon and Cornwall Underground Council

The Devon and Cornwall Underground Council (DCUC) is the regional caving council for Devon and Cornwall. It is an organisation composed of Individuals, Caving Clubs and other groups and organisations who are interested in caving and exploring mines within the counties of Devon and Cornwall.

Close liaison is maintained with the other Regional Councils and also with the Sports Council, English Nature and other local and national organisations.

DCUC is a constituent member of the British Caving Association (BCA) and is represented on the National Council and on the various special committees of the BCA. These committees along with the National Council conduct the business of the BCA.

The Devon and Cornwall Underground Council invites all clubs in Cornwall and Devon to nominate a representative to attend meetings of the Council. The club is currently represented by;

- Dave Warne club PCG DCUC rep

The Council maintains access to a number of Cave and mines, through formal access agreements, gate maintenance including locks.

The Council also maintains a cave and Mine Database on its website https://dcuc.org.uk

7. Club AGM

This year's AGM was held on 20th February 2019. Elections were as follows;

- Chairman – Dave Warne
- Secretary – Richard Vooght
- Treasurer - David Jean
- Membership Secretary – David Jean
- Tackle Warden – Alex Heath
- Meet Secretary – Timmy Murray
- Away meet Secretary – Timmy Murray
- Conservation Officer – Tara Beacroft
- Librarian - Bernard Page with the help of Richard Vooght
- Editor – Bernard Page
- Webmaster Keith Coventry
- Honorary Club President – David Jean
- Committee without portfolio – Laura Milroy

8. Christmas Meal 2019

Our Xmas meal at the The Dartbridge Inn, Dartington on the 22 December again proved to be an enjoyable event with excellent food. This choice of venue followed extensive research and testing by David Jean. Thanks to David for all you hard work organising the event!

The Pengelly Centre was again available for those who wished to stay overnight,

9. North Wales

North Wales (17th-22nd October 2019). David Jean, Richard Vooght , Laura Milroy ,Fran Burrell & Dave Warne

This year's North Wales trip, not as well attended as it was planned due to the accommodation not being available on the desired weekend. The trip was delayed a week and not all could make the later date.

I made my way up late on the Thursday afternoon knowing that, the other three from Plymouth were to travel up in the morning. On reaching Capel Curig, the phone went, it was Fran who had just arrived at Bangor station. With a short detour, Fran was collected from the train station and it was back to the hut for the night.

On the Friday morning Fran and I made our way down to Betsy-Coed where we stopped for breakfast, and the meeting point for the others who would arrive at midday. Whilst in the café, we were joined by David, Richard and Laura who had just endured 6 hour drive up from Devon. After we had are fill, it was a short drive into the Gwydirr Valley for the first underground trip for the weekend.

On arrival we parked up at a location in a track located in a wooded area, and continued are way up the track into the hillside, passing on the way the overgrown extensive remains of the processing plant that had long since been removed from the site. We passed by several gated adits on route until we reached a level area in the path. After a short scrabble down below the path, we found ourselves in a lobby of an open adit. After kiting up and a short scrabble over a mound of fallen ground and detritus, we made our way in through the adit level to shortly arrive in a large stope. At this point it was time to break out the cameras for a photo session. We explored this section of the stope taking photos as we went.



Photo showing Fran perched up in the end of the stope

Pushing on we made our way further into the mine re-joining the stope on several occasions as we went. The mine was a labyrinth of tunnels threading their way through the hillside but most eventually leading back to different levels into the stope we had entered first on the way in. Most of the levels had been carved out of competent rock, however when the miners encountered loose or soft ground, the remains of timer props were found.



Photo showing timbering supporting lose ground

At one point we found ourselves in a tramming level below a stope where boxholes and chute had been installed to facilitate the loading of wagons. The stope above being separated by a colossal timbered wall through which the ore was loaded into wagons through wooden chutes.



Photo showing timbering and boxholes below stope

Continuing on with the levels we came across branch further into the hill, After following for a short way, we found the way on upwards finally finding ourselves under an open wet shaft with water running down and daylight streaming in.. Tracing our steps back to the branch, we carried on until we came across a narrow stope where the level continued on through. As the level was exposed we went no further, but noted the white deposit on the foot wall where the mineral laden water had been running for many a year. This part of the mine was quite wet under foot.



