The Dillwyn Collection

The Journals of Lewis Llewelyn Dillwyn (b.1814 d.1892)

Transcribed by Richard Morris

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Note: This is a working edition of the journals that have been transcribed over a number of years by Richard Morris. This edition includes inconsistencies in presentation and orthography – in part due to inconsistencies in the originals. This work is presented to aid research into the Dillwyn family and related topics. It is part of an ongoing project that aims in the future to bring together a number of diaries and to convert them to modern, marked-up formats that will allow more powerful features and searching.

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1838

Inside the front cover is a table of elements and their atomic weights.

Original spelling etc in the diary has been retained and is not marked sic

After some date entries the symbols o and x appear. No reason is given for this but they have been included

SCAN TABLE OF ELEMENTS IN FRONT COVER

Sketty Hall 1838

January 22 - Monday

The Frost which set in on the 6th of this month broke up yesterday and the thaw was accompanied by heavy rain – the paths & roads to day have in many places broken in & sunk from the thawing of the ice – The sands are still covered with frozen foam &c – the lower current of wind to day has been a little to the south of East and the upper one from S.W.

The lowest that I have observed my thermometer during the last frost has been $+15\frac{1}{2}$ Far^t.

Jany. 23. Tuesday

A slight frost last night. Wind easterly to day – This morning I bought at Sparkes's a Gull which I believe is one of the varieties of the brown headed Gull – it was shot on the sands yesterday and is a great deal like the one I shot on the Llougher marshes on Friday last –

Jany 24. Wednesday

Sharp frost last night. Therm this morning at 26° - Lambs on the Vivian fields. I put into my laboratory furnace to day the two following mixtures

(6 oz Lime) and (4 oz Lime (2 oz Silica) (4 oz Silica

After leaving them in the fire about an hour and a quarter I took them both out & found them both unchanged by their burning –

The Wind all day has been from the East & has been very high & cold -

Jany 25 Thursday

Last night there was a fall of Snow but not to any great depth – this morning my Therm^r stood at about 23° - in the evening there was every appearance of another fall of Snow - & the therm^r stood at about 27. At 5 oclock – In the laboratory to day Mr Dela Beche joined me and we put into the furnace the mixture of 6 oz Lime to 2 oz Silica which I burnt yesterday – after letting it remain there about $1\frac{1}{2}$ hour it came out again unchanged to all appearance – the crucible however was covered with a kind of black glaze – we then put into a crucible some Green bottle glass and put it into the furnace – after remaining

there about $\frac{1}{2}$ an hour we put in the flue so as to cool gradually; the bottom of the crucible however was exposed to the flame so that when we took it out of the flue the bottom was red hot – we then set it down upon the cold bricks & as soon as it was cool broke it & found that part of the Glass that had cooled slowly to have the appearance of a volcanic stone, while the end that was exposed to the flame to the last and had consequently cooled quickly, remained in the state of Glass.

Jany 26. Friday

A fall of snow again last night and cold today Wind E.

I went over to Penllergare & went out shooting with John we observed between 1 & 2 oclock a Solar Halo –

Jany. 27. Saturday

Walked into Swansea from Penllergare after breakfast. Mr De la Beche joined me in my laboratory at about $\frac{1}{4}$ past 2 o.c. We put into the furnace a mixture of $\frac{1}{2}$ Silica & $\frac{1}{2}$ Lime with a very small quantity (not an $1/8^{th}$ part) of Salt (Chloride of sodium) for a flux – with this mixture we succeeded in making a Silicate of Lime We next put into the furnace a crucible with 3 parts of Potassa and one part of Silica in it for the purpose of making a very fusible Glass – upon taking it out we found that it had run into a Glass but of a jet Black color – I brought a piece of it home and upon looking at it in the evening found it to be quite melted on the surface and X having the appearance of Bitumen – It has continued cold all day.

[On opposite page]

^X occasioned by the dampness of the atmosphere –

Jany 28.Sunday

Wind S.E. A gradual thaw has commenced today - & there is every sign of a break up of the frost except that the wind continues Easterly –

Jany 29. Monday

Wind S.W. a rapid thaw took place last night which has continued all day – On Thursday last we put into the flue of the Biscuit Kiln two crucibles one containing a mixture of 3 parts Lime to one part Silica, and the other pounded Green Bottle Glass – the Kiln was drawn today and we found that containing the Lime and Silica to be consolidated but not fused. The other with the green Glass we broke and found the Glass (with the exception of a part in the middle which looked like a kind of opaque Glass) to have assumed the appearance of a very hard vitrified rock & upon examining the fracture we found it to be composed of crystallizations of a circular form –

We put into the flue of the Biscuit Kiln today two crucibles one containing pounded White Bottle Glass & the other pounded Fritt –

[on opposite page Fritt composed of]

We also put into my little furnace a mixture of 3 parts Silica to one of Potash, which fused readily & came out a white Glass.

Jany 30. Tuesday

There was a sharp frost early this morning. In walking into Swansea I saw great numbers of Sea Gulls –

Jany 31. Wednesday

Wind Easterly. Raw & cold without much if any frost.

I went into Swansea – in the Laboratory I made a crucible full of the composition for fusible Glass, that I made on the 27th and with exactly the same result. I also made a cruce. Full of ½ Silica & ½ Potassa & then put it in the furnace for about 20 minutes - the greater part of it boiled over & run into the ash pit this we collected and found to be a glass of jet black color. what remained in the crucible was of a deep reddish color – I put a piece of Mountain Limestone into a jar of Chlorine (which I made with sulphic. Acid and salt) & sealed it up with clay –

February 1.Thursday

Wind nearly due east - a slight frost last night - the Glass has been rising for the last few days & still continues to rise -

I tested the solution of the black soluble Glass today with the precipitate of Potash and found it to be strongly impregnated with Iron – I burnt the mixture of ½ Silica & ½ potassa again today but when I came away it was not sufficiently cool to examine the result –

February 2 Friday

Still cold & Wind E. Sharp frost last night. The Glass continues to rise. I went to Penllergare to day & thence to Llangefelach to the Petty Sessions, there was no business there - from there I returned with JDL. to Penllergare

February. 3. Saturday.

Came into Swansea from Penllergare this morning with J.D.L. and worked in the laboratory. Mr D.L.B. joined us there and we found some Granite Greenstone &c arrived from Cornwall for him – We put some of the fine grained Greenstone into my furnace and it soon run down into a fine Black obsidian – we then put in some of a coarser grain – and obtained nearly the same result – We also examined the two crucibles of White Glass and Fritt which we had put into the Biscuit Kiln on Monday, they were both Broke and the Fritt was nearly all lost, what remained however appeared to be in the same state as when we put it in – the White Glass had very much the appearance of Opal. the day before yesterday when I tested the Soluble Glass it was with a solution of prussiate of potash in Muriatic Acid and to day I tested it with a solution of the Pruss^e. Of Potassa in water & found that the test did not act till I had neutralized the Alkali with an Acid, & the same thing happened when I tested the Potassa alone –

It has continued cold all day and the Therm^r. this even^g at 9½ o.c. stood at 24°.

February 4. Sunday

Went to Swansea church to day – Dr Hewson preached a sermon in aid of the National Schools.

Frost still severe. 9 o.c. even^g Thern^r 24° -

[on left hand page: Found Icicles of Sap of Sycamore hanging from boughs that had been broken -]

February 5. Monday

Therm^r this morning just before Sunrise 23° - the day clear and sunny – Went into Swansea and bought a Brent Goose at Sparks's for 2/6. it was killed on Friday last.

Lab^y.

Put into the furnace some Greenstone and Porphyry – the former we did not allow ro remain in for long & it remained nearly unchanged. the latter had nearly and hours firing without fusion taking place. it however became consolidated and changed its color from Red to a Grey – the furnace to day did not arrive at its full heat as we had placed at the bottom a fire brick which in a great measure spoilt the draft in the furnace –

We also to day prepared & sent to be fired in the flue of the Biscuit Kiln 3 crucibles – one containing Porphyry, the 2^{nd} Course Green stone, and the third Cornish Stone (decomposed Granite) and Greenstone in the proportions of $\frac{1}{2}$ and $\frac{1}{2}$ - by weight –

[left hand page: X we put it in in fine powder -]

February 6. Tuesday

Frost still continues though not so severe as yesterdays – it has clouded over & the Glass has fallen

Lab^y.

