# Transcription of John Templeton's Journals

The John Templeton archive is held by the Ulster Museum. The Museum copied the Templeton Journals in halfyearly segments on microfiche (released in PDF) and have made them available to the Belfast Naturalist Field Club to facilitate a project to transcribe these remarkable handwritten Journals into a digital format and make them available to a wider readership.

The result is an accurate, uncorrected and unedited line by line transcription of the pdf copy of the Journals, preserving Templeton's original spelling, erratic punctuation, insertions and layout. The number in bold on the left relates to the Ulster Museum's PDF page number so it is easy to navigate back to the original text. The next number is the date given in the Journal. Occasionally Templeton numbers his Journal pages and where present these are given on the right. Editorial comment is in square brackets. A fully edited version with footnotes and summary appendices is in preparation.

# Templeton Journal 1807 Fiche No 1 14 Jan to 28 June

## **Initial transcription**

97 pages 15757 words

TDI' DAT MONTH/TEAN JOUNNALTAU	PDF	DAY	MONTH/YEAR	JOURNAL PAGE
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2

1

January 1807

- Heavy snow falling from Sowerbys fig
  E.Bot found that what I had formerly
  reckoned *Lichen crassus* found on the
  sides of Drains on the North side of Divis
  May 20, 1803 is *Lichen carnosus* of
  that work but that figure has the margin of the shields too brown they are of
  the same color as the crust
- 15 Frost snow still lying but after sunrise it began to thaw by 1 PM to rain which ceased at 3 about 5 PM it began to blow hard this morning thought of an improvement to my anemometer which is to mark the point of the compass when a Gale takes place

in the absence of the observer it is accomplished thus - Let the descending weight be furnished with a pencil which will mark on a piece of paper placed underneath and divided as a compass the point it descended on



2

3

## January 1807

16 Mild soft day Ice totally gone the *Mi*-*-mosa decurrens* has the leaves killed examined the stone at the Flax hole from which I took the brownish lichen last year, and find it the same as I found on the stone in the far plain I made a figure of it it agrees Very much with *urceolaria exanthematica* I have called it *Urceolaria volvata* see my fi--gure on account of its appearing envelop -ed in a volva in its first state see fig -ure 1.& 2 A fine bright Morning thrushes singing
".... Oumiavin.... brother to one of the Chiefs of the wandering Koriacs..... Though equal-ly informed respecting the Russian and Koriac mode of worship, he in reality proposed neither. He seemed dispo-sed however to be baptized, and only waited till he was better instructed upon certain points which he did not com-prehend. Full of admiration at the sub
-limity of Christian morals, and Majestic

pomp

4

## 3

pomp of its external worship, he acknow--ledged that nothing could give him a great--er desire to become a convert to it; but the imperious severity of some of our religious rites\*, the uncertainty of Celes--tial happiness, and particularly the idea of a God threatening eternal torments, fil--led him with inquietude and dismay. With all its visions and all its absurdi -ties, the Religion of his country, he said, offered him at least more hope than fear; its punishments were confined to the present world, and it promised him a recompence in the next; the evil spirit could only torment him during his life, and happiness awaited him af--ter his death. Agitated by these consi--derations, his mind floated in continual doubt and perplexity. He dared neither adjure, nor continue steadfast in the faith of his fathers. He blushed at its errors, yet his heart cherished them." (1) The Koriacs ".... acknowledge a supreme being,

the

\*He was chiefly terrified by the fasts, which, with the Greeks, are very rigid and very frequent.

(1) Lessops travels in Kamtschatka. 2. p.80-82

## 4

the creator of all things. He inhabits the sun, whose burning orb they consider as the throne or palace of the lord of nature, whom they probably confound with that celestial fire, which is supposed to be his dwelling. I am led to believe this, as they neither fear nor worship him. They address no prayer to him: goodness, they say, is his essence; all the good that exists in the world proceeds from him; and it is impossible he should do an injury. May we not conclude from this statement, that the view of the con--stant and universal benefits conferred by this king of the celestial orbs which gives life, action, and power to all things ter--restrial, while it taught them to con--sider this luminary of the world as their tutilary divinity, imbued them with the blind confidence I have described?

The principle of evil they consider as a malignant spirit, who divides with the sovereignly good being the empire of nature.+ Their power is equal. As the

one

+They believe also in inferior deities. Some

they

## 5

one is intent on the happiness of Man--kind, the other endeavours to render them unhappy. Diseases, tempests, famine, calamities of every kind are his work, and the instruments of his ven--geance. It is to pacify his wrath, that they sacrifice their personal interest, and have recourse to devotion. Their homage is dictated merely by terror with which this menacing deity fills every heart, and consists of expiato--ry sacrifices. They offer to him various ani -mals that have just began to exist, reindeer, dogs (1) the first fruits of their hunting and fish[Continued from + at end of PDF5:]

they consider as household gods, the guardians of their rustic habitations. These idols, coarsely carved and blackened with smoke, are hung up in the most conspicuous parts of their yourts. They are dressed in the Koriac mode, and ador--ned with bells, rings, and various other iron and copper trinkets. The other inferior deities they consider as inhabiting mountains, woods, and rivers, which reminds us of the nymphs in the mythology of the ancient Greeks. (1) I frequently perceived in the course of my journey the remains of dogs and rein--deer suspended on stakes, and testifying the devotion of the sacrificers.

6

-ing, and whatever they possess that is most valuable. Their devotional exercises con-sist of supplications and thanksgivings.
There is no temple, no sanctuary set a-part for his votaries. This fantastic
god is equally worshipped in all places.
and hears the Koriac who prays alone
to him in the desert, as well as the
assembled family, who conceive that
they render him propitious by pious

7

-ly getting drunk in their yourt; for drunkenness is become among these people a religious practice, and the ba-sis of all their solemnities.
This demon, this formidable spirit, is doubt-less the same being as the Koutka of the Kamtschadales, whose ministers and in-terpreters the chamans consider them
-selves. Here, as in the peninsula, the mystic language of these magicians
works upon the credulity, and obtains the
veneration of the multitude. They exer-cise physic and surgery with equal suc-cess. These exclusive functions which are supposed to be aided by inspiration

rather

7

rather than the light of experience, pro--cures them unbounded power. They are sent for from all parts of the country, and testimonies of gratitude heaped upon them before-hand. They demand with haughti -ness whatever they please, and consider everything that is given them as tribute. It is upon the pretext of making an accep--table offering to the god, whose organ they are, that they appropriate to them -selves whatever the inhabitants pos--sess that is most costly and beautiful. It is not necessary to suppose that these imposters gull their votaries by a pa--rade of virtue, by rigid observances, and a scrupulous life; on the contrary, they surpass them in their vices, and fall short of then in sobriety. On the eve of their magic ceremonies, they pre--tend indeed to fast all the day, but they make up for this abstinence at night by a profusion of the moukamorr, the intoxicating poison I have described, which they eat and drink to satiety. This preparitory intoxication they con-

#### sider

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-sider as a duty. It is probable that they feel its effects the next day, and that they derive from it and elevat--ion of spirits that contributes to de--range their minds, and give them the necessary strength to go through their extravagant transports."

