**RI MS HD/15/E Transcription**

[Horizontal rule]

[Heavy deletion with an insertion, also deleted]

[Pencil sketch of a face in profile]

[Blank page]

[MS torn] / [MS illegible]

<Text> = interlineation

{Text} = inverted

**RI MS HD/15/E, p. 000**

un peu si vous plait  
[?xxxxxxx] of beauty  
or of grace

[Pencil sketch of a face in profile]

[Pencil sketch of a face in profile]

[?Pencil map]

{39 ?Bunslxxd}

**RI MS HD/15/E, p. 001**

\*1  
Vauxhall  
The light was glimmering through the trees  
As raised by magic power  
And balmy was the waning breeze  
And full of hope the hour.  
Cloathd in loveliness by pleasure  
Before me lightly flew  
In jocund pace to jocund measure  
A guy & motley crew  
Among them forms of beauty strayd  
Fair as the morning beams  
And in such fairy tints arrayed  
As warm the pacts dreams  
with flowing locks that rested free  
Upon the soft & fragrant air  
With sweetest smiles of Harmony  
And bosoms heaving full & fair  
No rapture kindled in my breast  
unmoved the scene I saw  
From fountains of delusive Art  
No streams of natural love  
can flow

**RI MS HD/15/E, p. 002**

By me unnoticed passed the dream  
Of Midnight revelry  
As passes the final twilight gleam  
Oer the half closed sleepy eye.  
Away in Quietness I steall  
To seek a soul to Nature dear  
And if a transient joy I felt  
It was that Anna was not there  
Soft was the light that fell from her eye  
As that of the Rainbow seen in the blue  
sky. And like that light though  
bright & clear. It spoke of many

a coming tear.

Like the [?xxxxx] of the tear, [?uneven]

Her mind. When moved by the

blast of the westerly Wind. –

As soft & as changeful its colours

were give

how ~~glowing~~ [?xxxxxxxx] with Earth

**RI MS HD/15/E, p. 003**

3  
Oh could our spirits winged with flame  
Cast off their earth born chilly frame  
~~Yet carry~~ <Preserving> all their thoughts that move  
In holy harmony to love

~~All~~ <Ah> then how blissful would it be  
To traverse Natures reign with thee

[Horizontal rule]  
The Earth should be our first abode  
And We would chuse the mountain road  
Basking upon the cliffs that lie  
Beneath the [~~?xx] changeful~~ <dark unclouded> sky  
And whilst the sunshine spread below  
The life of Natures genial glow  
We in the snowy realm would rest  
In clouds of changeful colour drest  
The cataracts foam should be our boat  
Upon the torrents We would float.

**RI MS HD/15/E, p. 004**

In vain I have swore I will love her no

more.  
She torments, She perplexes; yet I must adore  
Her form is a fairys airial & free  
And now glowing with heaven  
its soft & as changeful, were  
all its wild [?dies]  
Slow darkened by Earth & [?now]  
Warm with the skies  
Like the fitful day of the  
summer storm. –  
Her heart by turns was  
cold & warm. –  
Short is her anguish &  
tranquil her form  
She hates me to day  
She will love me tomorrow.

**RI MS HD/15/E, p. 005**

5  
[?Whm] [?xx] [?xxxxx] the [?xxlles]  
wild  
[?Jxxxxx] the flowers  
unfinishd   
[?xxxxxxx] [?xx]

[?xxxxx]  
[?Send] to West [?xxxxx]  
consigned  
Was [?Softly] ardent  
[?josephine]  
[?xx] yet [?xxxxxxx]  
by [?xxxxx] or [?xxxxx]  
[?x] [?xxxx] & [?xxxxx]  
of [?x] [?xxxx]

**RI MS HD/15/E, p. 006**

[?When]

As soft & as changeful its colours

were given

how darkened by Earth

how glowing with heaven  
As smooth as the wave

of the sea was her mind  
<As the>

When moved by the breath   
of the Westerly winds  
Her rapture is quick &  
short is her sorrow  
She loves me today  
She will hate me  
tomorrow

**RI MS HD/15/E, p. 007**

7

It may be a matter of surprise that the influence  
of philosophical opinion has been so little  
felt & so transient in its operation  
but all astonishment will cease when  
it is considered that the truths of  
Science have been always limited to  
a certain number of individuals  
& that they appeal to the reason  
of Men & not to their feelings.  
However eloquent the language in  
which they have been delivered  
its character must of necessity  
have been different from that  
of popular declamation which  
relates to objects familiar to  
all & to passions which

**RI MS HD/15/E, p. 008**

every mind is capable {[?gliding]} of  
feeling.   
If the progress of philosophical  
discussion is like that of  
the the Quiet stream <of [?xxxxx] [?xxxxx]> it  
descends pure & clear  
it either moves by obstacles  
~~then~~ ~~it~~ or <slowly> saps their  
foundations it fertilizes  
& adorns [~~?xxxxx]~~

The course of popular opinion  
is similar to that of new made  
the Torrent swollen by Rains  
It rapidly moves along overflows  
its banks & <it> carries it  
with it mud & stones

**RI MS HD/15/E, p. 009**

9  
fruits & flowers, its force is  
irresistible <but of that duration> its effects ~~destructive~~

~~its duration~~ are powerful

but destructive.

In the fine Arts emulation. In our  
Modern Arts profit – Luxury & its  
good effects – [?xxxx] Ridiculous

opinions of those who are

constantly asking cui bono.

We are powerful

[Pencil sketch of a face in profile]

transitory, but destructive

The other is <gentle> [~~?xxxx]~~

but <permanent &> full of benefits  
[Pencil sketch of a face in profile]

**RI MS HD/15/E, p. 010**

like the fitful day of  
the summers storm  
Her heart by turns  
is cold & warm

~~Though I have lost thee now for ever~~

~~The calm air does not feel my sigh!~~

I joy that thou art absent; for my soul

Glows with the genial [unclear]restorative[/unclear] flame  
Of holy purity & honest love!  
The thought that though ~~art absent~~ <existeth> warms  
my mind  
With a wild sentiment of ~~angry [?xxxx]~~

**RI MS HD/15/E, p. 011**

11

My friend My sister long Remember me!  
For in my Spirit ever dost though

Ungrateful Girl, my Heart No more  
For thee shall tremble, pant & glow.  
~~To love, to wonder, to adore~~My feelings ne’er again shall flow  
To love, to wonder, to adore.  
Tis not because thy faith is gone  
That I am in this angry mood.  
Perhaps you live for me alone.

Perhaps you still are Kind & good.

I know in thee no single fault.  
And yet for thee, I do not care.  
Alass thy Virtues all are taught  
And Nature only made thee  
fair.  
<In deepest study still I find thee>  
~~always find thee in Serenity~~of How & where, & when to please;

**RI MS HD/15/E, p. 012**

~~[?The]~~ <You> [~~?arte] the~~ <fairest> Child of Heaven  
And <Heaven> [~~?xxx]~~ in ~~transport~~ <Kindness> to thee gave  
me for a slave.  
You will not be forgiven.  
<[?xx by thy cruelly]> Nay you wll neer yourself forgive!  
If those [~~?xxx]~~ bright charms on which I live  
Should lead me to an early grave  
Oh be not cruel; think my [~~?xxx]~~ love  
What daily pangs for thee I [~~?xxx]~~ <fear>   
What daily [~~?xxx]~~ care.  
~~And~~ yet <will> your [~~?xxx]~~ not approve.  
Aught that I suffer,   
I will not show  
With what a painful fire I glow  
How much, How warm I love .  
Oh let that <[?Law] that [?bargain]> [~~?refract] [?xxx]~~ the light  
That grain thy humid eyes, with beams  
In pity stream  
Oh that thy cheek is [~~?xxx]~~

**RI MS HD/15/E, p. 013**

13  
~~[?xxx]~~  
The summer ~~sweet~~  
white & fleecy cloud  
The lustre of thy cheek is pale  
~~its the [?xxxx] [?xxx]   
As the late summer~~the ~~lustre~~ <colour> of thy cheek is pale  
As the fair fleecy clouds  
<[?A] [?from] the rivers chilly that rest, [?xxx]>

~~[?xxxx]~~ the watered vale  
Along

[Horizontal rule]

<showers bowers towers lowers powers>  
~~That starting tear  
Thy life that late in~~ <redness> [~~?xxxx] wed~~

~~With the first buds  
Now write;  
With early summers  
With the first buds of Indian rose~~