I put a crucible full of porphyry into the furnace and left it there about 25 minutes – it was not fused but became consolidated much in the same manner as that I burnt yesterday – I also tried to fuse a mixture of 3oz of Cornish Stones to 1 of Potash this run into a substance that has very much the appearance of a half fused silicate of potash –

February 7. Wednesday

Lab^y

Tried again to fuse ;porphyry in my furnace but did not succeed although the heat was^x so great as to melt Iron – when it cooled it had the look of a pumice stone –

[opposite page: X see next page X]

Weather

Wind from the S.S.E. rain and thaw nearly all day –

February 8. Thursday

Weather

Thaw continues – rainy – Glass at 29. inches – Lab^y

We drew the crucibles we put into the Biscuit Kiln on Monday vesicular to day – the second containing Greenstone had cracked and the product had run out – the third compound viz. Greenstone and Cornish Stone had run down into an obsidian, but at the top the larger pieces of feltspar remained unfused – The first compound (Porphyry) had run down in the form of a Glass - & so hard as to scratch common

Window Glass & to strike fire with a steel – **X** (I was wrong in supposing the Porphyry I put into the Lab^y furnace Yesterday was not fused. it had much the same appearance as the last mentioned product.) from the Crucible of Porphyry from the Bisket Kiln, I broke enough to fill a small Cruc^e. Which I placed in the Lab^{y.} Furn^e.. suspended by a strong Iron ring to a bar of Iron upon looking into the furnace in about ½ to ¾s of an hour we discovered the ring of iron to be completely melted away. some small portions of it had run into and colored parts of the Porphyry which we found to be much less vesicular than it was when taken pout of the Biscuit Kiln – I put some white marble into diluted Muriatic Acid – and after about ¼ of an hours immersion, found it to be polished in the same way as the mountain Limestone I tried before

To make Bronze the true proportions are 9 of <u>Copper to 1 of Tin</u>.

February 9. Friday

Cloudy - & wind very high this morning – rained heavily in the night – in the afternoon the Wind abated and got up from the West towards the North – Miscellanous.

I went to Fairwood moor with my gun but did not see a single Snipe. I shot 1 Wild Duck and a very good specimen of the Peregrine Falcon –

February 10. Saturday

Weather.

Wind up to the North. frost last night – Therm^r this evening at 10½ o clock at 24. Miscellanous –

Went into Swansea & bought in the Market a Speckled Diver which was killed somewhere near Llanridian – Was joined at the Works by Mr De la Beche – Lab^y-

Put some fine Grained Greenstone in a large crucible in the L^y furnace. after it had been in some time the crucible broke and a quantity of Obsidian ran into the Grate in very fantastic shapes – we found however that what remained in the crucible was only partially fused –

February 11. Sunday

Weather -

This morning about 8 oclock Therm^r stood at 23 – cold all day in the shade. but the Sun bright. a little snow fell last night – This evening at 9 O.C. Therm^r. 26.

Misc^s

Went to Swansea church. Mr Cheshire preached and gave us a very good sermon – in the evening went down to see Mr DelaBeche. he intends to start for London tomorrow – he recomended [sic] me to try whether putting a piece of Limestone into a solution of Soda saturated with Muriatic Acid, will have the effect of polishing it –

February 12. Monday

Weather

8 this morn. Therm^r. at 27. clear & bright all day.

Lab^y

sent 2 cruc^s of Porphyry to be put in the flue of the Biscuit kiln – one pounded fine & the other course – I also run down one small cruc^e of Porphyry in my furnace.

February 13. Tuesday

Weather

still clear and cold - 10½ o clock this evening Therm^r at 25 –

Put some Limestone into Brine of different degrees of strength – Run down the Porphyry fused yesterday & found it after the 2nd fusion much less vesicular than after the 1st. Filled a cruc^e about an third full of Porphyry, as I have observed that when a full cruc^e of it is being run down some obsidian falls into the Grate & my object in partly filling the cruc^e was to prevent any part from running over – the result was that it was not so completely vitrified as when placed in cruc^e quite full - & the surface was covered with a kind of Glaze

February 14. Wednesday

Misc^s

Went into Swansea this morning – dined at home & went to a Ball at the Rooms in the evening – slept at Burrows Lodge afterwards – got a cast (of N.B. best Clay) from a Bronze medal of M.Angelo that Mr DelaBeche lent me, from the Gloss Kiln today – it was only smeared and looks very well

Laby

Fused a stone looking like Green Porphyry that R. Mansel brought me – Logan had given it him & he was not sure where it came from but I shall know in day or two – when fused it looked something like fused Porphyry & had a reddish colour that looked as if there was iron in it –

Weather –

Still cold – a heavy gale of wind from the East set in about 7 or 8 oclock P.M.

February 15. Thursday

 $Misc^{\underline{s}}$

Breakfasted with Benson at about $10\frac{1}{2}$ oclock – he gave me several very good specimens of copper & slag found at the bottom of the furnaces.

Lab^y

Tried to fuse a mixture of 3 parts Lime to 1 of Silica but without success – Weather

Still very cold – and the Gale continues from the same quarter as yesterday evening with unabated violence –

February 16. Friday

Misc^s

Went down to Penclawdd with Benson and Moggridge early this morning to look for Ducks; on the sands we saw a great number but were not able to kill any – I shot a brown headed Gull which I sent to the Museum on Llougher marsh on my way to Penllergare where I went after shooting, I saw a Heron get up, & at the place he rose from I found a Dabchick (Little Grebe) just killed, & I believe the Heron had killed him –

Weather

Wind from the East very high & accompanied by Snow & sleet, which it was almost impossible to face.

February 17. Saturday

Misc^s

Came in with John to Swansea this morning from Penllergare – as I returned home this evening I observed a very large flight of Long tailed Titmice

Weather

This morning the Wind changed to the S.W. and a good deal of rain fell, which has made the roads & fields very dirty & sloppy. This evening it is much colder & the Barometer is rising –

Lab^y

Put a cruc^e full of obsidian from Lipari that R Mansel gave me into the furnace – it upset and the greatest part run out what little remained appeared to be a glass of reddish color - & very hard –

February 18. Sunday

Misc

Went to Swansea Church in the morning & took a walk this evening – heard a Thrush sing

Weather

Sharp frost last night – a bright & warn sun all day –

February 19. Monday

Lab^y

Put into the flue of B. Kiln a crucible full of Obsidian from Lipari – put into Lab^y furnace a cruc^e, full of a black Stone that Logan gave me – after an hours burning it came out unchanged – R Mansell gave me two pieces of true Parian Marble – Weather

Wind SE. cloudy & raw all day – a cold and very gradual thaw –

February 20. Tuesday

Lab^y

baked in the Lab^y Furnace two small pieces of china Clay – they came out perfectly vitrified presenting a beautiful fracture – I next put into the furnace a crucible of Greenstone coarsly pounded – the weight altogether was $26\frac{1}{2}$ oz^{s.} – after it had remained in the furnace about $\frac{1}{2}$ an hour I took it out and found that it weighed exactly the same – when I left the Lab^y it was not cool enough fort me to examine – Weather – Froze a little last night, mildest in the day time – a little rain – 11 o clock this Evening Therm^r 38 –

February 21. Wednesday

Laby

prepared some clay for making casts from medals & c – broke the crucible of Greenstone that I burnt yesterday & found that part of it was Obsidian and the rest remained unfused in small pieces –

Weather –

Wind Easterly but thawing rapidly –

February 22. Thursday

Lab^y

in evaporating the Water from some China Clay which I had prepared, when it had evaporated almost to the consistency of paste and was boiling, I observed when I stirred it with a glass tube small flashes of a phosphoric light appeared on the surface

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Weather.

Wind E – Therm^r all day at about 33 to 35. no rain

Misc -

Bought a black horse of Keith to day – he is rising 5 – price £28-

February 23. Friday

Lab^y Got the cruc^e of Obsidian that I put into the Bisket Kiln on Monday out to day it was very little changed except that it was more vesicular than when I put it in – Weather.

Wind Easterly some rain fell in the night – about 1 oclock this afternoon it began to rain very hard & has rained more or less all evening – Mis^c-

rode over to Penllergare to breakfast & afterwards into Swansea – on the north side of the Cockett a good deal of Ice still remains on some of the fields

February 24. Saturday O

Laby

 1^{st} powdered some Granite from Cornwall and burnt it in the furnace. after it had been in about $\frac{3}{4}^{s}$ of an hour I took it out and found it to weigh the same as when put in – it had fused and returned nearly to its original form except that it was harder

2nd prepared some Nitrate of Iron for a red color –

Weather

Wind from SE – raining & unsettled all day. the Barometer has fallen & continues to fall apace –

February 25. Sunday

Weather

the wind last night & this morn^g very high from S.E.

Mis^c.

Found on my way to church that the last nights storm coming on when the tide was very high has done considerable damage to the roads - from the turn to St Helens to this end of the rope walk the tram road is almost entirely destroyed & the road itself rendered almost impassable by being covered by loose pebbles, as well being torn up in many places – the tide poured in between the other end of the rope walk and the Infirmary - & rushes down like a river as far as Clarence buildings – this rush of water took place at about 5 oclock this morning and lasted as they told me at the turnpike for upwards of an hour –

February 26. Monday

Weather.