> Lessop's travels in Kamtschatka Vol. 2. p.100-105

## 10

## January 1807

Showers during the day, in town, Mr.Tennant this morning went to Dublin

in consequence of finding Mrs.Tennant was dangerously ill, wrote to him in the evening, requesting him to write me how Mrs. T was - How terrible for two feeling minds to be separated in the midst of happiness, how dreary prospect which appears before the survivor, how melancholy of the ideas which the scenes of their former plea--sures give rise to, the rooms where they have sat in, the Groves or fields where they have walked, the different articles made use of by they departed friend, all conjure up the beloved im -age, which fades, and leaves a void behind, and long is it before the troubled mind is lulled to tranquillity [5 lines crossed out]

## 11

### 10

[3 lines crossed out] amidst the scene of death we see the futility of all worldly pursuits, and how useless it is to spend our time in vexing each other. The paths of ambition attract us not, and even riches have lost their dazzling splendour

18 Cold clear day with Snow showers

Read the Edinburgh reviews of Bailly the Astronomer and Mayor of Paris Post -humous works which give some of the most striking features of the beginning of the French revolution

19

January 1807

11

Froze hard the beginning of last night
and a very wet day following it
at a quarter past 4 A.M. begin-ning to blow ——Spent the forenoon in arranging Lich
-ens

The French use *Plantago maritima* for a pickle and sallad and sometimes boil the leaves in soup.

The Roots of *Carex arenaria* are well a--dapted for fixing movable sand, as they not only extend by their interlaced fibres but retain a certain degree of humidity on the surface. When fresh or washed they have a savour of oil of turpentine, or some balsamic pine. And they have being long celebrated in Germany as po--ssessing virtues superior to those of *Sass*-*-parilla*. Gleditch in the Berlin Me -moires for 1769 adverts to their success--ful application in the March of Bran--denburg, where waggon loads of the roots may easily be obtained. Where it cannot 20

12

hirta of the Linnaeus are recommended in its stead.

Edinburgh Review Vol 6 p 411 Art Nouveau Dict. d'Histoire Natu--elle. appliquée aux Arts &c.

a fine morning after heavy rain went to the Cave hill. Observed several Lichens in great perfection. it appears that there is 2 kind of Lichen concentricus on in which the crust is very thin and shield small in a dull white crust - the other has a thickened shining white crust with the shields larger and some of them with a brownish tinge - found *Lichen canescens* on the Limestone rock at the SW corner of the deerpark with a bright yellow Lepraria which I think is most likely the first stage of Patellaria varia which I found in the North wall of the deerpark varying from bright yellow to greenish yellow. on the same wall near the top found Conferva aurea spreading over the wall and mosses not growing in tufts as it commonly does,

when highly magnified it had simple fi--laments, and with the joints about 4 diameters, some doubts appear that this may be Byssus Jolithus of some authors see annals of Botany I 283. near it was a ferruginous Sepraria which answers in discription to Lepraria aroumata Ach-Pro -11 Crust, powdery, ferruginous, when highly magnified the appearance was round smooth granules. About the same place I found growing on the Moss on the wall a gelatinous plant which answers to Link.ia Nostoe An--nals of Bot. I. 275 the only difference appears to be the color which in mine is nearly Olive. but if my figure represents it, Sowerby E. Bot 461 must either be a bad re--presentation or a different plant Lichen crispus see my fig.2 tab 1

*—- crispus* var See my fig. 1 tab 1

15

15

January 1807 14

[blank page]

## 16

January 1807

20 Heard of the death of Mrs. Tennant who from her amiable manners had gained that affection and esteem which benevolence usually receives, even from those not so highly gifted as themselves with that characteristic of infinite Goodness when such a dear friend and companion passes away, it is long before we are perfectly reconciled to the loss, how much more sensibly must they feel who are united by the tenderest ties which can bind two human beings together, who alike feel joy and sorrow, and whose sympathetic hearts beat in unison, the pair hopes of pursu--ing the Journey of life together, giving and receiving those kind attentions which smooth the often rugged path.

those eyes ever watchful to ease the suffering mind, Death has closed, and the unencumbered Spirit looks with complacency from its happy abode, and receives the Greatful tribute of sincere sorrow, pain and one whose happiness was closely entwined with hers

17

January 1807

16

21 Snow and Sleet Froze at night

22 [blank]

23 Fine Morning afterwards snow showersWent in the Car to visit Mrs. Mc.Calmontformerly Miss Bess Barclay.

24 Slight Frost in the morning and a fine

day throughout Great Blue Titmouse singing Snowdrops white

25 Good dark day. made a figure of *Le -praria arcumata* found the 20 also of *Lepraria incana*.

Slight Frost dry in the forepart of the day after one began to rain Planted in the Grove 2 Great Queen Claude No. 8. 2 Great Damask No. 9.1 Black damask No. 10 and an Autumn Burgamot Pear.
After this read the Annual Reviewers ac--count of Sir J Banks paper on the Mil -dew of wheat. he seems to give a good view of the effect, but never mentions his idea of the Cause. From my observations it appears that

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that, the Wheat receives the seed of Mildew or *Uredo* from the *Agrostis stolonifera* principally, but also from *Poa pratensis* & *trivialis* &c. as I have constantly observed it upon these grasses even when there was none on Wheat. But it appears to me that, it is only when the wheat is in a state fit to re--ceive it, that it is infected, the time when Wheat is liable to Mildew, is when the straw is beginning to turn yellow, I have seen neighbouring fields, the one very much Mildewed, the other not, owing

to one being later, and of consequence green -er. Without rain or mist, I believe Wheat is never infected with this disease, and even with rain, if the days are dark until the straw is dry but if it is rain and sunshine while the straw is wet, the wheat seldom es--capes, and when a misty morning continues until the sun is high and breaks out bright, while the globules of Dew yet hang upon the straw, two or three such mornings never failed to produce Mildew, after this kind of weather.

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I have often known fields in the North West, or Northerly side of a hill, or other--wise shaded from the Sun escape, while all the southern exposures were mil--dewed. I have been told that some peo--ple in Ballinderry, were in the habit of drawing a hay rope supported at each end over their fields of wheat, in order to put the moisture off, before the sun broke out after a foggy morning, and that they found it prevented Mildew. from all these observations it appears clearly to me, that sunshine while wet remains on the straws is the first cause of Mildew but by what means this acts upon the straw so to make it a fit soil for the *Uredo* to vegetate on it is a little difficult to explain. The sun's rays transmitted through this

[2 lines blurred, check original]and therefore destroying its vitality,it becomes in a proper state for this Fun-gus to vegetate on. it is well known to Gar

-diners

#### 19

-diners that if they watered their Green--house or hot house plants in the morn--ing and that any of the water remained on the leaves when the sun came upon the watery Globule it would produce a decayed spot on the leaf. The progress of what is commonly cal--led Firing on Flare is the same as that of Mildew on Wheat, it first appears reddish like rust, and afterwards turns black, but it seems that the epidermis is to all appearance turned into charcoal and the future process of bleaching seems to confirm this idea, for this blackness which the bleachers call spret cannot be removed by any process which will not remove charcoal, it is not acted on either by acids or alkalis. I think that the aspersions cast on the charac--ter of the Berberry, viz, that of causing the

Mildew to infect wheat in its neighbourhood are totally void of any foundation, and that it is the remains of some antient prejudice adopted without examination, for the Fun-

