



THE TREVITHICK SOCIETY

KOWETHAS TREVITHICK
NEWSLETTER 161 AUTUMN 2013



The Puffing Devil on tour in Chitenay, France.

Reg. Charity
No. 246586

CHAIRMAN'S ADDRESS

Success, confession and an appeal

Much of this issue is devoted to this summer's venture into Europe with the 1801 Trevithick replica; it was a success, we developed our profile and we learnt a lot. We rubbed shoulders with the partisans of Papin and Cugnot's contribution to the development of steam power. It was interesting to note that some 10,000 curious people were attracted to the tiny village in France to discover something about steam and locomotion.

Also in this issue is a mention of 'Digital Natives – Digital Immigrants', erudite papers on the manner in which youngsters absorb facts and learn these days.

The results of the questionnaire that many so kindly completed show that we are mainly an aging group that ventures (maybe that's a strong word) into the digital age with some trepidation. At a recent meeting of the Society's council we discussed our lack of communication with those younger people we need to attract. While pleading for greater acceptance of modern communication systems I admitted that I do not Tweet; neither do I post messages on Face Book or reply to the 35 people on my LinkedIn site. The latter causes me some embarrassment as they have all taken the initiative to put their names into my list saying that they wished to contact me and I have never put my name on another's list. I speak to these people when we meet but I fear that had I responded digitally I would have sprung a deluge of e-mails that I am currently avoiding. There must a medical term to describe this condition, something that will be eliminated from the human race as my generation shuffles off.

In the meantime, I would ask those who are comfortable with the new technologies to add to our slender strands of digital communication as they appear so that Cornwall's industrial archaeology and the study of Richard Trevithick's achievements might reach the wider world. Thank you.

Philip M Hosken

EDITORIAL

I hope to get the next newsletter out in time for Christmas, so I have brought the copy date forward to facilitate this. I feel it will be nice to readjust the timings so that all four newsletters for a year actually appear within that year, as it used to be. So if you have anything for the next newsletter, please let me have it in good time. Thanks.

Colin French

Copy date for next newsletter: November 15th 2013



Established 1935

ELIZA JANE HALL



On 8th July 1873 a 17-year-old bal maiden was killed at Ding Dong Mine. Alice Ann Stevens and Eliza Jane Hall, both working at the stamps, met in the stamps boiler house during their dinner break and from there went on to the nearby whim house (this is not Ishmael's whim but another whim a few metres to the NE of the stamps). Shortly afterwards Stevens went to a nearby stream to wash her hands while Hall climbed on to the crown wheel of the whim, which was stationary at the time. Stevens admonished the foolish girl saying, "Eliza, don't you know better than to go up there?" Hall made no reply but climbed down from the wheel. Just at that moment the signal bell rang, indicating that the engine was about to start, and Hall, ignoring a second warning from Stevens, climbed back onto the wheel which was now in motion, exclaiming, "I will go round". The wheel had the motion of a roundabout, but proved to be a very dangerous one to ride, for in an instant the

girl's clothes were caught in it and she was dragged to the ground. On hearing Stevens' scream, James Berriman, the whim driver, stopped the engine. Hall was found lying partly on the ground and partly on the cog of the wheel, and on freeing her it was discovered that her right leg had passed through the wheel and was crushed and broken. Her left foot, having been caught in the cogs, was extensively fractured and blood was also dripping onto the ground. Despite prompt medical attention by Dr Montgomery the poor girl died seven hours later. At the inquest, Berriman stated that the crown wheel had been in use at the mine for over twenty years and this was the first accident that had happened with it. "No boy or girl had any business on or near the wheel", he added.

The mine's doctor's club book gives the following accounts:

Eliza Hall's funeral expenses	£2-14-0
Mrs Grenfell, per bill for coffin for do.	£ 2-7-0
Cabe Hire Eliza Hall's inquest	10-0
Hire of Rooms for do	2-6
Dr Montgomery's Fee for attending Eliza Hall	£1-1-0

Eliza was buried in an unmarked grave at Gulval Church. Following initial enquiries from Lynne Meyers, the enthusiastic researcher of bal maidens, the grave was eventually discovered. Money for a headstone was raised by Madron Old Cornwall Society and on 12th July 2013 a short commemorative service was held to dedicate the new headstone, which had been erected gratis by the undertaker Walkers of Penzance. Interestingly she is buried next to three different doctor Montgomery's, all of the same family.