**RI MS HD/15/E, p. 014**

~~My lips have lost their ruddy~~

~~pride  
And thou  
[?xxx]~~ sixteen springs have seen

thee rise

With ~~sheath of pleasure in thy~~  
<beauty beaming in thy eyes>  
And sixteen summers now  
have given  
Thy charms thy perfectness of [?xxx]

<Anguish>  
~~[?xxxx]~~ ~~[?xxxx]~~ has <never> touched

thy [~~?xxx]~~ mind  
No loss of friends, no change of fate  
~~My pleasures, [?xxxx] [?xxxx]~~

~~been refined  
And~~  
Fortune to thee was always Kind  
And still thy devotions steps

attends

Yet faded is thy lovely form

~~And~~ faded ~~is~~ thy face <in [?xxxxxx]> so fair

Thy cheek <that way> with roses ~~and [?xxx]~~ warm  
~~[?xxxx]~~ pale & glistening with

~~Their the sad lustre of a tear~~

**RI MS HD/15/E, p. 015**

15  
a tear. –

[Horizontal rule]  
Nature has Kindly bade thee love  
But thou will not her laws obey  
In haste his holy joys to prove  
And follow where I point the way

[Horizontal rule]  
Be not ungrateful <fairest> ~~lovel~~y Maid.   
In haste thy loveliness recover  
Let Natures sacred debts be paid  
And Bless thy self & bless thy lover.

[Horizontal rule]

~~<Soul of my Being>~~Oh let thy heart with rapture

beat  
And soon the ruddy blood shall rise  
Oh may not thou feel no other  
Than the soft blush of early love

**RI MS HD/15/E, p. 016**

My throbbing bosom prest to mine  
Shall swell with new & riper charm

~~The gentle pressure of my arms~~  
Thy earthy form shall grow divine  
Within the pressure of my arms

And from that <strong> [~~?xxxx]~~ & living fount  
Kindling [~~?xx]~~ new roses in thy cheek

The purple stream of life shall

mount  
[?xxx] why this change my lovely [?xxx]  
Why

**RI MS HD/15/E, p. 017**

17  
Thy lips in form like moving

clouds  
Were ruddy as the [?coming]

sky  
Thy lips in colour scarce

can vie  
[?Een] with the late autumn

red rose

~~[?xxxx]~~

Thy hair in no rich

wildness [?flows]  
Grey is thy [?xxxx] [?xxxx]

**RI MS HD/15/E, p. 018**

~~And yet I love thee~~thy breast  
No [?xxxx] luxuriance swells

thy breast  
~~In Nature We now perceive~~How is the range of ~~Natures~~ all created forms  
1st. Introductory & plan of the course.  
2. On the foundations of experimental Science  
3. On the natures of the deductions from it  
The unequal efforts of early genius  
the smoke & bright flame of Wood  
when first heated. The steady &  
vivid light afterwards.  
Like the leaves that are green.  
in the spring & the summer.

**RI MS HD/15/E, p. 019**

19  
but become bright & red on  
the approach of Winter. –  
– The Visionaries of Greece  
& the later specialists are  
like Men who should attempt  
to ~~leave~~ <build> Monuments as magnificent  
<& as permanent > as the temples of Rome  
with no other material   
than ~~clay~~ dust.   
They resemble the Architect  
Who forms his plan for   
a building without examining  
his materials.  
– The Men who begin with  
speculation & end with  
facts [~~?xxx]~~ begin at the

**RI MS HD/15/E, p. 020**

wrong and; the firmest  
~~[?found]~~ materials should  
be in the foundations  
the embellishments should  
be made after the   
structure is completed. –  
The river seldom becomes  
clearer in passing through  
a cultivated country but  
its waters are made  
more fertilizing. –

– Facts & the History of

facts are as immutable as

Nature. –  
The [?ancient] Systems which

Are [~~?xxxx]~~ destroyed please us

**RI MS HD/15/E, p. 021**

21  
The Youth of Talents seldom  
produces any thing very excellent  
till He has been buffeted

Somewhat in the World;  
Our best ~~fruit~~ <garden> trees require  
much pruning ~~before their~~  
~~produce fruit becomes of~~   
to make their produce good.  
by then [~~?xxx]~~ <remains> as some  
Buildings become only  
interesting in ruins. –  
The Systems founded after

Prejudices; may now amuse us  
the ancient temples were  
designed for ends degrading  
to humanity; but knew ruins

**RI MS HD/15/E, p. 022**

delight the imagination  
& We admire the powers

by which they were formed. –

[Horizontal rule]  
– . The opinions which result from  
passions are as the impressions  
made by waves upon the  
land what one Tide  
produces, the next modifies  
or destroys,

**RI MS HD/15/E, p. 023**

23  
1685 [?Bircher] died 1645  
1605 Bacon [~~?Tallurgie~~]

Chemistry by JS

Becker 1776  
Gaffendi 1592  
Gallileo 1593

Falconer on Mankind

M 81 [?Dally]

[?Dxxx]   
<Agricola 1494>

~~Nature has done her best for thee  
Nature has [?done]~~

**RI MS HD/15/E, p. 024**

1st – Use of Analysis  
2. – In Mineralogy  
3. – In Geology  
4. – In the Arts  
5. A subject which ought to  
be studied by Gentlemen &  
in its results not unworthy  
the Attention of Ladies. –  
6. Founded upon a Knowledge  
of the laws of Attraction  
simplest decomposition by Heat  
2 By reagents general facts  
of Attraction –  
Conclusion.

**RI MS HD/15/E, p. 025**

25  
– It is by the application of  
reagents that all the  
phaenomena of decomposition  
are produced. –  
But the Methods are  
capable of being almost infinitely  
diversified. –  
And in almost all cases  
of new investigation new phenomena  
are discovered. –  
– The effects of the laws of  
chemical action are almost  
infinitely diversified; &  
yet all are capable of  
being arranged as general

**RI MS HD/15/E, p. 026**

truths.  
This is an important  
fact both for those  
who wish to study the  
subject either for amusement  
or for use, for  
information or for  
discovery. –  
In following processes apparently  
the same interesting differences  
will occur such as Keep  
the mind in activity  
such as oblige it to  
discriminate. –  
– There is no limit fixed

**RI MS HD/15/E, p. 027**

27  
To ~~the [?xxxd] of this~~  
department of Science.  
–. The new generation of  
Chemists will not cannot  
be contented to imitate

the processes of their Masters;  
the Hope of Discovery can  
Scarcely pass away from

them its progress is  
insured both by Nature  
& by Art & its refinements  
depend upon & are produced  
by time. –  
It was said of the   
ancient [?Tales] that in passing

**RI MS HD/15/E, p. 028**

into a new country. –  
It is needless for us to again  
say that in Science &  
in the Arts; there is a  
dependence which ~~when~~  
~~[?xxxx] it~~ can be traced

is the source of their progression  
& importance – for a well  
organized country, [~~?xxxx]~~ power  
is always [?compound]  
Archimedes could not have  
made machines which frightened  
the Roman Soldiers without  
the assistance of Good Carpenters  
<& good workers in metals.>  
But the [?learning] even of

**RI MS HD/15/E, p. 029**

these pursuits is not limited  
~~[?to] [?Friends]~~; –  
To speculative [?their] [?there]  
minute researches into Nature  
are always laborious Hobbes  
has laid in his Leviathan

that ~~Chemistry~~ <Experimental> is a study fit  
for Blacksmiths & Cooks & yet  
this very man has endeavored  
to found himself a system  
of Chemical Science of   
which it may be said that  
it not fitted for Blacksmiths  
& Cooks nor for any living  
Being. –  
[Pen sketches of pyramids]

**RI MS HD/15/E, p. 030**

It is principally by  
analytical labours that  
Mineralogy has received  
the form of a Science  
& that our notions  
concerning the elements  
that enter into [?Rock]  
composition of our rocks  
have been examined  
& elements at least  
as important as those  
existing in the Atmosphere  
brought to light  
Combustion is a process  
which [?xxx] & naturally

**RI MS HD/15/E, p. 031**

31  
arrest the attention  
& hence the theory of Lavoisier

has had so great &  
so various applications

**RI MS HD/15/E, p. 032**

An account of some experiments  
in a [?xxx] mineral substance  
from Devonshire  
The final specimens of  
this substance were sent  
to Dr Babington by Dr  
Wavel of Barnstable  
It is found filling  
the cavities of Schist  
in a quarry about  
6 mines from Barnstable  
Mr Hatchett who  
at the desire of  
Dr Babington visited  
the place in which

**RI MS HD/15/E, p. 033**

33  
it was ~~found has~~ informed  
~~[?xxx]~~ discovered considered  
the Shist as of the  
soft clayey kind or  
the Schiefer [?xxxx]  
of Werner. ~~In the~~  
~~[?xxx]~~ Amongst the

specimens that I  
have in my possession  
~~the Rocks [?xxx]~~of [?~~xxxx] [?xxxx]~~ the native  
Rock some approach  
to argillaceous Shist; but  
~~[?xx]~~ one variety is sufficiently  
hard to strike fire  
with steel.