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#### 20

Fungus which grows on the Berberry is the same as that which gives the rusty appear--ance to young Gooseberries and is the Aci--dium berberris of Sow En. Fungi, 397, No 5 From the forgoing observations it may be seen how it happens that Wheat growing in a low and moist part of a field is more liable to Mildew than the more dry parts of the field, the greater quantity of moisture which rises from such a place may be often observed in the cool of the evening after a warm day, when the cool air is condensing the warm vapour which is rising from the yet warm ground, and if a greater quantity of moisture arises from this moist soil than from the dryer parts of the same field it follows that a greater quantity must be deposited on the plants growing in such a soil, unless dispersed by wind, and remain ready for the des--truction of the straw and forming a soil ready to receive the Mildew or seed of the Uredo frumenti

22

"J Peirson Esqr. read the Croonian Lecture on Muscular motion to the Royal Society this winter. It occupied the greater part of two evenings, in the course of which the lectu--rer entered into an elaborate detail con--cerning the heat and pulsations of ani--mals in different latitudes, in order to ascertain their effect on the muscles. As an instance: in this climate the pulse of horses beat 36 times in a minute, that of Cows 48, and that of Men 72; in Lap--land, and other high Northern latitudes, the Human pulse does not beat more than 45 to 50 times in a Minute. Mr. P. has made numerous experiments on the Muscles, in all which he found the Muscular irritability com -pletely destroyed by plunging them in water at the temperature of 96°; electricity, after such immersion, sometimes gave slight symptoms of excitability, but no human effort could ever restore the Muscular to its proper tone and vigour. Cold produced similar effects on the muscular fibre by instantly destroying its irritability. Hence the necessity of great cau--tion in applying warm water to the sur--face of bodies recently immersed in water in cases of suspended respira--tion, as heat may equally be as bad as

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cold

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cold with regard to its effects on the Muscular fibre, which by Mr. P. is considered in some degree the organ of life. Blood he regards as essential to life only as a stimulous to muscular irritability and the abstraction of blood occasions death through the want of its stimulating powers to the muscles. The stomach he considers as the most important organ of the human frame, and its irritability is so excessive that a blow on it will instantly des--troy life, though the heart can sup--port a wound some days.

Monthly Mag - Vol. 22. p581.

- 27 Slight Frost and a fine day in the Morn-ing made a Drawing of *Phaseum muticum*
- Slight Frost, afterwards cloudy and threat
   -ening rain. in the Morning made a
   Drawing of *Reticularia aeruginosa* see figures of Additional Fungi. A fine
   mild dry day
- 29 Mild cloudy morning a fine day to town.
- 30 Dark Mild morning a fine day
- 31 Frosty Morning snow showers Frosty night

February 1807

- Hard Frost Clear day walked to Seymour
   Hill Hedge sparrow singing
- Cold dry day Frost gone during the forenoon
   busy with Mr. Dubourdu's New Map of
   the C. Antrim
- Frost and Heavy Snow falling, towards 12
   A.M. Snowing ceased, to town found on the
   NW ditch of the New Road *Phaseum muticum* and *subulatum*
- 4 Mild Morning after Snow in the nightHeard of Mr. Tennants coming home went to him
- 5 Snow lying
- 6 Frosty fine day
- 7 Slight frost Ice thawed as the sun roseWent to Mount Vernon with Mr. Tennant
- 8 Heavy rain in the night returned home
- 9 Heavy showers with great squalls, about
  8 at night the wind became more strong
  and about 10 the Gale was very severe
  and with scarcely any intermission
  between the squalls.
- 10 Quite calm the Caffinch and robin sing--ing. I have almost always remar-

-ked

25

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-ked that the same power that causes the sea to flow acts on the wind, and that constantly as the tide flows the Gale increases and when the ebb takes place the wind begins to fall off - last night was 3 days af--ter New Moon - In night blowing

- 11 Wet Morning
- 12 Fine Mild Morning

13 Fine Morning - Went to town. Mr. Tennant mentioned some particulars about Salmon There are men stationed on rocks near the entrance of the River Bush who direct their companions how and when to put in their Nets from a high rock at the bush foot looking to the NE under the shade of the rocks the sun at his back he sees the Salmon at a great distance coming from the NE and can distinguish those fish which in -tend entering the River bush, the Ban Salmon coming along the coast as soon as they perceive the water of the bush, which they do either by taste or smell shoot out into the sea and are no more seen

while

26

### 25

while the others push forward to the river Bush.

[The following has been inserted between lines]

May not their coming from the NE

depend on the current through sound of Rahery setting against

these, and do the not come from the NW at other times of the tide.

The Bush rises among bogs The water is therefore tinged with brown the Salmon easily recognized by their colour and moreover by a consi -derable difference in their form, the Ban salmon are remarkably thick or strong made; the Bush much more slender The Ban or Colerain Salmon living in more transparent water are clearer in their color

A fine mild morning. Went to town early to Mr Wm. Sinclairs Funeral.
The fine description of Homer came across my mind where on the Shield of Achilles he marks the difference of Peace and war. The peaceful citizens are met in the forum.
"The subject of debate a townsman slain" The next compartment of the shield exhibited. The carelessness with which death is viewed in a state of warfare

there

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## 26

"there tumult there contention stood confest;

"On neared a dagger at a captive breast;

"One held a living foe, that freshly bled

"With new made wounds; another dragged a dead.

#### Homer Book 18

This solemn this awfull procession which tells man the vanity of all human pur--suits, custom has made a mere ceremo--ny unconnected with one. Melancholy thought, in the minds of the heedless multitude, they laugh, and talk, and convey with a slow pace, the only sem--blance of grief, to the dark and [narrow?] house the remains of one whose hand was often lifted to succour the distres--sed, and arm only extended to shield from want his fellow citizens, whose tongue so often pleaded in their defence and overthrew the arguments of their Calumniators, whose eloquence commanded the attention of assembled multitudes, and whose rectitude of prin

-ciple

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### 27

ciple made even Vice ashamed in his presence and respect though it would not immitate Mr. Wm. Sinclair early initiated into the practice of the Linen trade by perse -vering industry and honourable dealing rose to the first rank of eminence in

that business, Convinced of his own powers of mind, and independence of action Characterised him through life, and led him to be among the first in defending the Rights of Man. But to know the secret spring of a Mans apparent Benevolence we should view him in of the Social circle, in the exercise of the Duties of a Husband Father, Master, stations which Mr S. filled in such a manner as to excite the most lively feelings, of love, affec--tion, and respect. and it may be truly said few have departed more generally regretted, and whose death was a greater loss to their townsmen

#### February 1807

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- 15 An uncommon fine day through out. Common & Cloth of Gold crocuses in full blow at Seymourhill not one blown in my Garden, *Arum* in the hedges showing its <u>Spa</u> the *Hepeticas* in Flower -
- Heavy rain in the Morning. MildApril like showers during the day
- 17 Misty Moist Morning. Snow Showers during the day
- Bright Morning the ground covered with an evenly layer of snow. At 9

P.M. Ther - 28° - [a later insert:] about 3 o'clock at Deal on the East Coast of England a great storm from the N.E - many ships destroyed abated the 19 "Military morals are closely connected with military manners and habits ——— Indeed loudness throughout animal na--ture is allied to courage: the gelding is a spiritless Beast. Religion is not favourable to courage, half its essence consists in inspi--ring fears of the mind; and the habit of dwelling on prospective solicitudes of the immagination is the basis of apprehen--sion, dismay, and panic. —— The Priest and soldier are natural antagonists