Pete Joseph

OUT AND ABOUT EAST CORNWALL BRANCH

Calstock, in all its glory, shone on Saturday 20th April as we were blessed both with a beautiful spring day and Mr. Steve Docksey to portray with knowledgeable vigour Calstock's many industries associated with its port. Members strolled along the riverside road and through wooded footpaths above the old market gardens and became enlightened as they went.

The port of Calstock supported transportation relating to many industries including market gardening, mining, brick works, arsenic production, tile making, paper production and a sawmill.

The limestone trade brought by ships from Plymouth and the very visible large lime kiln on the bottom road, as well as many other kilns are very evident of lime production in Calstock.

The steep-sided and sheltered old market-gardening plots were very clearly visible. The abundance and variety of daffodils seen on the day supports the theory that as new daffodil breeds became

grown, old ones were naturally tossed aside and so now in April grow around the field fringes and hedgerows.

When the railway arrived Calstock's market gardening produce mostly found its way to London. The lucrative early flower and strawberry crops were sought after by the Victorians.

The port sadly lost out when speed and changes in the various industries gradually declined. However in its heyday, the quaysides were full of piles of copper, arsenic and tin ores from the Callington, Hingston Down and Tamar Valley mines. Imported raw products such as wood and coal were also cargoes for shipbuilding and mining.

The town was a busy place with several buildings accommodating the needs of seamen, which Mr Docksey gave clear accounts of.

Along the riverside there was ship building at Goss's yard (seen on the opposite bank at Calstock). This is where most famously the Garlandstone, a 150 ton ketch, which resides at Morwellham today, was built.

From the walk I felt that although the huge viaduct at Calstock towers



Steve Docksey showing members the remains of Calstock's incline plane which transported copper, tin and arsenic down to Calstock's quayside between 1859-1908.

with magnificence and brought rail transportation to Calstock and Callington, it was its port and the quay sides, which lie now less noticeably at its feet, which gave Calstock its roots.

On behalf of Trevithick Society members, thank you to Mr Steve Docksey for sharing your knowledge and expertise and a grand day out in Calstock.

Cheryl Manley

NICOLAS-JOSEPH CUGNOT'S FARDIER

Firstly, a fardier is a heavy duty, two-wheeled wagon usually pulled by one large horse and used for the transport of heavy loads, guns and, by film makers, carrying nobility to the guillotine. In Cugnot's case he replaced the horse with a single wheeled steam engine.

There was an opportunity at Chitenay to ask questions and examine the replica of Cugnot's fardier à vapeur. We were assisted in this by Joseph-Jean Paques, a French Canadian steam engineer, vaporiste, who posed the questions we asked. We understood it had been built entirely by public subscription.

While Cugnot, 1725-1804, had been misunderstood in the C18th his ingenious achievements are now proudly proclaimed by the French people who herald him for inventing the world's first self-propelled road vehicle.

Cugnot is seen in Britain, rather

in the same way as Trevithick, for his faults rather than his achievements. The difference in attitude of the two nations does us no credit. Cugnot is now a hero in France while Trevithick, whose achievements were substantial and long-lasting, still struggles for recognition.

While we can point out that it didn't go very far, we cannot dispute the French claim that Cugnot built a high pressure steam engine that propelled a vehicle. It worked but it had a number of shortcomings that would have made it impractical. However, given time and money Cugnot would surely have had the ingenuity to overcome these problems, an advantage enjoyed by the builders of his replica.

Cugnot's achievement was the production and use of high pressure steam in a compact design. In this he was many years ahead of those who drove their engines by atmospheric pressure and, like Savery and Watt, were unable to successfully contain high pressure steam.

The replica of Cugnot's C18th vehicle has incorporated many of the advantages of over two hundred years of engineering progress, including fine machining and hexagonal nuts. While the replica would have amazed Cugnot, it contains the salient features of his original locomotive.

There have been many drawings, some cutaway and conjectural, of the bulbous steam generator so we cannot say for sure how Cugnot generated his driving force but a phone call to Paris ascertained





that the wood fired boiler had been made of bronze. It has been suggested it was formed from two hemispheres vertically riveted together through lips on their circumference. The use of bronze,

employed in the manufacture of the best cannon of the day, was a sensible alternative to copper sheet and cast iron. There is much discussion about the original design of Cugnot's fardier, the mix of parts





from the two fardiers and the authenticity of the locomotive in Conservatoire National des Arts et Metiers in Paris.

It was clear from the escape of steam through the safety valve that the engine worked much higher than the quoted 20 lbs/sq inch. Following further enquiries the immaculate dressed drivers admitted to 'something in the region of 80 lbs/sq inch'.