**RI MS HD/15/E, p. 034**

The fossil so much  
resembles the Zeolite in  
its external character  
that it was at first  
referred to that species  
but Mr Hatchett suspected  
from its [~~?xxxx]~~ geognostic  
characters that it could  
not belong to it &  
Dr Babington

**RI MS HD/15/E, p. 035**

35  
This fossil was discovered  
by Dr Wavel in a Quarry  
near Barnstable. According  
to Mr Hatchett who visited   
the place in 179. it  
is imbedded in cavities  
of a rock of soft argillaceous

shist. When first made  
known it was considered  
as a Zeolite; <&from its geognostic relations> & [?xxx]  
<Mr Hatchet concluded that>

~~peculiar nature~~  
<this could not be the case &>  
Dr Babington ~~first~~  
ascertained ~~its peculiar~~  
~~[?xxxx]~~ its ~~peculiar~~  
nature. from its  
its general physical characters

**RI MS HD/15/E, p. 036**

<& from [~~?xxxx]~~ some expts on its>

& its solubility in the

<[?solution]> Acids ~~without producing~~ <made at his request>  
<by Mr Huckly> a ~~gelatinous~~ appearance

~~[?He]~~ concluded that it  
was a new mineral  
body & suspected that  
it consisted principally  
of Alumine. –

~~This Gentleman~~

It is to Dr Babington

that I am obliged for

the opportunity of investigating its nature  
more fully. That Gentleman  
permitted me with the  
specimens which I [?exployed]

**RI MS HD/15/E, p. 037**

37

& engaged me to undertake  
an analysis

[?last/?Cast]

~~Truly sixteen springs have seen thee rise~~With Beauty [?beaming] in thy eyes

~~And sixteen summers now have~~

~~given~~

<To – E –>  
~~Thy form the perfectness of heaven~~\*2  
I saw thee ~~once~~ <first> as if a flower  
opening beneath an April shower  
~~Then you~~ <blooming Heath>  
~~I [?xxxx] [?thee] [?once]~~ When loveliness  
Did ~~all~~ <all> [~~?xxxx]~~ form & features  
When you <were> [~~?xxxx]~~ yet <a growing> <~~growing~~> ~~a little~~ child  
At which each passing stranger  
smiled.–  
And stopped with Kindest joy to

trace <~~gaze~~>  
~~So witching were thy childish ways.   
<was thy form & face>~~

~~trace~~  
The <witching features> ~~wayward beauty~~ of thy face

**RI MS HD/15/E, p. 038**

~~I knew thee once a [?xxxx] being!~~

~~By [?their] pursued yet all new~~

~~?feeing~~

~~Again~~

~~When sixteen springs had seen thee~~

~~rise~~

~~With beauty <pleasure> beaming in thy eye,~~

~~When [?fifteen] summer suns had~~

~~given~~

~~The charms the perfectness of~~

~~Again I knew you <saw heaven> <then how> wayward being~~

~~By [?their] pursued yet all now~~

~~fleeing.~~

~~2~~

~~I sought thee [?xxxx] in [?xxxx] [?xxxx] in <felt love>~~

~~I woed thee what boyish love <passion>~~

~~{~~I [?xxxx] I will still complain,

~~<But never our>~~

I will not own myself his slave;

~~[?xxxx] [?xxxx] my [?xxxx] <[?xxxx]> <[?xxxx]>~~ false

But name my care in [?xxxx] [?xxxx] [?xxxx]  
And I bear it with me to the

grave}  
~~[?And] [?though]~~

~~My passion I will never disclose tell  
And warm me in the Arms of death  
Yet it shall ever fill my heart.}~~

**RI MS HD/15/E, p. 039**

39  
~~[?Even] the mild western cheek then [?sacred]~~

~~They cheek to such a warmest hue~~

~~In thy [?xxxx] cheek so bright a hue~~

[?I]

Thy Spirit surely springs from heaven

When first I saw thy stately form  
~~With every grace of motion warm~~

With every grace of motion warm

~~{It may~~

To see my [~~?form]~~ <[?cheek] [?form]> its freshness lose

[?May] [?some]

An <may> ~~will~~ it not his [?xxxx] move

And when my humid eye He views

He sure must know it beams with love.}

**RI MS HD/15/E, p. 040**

{~~Yet sure my faded form [?xxx]~~ tell <will prove>}

A mind

And when [~~?He] views~~ my humid eye

Sure He must feel, it beams

with love

~~Who gave [?xxxx] my trembling~~

~~heart~~

1

In vain, the tears of anguish flow  
~~In vain I still must [?vow]  
In vain my cheek is full with~~

~~woe,~~

In vain, I hope, in vain I sigh

~~For He shall never <[?xxxx] [?will] perhaps [?xxxx]> never Known~~

That I [~~?xxxx] [?xxxx]~~ must live <[?xxxx]> or die

?The [~~?xxxx]~~

~~[?xxxx] death my [?xxxx] the tale~~

disclose

~~My word the tale shall neer~~In secret I will still complain  
My tale shall never [~~?xxxt]~~ <reach> his ear  
In secret nourish [?xxx] all my care  
I will not [~~?fear]~~ <meet> his proud disdain}

**RI MS HD/15/E, p. 041**

41  
It is principally in consequence of  
improvements made in our instruments  
of experiment that the Sciences  
have been so much extended  
& that they have been made  
the common property having  
inclinations for studying them  
& patience for pursuing them. –  
Doctrinal speculations at  
present cease to be formidable  
in their influence; & variety  
of opinion & ~~of the~~ freedom  
of thought can only produce  
benefits in a department  
of Knowledge where the  
appeal is to Nature &

{with <lofty> pride [~~?xxxx]~~ meet his [~~?high]~~ disdain}

**RI MS HD/15/E, p. 042**

where ~~there is no~~ can  
be no fair decision without  
the evidence of present  
facts.–  
–The demonstrations  
belonging to Analysis are  
~~of in nature as rigid~~founded upon invariable  
properties of things; &  
the results of experiment  
must always convey  
truths which though not  
ultimate, owe their  
imperfection not to  
defect in our methods

**RI MS HD/15/E, p. 043**

43  
but in the defect of  
~~our sensations~~. –  
It is possible that  
even on this point new  
instruments may be discovered  
there is sufficient to occupy  
the genius & industry of  
Philosophers for years to come.  
This department of  
Knowledge is one which

Even [~~?xx]~~ coincides with  
the common ideas of utility  
the discovery of the nature  
of the productions of  
the globe & their appreciation

**RI MS HD/15/E, p. 044**

This argument however is  
but little worthy of being  
pursued. –

**RI MS HD/15/E, p. 045**

45  
– ~~The Sciences~~  
The ~~experimental~~ <Natural> Sciences  
~~have~~ one common foundation  
facts which are observed  
in Nature or ~~procured by~~  
~~means~~ developed by artificial  
inventions.  
Experimental researches  
have led to the greatest  
discoveries made in modern  
times for by mere  
contemplation of events  
extensive truths are seldom  
gained. The senses are imperfect  
they need assistance to enable  
them to discover truth  
& ~~by~~ active enquiry by  
the trials of results seems

**RI MS HD/15/E, p. 046**

to be that which is best  
fitted [~~?xxx]~~ to our nature  
& to the devellopement  
of truth. –  
– The Theories of natural  
Knowledge which present  
so beautiful a series of

combinations to the mind  
have been slowly formed  
by great industry & varied  
Labour; & though the  
methods which lead to  
discovery are sometimes  
unjustly neglected after  
the discovery has been  
made yet, they ought

**RI MS HD/15/E, p. 047**

47  
in all cases to  
claim the attention  
both of those who  
study with the  
hope of inventing  
something new  
& of those who  
wish to make  
themselves acquainted  
with the knowledge  
already acquired