White mineral deposit on foot wall of stope

Retracing our footsteps again we continued to explore the mine. At one point we found a wooden ladder, we descended finding ourselves lower down in the stope. Working our way through the stope we came across a wooden structure with a large ore chute. After climbing up through the chute, we proceeded on through the stope and eventually found our way back under the section of stope we had entered on arrival in the mine. A level below led out to the hillside terminated in another gated adit entrance.

In the lower section of the stope we found several artefacts left by the miners including old boots, bang boxes, and an old wooden body wagon or skip. We also came across some impressive snotites and pretty formations in small pools.

After spending many hours underground, we made our way back to the entrance, changing back into normal clothes before returning back to the cars with a total trip time totalling 4 hours

On the Saturday, the group split with two off on a long walk, and Fran and Big Dave meeting up with Margot who took us off on a trip in the middle of nowhere. Only a small hill to climb she said, it was half way up a mountain where we came across a series of small adits. The first adit entered was quite wet, and after a short way in the level sumped.

The next adit was some way along the side of the hillside and was impenetrable. A little further on again, and just above a large spoil tip was found another adit. On dropping in through the entrance, the adit continued a little way until a crossroads was encountered. We were confronted with a grid of tunnels running through the hillside, all handpicked and the mineral the miners had removed was on a very shallow decline into mountain. The tunnels being fairly low meant that we had to stoop all the time we were underground. What was apparent that the miners had removed almost all of the mineral that was located in the bottom of the level, even the in the pillars mineral had been removed and replaced with dry stone work. The rock being much fractured and loose showing all the scars where it had been picked away by the miners using hand picks only.



Photo showing typical grid layout of tunnels



Photo showing mineral removed and replaced with waste rock



Photo showing pick marks in rock

Monday's trip would be a stop off on the way home, this was to be quick visit to a mine visited many times before, but unfortunately, not taking much notice of where we were going we missed the turning and found ourselves going around in a big circle, before arriving at the Artist valley. The valley having a narrow road / track stretching for a few miles until the mine site is reached. After changing, we climbed a small hill up to the adit mouth. The adit lobby is quit wet on foot until you get in through the unlocked gate. This being an easy access trip we even managed to get David J underground, this mine being special for its waterwheel located at the end of the adit that was used for hoisting and pumping. This feature makes for some great photography. Unfortunately, the sheath wheel seen on previous trips was absent, this used to be laying besides the remains of wooden shear legs beside the flooded winze. Also emerging from the winze was the old cast iron rising mains complete with chain that original attached to a cam on the shaft of the water wheel providing a reciprocating movement. From the cam on the wheel attached by a tie rod and acting in the opposite direction to the chain is a balance box mounted on an "A" frame beam, complete with tie rods. The purpose of the balance box is to counteract the weight of the pump and water reducing the load on the wheel to water raised.

Located beside the waterwheel lies the remains of a winding drum and its wooden supporting frame partially collapsed. The hoisting rope long gone would have run over the wheel on the shear legs before dangling down the winze. It is not clear how the drum would have been connected to the wheel accept for a large gear wheel with the pinion missing that would originally have been located on the axle of the wheel where a square seat on the shaft remains. This would have slowed the drum down creating the mechanical advantage require to raise a heavy kibble full of ore.

What isn't clear is how the gear wheel attaches to the drum accept for the fact that attached to the gear wheel is a plate with two spigots which may have engaged into the spokes of the drum. On the outer side of the drum there is what appears to be a leaver system that would have been used to engage the drum with the spigots by sliding something in and out of mesh. On the outer side of the drum is a grove where a brake band would have been attached to hold the drum static when it was not engaged.

Water for the wheel enters from above the level, and spent water from the tail race, as well as water pumped from the lower level was channelled out through the adit.