Instead of cooling, refilling and re-firing the boiler at frequent intervals, as Cugnot would have had to do if he had travelled any distance, water was supplied under pressure from two apparently wooden casks at the rear of the fardier.

Steam from the boiler is currently directed through an ingenious valve system to two single-acting pistons in brass cylinders. Cugnot accomplished double action by a beam and two chains that connected the lower ends of the piston rods so that the powered descending piston could pull up the lower one. The engine achieved rotary motion by alternately pushing on ratchets placed on either side of the front wheel hub. We didn't discover how the driver confidently

selected reverse gear when executing a neat three point turn, something that would probably have been beyond Cugnot who crashed into a wall. Examination of the video by Georges Droulon at www.trevithick-society.org.uk/chitenay might reveal how this was achieved.

Changing direction of the weighty boiler and front wheel must have been a real problem for Cugnot but the current rack and pinion system affords remarkably simple single-handed steering.

The word ingenious has been applied to Cugnot's designs throughout this piece and it sums up the creative thinking of an imaginative man. He achieved a great deal that his predecessors, and many successors, could only have dreamt about. Little notice was taken of his two fardiers but in 1772 he was given a pension of 600 livres a year by King Louis XV. This ended with the advent of the French Revolution in 1789 and he was exiled to Brussels where he lived in poverty. Napoleon Bonaparte invited him back to Paris shortly before he died in 1804.

P.M.H.

**DENIS PAPIN 1647-C1713
SON OF CHITENAY**



History was re-enacted and created in the searing heat of a little French village this summer.

Situated a few kilometres south of Blois near the River Loire, Chitenay has barely a thousand inhabitants; it is without a bank or even a shop. However, this summer it showed that it was far from becoming a dormitory suburb of Blois,



something that many have seen as its only future. It proudly claimed to be the birthplace of Denis Papin, something that had been assumed by Blois for many generations. Then it set out to commemorate the tercentenary of his death in about 1713.

Chitenay has a cool church and a fighting spirit led by its present mayor, Didier Stetten-Pigasse, who, like his predecessor, headed a group of enthusiastic villagers who did not wish to see Chitenay fade into oblivion. Georges Abdallah was elected president of the organising committee and plans were made. In the excitement of planning it is doubtful if they truly appreciated what impression they would make on the international steam scene or how many videos of their little village would appear on You Tube.

Papin's work places him in French history as the inventor of the steam engine although we all appreciate it still had a long way to go to reach reality. His experiments with the application of heat to water included the creation of a 'bone digester' or pressure cooker. Following an accident he invented the safety valve. Papin also placed a piston in a cylinder over a little water that he heated to steam and made the piston rise. Papin was a physician in his day and travelled to England where he worked with Robert Boyle and became a Fellow of the Royal Society.

Blois, which had built a fine set of steps, erected a statue and dedicated much of its town to the memory of Denis Papin was persuaded to join Chitenay in its celebrations. It also provided publicity and raised much of the funding required to bring people and machinery to Chitenay.

The Chitenay group pulled together as much history as they could find connected to Papin and sought as many important links to steam development as they could. On the advice of Georges Droulon they invited the Trevithick Society's Puffing Devil replica of Richard Trevithick's 1801 Camborne carriage, noted by the French as the world's second steam vehicle. The important historical replica in the eyes of the French was Nicholas

Cugnot's three-wheeled fardier. This was to be the first time the two exciting vehicles had met.

The committee sought a variety of exhibits and these included several steam locomotives from the UK led by a magnificent Burrell showman's engine and a six-wheeled Sentinel steam lorry. Cornwall was also represented by Robert Dyke and his family with their White steam cars.



Outside the village there is a permanent multiple gauge miniature railway lay out. This attracted many enthusiasts including several from the UK who live in the Loire Valley area. Readers are advised to see the trains and traction engines by going to the video by Georges Droulon at www.trevithick-society.org.uk/chitenay. As well as scenes of the Trevithick and Cugnot replicas in action it contains footage of the steam cars, fair organs, vintage French petrol cars, a steam boat, a hot air balloon and a number of truly remarkable French steam and other model stationary engines. Many might consider that the ingenuity



and engineering that is apparent in these little engines makes the video worth re-running.

Many of the organisational decisions had the typical charm of rural France and were made as they were required. We waited all evening to discover that we were to sleep some distance away in a fine former chateau that had been converted to an agricultural college. Meals and wines were served to queues of people throughout the weekend and we supplemented the drinks at the one little bar in the village. It should be stressed that everything eventually worked and that everyone was happy and good humoured. Friday morning was a matter of getting steam and the tent up. It was also an opportunity to examine the other exhibits. Steam was not only used for locomotion as a stationary engine was employed to operate a fascinating machine that made wooden clogs, shown below. Again, see the above mentioned video.