Bra-

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### 29

Bravery seldom flourishes in a communi--ty but at the expense of tenderness and hu--manity. Women and Priests, who are usu--ally forward in offices of Kindness, are sup--posed to be comparatively inferior in point of courage. Anger is a tearing mangling passion; and during its paroxysms, cruel: but anger is the regular stimulus of brave--ry; every General reviles the foe. Those who are naturally most apt to flinch, are Naturally most afit to sympathize. There is indeed a reflex sympathy, as there is a reflex courage, brought on by reasoning about our duties, which may coexist with antagon -ist qualities: but these are accidents of accomplished natures, not the average lot of ordinary men. Old Generals are the mild--ests but not the boldest. The Russians are the bravest, the hardiest, the best soldiers but they are not the most humane. Archen--holty says, that in the seven years war some Russians, who had just lost their limbs, were seen on the ground still to gnaw at the Prussian foe who had fallen beside them. The French excel in military virtues, but not in justice and humanity. The I

-rish

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The Irish are splendidly courageous, they have much humanization to acquire.

#### 29

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-rish

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## 30

The Irish are splendidly courageous, they have much humanization to acquire. The Calabrians are the most daring, but the most cruel of the Italians. The Spaniards abound not in courage, but

Practice benevolence, and so do the Hol--landers. Nor are the public acts of coun--tries, while under the ascendancy of stan--ding armies, at variance with analogous inferences Annual Review (Art - Macdiarmids Syst, of National defence) Vol. 4th p 249 -

Experience proves that any diminution of the freedom of a people necessarily vi--tiates their morals. Montesquieu, a most acute observer of men, distinctly perceived this. He informs us that virtue is indis pensible in a free government, and altoge--ther unnecessary and extremely dangerous in a despotism. He affirms that even in a Monarchy, where the Sovereign rules by law, but by such laws as those of France, it is extremely difficult for the people to be virtuous

Same p. 248

31

So long as the Church of Rome and the church of Constan -tinople agreed in religious doctrine, their common creed had a right to the denomination of Catholic or universal; because it was in fact, the only recognised and established form of Christian confession. But should have agreed with this The Notorious corruption of the Nicene creed, by the insertion of the words filioque, began at the council of Toledo, in Spain, under Riccaredo, in the year 589. This addi--tional clause can be traced as already accep--ted by the Gallican Church in 791. At the Synod of Frankfurt, in 794, this innovation was superinduced on Germany, and from the time of the Coronation of Charlemagne it may be considered as having become the orthodox doctrine of all that portion of Christendom, which recognised the spiritual supremacy of the Church of Rome.

The Roman Catholic faith which differs from that of the antient Church by main--taining the twofold procession of the Holy Ghost, is therefore, but a modern heresy, first established in the year 794 and has prevailed in Europe only during about half the interval that elapsed between the foundation of Christianity and the Reformation. The Bishop of Or--leans, Theodolfus, seems to have been the

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#### 32

the person through whose zeal the pow--er of Charlemagne was moved to convene these councils, which established this re--cent and double genealogy of the Spirit; he is, therefore, the founder of the Roman Catholic sect; the proselytes to which might fitly be termed, in Ecclesiastical history Theodulfians. About seven hundred years later than Theodolf, flourished Bucer, who was con--sulted by Archbishop Cranmer concern -ing the alteration of the English Church, and who appears to have defined those articles of faith, which are now held sacred from the Tweed to the Channel. Ireland was first converted by the Theo--dulphians, and next undertaken by the Bucerists. Fourfifths of the inha--bitants repeat the Shibboleth of the one sect, and half the remaining fifth of the other: about a tenth are Calva -nists. The Bucerists have attempted to draw the Calvinists into their al--liance, and, under the common name

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of Protestant to advance a Claim of as--cendancy in Ireland. Assisted by the civil power of the British Government, this arrogance has been so successful, that the tythe is collected over all the lands of Ireland, for the exclusive bene--fit of the Priests of the Bucerists. A decimal fraction of the community has contrived to confiscate, for the benefit of its own peculiar priesthood, one tenth of the annual produce, which is equivalent to the feesimple of one sixth of the whole territory of Ireland. This has been accomplished and maintained by the forcible introduction and execution of penal laws against the cele--bration of mass and other innocent actions of the Priests of the Theodulfians (which laws have been lately withdrawn) and by the exclusion of their laity from offices of Ma--gistry honour and profit (which exclusion still subsists). Under Elizabeth, and at the instigation of the Bucerists 130 priests of the Theodulfians were executed at Ty--burn, and elsewhere, for no other crime than the inculcation of their tenets: so exten-

sive

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[PDF page 32 repeated here]

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[PDF page 33 repeated here]

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-sive a destruction of Priests never accompani--ed any other persecution, except that by the late Atheistical Revolutionist in France. Under Charles the First, North America was stocked with the exiles of a less murderous, but not less extensive persecution. Under Charles the second, two thousand Calvinist priests, who had been inveigled by the Bucerists into tem--porary alliance, for the sake of accomplish

-ing the restoration, were with the most ungrateful perfidy, ejected from their be--nifices, and had their private property, in the revenues of the Church, totally confiscated, without indemnity, by an act of uniformity. What was thus done against the Calvinist Clergy was extended under the third William to their laity. Corporation and test acts were introduced, in order to deprive their adherents of all political influence. They yet labour under the same grievous privations as the Theodulfians. During the reigns of George the first and second, a Philosophic party gave the tone to our Statesmen; the spirit of the Hierarchy slumbered; Ire--land

38

## 35

-land was tranquil, and Britain happy:
but the opportunity was lost of removing
the legal infringements on the political
equality of religious sects, and the evils
of intolerance were all to be renewed
during the ensuing reign. Every one re-collects how much the rebellion of Ame
-rica was embittered by the apprehen-sion of being visited with episcopacy;
and how much the rebellion of Ireland
was occasioned by the refusal of Catholic

emancipation. Two civil wars is a high price to have paid for our docility to this clergy. ——

Annual Review 4th. p258-9 By our religion (say the Annual Reviewer of Mr. Deputy Birch) he can only mean the monopoly enjoyed by his own sect (the Bu--cerist or Church of England no doubt) of hold--ing offices. By our Laws he can only mean two or three which must be replaced to grant the prayer of the petition. By our Liber--ties he can only mean our restrictions on liberty: the catholics ask for the remo

-val

## 39

## 36

-lieve more, and those who believe fewer than her thirtynine articles. Under
one sovereign (Elizabeth) a hundred and thirty Catholic priests were put to death, under another two thousand Presbyte-rian priests had their revenues confis-cated. No one sovereign educated in
her faith has yet terminated a reign
of glory, for Elizabeth was
a Catholic —-- William a Presbyterian
and the two first Georges Lutherans

when

## **40**

### 37

when they acceded.

Annual Review 4th. 290

19	Snow remaining on the Mountains.	
20	Showery, rain about 8 a heavy hail Show	
	-er	
21	A fine morning gentle breeze, Rain, and	
	Stormy night. Caffinch singing	
22	Showery and windy	
23	Hard frost and fine sunny day, Pilewort	
	in Flower ——	
24	Hard frost, Cloudy	
25	Very great rain in the night a fine day	
	towards night began to grow cold.	
26	Frost ground covered lightly with snow	
	light snow showers in the forepart of the	
	day, heavy blowing snow showers.	