**RI MS HD/15/E, p. 048**

**[blank page]**

**RI MS HD/15/E, p. 049**

49  
We do not sufficiently  
consider those feelings  
which great Men experience  
without wishing to express   
without being indeed  
able to express, such  
must have been the feeling  
of Newton when He made  
his great discovery. –  
– [?However]  
I am fond of reading

I am fond of reading  
romances, I have  
been lately exceedingly amused  
by reading the French  
Encyclopedia. –

[Pencil sketch of a face in profile]

**RI MS HD/15/E, p. 050**

In vain have I swore I will  
love her no more  
She torments She perplexes  
yet still I adore. –  
Her faults with her ~~virtues~~ <virtues>   
so strangely combine  
~~That I have~~ <I admire> Her ~~the~~ more  
the more I refine  
\*3 Her form is a fairys  
Free graceful & light

Her looks as the [~~?xxxx]~~ leaves  
of the ~~Aut~~ Autumn are  
bright  
And soft is the light  
that ~~falls~~ <beams> from her eye

As that of the

**RI MS HD/15/E, p. 051**

51  
Rainbow seen in the  
blue sky

And like that mild  
light though placid  
& clear  
It speaks of the  
coming of many a   
tear.  
As the wave of the  
Sea uneven her mind

When moved by the  
breath of the westerly  
wind.  
As bright & as changeful  
its colours are given  
Now darkened by Earth  
& now flowing with heaven

**RI MS HD/15/E, p. 052**

Like the feverish day

Of the summers storm. –

Her bosom by turns  
is chilly & warm  
Short is ~~anger~~ her

Rapture and transient

her sorrow. –

She lives for the moment

& and fear not tomorrow.

**RI MS HD/15/E, p. 053**

53

I love ~~thee now, in doubt~~ in

[~~?xxx]~~ care  
With feelings leading to despair  
I then a happy careless boy  
~~I loved the then a careless~~

~~boy~~\*2 I loved thee then a careless

boy

In <quiet> hope in <simple> ~~rapture & in~~

~~joy~~

I love the sea

On which the <beams of> morning ~~beams~~

~~did~~ play

Or as the bright full moon

on high  
In the <blue &> frosty sky  
Or as the [?xxxx] balmy

breeze  
Or as the Autumns tinted

trees –

**RI MS HD/15/E, p. 054**

Was the lightnings [~~?xxx]~~

~~by beauteous blaze~~

At which I tremble  
as I gaze. –  
[Pencil sketch of a face in profile]

**RI MS HD/15/E, p. 055**

55

~~You [?xxx] a~~

~~Your charms have changed~~

~~Ten summers since have~~

~~passed away~~

~~Since that <bright> & <well remembered> [?xxxd] day~~

Ten <~~winters~~ summers> ~~summers~~ now have

passed away

And full matured time

has given

Thy charms “the perfectness

of heaven

How <art thou> [~~?xxx] [?xxxx]~~ changed”

Does in they ~~changeful~~ <varied>

features lie”

And those who dare behold

thy face

Are awed by dignity of grace. –

**RI MS HD/15/E, p. 056**

I love thee still but love in

[~~?xxx]~~ care  
In troubled rapture mixed

with fear.   
~~I love thee [?xxxx] foaming~~

~~wave~~

~~Which may become~~

~~the [?xxxx]~~Or <or> as the lightnings [~~?xxxx]~~ blaze

{Or as the lightnings awful blaze  
last {At which I tremble  
 {as I gaze. –

I love thee as ~~I love~~ the swelling wave  
Which may become the seamans grave

**RI MS HD/15/E, p. 057**

57

[?xxxxye]

Or as the sky in colour warm  
yet breaking <[?warm]> of the <rising> ~~coming~~

storm  
~~Like the sublime which Nature  
In joy in [?xxxx]~~

~~[?xxxx] [?xxxx] in [?xxxxx] [?xxxxx]~~

~~lives~~

Or as the sky

when breaking storms

[Pencil sketch of a face in profile]

[Pencil sketch of a figure in profile]  
or ~~in the~~ sky

in colour warm

yet breaking of

the coming storm

**RI MS HD/15/E, p. 058**

To Alba  
The colour of thy cheek is pale  
As the fair fleecy mists that [?xxxx]  
Upon the meadows chilly breast  
Adown the watered vale  
2  
Thy lips in colour scarce can

vie  
Een with the late Autumnal

rose  
Thy Hair in no rich wildness

flows  
~~[?xxx] is thy [?xxxx] eye.~~

3

Grey is thy humid eye.  
3  
~~All who shall tell me why I love  
And why for thee in care I pine~~

~~[?xxxx] [?xxxx] can tell, for none can [?prove]~~

**RI MS HD/15/E, p. 059**

59  
And yet try fairy lineaments  
Still writes all my nightly dreams  
And interrupts my daily schemes  
And robs me of content

~~Ah why not though to me unknown~~

Oh could my spirit winged [?xxxx]

[?flame]

[?xxxx] [?xxxx]

~~Oh think me neither cruel~~ or

unkind

~~Spirit of [?Geni], [?xxxx]~~

Ah though thy form to me is

still unknown

~~Thy potent Genius~~ I with reverence

own

**RI MS HD/15/E, p. 060**

Oh let in [?pain] and holy sympathy  
Still dwell within thy bosom  
<Let thy Heart>  
Cherish the loveliness of living

things  
And sometimes turn thy memory

unto me  
And let thy potent Genius

raise the song

Of Nature [?xxx] many

Oh think not that my heart has

ever cherished

One thought

**RI MS HD/15/E, p. 061**

61  
Oh why art not thou unknown  
why is thy [?xxxx] song  
The only  
~~But what can be more lovely & more fair  
Than that soft blush which warms thy cheek~~The <[?xxx]> secret source of every

fountain  
That wildly tumbles down the

mountain  
Should to our [?wondering] <silent> hands

be shown  
Though to the wondering world unknown. –

**RI MS HD/15/E, p. 062**

{Kiss for moments; years of}   
sorrows  
– He has enslaved thee  
as the Mountain chain

and loves the mist by which   
at once it is cherished &  
nourished}

**RI MS HD/15/E, p. 063**

63  
Some of those speculations  
formed upon insulated facts  
brings to my mind  
a narration, an  
ingenious person had  
made a system of  
Geology, in which He  
attempted to shew that  
all rocks & soils  
were the produce of

alluvions. & He founded  
his [?xxxing] upon the facts  
of the Gravel pits of Kensington  
where only he had studied  
geology.

**RI MS HD/15/E, p. 064**

{And yet my  
In vain the tears <1> of ~~anguish~~ <sorrow> flow  
In vain I hope, in vain I sigh  
For He perhaps will never know  
That I must live for him, or die  
?~~xx~~ <Shall I> secret I will <2> still ~~still~~ complain

<or,> ~~[?xx] ever own myself his slave~~  
But [?xxx] my care is feigned  
disdain  
And bear it with me to the grave  
.3.  
Yet purely in my faded form  
~~[?xx] [?xxxx] [?xxx]~~ <[?tints]> trace of anguish [?xxx] find

~~Thee take~~ marks of sorrow He [?xxxx] read  
And if his heart like mine is warm.  
 ~~Will~~  
More sympathy may make him  
kind.

To see my cheek its freshness  
Ah will it not his pity <lose> move  
And when my humid eye He views  
He sure must feel it beams with  
love}

**RI MS HD/15/E, p. 065**

65

Softness

Tears

[?xxx] bless

grief p  
Then with a gentle voice  
you censure spread

And spare the living though

you blame the dead.

**RI MS HD/15/E, p. 066**

{brighten before they die assuming  
“Brown’s Theory” – the stimulus  
or the exertion may be the  
cause of the final debility}

**RI MS HD/15/E, p. 067**

67  
{is it possible to  
As if Rafaelle in  
one of his pictures had  
introduced by the side   
of the Virgin [?xxxxd]  
& our Saviour <?a Mountebank> ~~[?xxx] [?xxxx]~~  
The ludicrous is easily  
understood, & narrative always  
demands less skill,

Excess of ornament allways  
proves bad. “The leaves assume  
more vivid colour before they  
die – ­this “What can be more  
natural than that people should}

**RI MS HD/15/E, p. 068**

{ -The great facts that Newton  
discovered have now become  
the property of the public,   
& though all the labour  
which this great Man  
employed has not fortunately  
fallen to the lot of all  
yet the benefit is immense  
– What a picture does this  
man offer to us, how  
beautiful how grand untouched  
his days to the discovery of  
by Ambition, He gave up  
truth. We are  
delighted with the thoughts  
of the Academy of Athens}

**RI MS HD/15/E, p. 069**

69

{[?ally] when they  
connected with absolute  
utility  
If darkness becomes  
familiar & even pleasant  
to the Mind by habit  
shall not the glorious light be  
more delightful; – [?The]  
them who have been confined  
to their dungeon will not  
~~mainly~~ be glad to return   
to it or at least  
the free Son of the  
slave will not desire to  
wear his fathers chains.}

**RI MS HD/15/E, p. 070**

{It is only by making  
truths popular that their  
existence can be ensured  
Books may be destroyed  
a new [?Omar] may  
arise in a new emperor

& all things may fall

but prejudices conquered  
cannot be reastablished  
And if errors gain  
power from habit  
& from the length of  
time that they exist  
truths will not easily  
be forgotten more [?espec]}

**RI MS HD/15/E, p. 071**

71

{every charm.  
To bear a heart with  
every virtue warm.