Wind from N.E. Therm^r this even^g 36.

Misc^s. as the wind was not high the tide this morning did not do much damage although it was very high. yesterday evening it was so high as to enter the works & run nearly ½ way up to the canal –

Lab^Y put some Millstone Grit & Slag from an iron furnace into the furnace – the former did not change its state in the least & the latter boiled over –

February 27. Tuesday

Weather

Wind this morn^g. N.E. Therm^r about Sunrise 35. Heavy rain this even^g. About 11 oclock.

Finished making some China Compⁿ. ½ & ½. Ground & raw – gave it to Eli Laby Ball to make a cup & cast from as trials – they will be fired on Thursday & will be out on Monday -

Thrushes & Robins are now in song till about 9 o clock in the morning -, I have not yet heard blackbirds -I dined with Captⁿ. Hickey this Eveng.

February 28. Wednesday

Weather.

Mild – rain about 12 oclock for ½ an hour & again about 4. this evening Therm at 11 OC. $38\frac{1}{2}$

Misc^s - Went down to Caswell Bay with Mary & Miss DelaBeche – I got some Limestone partially polished by the sea water –

March 1. Thursday

Weather

mild and fine. this evening at 10½ Therm^r stood at 42.

Misc - Went into Swansea - The Court of Assize opened to day - this morning before breakfast the Black birds Thrushes & Robins were in full song –

 $Lab^{\underline{y}}$ Melted down a crucible of Porphyry in the furnace that had been fused before in the Biscuit kiln – it came out much less visicular than it was after the first burning -

March 2. Friday

Weather Mild & Fine. Wind N.E.

Misc^s. Crocuses begin to look very gay both yellow & white are in blow –

X prepared some Chlorine - & in one bottle full of the dry Gas I placed a piece of Limestone, & in another with a solution of it in water I put another piece of Limestone, & then sealed up both the bottles with clay & sealing wax over that – to try whether the Chlorine was strong enough I made another solution of it & put a piece of scarlet rag in it, which it very soon completely bleached. I put 2 pieces of Limestone of equal weight (the one polished by means of Mur^{1c}. Acid and after leaving them in it for about 5 minutes, I found that contrary to my expectations the polished piece had lost the most in weight –

[opposite page]

made the Cl. by pouring HClic acid upon per Ox. of Manganese in a retort – the action of the Acid on the m m. is as follows

SCAN IN DIAGRAM

MARCH 3 MISSING!!

March 4. Sunday

Weather. heavy rain from the East all most all day – Therm about 38. – Misc. \underline{s} the rain in the morning prevented our going to church.

March 5. Monday

Weather. Fine all day, about 8 oclock this evening it began to rain from the East-Misc^s - Went out hunting about Penllergare where I dined & slept

March 6. Tuesday

Weather – Wind Westerly – cold. a Hail storm came on about 11½ oclock.

Misc^s drove into Swansea with JDL this morning after break fast – the Egg cup & Medallion which were put into the Biscuit Kiln on Thursday were drawn yesterday they were hardened but not vitrified –

March 7. Wednesday

Weather – slight frost last night – wind Westerly, fine all day –

Misc^s on the road to Swansea I found a primrose in blow which is the first I have seen in a hedgerow this Year – Got some specimens of Granite containing a a [sic] great deal of Mica from the Ballast heap below the pilot house – a man down there said he believed the heap from which I procured them was part of the Ballast of a French vessel –

Lab^r- I fired in the Furnace a piece of the ½ & ½ china body & succeeded in vitrifying it.

March 8. Thursday

Weather – Wind Westerly. a slight frost last night – fine all day –

Misc. I got some more Granite from the Ballast heap to day & one piece of stone that looks like red Porphyry.

Lab^y Melted down some of the Granite – one crucible put into water the moment I took it out of the furnace – it had the effect of Granulating it – I did the same to a cruc¹ of the red Porphyry(?) [in original] & the immersion did seem to have much effect upon it as I found it to be very vesicular pinkish glass –

March 9. Friday

Weather -

Rather a sharp frost last night – Wind SE. fine.

Lab^y. Tried to melt some Barytes but the fire did not touch it – run down some Granite from the Ballast heap & took it out of the furnace at a white heat & threw it into water; found it changed to a hard vesicular glass. I next put some pummice into the fire and when taken out it was completely fused & looked like a dark grey glass. struck fire with a steel –

March 10. Saturday

Weather – rainy for the greater part of the day – Wind S.E.

Misc^s- went into Swansea but did not do anything in the Lab^r as I am having the furnace altered –

March 11.Sunday

Weather.

There was rain last night & this morning but it has held off all day, & the Glass is rising – wind S.E.

Misc^s Went into Swansea Church with Mary – in the evening took a walk – went to the hedge beyond the Ice house to look for primroses but could not find one –

March 12. Monday

Penllergare

Weather – fine & sunny – in the course of the day the wind changed round to the West –

Misc^{s.} came over here to breakfast & then went out hunting to Brynbach; we had one very long run – I saw a yellow butterfly out to day

March 13. Tuesday

Penllergare

Weather. Mild and rainy –

Misc^s - drove into Swansea in the morning with J.D.L – and walked out in the evening. as I came through Nidfwch I heard 2 or 3 Pheasants crowing.

March 14. Wednesday

Weather – Mild & rainy –

Misc^s - In the morning I worked with JDL in his Laboratory & distilled some laurel water – in the evening we went down to the river for an hour and took 11 fish with worms

March 15. Thursday o

Weather – Fine and Sunny all day

Lab^y. Made to comp^s. for fritting for Nattgarw Body – viz. 1st. 36^{oz} Si. To 3^{oz} K - & 2nd 30 Ch^a·St.3 K -SCAN /?/

Misc^s. Walked into Swansea this morn^g saw 4 Bulfinches together which shews they have not yet paired or at all events that they have not begun to build – Toad spawn is now plenty in all the pools – Honeysucles [sic] are in leaf – Rooks are now all busy in building –

March 16. Friday

Sketty Hall

Weather. Wind W. heavy showers all morning – cleared up a little in the afternoon – Lab^y Melted a cruc^e of Porphyry that had been rundown twice before but, it was not at all altered by its 3rd burning

March 17 – Saturday

Weather – Wind W. showery – wind high –

Lab^y. Opened the bottles of Chlorine & its solution, containing limestone which I placed in them & sealed up on the 2nd of this month & also one of Hydrogen – in neither case had the Limestone undergone any change – I precipitated some Alumina from Alum by means of adding Ammonia to a solution of it –

March 18. Sunday

Weather – Fine & mild in the morning – rain in the afternoon & evening – Misc^s walked into church – dined with Captⁿ Hickey in the evening

March 19. Monday - o

Weather – fine in the morning – rain in the afternoon – very mild –

Misc^s Walked into Swansea – came out with Moggridge – went to look for flowers about the Ice house – found several Primroses & two or three Wood Anemones in blow –

Lab^y washed & filtered some Alumina for the Nant Garrw China –

March 20. Tuesday

Weather – rather cold – Wind N.W. showers of rain & hail.

Lab^y Melted some of the hardest Porphyry of the lot from Cornwall in my furnace – it is not so glassy when fused as the other was –

March 21. Wednesday

Weather – Fine but cold –

Misc^{s.} Went into Swansea but did not do any thing in the Lab^y. In the garden here the gooseberry buds are beginning to shew the green of the leaves –

March 22. Thursday

Weather – Fine but cold –

Misc - Went to Penllergare early where we drew the covers with Stricks hounds for a fox but could not fine one – in the afternoon we started a drag and had a very good run –

March 23. Friday

Weather – the ground was completely covered with snow this morning but it was quite thawed by the sun before 10 oclock – this evening at 10 oclock my therm^r stands at 28⁰ –

Misc^s I slept at Burrows Lodge last night - & walked out here at about 2 oclock-

March 24. Saturday - o

Weather – in the morning cold –about 11 oclock there was a storm of frozen rain which lasted for about ½ an hour & it then turned to rain – wind in the morning S.E. in the afternoon W.

Lab^y run down some greenish sort of slate that came in the lot of Stones from Cornwall – it burst the crucuble was very vesicular – retaining its color

March 25. Sunday

Weather – fine – Wind W –

Misc^s Went to church in the morn^g – in the evening took a walk – Cuma Anemones Persian Iris's Saxifrega oppositifolia white Arabis & purple & white Mezesems are now in blow in the garden – in the fields I found Bluebell leaves up & coltsfoot in blow

March 26. Monday o.