We took a thousand bilingual leaflets with us that explained the rise of steam power, its main inventors, Trevithick's position in the development of power and how our replica was built. Although the French engineers were clearly very proficient in their understanding of steam the general public seemed to know little and were clearly fascinated. It certainly appeared that Trevithick was unknown to them. Our leaflets were avidly read and we were asked numerous questions. Several were posed by school teachers who were going to explain what they had seen to their pupils. We were grateful during these exchanges that we had Julie Hitchon with us as our translator.



On the Saturday those vehicles that could cover the 14 kilometres to Blois did so in order that its people could share in the excitement. It also generated a great deal of interest in what was happening at Chitenay and next day we saw the greatest crowds attend the Papin commemoration. All our leaflets were soon gone and people were offering to pay if we could find them a copy. We confidently calculated that some ten thousand people had passed by our

tent and the organisers were astonished; we don't think they had really contemplated the effect of their years of work.

Several of the usual Trevithick locomotive team were unable to attend the event but we had Colin French as driver and we advertised in the West Briton for volunteers. We were joined by Mark Pearce, who proved his worth by skilfully steering the awkward Trevithick replica, and Roy Gill who served us as general factotum. Along with Julie the remaining members of the team were Kingsley Rickard and Phil Hosken.



Our locomotive and event trailer were conveyed to Chitenay aboard Wayne Wills's truck with Connor Salmon riding shotgun. After they had unloaded they continued to work throughout the weekend as active members of our team and we are very grateful to them for their enthusiastic, good humoured input.

There were all sorts of peripheral entertainments relating to Denys Papin throughout the weekend and they included a theatrical presentation on three stages in the village set up to represent France, England and Germany, countries where Papin worked. This was followed by a torchlight procession to a splendid firework display that included music with Papin's life story broadcast through speakers.

Mention must be made of the temperatures we all endured. They were the highest Chitenay had known since records began with a shade air temperature of 36.5°Celsius being regularly recorded. This meant a road surface temperature well in excess of 50°Celsius. We don't know the temperature within a few inches of our raging boiler furnace but Colin French's shoes melted on his feet!



Maybe we, or our successors, will do something like it again one day.

P.M.H.

The photographs of Chitenay were supplied by Phil Hosken, Roy Gill, Julie and Anita Noall, and Georges Droulon. Many thanks!

Thankfully the organisers came to our rescue throughout the weekend with regular bottles of chilled drinking water.

As is customary with such international events, we took some presents to our hosts, the least we could do as we had been their guests all weekend. We also took some of Skinner's beer which the French enjoyed.

From our breakfast in the street each morning to the story we have told about Richard Trevithick and links we have forged with steam enthusiasts in France it was an exciting, memorable experience.



There are a number of videos on You Tube that record what happened at Chitenay in July 2013 including:

www.youtube.com/watch?v=GaT5tl8_f5I

www.youtube.com/watch?v=2MgZ9uRkHyg

<http://www.youtube.com/watch?v=CrWxRH5S7AE>

LEVANT REPORT

The exceptionally good summer has brought plenty of visitors to the region and attendance numbers are good. There have been special events also including several candlelit evening steamings with Mark Harradine telling tales of Cornish Miners.

Plans have been submitted to Cornwall Council for approval for moving the fuel oil tank from Skip shaft to the boiler blow-down pit. Although the Whim engine house is Grade II listed, we are hoping that the necessary permission will be granted so that the work can be carried out over the shutdown period commencing in November.

A sum of £40,000 has estimated for the refurbishment and preservation of the old Geevor upcast fan which is situated at the head of Engine shaft. Due to its rarity it is considered to be worth saving and various fund raising exercises are in place including the selling of NT raffle tickets.

The cooling water level supplying the condenser for the Whim via a cistern under the engine has been dropping alarmingly whilst the engine is running. Fearing the worst that there was a bad leak in the cistern, it now has been discovered that too much water has been entering the condenser because the bolts on the

flanges connecting the driver's foot valve to the condenser are rusting out. This has caused the flanges to separate which is allowing water to enter between the gap!