The Rock which resists  
the waves does not  
partake of the tumult  
of their motions –}

**RI MS HD/15/E, p. 072**

{Thou blooming window of Hygeion

Power

Fair as the bud beneath the vernal shower,

When the mild Zephyrs from the  
Ocean blow  
With joy in health I see thy  
features glow  
With every infant grace I see her sire  
Whilst pleasure sparkles in thy infant

eyes  
Long mayst thou live & as thou livst improve

In all that wakens kindness  
hope & love & love  
To earth from art & nature}

**RI MS HD/15/E, p. 073**

73

{azure eyes  
How could a politician be secure  
who dreaded the Aqua [?Zophane]

[Pencil sketch of a face in profile]  
How could the   
merchant be secure as long  
as the idea of [?Alchemical]  
With Science

Much has been said  
concerning the effects of  
Science in making  
people superficial & pedantic  
It is now become the fashion  
to say that the [?xxxx] [?xx]

[?xxxd]}

**RI MS HD/15/E, p. 074**

{[?xxx] [?Zoe] ~~in ?health~~ <in beauty>

~~& beauty~~ <& with feeling> warm

So from a heart  
with [?xxxx] our true worth  
Long must thou live  
In [?xxxxx] improve  
And as thouh livest

In all that wakens  
kindness hope & love  
With every infant ~~[?xxxx]~~ grace  
I see thee rise  
Whilst pleasure  
sparkles in thy}

**RI MS HD/15/E, p. 075**

75

{Fair  
New blooming in order of  
Thy fathers power  
Fair as the bud beneath  
the ~~luminous~~ <vernal> flowers  
When the mild Zephyrs  
from the ocean blow  
With joy; in health  
I see thy features  
glow  
[?xxx] [?xxx] from [?xxx] &  
Nature every charm}

**RI MS HD/15/E, p. 076**

{[Geological sketch in pen]}

**RI MS HD/15/E, p. 077**

77  
{most people took care  
only of themselves, but  
that for her part, She

would take care of  
her family}

**RI MS HD/15/E, p. 078**

{My Mothers genius &  
her feeling heart  
My fathers strength

& mortal energy

That chills [?xxxing]

Keeps  
the vital Heart  
[?xxxx] Yet He enslaved her

as the mountain mists is  
~~by the~~ by the mountain  
The old Woman who  
in the fire of London  
being uncommonly busy  
in stealing said  
that in such a case}

**RI MS HD/15/E, p. 079**

79  
{Spirits of woods & waters

powers divine   
The diminution  
of temperature  
occasioned  
by a snow cloud  
can only be  
assigned to  
Radiation}

**RI MS HD/15/E, p. 080**

{Much ornament ~~is~~  
attached to opinions  
proves they are sickly  
the leaves ~~[?fxxx] upon~~ <look more brilliant> the  
<& beautiful> ~~trees~~ before they die. –  
If the mathematical Sciences  
are efficacious in their power  
of interpreting the Reason &  
refining the judgment, the Chemical  
ones are still more efficacious  
because they approach nearer  
to the facts of common life

~~[?xxx] [?xx]~~}

**RI MS HD/15/E, p. 081**

81  
{82. <High Street> Marylebone  
In vain the tears of sorrow flow  
In vain I hope, in vain I sigh  
For He perhaps will never know  
That I must live for him or die

[Horizontal rule]  
~~Still [?xxxx] shall complain  
Shall I [?xxx]  
Still unknown shall I complain  
Shall I still <2>~~Shall I unnoticed still complain  
Or what I am ~~to h~~

at once display}

**RI MS HD/15/E, p. 082**

{must pursue the Analyses as  
a guide, Analogy & observation  
We must take for our   
lights. –  
In this point of view the  
Science is perhaps most  
important. –  
In the Arts for the  
increase of National  
Riches & commerce. Instance  
in Wedgwoods Manufactory  
Methods of Analysis  
Laws to be observed  
Methods consist in destroying  
attractive power  
Accuracy of Synthesis}

**RI MS HD/15/E, p. 083**

83

{represent positive quantities  
in certain stone such for

instance as the Ruby is  
uniformly composed of alumine  
to certain stone such for  
& silex; Here the external  
character is the guide  
to an important fact.  
– In the infinite variety  
of the mineral kingdom  
a classification has been  
made & chemical Analysis  
& mineralogy have followed  
each other with rapid  
steps. –  
In Geology ~~by~~ Experiment  
is the only path Here We}

**RI MS HD/15/E, p. 084**

{any sensible change of composition,  
~~In~~ the infinite varieties of   
Carbonate of Lime the  
[?xxxx] [?xxxx] which afford  
to the [?xxxx] Chrystalographer  
so much room for speculation  
are to the analyst.  
to the Oeconomical philosopher  
& to the mineralogist nearly  
the same & is found  
the same in bodies fundamentally  
different. –  
It is therefore not  
the characteristic character.  
In ~~the~~ Chemical  
Mineralogy; all the bodies}

**RI MS HD/15/E, p. 085**

85  
{The classification founded upon  
the forms of chrystals is  
little more accurate though  
susceptible of the most  
beautiful applications  
Not even the genius of  
[?Hauy] has been sufficiently  
powerful to establish it  
as a mineralogical  
character & what is  
called the “primary form”  
that which ought to  
be invariable & characteristic  
often changes without ~~the~~  
~~slightest changes~~}

**RI MS HD/15/E, p. 086**

{work of Philosophical Mineralogy  
& He determines that no  
other character should be  
admitted but those which  
are inalterable & independent  
of chance or accidental  
combinations. These characters  
can only be chemical  
for the Labours of the  
great Master of the German  
School have proved that  
all others are variable  
& that it is only from  
their combination that  
the species can be determined}

**RI MS HD/15/E, p. 087**

87  
{similarity of composition. The  
person who has been accustomed  
to compare the external  
qualities of bodies with the  
results that they give  
when submitted to experiment  
is most of all capable  
of ascertaining the mineralogic  
species –  
The enlightened Dolomien; whose

death Philosophy will long  
deplore traced – with the  
hand of a Master, the  
path which Mineralogists  
ought to pursue in his}

**RI MS HD/15/E, p. 088**

{marry after your own fancy. You must  
keep them much in the World

[Pen sketch of a portico]

As the leaves assume

more vivid colours before

they die

[Pen sketch]  
It is upon this part

of Chemical Science that  
Mineralogy is in a great  
measure founded by the

invariable & constantly operating

Laws of chemical affinity

We learn that similarity

of properties in bodies imply}

**RI MS HD/15/E, p. 089**

89

{to our senses; & that  
a pyramid represents  
a ray of the divine

[?part] – see [?Exxebius]  
Press Evang: 11 6 111. 7 &11  
It seems not probable  
that the mythology of  
the greeks was a very  
heterogeneous collection  
[?Damaus]. [?Cecross] – Cadmus

[?Phere]: Orpheus [?Thraxx]

Excellent observation of  
Grew; list if you  
with children to}

**RI MS HD/15/E, p. 090**

{To attempt to explain all  
the vague opinions which then  
have adopted would be a  
useless labour, to draw  
Mystery out of Mystery is  
of little use, Of what avail  
were the elaborate disquisitions  
of Porphyry the great  
Apologist for the pagan  
superstitions – He thought  
He could prove that

the worship of the  
Basaltic idols ~~[?xx] [?x]~~   
or black stones signifies  
~~[?xx]~~ that the divine  
Nature is imperceptible}

**RI MS HD/15/E, p. 091**

91

{conjectures of modern  
speculation, ~~[?xx]~~ in similar disposition  
is found towards imperfect  
generalizations – the mind rests  
satisfied with conjectures; the   
most fertile imagination develops,  
the most interesting views,  
but facts & the real order  
of things are in general  
disregarded or what is to [?one]  
misinterpreted for the purpose  
of serving the views of a [?pxxxxx]  
[?xxxxx] – arrangement  
of words.}

**RI MS HD/15/E, p. 092**

{~~On certain~~

On Basalt & some congenerous  
Rocks. –

Few subjects have been  
here generally discussed in Philosophical  
Systems, from the days of Hesiod

To the present times than  
the formation of the Globe.  
– In every general Philosophical  
theory advanced by human

Ingenuity of labour. Cosmogeny  
to the present times than  
has formed a part – Whether we  
examine the wild suppositions  
of the Dogmatists of Egypt  
India & greece, or the   
more refined hypotheses &}

**RI MS HD/15/E, p. 093**

93  
{Remarkable arrangement  
of Granitic Rocks  
Cornwall – The [?Carns]

[Geological sketch in pen]}

**RI MS HD/15/E, p. 094**

{Primitive Shist Aspect. L. Lomond.