Adjacent the wheel is a level leading on into the mine, with a small chamber leading off behind the wheel probably for access for maintenance. Lying on the floor of the level some way in is a pinion on a short shaft, but it is not known if this is connected with the wheel or another piece of equipment elsewhere in the mine. A little way further on in the level, there is a small timber bridge consisting

of a couple of planks supported by wooden stulls over a flooded section before it intersects a shaft. After crossing the shaft, there is a little climb up to a continuation level where an old egg shaped kibble can be found. From this the level continues for a short distance with some lovey colours and rails in the floor. After making our way out back to the cars we were on our way home dropping Fran at Bristol station before returning to Plymouth

Dave Warne

10. Coronavirus

For the foreseeable future club trip have been curtailed following the Covid 19 lockdown. This means there will be no Tuesday evening trips, weekend away trips or trips abroad to France, Spain or Ireland.

So the closest we can get to a caving experience is form youtube! Below are some examples

11. Armchair Caving on youtube

https://www.youtube.com/watch?v=VayI2aeyS68

Goatchurch is the Mendip Equivalent of Pridhamsleigh

A documentary-style insight into a technical multi-day three man expedition to the furthest reaches of Goatchurch Cavern. This highly complex and demanding, but infrequently visited, cave set deep within the Mendip Hills in SW England poses a serious challenge for even the most experienced caver. Not suitable for children, pets which may get easily offended, or adults who are timid and don't understand the enjoyment of caving. Contains offensive and complex technical terminology

A Pridhamsleigh Trip Trip – Not PCG

https://www.youtube.com/watch?v=svy6kOvyaOc

A PCG Mine Trip to Devon United Mine

https://www.youtube.com/watch?v=SYTjNqqWcFs

A PCG Radford Cave trip

https://www.youtube.com/watch?v=5UAN7KIvhX8

Craig's Video from Derbyshire

https://www.facebook.com/choldstock/videos/10163267729545387/

Craig's video from South Bedford Mine – Tamar Valley

https://www.facebook.com/choldstock/videos/10163250742910387/

and finally for those dreaming of an away trip OFD in South Wales

https://www.youtube.com/watch?v=zkEhoVtN7jg

https://www.youtube.com/watch?v=EkLzwi_Z2Ms

12. Mining Terms (2)

During club trips you will probably hear some members refer to techniques and equipment used in mining. This short glossary covers a few off these (others are in the last newsletter;)

- **Afterdamp -** Noxious gases left after underground *explosion*
- **Air Door -** Door fixed across a level to direct flow of air for ventilation
- **Arching -** Roof supports in a level built of stone, wood, concrete or iron.
- **Attle -** Cornish term for waste rock of no value

- **Back filling -** Waste rock, which is dumped in a disused area of the mine to save the time and expense of bringing it out to a surface tip (also sometimes to support the mine so that a greater amount of rock can be extracted adjacent to backfilled areas)

- **Banjo Shovel -** Short handled shovel (Cornwall)

- **Box hole** - A short raise or opening driven above a drift for the purpose of drawing ore from a stope, or to permit access

- **Country rock -** Naturally occurring rock, igneous, metamorphic or sedimentary, in which the mineral vein is situated**.**

- **Cross-cut -** A passageway cut through solid rock from one vein to another (technically cutting across the rocks/beds rather than along them, also known as a cross measures drift in coal mines)

- **Fathom -** Nautical measurement of 6 feet, widely used in the mining industry

- **Hangingwall -** The wall or cheek of the vein which is uppermost (geologically sequenced) as the vein hades. The opposite (normally lower) side is the footwall. Normally the upper and lower sides, but in a vertical vein the geological sequence is important

- **Launder -** Wooden trough for conveying water

- **Snottite** - Also snoticle, is a microbial mat of single-celled extremophilic bacteria which hang from the walls and ceilings of caves and are similar to small stalactites, but have the consistency of nasal mucus.

More to come in next issue.

13. Evening Trip Report – South Bedford Mine

Evening Trip – Craig, Rick and Tim

A Thursday evening saw 3 of us for a trip to South Bedford Mine. The entrance involved a damp squeeze into a damp adit. From there it was to a shaft that required traversing. Then there was an adit with lots of artefacts and interesting things to see.











Craig Holdstock