As a result members of the present 'Greasy Gang' were under the floor in cramped conditions to make repairs. The photos above and below show Adrian Felix under the floor and condenser on the Whim at Levant. The dump valve assembly had the old securing bolts ground out and both flange faces cleaned up. A new gasket was made using 'Walkerite' and Hawk jointing compound and then reassembled. A coat of paint was then applied. An easy job if accessibility was not a problem, but this was extremely difficult due to the severely restricted space in the cistern and lifting tackle was needed to pull the assembly up to floor level. Once again the Levant engine is back in steam. As Milton Thomas always reminded us 'Nothing is easy at Levant'!



Ron Flaxman

PUFFING DEVIL

In Chitenay, the weld that held the chimney in place at its base, broke, which meant that we could not drive the engine around the village, on the last day. Instead we operated it as a stationary engine with the chimney resting in position. On our return to Cornwall a temporary repair was made and this enabled the engine to be displayed at the three day W.E.S.E.S. rally at Stithians.

This winter the engine will go over to John Sawle's workshop for maintenance and storage. We plan on lifting the cylinder head to check for any wear after 12 years of steaming plus the front and rear plates, of the fabricated fire box require replacing. Two of the old set of fire bars are also buckled and will be changed.

The boiler will need its annual inspection before the next outing.

TREVITHICK MEMORIAL LECTURE

The story of Richard Trevithick has developed down through the years as each author has added his or her interpretation of the events researched or imagined by their predecessors. There is nothing unusual in this, much of history has been written in this manner.

It is therefore refreshing to re-examine the work of Prof Inglis. FRS, OBE. It is clear from his Trevithick Memorial Lecture to the Institution of Civil Engineers in 1933 on the centenary of Trevithick's death that his research as an engineer into the life, experiences and achievements of Cornwall's greatest inventor took him beyond the mechanical aspects of his subject into the lives of those who surrounded him.

Like many authors he fell foul of the anecdotes of Trevithick's third son and biographer, Francis, but did criticise him for the lack of homely detail about his father. Rather surprisingly, he endorses the operation of the second phase of

Savery's engine; something any student of steam engineering could see would never have worked. He also failed to recognise the duplicity of Davies Gilbert although his suspicions were obviously alerted when he queried why the application to parliament on behalf of Trevithick, which was entrusted to Gilbert, was never presented. Like many before and since, he was deceived by the 'folly and madness' valediction at the end of Francis Trevithick's book.

Otherwise the fourteen closely typed pages of his lecture contain an in-depth study of Trevithick's attainments and the circumstances surrounding all aspects of his life. It is recognised as an authoritative account of his life by an eminent professor who, as a renowned civil engineer, academic, politician and FRS, whose work included the design of temporary military bridges during the Great War and heading the enquiry into the R101 disaster. He clearly sets out Trevithick's achievements and many of his relationships. When describing the latter he uses just a few words to sum up what must have taken much patient research.

You can download the full original lecture by courtesy of the Institution of Civil Engineers at:

www.trevithick-society.org.uk/inglis

P.M.H.



KING EDWARD MINE

The end of the season is nigh and although warm dry spells of weather spell doom for visitor numbers as it means “bums on beach”, the site has been quite busy. Apart from the normal casual visitors we have had a several group visits, schools, Women’s Institutes and Old Cornwall Societies and two large groups: The Federation of Old Cornwall Societies Summer Festival which is held at a different location each year was held at Camborne this time so we hosted a coach load from them and an international mineral processing conference was held in Cornwall resulting in an evening visit of a group of forty.

General maintenance goes on apace. In particular Tony Bunt and his “countryside engineers” have had their work cut out, literally, to keep the undergrowth under control. In the mill Tony Clarke and Eric Rabjohns have completed the jigger, a machine using a vertical movement in water and powered by hand, to sort copper ore. Being of wooden construction none of these machines survive. They have also refurbished a laboratory size Harz jigger which operates on a similar principle but is a little more sophisticated. One major task for the winter is the lifting of the cylinder head of the Sulzer engine. This requires a deal of planning due to limited working space and the rigging of lifting kit due to the weights involved.

By the time you read this we will have hopefully completed an archaeological dig around the north side of the stamps enginehouse during which we hope to locate the line of the flues, boiler loadings and the footings of the boilerhouse and its attendant stack. The original boiler house held one boiler which must have proved insufficient to supply the steam need as an addition was added which housed a second boiler.