Weather. Fine. Wind E. Rain last night –

Lab^y - prepared some china clays - & made some proto sulphuret of iron according to Reids mode –

March 27. Tuesday

Weather. Very fine & sunny –

Misc^s walked over to Penllergare to breakfast & then into Swansea – observed several small red & black dung beetles flying about – also Tortoishell [sic] & Sulphur Butterfies [sic] –

Lab^y- mixed some of the two frits for the Nantgarw body with alumina –

March 28. Wednesday

Weather very fine -

Lab^y finished preparing some Nantgarw & Dresden china body – also tested some earth from Cline Wood for manganese, but found the Iron to come very much in my way –

March 29. Thursday

Weather – very fine – a mist over the sea in the morning, till about 9 oclock

March 30. Friday

Weather very fine – a mist over the sea like yesterday

Misc – saw a large flight of oyster catchers on the sands

Lab^y made some Dresden body with a 12th of Potash –

March 31. Saturday o

Weather cloudy this morning but cleared off & was a fine afternoon Glass fell last night but is still very high –

Misc^s walked into Swansea & observed the Gulls in the fields –

Lab^y- fired up with a bit of the clay I made yesterday - & it seems to answer very well –

April 1. Sunday x

Weather – fine – but cold – Therm^r this evening at 11¹/₄ oclock 29^{deg –}

April 2. Monday o

Weather – Therm^r this morn^g at 6½ oclock 27 – fine

April 3. Tuesday x

Weather – a little rain fell to day. Wind W. Mild –

Lab^y- melted some Cornish granite – the Mica would not fuse –

April 4. Wednesday x

Weather. Fine- Wind W-

Misc^s- Dined at Penllergare

April 5. Thursday o

Weather – fine. Wind W. Cloudy – roads very dusty –

April 6. Friday x

Weather – some rain fell last night – misty all day –

Lab^{Σ} got the trial of Dr. Body with a 12th K. from the Kiln today it was not nearly fired up – made a dip for a glaze of 5 of china clay and one of K –

April 7 – Saturday o

Weather – Heavy rain from S.W. in the morning –

Misc - Cowslips in blow in the field in front of the house

Lab^y Dipped the china I got from the Kiln yesterday with the Glaze I made yesterday & fired it in my furnace but it did not run –

April 8. Sunday x

Weather. Showery & raw –

Misc[§] The Horse chesnuts by the Dining room window are in leaf – this evening I went up to Llandiloes with Mr DelaBeche to attend a fair which is to take place tomorrow –

April 9. Monday - x

Weather – Fine and sunny

Misc^s We walked out this morning into the Fair but there were no horses worth looking at – we also went into one or two quarries & procured some Trilobites – we afterwards went as far as Cross inn in the Fly and then walked over by the Grouse Hills & Mynydd Piscodlyn & Bryn Bach – about Llew Bridge the Fly overtook us and as I felt poorly & tired we went on to the turn to the Cockitt in it - & then walked across here – by the road side I observed some tadpoles in a pool –

April 10. Tuesday x.

Weather. Rainy in the morning –

 $Misc^{\underline{s}}$ Crown Imperials are in blow – I am laid up with the measles and cannot go out

April 11. Wednesday x.

Weather – Fine & seasonable

Misc^s - still unable to go out –

April 12. Thursday x.

Misc^s same as yesterday –

April 13. Friday – x

Misc^s still confined to the house – Moggridge yesterday found some of the Canther Palustris at Penllergare –

[opposite page]

Good Friday -

April 14. Saturday O

Weather rain last night –

Misc^{s.} Rather cold – I did not go out –

April 15 Sunday x

Weather - stormy - wind very high from the West -

April16.Monday o

Weather – wind very high from West showers of Snow and Hail –

April 17. Tuesday – o

Weather – still cold – with storms of Snow and Hail – wind N.W.

April 18 Wednesday x

Weather – this morning till the sun thawed it the ground was quite covered with Snow. Wind N. About 9½ o clock it began to snow again & continued a heavy fall with little intermission till about 12.oclock – it then cleared up & was a fine afternoon though very cold –

Misc- I went into Swansea which is the first time I have been out since having the measles

April 19. Thursday x

Weather – Fine & very cold – Wind N.

Misc – walked into Swansea. saw several Swallows. Moggridge tells me that he saw some the day before yesterday –

April 20. Friday o

Weather. Wind form N.W. not so cold as yesterday. Fine –

Lab^y. Mixed 4 oz of Cank [?] Stone (Sulphate of Barytes) 2 of Blue clay and 2 of cornish stone to make a Jasper body –

April 21. Saturday x

Weather -

Wind S.W. high – Glass fell last night – this evening about 6 o clock it began to rain hard & continued so all evening –

Misc^s I observed in my Garden the leaves of the Butterfly orchis up – though I have had it for two years during which time it has flowered & looked very well it has never increased at all – I saw Wood Sorrell in blow today

Lab^y- Made a body of B.½ & ½ with a 6th of Potash – dried the Jasper body I made yesterday but found it too short to be worked easily

April 22. Sunday x

Weather – mild. Wind W. A great deal of rain fell in the course of the day –

April 23. Monday x

Weather – Mild. rainy all day

Lab pounded some cornish stone fine & passed it through a lawn seive [sic]. no 10 – put it in the furnace & left it there for ½ an hour – it was completely melted into a white vesicular mass –

April 24. Tuesday x

Weather – rainy – Wind N & E –

Lab^y passed some granite through a 10 lawn sieve & fired it in the furnace – it melted into a whiteish mass not very vesicular

April 25. Wednesday x

Weather fine – Wind N.E. high –

Lab^y put some of the slate from Cornwall in to the furnace – it run into a pummice

[opposite page]

April 22 to 25 -

Vegetation generally is very backward the rain however has brought the leaves grass &c a little on – the Grass on the lawn was began to be cut on the 24th – the Ribes sanguinea turbar ranunculuses Iris purpura [? Ink messy] and many other flowers are now in full blow – black birds are in fuller song all day than they have been for the whole spring –

April 26. Thursday – o

Weather fine – Wind N.E.

Misc^s Mr De la Beche, S Benson JDL & myself went up to the Lamb & flag at the head of the Swansea valley to get a fossil tree – we arrived there about 8½ o clock & found Moggridge there before us – Melyn Llacch where the trees are situated is about a mile & a half from the Lamb & flag – there are 4 of them all Sigillarias – we got one away which was 13 foot 6 inches high & 1 f^t 6 in^s in diameter by digging down to the roots we found that they sprang from a Vein of Coal – there is another tree that springs from the same spot 5ft. 6 inches in circumference – but only 4 ft 2 inches high – We got back to Penllergare about 7 oclock this evening –

April 28. Saturday x

Weather. Fine. Wind N.E.

Misc^s Mr De la Beche & myself walked over from Penllergare this morning in time for breakfast – I afterwards went into Swansea –

April 29. Sunday x

Weather – fine. Wind N.W.

Misc - after church I walked over to Penllergare – found 3 pretty good fossils –

April 30-Monday x

Weather – Wind S.W. fine in the morning but in the evening it rained heavily – Misc^s John drove me into Swansea about the middle of the day from whence I walked home

May 1. Tuesday -x

Weather – wind S. & S.E. heavy rain –

Lab^y pounded some granite from the ballast heap very fine so as to pass through a 10 Lawn – and fused it in the furnace – a crust formed at the top which was not quite fused –

May 2. Wednesday x

Weather. Wind S.W. rainy – mild

Lab^y put 100 grains of Iron ore into Nitric Acid for an analysis of it –

May 3. Thursday x

Weather – Wind S.W. rainy –

May 4. Friday x

Weather – rain all day – mild –

May 5. Saturday. X-

Weather – fine – wind N.E.

Misc^s walked over to Penllergare to breakfast & afterwards into Swansea where I went with DelaBeche & Young Francis to Baths yard & got some specimens of Copper ore –

Lab^{Σ} fired a trial of B.1 – B.1. & Silicate of K (3 of S. to 1 of K) 1 – it was not fired up but came out a good white & self Glazed -

[opposite page]

May 1 to 5 -

This weeks mild & rainy weather has brought vegetation on very much – Horse chestnuts Sycamores & Tachamahaks [?] are in full leaf - & beech trees will soon be the same – Whimbrils have not left the coast yet – Water Lilies begin to shew their leaves above water –

May 6. Sunday x.

Weather – very fine – Sunny & hot –

Lab^y tried some iron stone with Byers to find the quantity of Iron contained – we mixed with it ½ its weight of Lime & put in the furnace – when we took it out it was fluxed & we found a small peice [sic] of metallic iron at the bottom of the crucible which was full of Silicate of Lime –

Misc - walked over to Penllergare where Beech is staying & dined & slept there – went down to the colliery on Penderry & got some specimens of ferns & c in the coal shale –

May 8. Tuesday x-

Weather – Very hot & sunny –

Misc^s I remained at Penllergare all day –

May 9. Wednesday x

Weather – Hot & sunny – Wind in the evening E.