[Geological sketch in pen]}

**RI MS HD/15/E, p. 095**

95

{Limestone of Arkendale is  
analogous to that of  
the tees the sketch made  
from memory shows its  
stratification

Scientific Aspect

[?Cobler] near [?Arrogicas]}

[Geological sketch in pen]

**RI MS HD/15/E, p. 096**

{miles from Arkendale &  
is [?xxred] by a hush  
sketch from memory  
[Geological sketch in pen]

The Barytes is found in  
Dodecahedrons principally &  
in the common fibrous form.  
the bed is remarkably soft  
it is with lead & the  
sulphates.  
– The general metalliferous}

**RI MS HD/15/E, p. 097**

97

{At Arkendale in Yorkshire. The  
Country. Secondary – And the  
strata in some measure analogous  
to those in tees dale except  
that no vein has been cut  
through. Great lead bearing Veins  
from east to West & curved

[Horizontal rule]  
& diminish downwards so as  
to be lost at a considerable  
depth they are in limestone  
still but they have likewise  
been found in standstone  
The great metalliferous  
Vein bearing the Carbonate  
of Barytes is about 2}

**RI MS HD/15/E, p. 098**

{Vein at Arkendale of which  
a side is bare & from  
which the limestone  
strata on one side  
have slipped at least  
10 fathoms}

[Geological sketch in pen]}

**RI MS HD/15/E, p. 099**

99

{Some of the Carbonate of Lime  
of Veins appears very stalactical  
The Carbonate of Barytes of  
Northumberland is Chrystalized  
in lenticular forms. – & is  
found in the Veins in  
Nodules. –  
– The Veins are sometimes  
laid bare by what is called  
a Hush. that is by carving  
a Mountain torrent to flow  
over the face of the rock  
by which the discovery is  
made.}

**RI MS HD/15/E, p. 100**

{found from north to south.  
Lead is the usual metal. Blende  
is generally connected with   
it & Iron forms a part  
of the gangue, Gossan or  
sides of the Vein –  
These are plate Veins analogous  
to the pipe Veins of  
Derbyshire. –  
Where a vein comes between  
two strata there is often  
a slip.  
vein  
Shale Shale

Limestone Limestone  
[?xxss]}

**RI MS HD/15/E, p. 101**

101

{& Yorkshire near Alson Moor  
is stratified & the Rocks   
except the Win are congenerous  
The Veins run through  
all the strata. They are  
of Quartz, fluor, Sulphate  
& Carbonate of Barytes &

Carbonate of lime – They  
are principally metalliferous  
when in the Great  
Limestone strata. And  
the greatest veins are   
from East to West;  
but now & then a  
metalliferous Vein is}

**RI MS HD/15/E, p. 102**

{The depth of the strata little  
& the thickness not more  
than a foot or a foot  
& half. –  
– Some of this coal is  
very near the level which  
produces the Carbonate of  
[Barytes which is at a Mine  
of Colonel Beaumonts in Northumberland  
about 3 Miles from Nant Head  
The Carbonate is in <nant> the  
Metalliferous limestone with

Sulphate of Barytes.  
– The whole aspect of the  
Country of Durham. Cumberland}

**RI MS HD/15/E, p. 103**

103

{Shist or Hazel – Likewise

above it. The Vein  
in Alstone is not Metaliferous  
but it is in [?Dutton] in Yorkshire  
– Coal is found <in Alstone> as low  
as 140 fathoms. – Where  
the coal touches the Vein  
it is said to be rendered  
[?Coak] of this I have a  
specimen from Cockfield Durham.  
– Coal abounds in Alstone  
Moor near the surface – but  
it is a peculiar species  
called crow or Cat Coal  
it is upon silicious sandstone  
& below – Shiver –}

**RI MS HD/15/E, p. 104**

{plate 3 1/4 – Limestone Tumbler 3  
Great Limestone. 7. –  
The plate means loose  
shiver – the sills [?xxx] <mean>

~~calceous~~ sandtone – The fire  
stone is hard silicious sandstone  
– The great Limestone is generally  
in alstone Moor at 100  
Fathoms. In Teesdale it  
is much lower. & there  
are great varieties produced   
by Veins – The Win  
occurs in Alston Moor  
at the depth of 200 Fathoms.  
And below it is the hard}

**RI MS HD/15/E, p. 105**

105  
{Account of the strata  
in Alston Moor. & Tees Dale  
being a country of 20  
Miles square. –  
1. soil & gravel. 2 grandstone sill 47  
plate 107. Hazel & coal 47.  
Plate. 7. Fathom Plate 47  
Hazelsill 2. Upper Slate  
Sill 3. Plate 2 Under slate  
Sill 4. Hazel sill 1 1/2 / Coal 4  
with plate ./ Limestone & Iron  
Stone 6/ plate 11F. plate  
2. Little Limestone 1 1/2 Hazel  
~~plate~~. Sill 1/2. Upper coal sill 1 1/2  
Coal. 1. Under coal sill 2}

**RI MS HD/15/E, p. 106**

{Near Eglestone Hall. is  
a seam of Coal < about 9 inches thick> below Limestone  
& upon sandstone very hard  
Shale is above the Limestone  
Sketch.

[Geological sketch in pen]

At a junction of two [?beds]  
of sandstone & limestone a  
Vein of lead; & the lead  
absolutely in the sandstone. –}

**RI MS HD/15/E, p. 107**

107  
{High Force}

[Geological sketch in pen]}

**RI MS HD/15/E, p. 108**

On a second examination of  
the high force I am inclined  
to believe that the appearance  
of the Dike in the Win is

Owing merely to an eruption  
of the strata. & that  
the vein has no win  
rider of a peculiar Kind. –   
This certainly is the case  
in the lower Basalt. –  
1. The Basalt  
2 Shist  
3 Basalt  
4 Shist  
5 The limestone  
D. The Vein}

**RI MS HD/15/E, p. 109**

109  
{Sketch of the Rocks at the   
High force}

**RI MS HD/15/E, p. 110**

{The calcareous spar was   
highly penetrated by pyrites  
near its junction with  
~~the~~ shist. – & between  
the shist & Limestone  
there was no distinct  
Transition. –

– In the Basalt generally  
there were large ferriferous  
veins & in general  
the Basalt from its  
decomposed surface which  
was of a yellow colour  
indicated much combined  
iron.}

**RI MS HD/15/E, p. 111**

111

{the other Basalt; but its  
chrystals were not so distinct  
In it was a Metalliferous  
Vein containing Blend &  
Galena with Iron oxide.  
the Gangue. Calcareous spar &  
Quartz. –  
– This Vein passed  
through all the strata; but  
the dike was lost in the  
Shist & Calcareaous Stone  
& in those Rocks it  
was not metalliferous  
being in the Limestone  
principally calcareaous spar}

**RI MS HD/15/E, p. 112**

{Below the shist is shell limestone  
blue & containing [?oiler] shells  
colulloid & veins of calc: spar  
In one mass of the Basalt  
a large Zeolite was found  
which shews it to be  
congruous with other Basalt. –  
– In the Basalt wave  
many veins of calcareous spar.  
– At the upper part of  
the force there appeared  
a species of Dike in the  
great heap of Rock. This  
Dike was of a thin texture  
& contained apparently  
more silicious matter than}