In June it came to our notice that we had a small subsidence in the drainage ditch on the right hand side of the approach road as King Edward is entered. Being in a

heavily mined area such incidents are not unusual and we monitored it for a few days but no further movement was apparent. Due to the fact that the problem was adjacent to, or even possibly under, our approach road we felt it best to inform the site owners, Cornwall Council who advised they would be on site two or three days and engineers would investigate. Sure enough, on Tuesday, 17th. June, Cormac, the engineering arm of the council arrived with a van and a JCB. The current ground level is several feet above the original level due to much dumping of mining waste. Having excavated to some twelve feet depth nothing significant was found other than water percolation had created a small void where the silt had been washed away hence the subsidence. Many years ago there was building on the site and the only things of any interest found were an old and very bent coal scuttle, a glazed pot and two relish bottles. These turned out to be more interesting than originally thought once they were cleaned up. They were of moulded manufacture, of slightly different ages and were embossed “Goodall Backhouse & Co. Yorkshire Relish”. A Leeds company, they made a number of grocery lines, having begun as Bell & Brooke in 1830 but became Goodall Backhouse in 1858 but are no longer in business. Their claim to fame was that they were the first company to take legal action to protect a trade name, in this case “Yorkshire Relish”

K.J.T.R.

TEHIDY CHEST HOSPITAL MUSEUM

In response to a query in the last newsletter regarding the rubber stamp given to the Society, Mrs. Patricia Woodward, FIBMS., MSc., FRMS, currently Publicity Officer for the Kernow Microscopical Society and former Principal Biomedical Scientific Officer at the Royal Postgraduate Medical School, Hammersmith Hospital has submitted the following:

“Regarding hospital museums, these are pathology museums and were required by law for institutes training doctors. In such a medical museum would be found mostly pathology and surgical specimens, preserved and mounted in glass jars or perspex boxes. These would be mostly lung conditions and possibly heart. Alongside these specimens would be microscope slides made from them for diagnostic purposes. All samples would be anonymously catalogued with a collection reference number.

As to the whereabouts of the collection now, it could have been transferred to another hospital either locally or as far away as middle eastern medical schools.”

K.J.T.R.

TREVITHICK SALVER

Here is an opportunity for you or a friend to acquire a notable piece of silver connected to the Trevithick family.

It is a hallmarked solid silver salver with an overall width of 13 inches. It was given by Frederick Harvey Trevithick when he was Chief Engineer of the Egyptian Railways to Charles Redman Bey in 1898 as a mark of respect for his 15 years of service. Six years earlier Bey had been awarded the Order of the Medjidieh. An announcement in the London Gazette of February 16 1892 stated,



Whitehall, February 15, 1892.

THE Queen has been pleased to give and grant unto Charles Redman, Bey, Engineer to the Egyptian Government Railway Carriage Department, and Deputy Inspector of Egyptian Government Railway Stores, Her Majesty's Royal licence and authority that he may accept and wear the Insignia of the Order of the Medjidieh of the Fourth Class, which His late Highness the Khedive of Egypt, authorized by His Imperial Majesty the Sultan, was pleased to confer upon him in recognition of his services whilst actually and entirely employed beyond Her Majesty's Dominions in the service of the Egyptian Railway Administration.

A relative of the recipient wishes to dispose of the salver and a line to the editor will put you in touch.

P.M.H.

DIGITAL NATIVES AND DIGITAL IMMIGRANTS

It is a sad fact that many who are reading this still think that a virus is something likely to give us a cold and a tablet is the counter measure we take to alleviate the symptoms. We are beginning to understand that mice are now more likely to live on our desks than under the skirting boards but apps, Face Time, Cloud Computing and all sorts of iThings are best left to the youngsters who don't talk to us anymore.

Marc Prensky is the inevitable American who has studied the situation from an educationalist's point of view and speaks of those who have grown up in the digital age as its confident Natives while the rest of us are mere Immigrants who will never wholly grasp the native language.

In one of his essays he starts by saying, 'Today's students have not just changed incrementally from those of the past, nor simply changed their slang, clothes, body adornments, or styles, as has

happened between generations previously. A really big discontinuity has taken place. One might even call it a “singularity” – an event which changes things so fundamentally that there is absolutely no going back. This so-called “singularity” is the arrival and rapid dissemination of digital technology in the last decades of the 20th century.’

The youngsters today are being born into an age that has changed radically in the past ten years. My son-in-law is a Senior University Lecturer who tells me that many of the newly arriving students have to be taught to e-mail because they have grown up with later forms of communication.

Prensky goes on to talk about the rise in digital technology and says, ‘It is now clear that as a result of this ubiquitous environment and the sheer volume of their interaction with it, today’s students think and process information fundamentally differently from their predecessors. These differences go far further and deeper than most educators suspect or realize.’

The stunning reality of this essay by Prensky is that it was written in 2001, before social networking, Smart phones and everything we see about us today. To find out just what Prensky said then and now, go Digital Natives on the Trevithick Society web site and open up his essays.