Lab^y tested some crystals of copper & found them to be muriate –

May 10. Thursday x

Weather – Wind E. high in the morning – bright sun –

Misc^s - walked with Mr & Mrs DelaBeche & Mary through Cline Wood where we made some sketches – Mr DeleB. and myself searched for fossils in the coal shales but with little success

May 11. Friday x

Weather – very fine –

Lab^y Mr DeleB. brought a bit of copper ore to assay – we put it in the furnace with a little salt upon it, but as we were pressed for time we drew it before the salt was quite burnt out and were nearly stifled with the chlorine which was evolved – we poured out the liquid ore from the crucible & found it to be very rich, but the salt not being volatalized we only obtained a chloride of copper & did not weigh it –

May 12. Saturday – x

Weather – dry & hot –

Lab^y tried the copper again in the dry way & put some Borax with it as a flux – it run into buttons but not of pure copper – we also made a concentrated solution of nitrate of copper & put it in the air pump to crystallize –

May 13. Sunday x

Weather – dry & fine – the glass fell last night –

Misc^s in the afternoon I walked over the Mumble hill to the cave between Limeslade & Langland accompanied by Mr De La Beche

May 14. Monday x

Weather - cloudy & slight showers -

Misc^s did not go out on account of my sprained ancle – Named two or three fossils from Brynbach colliery between Llanelly & Llangenech – Neuropteris cordata appears to be the most frequent, as every specimen of the shale that I have got, abounds with it –

May 16. Wednesday. X

Weather - Clear & fine -

Misc. My ancle much better, drove into Swansea in the afternoon – This morning Griffiths brought me a lot of very good fossils from a pit his brother is sinking near groves end – the shale they are from us about 3 fathoms from the coal –

May 17. Thursday o

Weather – fine – there was a slight shower about 4 o clock P.M.

May 18. Friday o.

Weather – fine – rather cold –

Misc - Went into Swansea this morning in the carriage – The Beaches came to us to day –

May 19. Saturday -x

Weather. Rain nearly all day – it cleared up between 4 & 5 o clock –

Misc - walked up to the Town hill quarry & found several specimens of calamites & Lepidodendrons – got some very good specimens of ferns on coal shale from Griffiths of Penllergare but do not yet know which shale they come from

May 20. Sunday -x

Weather. Rainy all day –

May 21. Monday o

Weather, fine all day – began to rain late this evening –

Lab^y- tested some black marble from Llangyndewyrn [?] & found that it contained a considerable portion of Iron –

May 22. Tuesday – o

Weather – fine all day – it rained heavily in the night

May 23. Wednesday x

Weather – fine –

May 24. Thursday x

Weather. fine – but rather cloudy

May 25. Friday x

Weather fine & sunny. Therm^r at night generally about 50^{deg}

Lab $^{\vee}$ weighed 400 grains of Course Porphyry & put it into an ware Tube, ready to be melted & to try & catch the gass [sic] that escapes from it during fusion –

May 26. Saturday x

Weather fine – sunset very red – new moon –

Misc^s Went down to Lilliput this morning where I saw my dearest Bessie & the result of the interview was that this has been the happiest day of my life –

[opposite page]

May 26.

I am now made happy by the prospect in life that is before me, that of being united to her I love – May God grant me grace to fulfil those resolutions I have made most seriously that no conduct of mine shall ever for a moment cause her sorrow or uneasiness – May we live together loving one another here, & through our lives may we never forget that duty & Love we owe to Thee most Gracious God, so that hereafter we may obtain Thy Heavenly Kingdom where sorrow is not known & friends are never parted –

May 27. Sunday. X

Weather – fine. Wind high S.E.

Misc^S Went to church in the morning where Dr Hewson preached a very fine sermon on the Ascension – In the afternoon I walked down to Lilliput, & afterwards up to Cline common with my dearest Bessie, where we walked till it was time to return home –

May 28. Monday x

Weather – Mild & fine rain this morning, which cleared of about 11 or 12 o clock –

May 29. Tuesday – x

Weather – showery & dull all day

Misc^s went to Swansea in the morning early – about midday I went down to Lilliput & took a walk with Bessie –

May 30. Wednesday x

Weather. Fine all day –

May 31. Thursday – x

Weather – rain in the night & early this morning – fine all day

Mis^c- went to Penllergare to Breakfast, & saw Lady Mary Cole there – I afterwards went into Swansea & then came on here where I spent the remainder of the afternoon with Bessie –

[opposite page]

Remarks since May 5

about the 6th. Beech trees were generally in leaf – on the 10th I saw dead nettles in blow & butterflies of several sorts out – 24th Sand roses in blow on the warmest parts of the Sand Banks – Bog Beans in flower – Veronica camelias in blow commonly – There are great numbers of Cockchaffers this year –

June 1. Friday x

Weather – rain in the night, fine all day

Misc^s went into Swansea in the morning - & about 2 oclock went down to Lilliput where I dined & spent the evening.

June 2. Saturday - x

Weather – rain in the night & this morning – Fine & mild in the day –

Lab^y This day week Mr De la Beche put some Sulphuret of Lead (Lead ore) in Nitric acid & left it to stand. on Monday I tested the liquid for lead with Hydrosulphuret of Ammonia & Hydriodate of Potash both tests acted – to day we again tested for lead & did not find it – we then dried the earthey matter &c that remained at the bottom & found the lead in the form of a sulphate –

[opposite page]

The Lead ore first formed a Nitrate of Lead part of the Sulphur floating on the surface & nitrous acid escaped –

in the course of the week the sulphur took the ox: of the Nitrate & was converted into :S & thus a sulphate of Lead was formed - & nitric oxide escaped -

The above is the process I suppose to have taken place but I have not yet proved it to be right –

SCAN DIAGRAM

June 3. Sunday x

Weather fine in the morning – heavy & frequent showers in the afternoon.

June 4. Monday x

Weather – Fine – some rain in the night –

June 5. Tuesday o

Weather – very Fine –

Misc[§] went over to Penllergare at about 1 oclock – met Mr DelaBeche & Bessie there – we remained to dine there & went to the coal crops on Penderry & Coetrennig – we got several very good Fossils – we rode home in the evening –

<u>June 6 – Wednesday</u> x

Weather – Fine – wind N- & NW-

Lab^y- Tested the Lead ore from the Coal basin that Moggridge gave DelaBeche for Silver but could not find any – I converted the sulphuret into a Sulphate from which I procured the metallic lead by means of a Blowpipe & dissolved that in Nitric Acid –

June 7. Thursday x

Weather fine – wind N & N.W. cold –

Misc^s Went into Swansea in the morning & about 12 oclock went down to Lilliput from whence took a walk with Bessie to Caswell Bay, where she made a sketch –

June 8. Friday x

Weather – Fine –

Misc^s Went down J.Thomas's colliery with him this morning got some very good fossils from the shale roof of the workings which is full of them – I noticed

particularly Sigillarias Lepidodrendons (elegans?) a great quantity one or two sorts of Neuropteris, Sphenophyllum erosum? & a pecopteris –

June 9 – Saturday – x

Weather Fine in the morning & came on to rain about 4 or 5 &c, which did not last long

June 10. Sunday – x

Weather – rain nearly all day –

June 11. Monday. X

Weather – Mild. showery –

June 12. Tuesday x

Weather. Mild – very showery

Misc^s went into Swansea – on the Sands I saw a sea Devil cast up –

June 13. Wednesday o

Penllergare

Weather – Heavy rain and Thunder about the middle of the day

June 14. Thursday x

Penllergare

Weather – rain nearly all evening – fine in the morning –

June 15. Friday o

Penllergare

Weather – rain nearly all day

June 16. Saturday

Penllergare

Weather – rain the greater part of the day –

June 17.Sunday x

Penllergare

Weather – showers in the morning fine all the rest of the day

June 18. Monday x

Penllergare

Weather – Heavy rain the whole of the day

June 19. Tuesday

Penllergare

Weather Fine – wind W. rather high cloudy –

Misc^s Walked into Swansea in the morning –

June 20. Wednesday – o

Penllergare

Weather. heavy rain the whole day – Wind W.