**RI MS HD/15/E, p. 113**

113

{after them the Rock. –  
At the high force the  
Tees is precipitated over

in Basaltic Rock. of which  
the Arrangement is very  
interesting – . The Basalt  
rests in Shist; below  
the Shist is a second row  
of irregular columns &  
Below this is Shist  
Where the Shist & Basalt  
meet there is a perfect  
transition the shist becomes  
hard like [?brass] & the  
Basalt becomes fine grained &

uniform. –}

**RI MS HD/15/E, p. 114**

{Veins in the basalt about  
7. Miles above Eglestone on

the Tees. –

[Geological sketch in pen]  
The Direction of the Veins  
was various & their sides  
in many places a broken  
Basaltic dike through [?~~xx~~] ~~the~~}

**RI MS HD/15/E, p. 115**

115

{it is cut by veins which  
are of a softer Basalt  
or Grundstein & which  
in their centre contain  
calcareous spar & sometimes  
Quartz. –  
The Basalt in general  
is compact but in some  
places passes into truly  
chrystalized grunsteinwith  
large crystals of hornblend  
– In many parts it is  
perfectly columnar & near  
the Bridge some very  
distinct Hexagonal prisms.}

**RI MS HD/15/E, p. 116**

{Eaglestone Durham Augt 26  
The bed of the Tees till about  
4 miles above Eglestone is  
Sandstone of a soft kind & carboniferous  
at Middleton Shale limestone  
forms the bed of the  
river it is in horizontal  
strata – in the west of the  
Tees about 6 miles above. E.  
Basaltic Rocks appear  
& rise to the height of  
6 or 700 feet – This Basalt  
forms [?~~xxxx~~] the bed of  
the upper part of the  
river [?~~xxx~~] as high as  
the great waterfall}

**RI MS HD/15/E, p. 117**

117

{Junction at [?Secar] point of the  
prim & secondary sandstone

[Geological sketch in pen]}

**RI MS HD/15/E, p. 118**

{Note in every Vein thus it is to be  
enquired is it a Vein of Chasm  
ie a vein which fills up a  
space between two walls of Rock  
[Geological sketch in pen]  
thus or in it a hole vein   
which fills a simple orifice  
thus [sketch]. When it is a Chasm  
Vein, it is to be noted  
what is its direction ie  
its general course secondly what  
is its deviation or [?Less]  
from the perpendicular. –

The Vein dikes are almost always

Chasm Veins, so are the

Load Veins in the secondary

Countries. –}

**RI MS HD/15/E, p. 119**

119  
{see: Schist or prim Sande

[Geological sketch in pen]}

**RI MS HD/15/E, p. 120**

{Wins of the Huttonians.

– Its aspect differs very  
much from that of  
the [?quarthon] rock &  
approaches nearer to  
basalt when the  
face only of the Strata  
is broken; but it  
cannot be confounded  
with Basalt on account  
of its great irregularities}

**RI MS HD/15/E, p. 121**

121

{places bent in the  
form of an arch  
a little way in Lumsden  
strand a form of  
them is seen approaching  
to the double arch.

[Geological sketch in pen]

Many of the stones are  
apparently water worn [?S.JH]

– This primary sand stone  
approaches way near to  
some of the [?~~xxxx~~] [~~x]~~}

**RI MS HD/15/E, p. 122**

{is a Breccia –  
primary sandstone of  
a character approaching  
to primitive quartz ore  
rock. contains veins  
of Quartz of iron spar  
& of calcareous spar  
& alternates with soft  
schist. –  
I found Coal in some  
of the primary sandstone  
which distinctly marks  
its origin. –  
The strata of the primary  
sandstone are often  
quite vertical; & in some}

**RI MS HD/15/E, p. 123**

123

{Arch in the strata near Lumsden   
~~Dec Jan [?pxxxxx]~~ [?I] [?se:] sande

[Geological sketch in pen]}

**RI MS HD/15/E, p. 124**

Observations made near  
Dunglass in Haddington Shire  
& in Berwick Shire  
High in White adder Water

Is seinite of a very distinct  
character. – near it are  
primary sandstone & shist  
Rocks. –  
The coast from Dunglass

to the Siccar soft see

sand stone – at the

Siccar transition into

Primary sandstone & shist

where the transition is  
Much of the fragments  
of the primary are  
found imbedded in the  
secondary which there}

**RI MS HD/15/E, p. 125**

125  
Character of the indurated sandstone

Lumsden [?shore]:  
1 gen.

[Geological sketch in pen]

2. particular Rock water worn

[Geological sketch in pen]

**RI MS HD/15/E, p. 126**

{Sican point Haddington Shire

[Geological sketch in pen]}

**RI MS HD/15/E, p. 127**

127

{in which Limestone was  
seen passing into Glimner  
Schiefer & stratified  
directions

[sketch in pen]  
Garnets were seen in  
all the rocks of the   
high Glimmer. Schiefer  
Kind}

**RI MS HD/15/E, p. 128**

{From L. Tarn Head to Callendar  
the first part of the road  
transition rock of Micacious Shist  
into Grauwacke – [?xxxtoric]  
porphyry & trap.  
On Loch Catherne Grawake  
joining schist  
In Callendar some T Pudding stone  
of the same kind as that at  
Staffa and at Oban –  
All the Rocks of the [?xxxxte]  
Grauwacke & Granster kind

here congenerous

[Horizontal rule]  
Road between [?Tyndrum] & Loch  
[?Earn] principally Glenmor Schiefer  
& porphyry – A Quarry of  
Limestone near Crian Larich}

**RI MS HD/15/E, p. 129**

129

{different porphories in Limestone  
range without shells but  
containing quartz pebbles –  
[?Dxsh] Loch Aloe – Glimner

Scheifer Seinite porphory

& Granite – so on  
till [?xxxxx] a few miles  
of Oban – Where [?Alumxxxx]  
Shist occurs – alternating

With a peculiar large

grained [?~~xx~~] pudding stone  
[?cant] [?xxxxx] [?xxxxx] of Win

of Quartz & other stones  
– This pudding stone evidently

the same as the pudding

stone below Basalt  
On the Landing Mull

the Win with Zeolites

& chiefly [?xxx] where we travelled}

**RI MS HD/15/E, p. 130**

{road from Glasgow to Edinburgh  
Shist by [?Luss] – the loss of   
Benlomond Glimner Scheifer  
At [?Arroguar] – Seinite– granite  
Porphyry – Glimner Scheifer  
The hills above (the cobbler &)  
are all either Seinite or  
stratified quartz or glimner  
Scheifer. – The compact Seinite

contain pyrites – Seinite on  
the cobbler easily decomposes &  
gives a brown aspect. –  
At the bottom of the Hill  
before Rest & be thankful

Stones approaching to [?Gneis]  
feld – spar Quartz mica –   
with a fine red porphyry  
At [?Mxxvary] porphyry &   
Micacious Shist. –  
Road ~~under~~ from [?Moerary]  
to Loch Awe – Miccacious shist}

**RI MS HD/15/E, p. 131**

131

{In Scotland the secondary range  
begins a little beyond the  
North west boundary. –  
– At a quarry in Edinburgh  
which we examined with Mr Playfair  
a district intersection of stratified   
sand stone by Win with a  
transition of Win into Limestone

[Geological sketch in pen and pencil]

– At Arthurs seat & Salisbury  
crag – Win apparently  
upon pudding stone & on  
sand stone – Alternations   
& [?indxxxlation] of Veins  
Basalt or Win on the}

**RI MS HD/15/E, p. 132**

{similar in the cornish [?~~xx~~]  
primitive Stones  
Augt 11

[Horizontal rule]  
Observations made in  
July before the visit  
to the Highlands  
copied from red Book  
In Yorkshire from the whole  
western line of Road, I saw  
stratified mountains – principally  
silicious sand stone – with Magnesium  
& shell limestone. – the silicious  
sand stone runs into cumberland  
but in Cumberland ~~we~~ could  
observe no organic remains. –  
The mountains in Cumberland  
& Westmoreland are Shist  
Variolite – Grauwacke & [?shistxxx]  
porphyry. – The parasitical  
Stones. Garnets. Quartz}

**RI MS HD/15/E, p. 133**

133

{Mica. shew this.  
We found between [?Inverness]  
& Kings House. – Shapes  
of stratisfied Quartz  
containing distinct Veins  
of Granite. – Likewise  
masses of micaceous Shist   
containing similar Veins  
We likewise observed Granite  
passing into Quartz Rock  
& micaceous Shist Rock  
by direct & gradual  
transition –.  
These facts are very important  
as they show all these  
Rocks to be congenerous  
& they agree with facts}