We, as Digital Immigrants, have one foot in the past, have come from a different environment and will always speak digitally with an ‘accent’. No longer can we imagine a comfortable scene with children around a fire being instructed in their heritage by their parents and grandparents. Nevertheless, we have a cause and a responsibility to pass on the story of Cornwall’s remarkable industrial past to the leaders of tomorrow. The youngsters of today are very clever but they were programmed differently to their predecessors.

If Cornwall is to retain its integrity in this changing world its leaders need the knowledge upon which its livelihood was based. This Society is beginning to digitise its possessions and, in so doing,

it is embarking on a journey where it can’t look back.

P.M.H.

YOUR E-MAIL ADDRESS

If you don’t receive periodic e-mail messages from this Society it’s because we haven’t got your e-mail address. If you’d like to stay in touch, please forward your e-mail address to membership@trevithick-society.org.uk and, include your name as we might not know who you are.

PUBLICATIONS

Professor Marilyn Palmer, President of the AIA, and author of a monograph on the Basset Mines some years ago, has forwarded details of a major new mining volume on the Ecton Copper Mines in Derbyshire. This is a very significant work and the outcome of 15 years research. This may well be of interest to some members.

Details are John Barnatt, *Delving Ever Deeper: The Ecton Mines through Time*, 382 pages, £21.00, ISBN 978 0 901428 26 4. It was published on 1st August and copies may be obtained from the Peak District Mining Museum, Matlock Bath, DE4 3NR adding £5.60 for postage.

Graham Thorne

TREVITHICK BOOKS

The Oblivion of Trevithick is now out of print. We are wondering what to do in the future. *Genius, Richard Trevithick’s Steam Engines*, which is a shortened version of the Oblivion book had also sold out but has been reprinted and is available again. If you require a copy, please send a cheque for £7.99 to include carriage to the Trevithick Society, at PO Box 62, Camborne TR14 7ZN and, PLEASE, include your name and address.

THE HISTORY OF CAMBORNE SCHOOL OF MINES

On the occasion of the CSM's 125th anniversary in November, this Society is publishing the history of mining education in Cornwall. It has been written as the result of many years of painstaking research by Lawrence Piper, former Principal at Cornwall College. This will be a notable addition to Cornwall's industrial history as it relates the activities of one of the greatest international seats of mining education. The thousands of students who have passed through its doors went on to provide the world with the resources for its growth and development.

It will be in jacketed hardback form with an Ex Libris area for personal history use. The price direct from the Trevithick Society is likely to be in the region of £26 plus carriage. To keep the price down the print numbers will depend upon interest and anyone possibly requiring a copy should e-mail their name and address to esm@trevithick-society.org.uk

DEVON GREAT CONSOLS A MINE OF MINES

As I write this in early September the manuscript of Rick Stewart's history of Devon Great Consols has just been despatched to the printer. The aim is to publish in mid-October. This is a very substantial and much anticipated volume, telling the story of a legendary enterprise in full for the first time.

Devon Great Consols contains a mass of research and much information never previously published. It runs to over 400 pages and will be available as a large format paperback at £24.99. There will also be a limited edition of 100 hardback copies in a dust wrapper at £42.99. We expect the demand for these to be considerable.

Details are –

R.J. Stewart, *Devon Great Consols: A Mine of Mines*, Trevithick Society, Camborne, 2013. ISBN 978 0 904040 97 5 [Paperback] £24.99; 978 0 904040 98 2 [Hardback] £42.99.

Graham Thorne

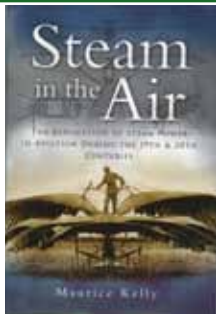
THE LISKEARD AND CARADON RAILWAY

The Caradon Hill Area Heritage Project has just published *The Lost Years of the Liskeard and Caradon Railway* by Alec Kendall. The main aim of this 150 page volume is to shed light on the later years of this mineral line from its takeover by the GWR in 1909 to the generally accepted closure date in 1917 and the rumours of subsequent use. The book also contains much useful information about what survives on the ground north of Moorswater with illustrations, many in colour. The book is in A4 format and in layout is on the border line between a report, similar to those once issued by the Cornwall Archaeological Unit and a large format paperback. It will appeal to those with an interest in this fascinating railway and in the local mines and quarries. The one thing which it lacks is a good detailed map of the Liskeard and Caradon line to which the reader can relate the specific sites covered in the text. *The Lost Years of the Liskeard and Caradon Railway* costs £12.00 and is available from the The Book Shop, Liskeard.