June 21. Thursday x

Penllergare

Weather – Fine – wind high – showers

June22. Friday x

Penllergare

Weather – Fine –

Misc[§] walked into Swansea with John –

Laby put some Cobalt & Zaffre into ::N - SCAN THIS

June 23. Satiurday x

Penllergare

Weather – Fine – very hot –

Misc^s Rode with Bessie to Sketty & then on into Swansea

June24. Sunday – x

Penllergare

Weather – Fine – very hot –

June 25. Monday. X

Penllergare

Weater. Fine – sultry & hot –

Misc^{s.} Rode into Swansea with John & Bessie, they went to the 1st of a course of lectures on chemistry &c by Dr Warwick –

June 26. Tuesday x-

Penllergare

Weather. cloudy very sultry

Misc^{s.} Walked out with Bessie over the Coedtrennig meadows & up the Traedegar cwm – we made one or two sketches – I fished down the cwm & took 24 fish

June 27 – Wednesday 0-

Penllergare

Weather Fine – hot –

June 28. Thursday o

Sketty Hall

Weather – fine -

June 29. Friday x

Penllergare

Weather. fine -hot -

Misc^{s.} LWD started for London by steamer to Bristol at 11 o clock this morning – I attended Dr Warwicks Lecture which was on Combustion, & Meteroic stones –

June 30. Saturday o

Penllergare

Weather – Fine in the morning – rain set in about $1\frac{1}{2}$ o clock - & continued all evening –

[opposite page]

June. 30.

the Crops in general look very well. very little hay is yet cut – Insects of all kinds are very plentiful this year, especially rose beetles – The birds have continued in nearly full song throughout the whole month.

July 1. Sunday x

Penllergare -

Weather.fine -

Misc^{s.} Went to Llangefelach church in the morning & in the afternoon walked up to BrynBach with Bessie

July 2. Monday -x

Penllergare

Weather. fine. hot - a fresh air in the morning –

July 3 – Tuesday x

Penllergare

Weather – fine. very hot –

Misc^{s.} went out fishing before breakfast & took 10 trout – rode with Bessie into Swansea after breakfast –

July 4. Wednesday x

Penllergare

Weather – Fine. very hot.

Misc^s went out sketching with Bessie

July 5. Thursday o

Sketty Hall -

Weather. very hot & sultry all day in the evening a heavy storm came on. ½ past 10 during rain Therm^r stood at 60.

Misc - We returned home today from Penllergare

July 6. Friday – x

Weather. showery. wind high -

July 7. Saturday o

Weather – Showery

Misc^s. Walked into Swansea in the morning & afterwards over to Penllergare where I dined & came home in the evening –

July 8. Sunday x

Weather. showery – mild –

July9. Monday x

Bristol -

Weather – Showery in the morning fine afternoon –

Misc^s started from Swansea this morning by mail & arrived here a little before 5 – am just going on to London by Mail which will start at ½ 7 –

July 10. Tuesday o

London – Hatchets Hotel

Weather – sunny & hot

Misc^s arrived here this morning about 6½ oclock - went about all day executing commissions – in the evening I went to the Opera which was Malek Adel –

July 11. Wednesday o

London Hatchets Hotel

Weather. very hot –

Misc^s had a headache in the morning – in the afternoon went about some commissions

July 12. Thursday o

London

Weather – still hot –

Misc^s - finished most of my commissions & went to see exhibitions of Pictures of the British institution and the society of Water-color painters –

July 13.Friday x

London

Weather – oppressively hot and sultry –

Misc - having all our business here Papa and I are going to start homewards per the Monarch coach at 6.oclock P.M.

July 14 Saturday x

Sketty Hall

Weather – fine all night – but heavy rain and high wind all day –

Misc^s We got to Bristol this morning at about 8½ o clock & came on from thence at 10 oclock by the Bristol steamer where we found Mr DelaBeche – outside the river we saw the Great Eastern steamer which is preparing for another journey to America – on this side the Naas [?] point we had a very heavy sea which made me very ill –

July 15 – Sunday x.

Weather – Fine. wind high –

Misc^s walked into Swansea in the morning & down to Lilliput in the afternoon

July 17. Tuesday x

Weather – Fine in the morning – rainy in the afternoon – Wind S.W.

July 18. Wednesday x

Weather – Fine. Wind N,.

Misc^s- Went into Swansea in the morning & walked up to Cline Common in the afternoon with Bessie –

July 19. Thursday x

Weather – Fine – Wind – W.

Misc^s went into Swansea in the morning & attended a meeting of the board of Guardians – in the afternoon I went down to Lilliput where I dined –

July 20. Friday x

Weather. Fine. a little rain fell in the night –

July 21. Saturday x

Weather – Fine. showers in the night & early this morning –

Misc^s went for a walk over the Mumbles hill with Bessie & Mary in the afternoon

July 22. Sunday x

Weather. Fine – Wind. N-

July 23. Monday x

Weather – cloudy – no rain. Wind N.W.

Misc^s Walked into Swansea with Bessie – Agreed with M Bevan for the purchase of the new Pottery –

July 24. Tuesday x

Weather. Fine all day with the exception of a storm about 4½ in the afternoon –

July 25. Wednesday x

Weather – Fine – Wind N.

Misc^s Walked into Swansea in the afternoon – committed a woman named Mary Thomas for trial at the ½ Sessions for felony –

July 26. Thursday -x

Weather – Heavy rain set in about 9 oclock A.M. & continued till 3.P.M.

July 27.Friday - x

Weather. showery x -

Lab^y- tried some Lead ore (a carbonate) from near Bristol – fused with Blowpipe & found it to contain as nearly as I could make out 75 percent of Lead – I also put 50 Grains in Nitric Acid which after it is dissolved I shall weigh, & find the loss of weight, which will be the quantity of Carbonic Acid it [? word deleted] contained –

July 28. Saturday x –

Weather. showers in the morning.

July 29. Sunday x-

Weather. showery –

July 30. Monday x.

Weather. Fine.

Misc^{s.} Went into Swansea with John in the morning and thence we drove on to Penllergare where we spent the afternoon and returned home to dinner –

[opposite page]

July - 30 -

The Hay harvest is not yet finished in consequence of the showery weather we have had lately – I have observed within the few last days great numbers of the little Willow wrens in the garden –

July 31. Tuesday – x

Weather – Fine – Hot –

August 1. Wednesday o

Weather – Fine in the morning – about 11 o clock it began to rain & continued raining heavily the whole day

August 2. Thursday -x

Weather. Heavy rain in the morning – cleared in the afternoon – but has been cloudy & windy all day

Misc^s- Went into Swansea in the morning and into a Ball & Fireworks with Mary in the evening –

August 3. Friday x

Weather – Heavy rain all evening – mild

Misc^s. Walked in to Swansea with Bessie in the morning & round Horn thence by Penllergare with John at about 2 oclock –

August 4. Saturday x

Weather – Heavy & frequent showers in the afternoon – cloudy – Wind S.W.

August 5. Sunday -x.

Weather – Windy. Heavy showers all day

Misc^s. Went down to Lilliput with Bessie to breakfast – DelaBeche returned home last night from Devonshire where he has been for a week – After breakfast I walked into church where we all stayed the sacrament –

August 6. Monday x-

Weather – stormy – one or two very heavy showers

August 7. Tuesday x

Weather – windy & cloudy. not much rain

August 8. Wednesday x

Weather – Fine. no rain all day Glass rising. above 30 inches –

Misc^s Went with DelaBeche & John in the afternoon to look at the river and Basin – we got one or two good specimens of Copper ore – I dined at Lilliput –

August 9. Thursday x

Weather. Heavy rain till about 12 oclock – when it cleared off – Wind SW.

Misc^s- Took a ride with Bessie & Mary to see Arthurs stone on Cefn Bryn –

August 10. Friday x

Weather. Rain nearly all day –

August 11 Saturday x

Weather. cloudy – no rain –

Misc - Went to the christening of Fannys little boy & dined at Burrows Lodge afterwards –

August 12. Sunday -x

Weather – rain nearly all day

August 13. Monday x

Weather – Fine. Wind W –

August 14. Tuesday x

Weather. Fine – Glass high – fell a little at about 9 to 10 oclock this evening – Misc^s went into Swansea in the morning & remained there nearly all day executing commissions – dined at Lilliput –

August 15 – Wednesday x

Weather – Fine

Lab^y. DelaBeche tried some Sutton Stone of which the mullions are built – as near as we could guess it did not contain more than 50 per cent of Lime

August 16 – Thursday –

Penllergare

At 11 o clock this morning was united to my dearest Bessie – may God grant that he future life may be a happy one – Weather fine.