- 27 Snow Showers frosty during the nightabout 9 PM Thermometer 26°
- Frost snow remains a fine bright Mor-ning. Thaw commenced in the Morning

  A subject for the consideration
  of the inhabitants of Belfast —

  Water it must be allowed is one of the most
  necessary articles both for our comfort existence the want
  of a sufficient supply has been long felt as

а

March 1807 38 a great inconvenience in Belfast, but we are more glad to find that by

the unwearied exertions

of the Gentleman appointed for the purpose of investigating the sources and flow of the neighbouring waters

an ample quantity

has been discovered easily to be procured, and although many have objected to the wa--ter being impregnated with a considerable portion of impure matter, as acids and alka -lies from Bleach greens and putrid animal and vegetable substances which fall in--to it as it flows along, these objections must however vanish when it is known how ea--sy it is to purify water by filtration, agi--tation and exposure to the air +. It was no doubt in consideration of this that Splendid fountains have been erected in

### 41

Rome and other great Cities, and as Bel--fast is every day making extensive strides towards opulence and Splendour we have every reason to believe that it would meet with the approbation of the inhabitants if such was erected here, the expense should form a matter of trifling considera--tion when it is considered how essential -ly necessary pure water is to good health how much their streets would be ornamented

by

42

#### 39

by a few Jets, cascades and fountains which would toss their sparkling volumes aloft in air on which the sunbeams played in all the various colours of the heavenly bow) A steam engine crea--ted at a moderate expense would raise the water sufficiently high for this purpose and to flow into the upper stories of the hou--ses where its might be ready to extinguish any fire which might happen, and immediately stop the progress of des -truction. When we are convinced how much the adoption of this plan would administer to the profit and pleasure of the inhabitants of Belfast, who have of late shown such a laudable spirit of the im--provement of their town, and who are at all times so ready to listen to any
thing which may tend to the comfort of the inhabitants, we have every rea--son to believe that nothing more than a hint is necessary to bring this plan into immediate execution.

+In order to have good water Fourcroy says "It is necessary that no common sewers

or

**43** 

#### 40

or drains should pass into it, that its cur--rent should not be impeded or rendered slow -er by obstacles, or by water being drained off in too great quantities, that the wa--tering of hemp or the washing of cloths in soapy lisciviums should not be perfor--med in it. &c. and lastly such waters produce a sense of weight at the stomach pass with difficulty through the intestines and the action of the digestive powers — — To correct these bad qualities several methods are employed entirely grounded on Chemical or Physical considerations Agitating by means of Mills or causing it to pass through the air in the form of Jets, cascades &c These methods fasci--litate the evaporation of noxious gas and putrid spiritus rector the water may contain, cause impurities to subside by

uniting them into larger masses, and

occasion the absorption of a proper quan

-tity of atmospheric air &c.

Fourcroys Elements of Chemistry

5 Ed. by Thomson Vol.1.p223

[Elements of Chemistry and Natural History to Which Is Prefixed, the Philosophy of Chemistry by A. F. Fourcroy, Fifth Edition, with Notes, by John Thomson, in Three Volumes by Antoine-Francois De Fourcroy]

Written for the advocates for supplying Belfast with the dirty water of the Milldam.

# 44

#### 41

Frederics and her Buonapartes, America may beckon to securer shores the trembling virtues, the patient industries, the curious searches, and the forsaken Muses

Annual Rev - 4 - 721 [2?]

It is mind alone that raises states and depresses them the mind of Alexander Conquered India, that of Napoleon now conquers Urope, whether we view superi--or intelligence guiding the political Machine, launcing numerous fleets over the ocean, or yoking the peace--ful Plough the power of intellect over mere force are alike conspicuous. The mind of Newton penetrated beyond this lower world, and traced the circling planets in their course, his hand direc--ted the helm of the Navigator and taught him to steer his devious path, over the pathless ocean It was by this that

Cook pursued his successful course through seas unknown whose surface had never

yield-

45

40

[PDF page 43 repeated here]

**46** 

41

[PDF page 44 repeated here]

**47** 

#### 42

yielded to the crooked heel, that Montgol--fer mounted into the cerial regions, that Lavoiser taught us to divide the elements of earth, air, water, and fire, and resolve them into their original simplicity. It is mind alone which elevates the mortal, to approach the Immortal essence by whom all things are, and were created, and which feeds and clothes and warms us, and places man at the head of all animated nature. The works of Dioscorides, Galen Aristotle, and Hypocrates, yet influ -ence the minds and actions of Man--kind, and Euclid will remain first in rank among the bene--factors of the human race, as long as the social chain binds Society

together. Whoever then wishes to make men happy, and great, let them endeavour to extend the powers of mind. let them endeavour to banish from

**48** 

43

from society all those pursuits whe--ther entitled professions or amuse--ments which tend to raise the more turbulent passions, Drinking and Gaming have too long disturbed civi--lized society, carrying in their train a long list of evils, it is by drink the barrier of virtue is mostly broken the thorny paths of vice made smooth and the hand of the nightly assassin armed often against his benefact -or, Gaming with its mild insidious face gains upon the unwary victim, first gently pleases, then all the an--gry passions of the soul let loose conspire to hurry on their Victim fell despair, remorse, for friends, honour, and subsistence gone impel the af--frighted maniac on to self destruc -tion.

And should you thereafter be able to extend your views so as to embra--ce the whole circle of the Arts and Sciences [later insert]

Genius

The most active mind the most fertile

Ge-

49

#### 44

# the exhaustless field of Science in--vite to pursuits in which health of body peace of mind are the constant produce, whether you penetrate into infinite space and trace the circling planets and calculate the laws which retain then in their orbits and direct them in their course, or directing your enquiries to this world which we inha -bit, you traverse the earth in pursuit of the animated and inanimate objects which present themselves on all sides to the attentive observer, Zoology Bo -tany and Mineralogy each present such charms, and give such lasting pleasures as falls not to the lot of the Votaries of Fortune. Or does the Pain--ters or the Sculpturer art allure thee, first painting with a gentle hand leading thee on amidst all the fair variety of things, points to

natures

natures ample field, the Canvas flows beneath thy hand, Man the Master of this Earthly Sphere seems to act and reason, the roaring Sea the thundering Cataract sound in our ears, the glowing heat, the gen--tle breeze & rushing Storm strike upon the senses, and each raise in turn the gentler or the rougher passion and now subside to peacefull calm. Beneath the Sculptures hand the rude rock is made to yield, and as--sume the fairest forms, the Stern destroyer of Mankind surrounded by his implements of destruction yet frowns in death, while the tears of Benevolence yet seem to flow, and that beauty which cha--rmed and attracted each beholder fixed in mute attention the fascina--ted eye.

51

46

These are pursuits which bid the rougher passions cease, bind kindred minds by indissoluble bonds, and teach us to look up to that immor -tal spirit who formed this world, who decked with so much beauty Animated and inanimate nature, and destined each to act their part in one General Scheme of Good.