**RI MS HD/15/E, p. 134**

{[?sheil] Road composed of feld  
spar Rock – porphyry & Glimner Schiefer.   
containing Garnets. –

Large Mountains of stratified Quartz  
the white mountain of this Kind.

which is the most abundant of the primitive  
Rocks here – evidently in layers having an inclination  
from N to south & a dip from East to  
west. [sketch in pen] – Fracture like that  
at Shale. & apparently the same kind  
of stone. Does not this shew that the  
Quartz or stone under the Basalt may  
be primitive: & perhaps the veins of}

**RI MS HD/15/E, p. 135**

135  
{The series of Rocks near Stronian are Granite  
red & white Granite – on the road  
from Strontian to Fort William  
a series of Rocks composed of Quartz  
& Mica begin – they are stratified   
& of [?Greis] formation. ­– at their bases  
a rock with a base of red chrystalized  
feld spar containing chrystalized Quartz.  
some parts of the fbaces of the mountains  
were micacaeous shist ­–  
From Fort William to Kings House we  
saw Ben Nevis in great beauty [?assxxxtly]}

**RI MS HD/15/E, p. 136**

{Another view

[Geological sketch in pen]}

**RI MS HD/15/E, p. 137**

137  
{Quartz on Mountain next Ben Nevis

[Geological sketch in pen and pencil]}

**RI MS HD/15/E, p. 138**

{Arrangement of Rocks on the  
NW. coast of Scotland}

**RI MS HD/15/E, p. 139**

139

{Ben Nivis

[Geological sketch in pen and pencil]}

**RI MS HD/15/E, p. 140**

{In [?Innich] Keith  
1. stratum – Win or Basalt  
sometimes columnar.  
2. Pudding Stone –  
3. – Limestone & siliceous  
sandstone in alternation

[Horizontal rule]  
Arrangement of Rocks  
from Ben Nivis to [?Tyandron]

[Geological sketch in pen and pencil]}

**RI MS HD/15/E, p. 141**

141

{Sketch of the Cliff

west side of Staffa

[Geological sketch in pen and pencil]

partly composed of decomposed Win

in large nodules

Parasitical Stones

in the Basalt particularly

in the softer Kind. Zeolite

hard. Veins of calcerous spar

[Horizontal rule]}

**RI MS HD/15/E, p. 142**

{– In Thule. Sketch of  
the Cliff opposite Ulva

[Geological sketch in pen]  
2 pudding stone

[Geological sketch in pen]  
3 Siliceous sandstone with Veins  
of Quartz & Mica dip to the  
East about 1 in ten.

[Horizontal rule]  
Aspect of Siliceous Sandstone  
primitive fracture in Rhomboid  
[Geological sketch in pen]}

**RI MS HD/15/E, p. 143**

143  
{Carbonate of Stratites sometimes.  
but little pyrites – though  
some occurred in the Win –  
– The granite ends a

few miles from Stontian  
 when the mountains are

composed ~~of~~ principally of  
[?~~grain~~] [?~~xxx~~] containing  
Quartz & glimner on the  
sides of Loch [?Sewhart] much

red ~~porphry~~ feldspar rock

with Quartz. –}

**RI MS HD/15/E, p. 144**

{Where the Win comes in the  
load is rich & trails –   
There is no heaving of the  
load but a trailing on  
the other side. –  
The bed of the Load is  
~~lead~~ [?ferraqinous] Quartz which  
they call red rider the  
country beneath large grained  
granite. –  
The indication of the Vein  
ocre as in the cornish  
Gossan. –  
The Gaugue itself composed  
first of a Calcarceous spar. [?Harxxtone]  
next. Heavy Spar. – Chlorite.}

**RI MS HD/15/E, p. 145**

145

{Sketch of the Windike at  
Strontian

[Horizontal rule]  
Vein of lead [?xxxx] with  
its gangue from three to  
eight feet through ­– direction  
from East to West [?diss]  
of 1 yard generally in six.  
Win dike or Vein from  
North to south [?diss] more  
than that of the lead  
but irregular. –

[Geological sketch in pen]}

**RI MS HD/15/E, p. 146**

{Sketch of the Sand stone Quarry  
near Glasgow.

[Horizontal rule]  
1 Soil sandy

[Horizontal rule]  
2. Irregular masses of sand stone in  
soil

[sketch in pen]

[Horizontal rule]  
3. red tinge from Iron  
continued masses of sand stone  
[sketch in pen]  
[Horizontal rule]  
4. horizontal layer of rough grained  
continued masses of sand stone

[sketch in pen]  
5 undulating vein of manganese & iron

[sketch in pen]  
6 Layer of white sand stone

[sketch in pen]  
7 Undulating Vein of Coal with Bitumen   
approaching in some places to  
[?wood]

[Horizontal rule]  
8 Alternate irregular strata  
of micaceous sand stone  
Carboniferous schist  
Carboniferous clay & coal  
[Horizontal rule]  
White Sand stone for building}

**RI MS HD/15/E, p. 147**

147  
{Ben Nevis

[Geological sketch in pen]}

**RI MS HD/15/E, p. 148**

{The different propensities like  
the different strings of well tuned

[?~~x~~] harp each having  
a different tune but  
all in harmony  
Porphyritic Aspect.  
River Awe

[Geological sketch in pen]}

Porphyritic Aspect.  
Awe

**RI MS HD/15/E, p. 149**

149

{Mountain above Strontian  
principally composed of a rock consisting  
of Quartz & Mica

[Geological sketch in pen]}

**RI MS HD/15/E, p. 150**

of the Grainite & Basalt   
in Mull?.. – –  
[Horizontal rule]

Basaltic Aspect  
Staffa

[Geological sketch in pen]  
– in the rock of Dumbarton we  
observes pudding stone below  
the Win containing Win which  
would shew that the pudding  
stone was formed after the Win}

**RI MS HD/15/E, p. 151**

151

{in some places having

the aspect of [?greis]. –

Coast of Mull  
opposite Iona – Hard red  
Granite. – In Iona  
no Rocks of Granite  
Rocks, Schist principally  
passing into Jade &

[?hernstone] – On the

South side large dike  
or Rock of Jade.  
sides a peculiar compact  
asbestos, one piece I

Found filamentous

[?Qu] is it possible  
to trace the function}

**RI MS HD/15/E, p. 152**

{Staffa.. The Basaltic Columns  
rest when in imperfect sand  
sand stone containing  
large fragments of  
Win –  
On [?McKennith]  
the rocks are  
1 stratum Basalt  
evidently columnar  
2 pudding stone –  
3 Limestone & hard silicious  
sand stone in alternate layers  
– on the opposite Coast  
of mull  
1 Basalt  
1 Pudding stone  
Hard stratified

Sand stone silicious

[Horizontal rule]}

**RI MS HD/15/E, p. 153**

153  
{Ben Nevis  
from Oban Bay  
[Horizontal rule]

[Geological sketch in pen]}

**RI MS HD/15/E, p. 154**

{Cruachun Ben

farther in Oban Bay  
Primitive Mountain Aspect  
[Geological sketch in pen]}

**RI MS HD/15/E, p. 155**

155  
{Lismore Sound of Mull  
Limestone Aspect

[Geological sketch in pen]}

**RI MS HD/15/E, p. 156**

{ Cruachan Ben

from Oban Bay  
[Geological sketch in pen]}

**RI MS HD/15/E, p. 157**

157

{The maiden island in the   
bay of Oban

[Geological sketch in pen]  
[?Qu] is not the Breccia from  
the destruction of the primitive  
Rock by water. –  
Mem. The elucidation of the   
secondary strata beneath the  
primitive apparently by  
[?xxllx] [?xxxx]. – [?xx] [?txxx] may

be just suffered to remain   
not filled up which may be filled  
afterwards –}

**RI MS HD/15/E, p. 158**

158

{Augt 1. Oban the Country  
here has a base of metalifferous  
shist & ferruginous schist  
with veins of quartz  
& pearl spar; indications of  
copper. Pudding stone containing  
very considerable masses of  
porphyry & primitive stones & Win

Base argillaceous  
On the pudding stone stratisfied

sand stone. –  
General geological aspect  
Schist  
sand stone  
Schist  
[Geological sketch in pen]}

**RI MS HD/15/E, p. 159**

{Granite Aspect  
33 Kings

Street  
Covent Garden}