Graham Thorne



BOOK REVIEW



Steam in the Air, Maurice Kelly, Pen & Sword Books Ltd. ISBN 1 84415 295 2. £19.99.

If Richard Trevithick's restless brain didn't think of flying it's apparent that many of those who followed him saw ways of using his high pressure steam engines to soar with the birds.

Maurice Kelly's remarkable book reveals the dreams and endeavours of possibly a hundred gifted amateurs who pursued a number of different ways to become airborne. From early hot air and steam balloons to steam propelled dirigibles, flapping wings and helicopters.

It can be seen in this profusely illustrated book that many of the early carriages of the air resembled boats and that accounts for the term 'air ships' being used to this day. It is a gripping eye-opener for those who believe that the Wright Brothers* were the first to fly.

The aerial adventurers were not confined to England and the United States. For instance, a model helicopter with counter rotating blades was built in France in 1784. The 19th Century saw feverous activity in practical aviation and, while Trevithick was busy with his locomotive at Penydarren in 1804 his contemporary inventor, Sir George Cayley, 1773 – 1857, was trying to get off the ground. Cayley stated, 'I am convinced that aerial navigation will form a most prominent feature in the progress of civilisation'.

The best known exponent of the 20th Century was William Besler who flew a quiet steam bi-plane 80 years ago.

His flight and subsequent developments in steam aeronautics are covered in this enthralling book.

Maurice Kelly's book can be obtained, post free, from his son, Nick, at 4 Kingston Close, Shoreham-by-Sea, W. Sussex BN43 6LP.

* After Cornishman Richard Pearse in New Zealand.

P.M.H.

THE UNITED MINES GHOST

My late grandfather James Henry Bullen, who I never knew, was employed by Hocking & Loam, Engineers of Moditonham in East Cornwall, as their Resident Engineer in the St Day Area. This narrative concerns an experience he had in the 19th century. My late father passed the information to me. J.H. Bullen lived in St Day and had a pony and trap for transport.

In the late afternoon on a summer's day he called at a pumping engine where some repairs had been effected, quite recently, to ensure all was well. He was speaking with the engine driver and fireman when the subject of an accident, which had happened at surface on the mine arose. It had occurred that day and a man had been killed. The conversation had moved on when the fireman exclaimed that the deceased man was walking along the path which led past the engine house! Apparently it was not unusual for them to see him when the engine man and stoker were on this particular shift, as this path between the mine and Todpool, where he lived, was his normal route, to and from work.

The approaching figure was not in any way unusual. All three men saw him go by and the fireman, being the younger of the trio, went to the cylinder opening steps to a point where he was within a few feet of "it".

Joff Bullen.

SOCIETY MEETINGS

Society Programme

Tuesday October 8th. ECB.

20th Century Mining in East Cornwall and Devon. by Owen Baker.

Friday October 11th. KEM.

John Couch Adams - Astronomer.
by Robert Beeman.

Friday November 8th. KEM.

A History of Delabole slate.
by Levi Hamilton.

Tuesday November 12th. ECB.

Computer three dimensional mine models of Cornwall. by Dr. Keith Russ of Western United Mines.

Tuesday December 3rd. ECB.

The East Cornwall Minerals Railway.
by Vic Harman of the Calstock Archives.

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Tuesday February 18th. ECB.

Wacker Quay and its Railway-Its history and modern day community management.
by Dave Readman.

Tuesday March 11th. ECB.

17th Century Copper production.
By Author Rick Stewart.

The West Cornwall Branch meets at King Edward Mine (KEM) at 7.30pm on the 2nd Friday of the month.

The East Cornwall Branch (ECB) meets at the Public Rooms at Liskeard and start at 7.30pm, unless stated otherwise.

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<http://teammanley-ts.blogspot.com>

Non members are welcome to all talks.



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The Trevithick Society, a registered charity, is a recognised body of the study of industrial archaeology in Cornwall. Membership is open to all who are interested in the region's great industrial past, whether or not they live in Cornwall. The Society takes its name from one of Britain's foremost inventors and pioneers of the Industrial Revolution, Richard Trevithick, a Cornishman whose name is inseparable from the development of steam power. This newsletter is published quarterly and, together with the annual journal, is distributed free to members. Letters and contributions are always welcome and should be sent direct to the editor.

The views expressed in this newsletter are those of the authors and not necessarily those of the Trevithick Society.

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