17 Heavy Snow Showers went to Lis--burn, bought 3 bales of Poland Oats to Change our seed which had got full of the seed of *Vicia sativa*, my own seed much larger and finer than any in the Lisburn market although now in cultivation on my farm above 30 years, this seems to Confirm an experiment made in France where the same seed was sown for 60 years without de gen

52

47

-generacy the only attention paid in particular was laying on some ma -nure

- 18 Snow showers with great blasts
- 19 Hard frost Snow Showers
- 20 Gentle Frost fine day, soft rain in the Evening
- 21 Misty rain
- 22 Misty Morning fine warm day
   Papilio Urtica [? butterfly or could be a caterpillar on a Urtica-nettle] seen
   Fragaria sterilis [Potentilla sterilis –Barren strawberry] in Flower
- 23 Fine clear Morning *Viola odorata* became cold and the wind chan-

-ged suddenly from NE to SSE.

Fine warm Morning Found on going to town that Mr. Tennant had re--ceived from a Carrickfergus fisher
-man, *Cancer* [crab] like *Tetraedon* but the snout Bifid instead of Quadrifid -*Asterias papposa* [12-rayed starfish], *A. glacialis* with five and four rays and a Fragment of *A. Sphoerucata. Sepas Balanus*[barnacle] - *My*-*-tilus*

53

-tilus umbilicalis [mussel] Alyonium di-gilatum [digitatum –Deadman's fingers' coral] two or three kinds of <u>Ser</u>
-<u>fuila</u> and a Spongy substance resem
-bling in form *Tubipora musica* [Organ-pipe coral]

- 25 Hard Frost Fine sunny day
- 26 Not Frosty but Cold Fine day Receiv

-ed from Mr. Mackay from Dublin

No. 1 Adiantum Capillus Veneris [Maiden-hair Fern]

- 2 Aspidium spinulosum [now Dryopteris carthusiana Narrow buckler Fern]
- 3 Saxifraga adscendens
- 4 from Brandon
- 5 from Brandon

#### Mountain

Mr Mackay requests my opinion

of No. 4 & 5 he says No. 4 is perhaps

only a variety of adscendens but

he thinks No. 5 very distinct see

his letter of 24 of March

- 27 Cold dry day
- 28 Dry Mild cloudy day

29 Dark cold day

A fine day went to Carrickfergus
 with Mr Tennant, near Killroot on
 the stones of a Stone Fence found a--gain the bright ferruginous plant

which

# 54

which had formerly attracted my at--tention

Found also on the shore various *Sertula--rioe, Serpuloe*, &c with the cordated Crab *Murex undata, Trochus majus, Turbo duplicatus*, where the fishermen empty their Bait baskets

Fine dry morning but Cold.
This day opened the election of a Mem--ber of Parliament for Carrickfergus
Mr. James Craig offered himself as a Candidate, he said he was known to them all and upon his Character he depended, for their approving of him.

> Mr. May then Spoke he said he stood be -fore them as the representative of a Noble house, who had acted for a long series of years as disinterested and kind Landlords of the surround--ing territory. that a prejudice had

prevailed against him as being supported by the Lordly interest but he believed if that was inquired into

into both Candidates were nearly equal in that respect -Mr. N. Kerr said he had been too late in making application to them but hoped if he had, they would have thou--ght him worthy of being their represent -tative, that he was their neighbour that he believed he had on all occasions acted the part of an upright magis--trate, and that in full confidence of their approving of him the next opportunity he now retired. Some debate afterwards took place about the Sherif having Counsel and the Election went on. From this Scene of contention I went up the adjoining river and found various Cryptogamic plants. As Jungermania Thuya Dick Crypt 4. p 19 Dill 72-33

March 31

This day opened the Election for Carric fergus - Mr Craig presented himself as a Candidate he said he was known to them

all and upon his Character he depended Mr. May stood before them as the represensative of a noble house who had acted for a long series of years as disinterested and kind landlords of the surrounding ter -ritory, that some might say that his was the Lordly interest but he believed that if that was inquired into both Candidates in that respect were nearly equal Mr Kerr told them he had been too late in making application to them but hoped if he had they would have thought him worthy of being their representative that he was their neighbour that he believed he had on all occasions acted the part of a Magistrate in such a manner as to give general satisfaction and that in full confidence of their approving of him another time he now retired after some debate about the Sherif having Counsel, and about the Sherif adjourning the Count they poled 20 each

57

[Unreadable, probably pencil]

**58** 

[Candidate's speech] Citizens . though I cannot boast of Nobility I can boast of Ancestors carrying a higher title than even Nobility can confer that

of honest man, I cannot boast of the em -blazened Shield on which the hand that grasped the plunder and the dagger red with blood is splendidly pourtray ed. I present myself to you inde -pendent as yon bird which scims the swelling wave, the Creature of no Minister the tool of no Lord. Citizens if you think me worthy of being your representative I go to attend my duty in Parliament ready on all occasions to stand forth the de -fender of Your rights, and the Rights of Ireland. I come not from a dis--tant land I dwell among you as my forefathers have done before me, your interests are my interests. I am connected by the closest ties. If I am so happy as to be your re--presentitive it is the sincerest wish of my heart that I may never fail in my duty to you and to my Country

and that when I return again to soli -cit your favour my conduct may be a ready pasport to a second tryal Carrickfergus April 1 - 1807 [Some marks in pencil]

59

1

[blank]

#### 62

61

April 1807

Cold bright morning hard frost Ice Went along the Shore to the White head, on the rocks about it found Fucus fascia or perhaps more properly Ulva fascia in abundance see my figure but I would not be surprised if was found to be the young plants of some of the larger species) F.esculentus F. saccharinus, F. loreus, F. pinnatifidus F. coccincus. F. crispus, F. purpurascens and the 2 varieties of F. plumosus. *Conferva coccinea,* On a freestone bank about a mile above the head plenty of *Conferva rosea* &c and in a little pool adhering to the Fucus serratus a little Sucker Cycloptinus minutus Shaws Gen Zoo 396 see my figure but perhaps it is only the young of *C. Liparis*. Found also various Corallines Sertucarias, Anomia squa--mula Lepas striata, Patella pellucida in Stones Mytilus rugosus. Spongia occel--lata, growing on rocks, an Alcyonium flask shaped but fatter sometimes varying a little dull white adhering by the base to Confervae and Fuci in the little pools and

along with it a Species of the Genus *Ma--maria* it might be thus Characterized Body smooth cylindric or a truncated cone Aperture single not surrounded with cirri forming a hollow cone Colour white with a pinch of Cinerous yellow See this figure



perhaps it is the Mammaria Mammilla Turtens Lin.4.p.105 I took it at first for a small mutilated Acti -nia. Found also Asterias occulata, A.glacialis with 4 and 5 rays, Asterias papposa with 13 rays Cancer Bernardus very Common Cold dry day Ice and Snow in the shade during the day Slight Frost cloudy in the after part of the day Dry grey Morning wind became South -erly blowing hard with rain Mr. Montgomery sent me from Belfast the Anarhichas Lupus Lin. Sea Wolf of Pennant made a drawing of my lit

2

3

4

-tle sucker it answers in most particulars to *Cyclopterus minutus* of Shaw

- 5 Dry SW wind rain in the night. Heard of John Taylor of Belfast having a tame rail caught last summer it is grown quite familiar eating pieces of Potatoes and Crumbs of Bread
- 6 Dry wind blowing from the SW
- 7 Wind West Cloudy & Sunny mild warm day
- 9 Cloudy and a good deal of Rain in the night
- 10 Wet morning windy night
- Showery and Sunny day sowed Ame--rican seeds