August 17. Friday

<u>Penllergare</u>

Weather – heavy rain in the morning mild –

Misc^s. Bessie was not very well this morning & we stayed at home all day

August 10. Saturday

Penllergare

Weather – Fine but unsettled

August 19 – Sunday

Penllergare

Weather – showery

August 20. Monday

Penllergare

Weather – Stormy - -

[opposite page]

For our North welsh tour see small Journal –

August 21. Tuesday

Llandeilo

August 22. Wednesday

Aberystwith

August 23. Thursday Dolgelly

August 24. Friday Dolgelly

August 25.Saturday Dolgelly

August 26. Sunday Dolgelly

August 27. Monda Dolgelly

August 28. Tuesday Talyllyn

August 29. Wednesday Tal y Llyn

August 30. Thursday Tal y Llyn

August 31. Friday Dolgelly

September 1 – Saturday Dolgelly

September 2 – Sunday Dolgelly

September 3. Monday Dolgelly

September 4. Tuesday Harlech

September 5. Wednesday Harlech

September 6. Thursday Beddgelart

September 7. Friday Beddgelart September 8. Saturday Beddgelart

September 9. Sunday Beddgelart

September 10. Monday Beddgelart

September 11. Tuesday Beddgelart

September 12. Wednesday Llanberis

September 13. Thursday Llanberis

September 14. Friday Bangor

September 15. Saturday Liverpool

September 16. Sunday Liverpool -

September 17. Monday Liverpool –

September 18. Tuesday Liverpool

September 19. Wednesday Bangor

September 20. Thursday Bangor –

September 21. Friday Bangor –

September 22 Saturday Bangor

September 23. Sunday Bangor

September 24. Monday Capel Curig September 25. Tuesday

Capel Curig –

September 26. Wednesday

Dolgelly

September 27. Thursday

Dolgelly

September 28. Friday

Llanidloes

September 29. Saturday

Brecon

September 30. Sunday

Brecon

October 1. Monday

Sketty Hall -

October 2. Tuesday -

Weather fine –

October 3. Wednesday

Weather – fine

October 4. Thursday

Weather – fine

October 5. Friday

Weather, fine –

October 6. Saturday

Weather fine -

Misc – DelaBeche came home yesterday evening & dined with us today – This morning I went up to Byers & purchased several minerals &c of him –

October 7 – Sunday

Weather fine –

October 8. Monday

Weather – fine – Wind N.E. - & has been in the same quarter for one or two days

October 9. Tuesday

Weather. Fine. cloudy – Wind NE –

Misc- Walked with Bessie down to Lilliput after breakfast and afterwards into Swansea

October 10. Wednesday

Weather – looked rainy in the morning but cleared off fine in the afternoon – Wind SW

Misc^s Went on to Fairwood moor to look for Snipes – got there about 12 oclock – I did not find very many – I bagged 12 –

October 11 – Thursday

Weather – Wind S.W. & W. Rain in the evening –

October 12. Friday

Weather – Cold – heavy hail storms –

October 13. Saturday

Weather – Fine. very cold. Snow on the Hills at the head of the Swansea valley

October 14. Sunday

Weather – heavy rain from West the greater part of the day

Misc^s I walked into church –

October 15. Monday -

Weather – wind high from the W. & S.W. cloudy – no rain –

Misc^s I walked into Swansea in the morning – and afterwards Bessie & I dined at Wheatlys –

October 16 – Tuesday

Weather – windy – heavy rain all afternoon & evening – Wind. W-

Misc^s Walked into Swansea in the morning with Bessie – attended the quarter sessions in the afternoon, & dined with the Magistrates –

October 17. Wednesday

Weather – Not much rain & one or two hail storms –

Misc- Made calls with Bessie -

October 18. Thursday

Weather - Heavy rain nearly all day -

Misc^s did not go out –

October 19. Friday

Weather - Fine - Wind N.W-

October 20. Saturday

Weather – Fine – warm

Lab^y Prepared a jar of pounded Greenstone to get into the Bisket Kiln on Monday –

October 21. Sunday

Weather – frequent showers of small wetting rain – Mild. Wind S.W.

Misc^s I walked into Swansea church the rest of our party remained at home as Mama is not well – in the afternoon I went down to Lilliput and spent an hour with DelaBeche

October 22. Monday

Weather. Wind S.W. threatening all day no rain –

Misc^s walked into Swansea in the morning and made calls with Bessie in the afternoon

October 23. Tuesday

Weather – Wind S.W. threatening all day – heavy rain in the evening after dark –

October 24. Wednesday –

Weather – Wind NW. showery – clear and fine in the intervals –

Lab^{y.} tried some earthy matter from a copper mine for lead & copper – found it contained both but more of the former than the latter –

October 25. Thursday

Penllergare

Weather Heavy rain nearly all day –

Misc. Bessie & I came here about 3½ o clock to day & intend to remain here for a week

October 26. Friday

Penllergare

Weather – Fine, with occasional showers

Misc. Went out hunting with John – the hounds met on Gelly wastad – we had not much sport –

October 27 – Saturday

Penllergare

Weather – pouring rain all day –

Misc^s Drove into Swansea with John − I bought a horse of Keith for £40 −

October 28. Sunday

Penllergare

Weather – Fine in the morning tremendous rain in the evening

October 29. Monday

Penllergare

Weather – The storm last night was very violent, but has not blown down any trees of any consequence about here – the river was very much flooded this morning –

Misc[§] I went into Swansea to breakfast & returned here about 2 oclock & then went out shooting with John – I killed a Pheasant & rabbit & he killed a Wood Pigeon –

October 30. Tuesday

Penllergare

Weather – Fine

Misc. I rode into Swansea in the morning & joined the hounds on Town hill in the afternoon

October 31. Wednesday

Penllergare

Weather Fine -

Misc^s. Went for a walk with Bessie in the morning & afterwards went with John to look for a woodcock – we had no sport –

November 1. Thursday

Sketty Hall

Weather – cloudy – not much rain

Misc^s returned from Penllergare today –

November 2. Friday

Weather – cold with heavy storms

Misc^s Went into Swansea where I remained nearly all day shopping &c with Bessie

November 3. Saturday

Weather – rain the greater part of the day – cold & RAW –

Lab^y put some melted greenstone with about a third by measure of Lime into the furnace & let it cool slowly – when I examined it I found it had exactly the appearance of the melted Greenstone without lime –

November 4. Sunday

Weather – showery – Wind W- Barometer 28 & 9.10ths inches –

Misc^s the weather was so uncertain this morning that we did not go to church – in the afternoon I walked down to Lilliput & dined with DelaBeche

November 5. Monday

Weather – stormy –

Lab^Y DelaBeche brought a mineral which he got from J.Thomas – it came from Scotland – We found it to be a carbonate – but could not ascertain of what – it is certainly neither Lime nor Lead – X

[opposite page]

X

We tested it for Strontian and Barytes – it is certainly not the former as when its nitrate & Muriate were moistened & put in the candle the flame was not colored – some of the tests for the latter acted rightly & we think it may be that –

Monday 6. Tuesday

Burrows Lodge

Weather – fine in the morning – in the evening heavy rain & high wind set in from the S W

Misc^s Bessie & I came in here to day & intend remaining for a Week – we made several calls & dined with Moggridge in the evening

November 7. Wednesday

Weather – stormy & uncertain – wind very high last night –

Lab tested J Thomas [']s mineral with DelaBeche – we now believe it to be carbonate of Zinc –

November 8. Thursday

Weather. wind last night tremendously high – not much rain to day –

Misc - about 12 oclock I went to Sketty & took a ride with Mary over Cline Common

-

[opposite page]

8. saw a foxglove in blow

November 9. Friday

Weather tolerably fine in the morning heavy rain in the afternoon – Misc^s Bessie not being well to day I did not go out much –

[opposite page]

9. saw a sand Martin –

November 10. Saturday

Weather. fine -

Misc- We did not go out as Bessie was still unwell and I was laid up with a bad headache and tooth ache –

November 11. Sunday

Weather – heavy hail and rain in the morning – fine in the afternoon

November 12. Monday –

Weather – last night there was a sharp frost & the ice remained on the pools in the shade till midday – Wind N. & N.E. Clear and fine all day

Misc^s rode over to Penllergare with DelaBeche in the afternoon to see how John is as he has a bad fall from his horse on Wednesday last at Cowbridge

November 13. Tuesday

Weather. sharp frost again last night – clear and cold all day –

November 14. Wednesday

Weather – Fine and clear – not so cold as yesterday –

Misc^s rode over with Mary to Penllergare in the afternoon

November 15. Thursday

Sketty Hall -

Weather. cloudy & raw. no frost last night –

Misc. We returned here today at about 3 oclock –

November 16. Friday

Sketty Hall

Weather. Cloudy – Wind E – no rain –

Lab^y- I tried the mineral (we were working at on the 7th) for Zinc – and believe it to be as we supposed a carbonate of Zinc – a solution of its Nitrate in distilled water threw down a white precipitate with both Hydrosulpuret of Ammonia and Ferrocyanate of Potassa- with Hydriodate of Potassa however it did not appear to combine in any way at least there was no precipitate

November 17. Saturday

Weather. Wind getting up to N. Fine –

Misc^s. walked round by Penllergare into Swansea - & then home here -

November 18. Sunday

Weather – heavy rain from the East for the greater part of the day

November 19. Monday

Bristol –

Weather – heavy rain from the East nearly all day – raw & cold –

Misc^s DelaBeche & I started from Swansea at about 8 oclock this morning by Mail and arrived here at the Bush Inn about 6.oclock p.m.