Found Specimens of the *Conferva rosea* in fructification of which I made a

drawing with Ulva fascia

- 12 Windy Showers Andromeda calycula
  -ta Erica Miditeranea and Viola cani-na in Flower ——
  made a drawing of Ulva filiformis &
  a parasitic
- 14 Cold cloudy day with hail showers

recei-

65

received from Mrs. Nath Magee Iris pumila Heleoborus hyemalis

#### Monarda dydima

As I returned from Mr Walter Wilsons Funeral ——-

15 Cold showers went to Mr Tennants 16 Ice in the Morning went to Break -fast at Mr McCalmonts found on the Whitehouse shore a Crab in the very act of eating its old shell the upper shell had parted the new covering was quite soft some of the Claws were disengaged while others remain--ed in the old covers, found also a curio us worm of which see my figure and Fucus capillaris Turners Syn No. 72 if not a New one with what I take for mutilated proticulasus, and jubatus on going home saw 2 Swallows flying about In the Evening went to Mr Davisons lectures on Natural Philosophy

66

17	Hail and Snow Showers Prunus spinosa
	Fl-

18 Dry cool - Saw 2 swallows, going toMr. Joys -

Received books from Mr. Archer -

- 20 Dry cold went to get plants of *Arum maculatum* at Knockmaggunny
   Ground Ivy in fine flower
- 21 Slight rain. Fieldfares. Heavy Rain in the Night

- Wet Morning, finished my drawing of what I suppose *Fucus cappillaris*Found in the ditch of the Alder Grove *Conferva inflata* En. Bot 1670 of which I made a drawing. Willow Wren come 2 or 3 days
- 23 Showery Planted *Phyllereas*
- 24 Mild rain and Warm sunshine
- 25 Warm Cloudy Thermometer at 1 PM
  64° Sanguinaria canadensis,
  Anemone nemorosa, Prunus domes
  -tica or hedge plums flowering, White
  Butterfly -
- 26 Bright and warm day *Caltha palustris*Flowering. Snipe and Quail calling

67

A fine very warm day
After attending Mr Davisons lecture on
Saturday Night I wrote the following
for the Belfast Newsletter
The pleasure which I received from Mr. Davidsons
lucid abridgement of the Huttonian theory of
the formation of the Earth was greatly en-creased by observing the numerous and at-tentive audience which surrounded me and
which plainly told that an enlightened
Society only required to have its attention
aroused to receive great and sublime plea-sure from a Contemplation of the works

of Nature. Little do they think while

they listen with surprize, while they ac--company the traveller to the top of the Andes, descend with him into mines or trace his course over the Snow covered Mountains of Switzerland, that the for--mation and productions of their own coun--try exhibit no less astonishing and il--lustrative proofs of the power and wisdom of the Almighty former of the whole, every Sandpit, every Quarry affords an incom

-prehensible

prehensible picture, do not travellers from the most distant parts of Europe ar--rive annually on our Shores to see that sublime production of Nature the Giants Causeway, and in what Country is their to be found a more astonishing deviation from horizontal stratification than our Whin Dykes which may bewilder the most fertile imagination in attempt--ing to form a theory of their formation

> The years hold on their fated way, When Ocean shall yield up to day The realms that whelmed in darkness sleep Engulfed beneath his sluggish deep; And stretching far beyond her utmost shore Remotest Thule view new worlds unknown before Sense. Med.

The effects of that tremendous convulsion which has raised Sea shells to such ama--zing heights and buried them with other Organic remains to such depths is visible on every hand in our own Neighbourhood our Mountain torrents exposed to view the productions of the Indian Sea and of our own shores mingled together at the Ele -

#### -vation

-vation of 1100 feet, and to whatever depth work--men have penetrated in the valley in which Belfast is situated they have constantly found shells, often intermixed with nuts and the remains of trees, and what country has pre--sented to the site of the Naturalist a more surprising Animal than our Gi--gantic Deer not found as yet in any other part of the world either alive or amidst the numerous remains of prior existence, M= it is also mentioned that in sinking the foundations of a Mill at Ma--hery C. Cavan the bones of a Stupendous Animal were found some of the teeth of which weighed two pounds and three quar--ters each\*. Lough Neagh gives us wood whose vegetable form remains though changed to Flint, and the hard--est limestone of our shores, is perforated in every direction by an apparently

feeble shellfish. These are but a small part of the interesting objects which our country presents, what future revolutions of matter may take place on this our earth is hid from mortal mind to conceive, But certain

\*Boate & Molyneuxs Nat. Hist. of Ireland. 128

certain it is that nothing tends more to elevate the mind of Man to his Creator than a con -templation his works, that nothing af--fords a purer pleasure, and that it is the duty of those to whom the Great Parent of Nature has given powers of discrimi nation, to direct their attention to the

[eight lines covered by paper slip]

assured that ignorance is not the Guar--dian of Virtue, which is not so much as Madame Briquet says "the gift of nature as the effect of study, Ignorance and Idle--ness are the parents of one half of hu -man crimes; and more knowledge ren--ders persons capable of more pleasures. The graces reside rather in the mind than in the Countenance; and women who distinguish themselves in literature

70

[page 69 copied again with paper slip turned over]

+ These are not the only remains which have been discovered in Ireland which seems to confirm what is now considered as the pictures of Poetic fancy, that the earth fresh from the makers hand nourished a race of Animals with which the present compared would appear as dwarfs for =

[page 70 copied in full] certain it is that nothing tends more to elevate the mind of Man to his Creator than a con -templation his works, that nothing af--fords a purer pleasure, and that it is the duty of those to whom the Great Parent of Nature has given powers of discrimi nation, to direct their attention to the pursuit of Knowledge, to spend some por--tion of their time in contemplating the works of nature which surround them on all sides in such attractive forms and colours.

And let not Females who wish to taste the pleasures of Knowledge, shrink before the ridicule of the ignorant, they may rest assured that ignorance is not the Guar--dian of Virtue, which is not so much as Madame Briquet says "the gift of nature as the effect of study, Ignorance and Idle--ness are the parents of one half of hu -man crimes; and more knowledge ren--ders persons capable of more pleasures. The graces reside rather in the mind than in the Countenance; and women who distinguish themselves in literature

and

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and science do not become men, as the Vulgar pretend, but more amiable Wo--men, since the sex is not rendered un--natural by being rendered more perfect. Science she continues is the attainment least affected by the caprices of fortune; why then are Women to be debarred from acquiring such a possession? Do we not share the ills of men? why inter--dict us the good? if in our portion of the latter, nature has acted rather the part of a Stepmother towards us why deprive us of the consolations of study? Study would serve as an alimer to the active im--aginations of Females, it would ren--der them domestic, and would make society more delightful because less constantly essential; it preserves from low occupations, and contributes to good manners; it guards against melancholy and gives us instead of hours of ennui, with

which life must otherwise abound those that

are most delicious" +. To the accomplish-

-ments

+Historical and literary Dictionary of French Ladies by Ma--dam Briquet

ments and knowledge of Arts which you now possess add that of Science, and while Pain -ting leading thee on, points to natures ample field di--rects thee to cull what ever can glad the heart and charm the sight, and on your canvas give to remote, and unborn vision to view the passing scene and Natures most pleasing forms, let the miles of Science guide your hand, and thy imagination never wander from ac--curacy and truth. If you wish to excel in Painting Poetry or Music call to your aid the Sciences and study the Simplicity and Uniformity of Nature