November 20. Tuesday

Weather – small drizzling rain raw & cold – Wind E –

Misc. We started this morning & went first to see about furniture. Kingstons in Park Street was the shop we fixed upon where I purchased several things – we afterwards went to see the exhibition of Pictures at the institution some of which were very good – Mr Stutchbery, the curator of the Institution then accompanied us to the house of Mr W. Raddon 10, Cumberland Terrace where we saw some very fine engravings and also a very fine collection of American insects which he has procured from the Copal Gums Turpentine &c. Imported into Bristol – from his house we went to Mr Stutchlberys & then proceeded up to Mr Wests at the Observatory, Clifton – where I was much amused by the sight of some machinery he has invented for engraving – from here we returned to the Bush to dinner –

November 21. Wednesday

Sketty Hall

Weather – wind N.E. cold and raw – not much rain –

Misc[§] DelaBeche & I left Bristol this morning by mail & Arrived here at about 8 oclock – we were delayed on the road for some time by one of the leaders breaking his leg on Newton Down

November 22. Thursday

Weather – much the same as yesterday

Misc^s went into Swansea in the morn^g & rode round by Penllergare in the evening –

November 23. Friday

Weather – Fine – Wind E.N.E.

Lab^Y burnt 8 parts of Lime 3 of Silica and about ½ or ¾ of Alumina mixed together in my furnace – they appeared however to have undergone no change when I took them out –

November 24. Saturday

Weather. Wind due east – very cold –

Misc- Went on to Fairwood Moor with my gun – saw very few Snipes. bagged 5 –

November 25. Sunday

Weather – Wind very high. due East – a sharp frost last night –

November 26. Monday

Weather – wind very high last night from the East, accompanied by rain & Snow – all the Aberavon Hills &c remained covered with Snow all day 0 towards the Wind [sic] got more to the S.E.

November 27. Tuesday

Weather – Heavy rain accompanied by a heavy gale from the S.E – nearly the whole day

Misc^s- Went into Swansea with Mama and Bessie at 1 oclock to attend a concert of Bachsas *[sic?]* at the Rooms. Signors Brizzi and Puzzi, the former a tenor singer & the latter upon the horn, were the best performers

November 28. Wednesday

Weather. Tremendous Wind & Rain from the S.E. all morning – in the afternoon the wind changed to S.W. still very high. Barometer stands below 28 ½ inches

Misc^s Went into Swansea this morning with Mama & Bessie to meet Kingston about the furniture for Burrows Lodge

November 29. Thursday

Weather – Stormy – rain for the greater part of the day – Thunder & lightning last night

Misc[§] I walked round by Penllergare

November 30. Friday

Weather – No rain – Wind S.W. high

Misc^s Went into Swansea in the morning to have one of my teeth which has been troubling me for some time out – it was very much perished & Bird could not in consequence take it out either with the Forceps or German Key as it broke at every trial –

December 1. Saturday

Weather – misty rain in the morning heavy rain all evening

 ${\sf Misc}^{\tt S}$ I did not go out as my Gums &c are a good deal inflamed from yesterdays operation –

December 2. Sunday

Weather – tolerably fine all day Wind S.W.

December 3. Monday

Weather – Stormy. Wind S.W. Barometer about 29½ -

Misc – did not go out all day in consequence of the inflammation of my gums not having quite gone down

December 4. Tuesday

Weather – Fine with occasional slight showers – Wind N.W.

December 5. Wednesday

Weather – Fine

December 6. Thursday

Weather – Fine. Wind S.W.

Misc^s I went on to Fairwood moor to look for Snipes – found very few & only killed 2 –

December 7. Friday

Weather – Fine – rain in the night –

Bar^r above 30 inches 0 rising –

Lab^y made a solution of Lead & Copper in Nitric Acid tested for Cu with Pruss^{e.} Of K which acted. I precipitated all the Cu by this means & filtered the remaining liquor & then tested for Lead with Hydriodate of K and Hydrosulphuret of Ammonia but neither of them acted –

December 8. Saturday

Weather – Clear and Fine. Wind N.E. barometer 30 & a ½ inches –

December 9. Sunday

Weather. a frost last night. fine all day – a heavy fog has come on this evening –

December 10. Monday

Weather. the Fog has continued all night and is very thick this morning -10. PM. it has lasted all day.

December 11. Tuesday

Weather. The Fog has cleared off. & the day has been fine.

Misc^s Walked into Swansea with Bessie and attended a meeting of the Harbour Trustees –

December 12. Wednesday

Weather. Mild. showers of Misty rain from S.W.

Misc[§] Went into Swansea this morn^g attended the yearly meeting of the Savings Bank, got home about ½ to 3 o clock & went out with my gun to the other side of the Town Hill & returned by the Wig fach – saw 2 Woodcocks & 1 Snipe and a Jack Snipe & bagged them all without missing a shot –

December 13. Thursday

Weather much the same as yesterday

December 14. Friday

Weather. Fine. cloudy –

Misc^s Went out shooting up Singleton in the morning & dined there in the evening – I only shot one Wild Drake. In one of the covers I observed Campions still in flower –

[opposite page]

some days ago I saw a primrose in blow

<u>December 15.</u> Saturday

Weather. Fine – Wind E –

Misc^s Drove Bessie into Swansea this morning to give Mr Francis a sitting for her picture

December 16 Sunday

Weather. Fine all day a sharp frost last night Wind East

December 17. Monday

Weather – Wind East. cloudy, raw & cold, no frost

Misc - drove Bessie in my gig to Penllergare and then home by Swansea –

December 18. Tuesday

Weather. Cold, Wind East. No frost

December 19. Wednesday

Weather – Cold in the morning Wind E: in the evening it became milder Wind. S & S.W-

Misc - Walked into Swansea in the morning and afterwards rode with Mary down to Penrice

December 20 Thursday

Weather. Fine – Wind NE in the evening.

Lab^y DelaBeche brought some Chilian Copper, we mixed a portion of it with charcoal & put it in the furnace – we did not urge the furnace up to the full heat – when we drew the crucible we found that the copper was melted & dispersed through the whole of the charcoal in small particles –

Misc^s Walked into Swansea in the morning with Mary & Bessie –

December 21. Friday

Weather. Fine – wind very changeable –

Lab^y. cleared some of the charcoal away from the Copper ore we melted yesterday & burnt it again in the furnace – the copper run down into a button & the residue in the crucible appeared to be a kind of black glass – the ore is very rich. We put some of it into Nitric Acid (which acts very strongly on it) to assay it in the wet way

December 22. Saturday

Weather – heavy rain last night fine this morning – towards Midday it clouded over Misc^{s.} rode over to Penllergare to breakfast & afterwards into Swansea –

Lab^y- put some of the glassy residue from the copper ore into Nitric Acid which acts upon it, although not strongly till heat is applied - upon testing it I found a great quantity of Iron in it – there did not appear to be any silver in it.

December 23. Sunday

Weather. Fine. Wind S & S.W.

December 24. Monday

Weather. Fine in the morning heavy rain in the evening Wind N.E.

Lab^{y.} began an analysis of ore of oxide of Copper from Chili, by putting 50 grains of it into Nitric acid then diluting it & filtering it to separate it from the insoluble parts which I believe consist principally of per oxide of iron $-{}^{2}$ Fe $+{}^{3}$ O

December 25. Tuesday

Weather, fine & clear Wind NE.

Misc. Went to church in the morning & took a walk with Bessie & papa in the afternoon to meet DelaBeche who dined here – we received the news that Emma has got a little boy, born today

December 26. Wednesday

Weather – sharp frost last night – early this morning however the wind got down to the SW & we have had heavy rain nearly all day

December 27. Thursday

Weather – fine – clear

Lab^y- Prussiate of potash throws down a blueish black precipitate from a solution of Iron & Copper in Nitric Acid -2^{y} [?] which has it the strongest affinity for

December 28. Friday

Weather Fine. sharp frost lat night – wind not fixed –

Misc- Went with Papa to Llangefelach to attend the Petty Sessions where I remained nearly all day. Walked home in the evening through Swansea

December 29 Saturday -

Weather – Rain from S.W. all day

December 30 Sunday

Weather. Heavy rain nearly all day

December 31. Monday

Weather Fine –

Misc^s Went into Swansea in the morning & to a Ball in the evening

[END OF DIARY]

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