F

28 A fine day *Mespilus Canadense* Flow ering

- 29 Fine Warm day *Mespilus praecox* Flow heard and saw the Cuckoo
- Cloudy Warm day Slight Showers Stel *-laria Holostea, Ranunculus aurico- -mus* Flowering Rail calling pretty
   generally. Many Flashes of lightning about

10 PM towards the NE

May 1807

- Pretty Loud Thunder early in the Morning
  Cloudy warm day.
  Made a figure of the Orange coloured *Conferva*on the Stem of the large *Sambucus nigra*in the Avenue found it to differ nothing
  from that from the Stones near Killroot &
  to correspond with *Conferva ilicifolia* En Bot 1639
  I think there is great reason to suppose *C. Lichinicola* E. Bot. 1609 and these but
  one species
- 2 Dry warm dark day slight rain in the Evening. *Spartium Scoparium* Flo
- 3 Dry day somewhat cloudy *Orchis maculata* Found that the Lichen which I thought *Lichen flavovirescens* of Dickson III. 13 is *Lichen terres -tris* En.Bot. 1681 and that my *Lichen* found on Divis of which I made a figure in my Na--tive Irish plants is *Lichen carnosus* En--Bot. 1684
- 4 Cold dry day
- 5 Rain in the morning or during the night Coldish cloudy day
- 6 Rain in the Morning
- 7 Windy with showers Windy night
- 8 Windy morning some Showers accompan
   -ied Mr. Alex Ross on his return as far as
   Mr. Coopers Nursery where I got the follow

May 1807

ing plants

Veronica pinnata

Andromeda Calyculata, narroleaved

Arbutus Andrachne sawleaved

Lonicera glauca

Stipa pinnata

Iris florentina

Symphytum

Scarlet Comfrey

ing

Phlox subulata

Ornithogalum pyramidale

Epilobium augustisaimum

Erica vulgaris plena

White Arenaria

Betonica

Mellissa grandiflora

Antirrhinum

Serratula spicata

Lichnis quadridentata

9 Fine day shower in the Evening

- Fine morning gentle rain. *Pedicularis* sylvatica, Orobustuberosus Scilla nutans
   Fragaria vesca Vicia sepium Flowering
   Pied bird came
- 11 Fine day heavy rain in the night Madea drawing of *Clavaria Botrioides* Sow Fun 335

Mild rain through the day. in the even--ing heard Mr Davidsons Lecture on Luminous and Fiery Meteors - He

ex-

77

explained in a pretty satisfactory manner by means of a Glass Globe a perpendicular line of colours, but did not account for the bow - the explanation I would give is that there is a certain angle of incidence and reflection which gives the different colours and this takes place with both vertical and horizontal rays



S the sun AAA red rays of incidance BBB red rays of reflection or to make it in another manner suppose B and B two rays from the base of the bow O the observers eye



it is plain the angle

\*O C is equal the angle B O D

the same

colour will be transmitted by being seen under the same angle. In exhibiting the Phenomena of the in flammable air which arises from putryfi ing marshes, by means of Sulphat of Lime put into water inflammable air was quick -ly disengaged which detonated with a pret -ty loud crackling or small explosions emitting a considerable quantity of smoke which exhibited the curious pheno--mena of a ring when it had ascended a little way from the Glass which contain -ed the cause of the explosion. a similar appearance may often be observed after the explosion of a cannon. this appearance is not easily accounted for, but may we not suppose, that the explosive force acting upward drives the smoke to the outside and as the air presses it on all sides it is condensed and rendered visible as long as the ring is able to resist the

pressure but it is at last obliged to collapse and ascend in a irregular cylin--der like other smoke. This morning Mr Mc -Clery came to request me to write copies of letters to Lord Donegall and Mr. May relative to ground for Building a College on

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#### May 1807

- Made a drawing of *Jungermania Thuya* Dick Cryp 4 p19 Dill 1.72
   fig 33. found at the waterfall near Car rickfergus Wet day
- 14 Wet day Mr. McClery and I finished our letters for Ld. Donegall and Mr. May
- 15 Heavy rain Thunder to the West made drawing of *Conferva ochracea & C. pic--tinalis*,
- Fine day Warm and Cloudy with Sunshine
   putting several of the Greenhouse pl
   -ants in the ground *Minyan theotifol* -*liata* Flowering
- 17 Fine morning pleasant day throughout
  Grasshopper Lark singing. This Evening
  Mr. McClery came to show me the
  letters with the signatures to the
  amount of 43 of the Principle in ha-bitants of Belfast and the Neighbourhood
- 18 Fine day White throat come
- 19 Attended Mr Davidsons lecture on Thun-der and Lightning. he said that the

cause of Electricity being in the air was perhaps the friction of the parti -cles of air on each other, that clouds highly electric gave out their Electric

mat.

[Continued at pdf 86]

[Page inserted, folded, on its side but copied in full on pdf 81]

81

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The Character of the Country is in some degree connected with the success of the plan, and those who can feel interested for that Character, and what is still more momentous, who are desirous of Promoting happiness, and diffusing knowledge will surely befriend to the utmost of their power an undertaking having solely those beneficent objects in view To establish an extensive system of Educa--tion will be honourable to our town and Neighbourhood, and exhibit to the World our desire of extend -ing information We wish to have it understood that our plan has nothing to do with monopoly or exclusion, we wish to comprehend whatever is useful, embrace whatever is excellent and conciliate the favour of all. We trust therefore that the subscribers will "give the whole reins to their benevolence, think that they will consider their exertions will receive the

thanks of a grateful Posterity <u>when all recol</u>-<u>-lection of opposition to this Institution shall</u> <u>impress it on their minds</u> [underlined in original] be swept into Oblivion, and consider that in the words of a Great Man" they may live long, they may do much, but they never can exceed in use--fulness what they do on the present Occasion

The committee appointed to prepare a plan of Education and Government for the proposed seminary now present it to the public. They cannot flatter themselves that the pre--sent scheme has reached perfection, it is still open to improvement, and the body of proprie--tors will always retain an unlimited control over the institution.

The present time affords a combination of fa--vourable circumstances which may never again present themselves, the Public mind is awakened to a sense of the importance of this undertaking, a liberal grant of ground for the erection of the necessary buildings has been obtained, there is reason to believe the Government of the Country will assist in forwarding an establishment of this nature, And it now alone depends on the liberality and spirit of those who can appreciate the value of the object whether their intentions shall be carried into effect The [Folded page inserted upside down. Copied in full on pdf 82]

[Heavily edited printed pageproof with many lines crossed through and marginal additions:]

18

To render the plan efficient the zealous and cordial co-operation of all who are friends to the improvement and extension of knowledge, is now become neces--sary, the present time affords a combination of favourable circumstances which may not speedily occur; the public mind is awakened to the importance of this undertaking; a large and well situated piece of ground has been liberally granted by the MARQUIS OF DONEGALL; the Government of the Country has expressed its

willingness to forward a scheme of this nature, and has already advanced a considerable sum in aid of an attempt somewhat similar in another part of the king--dom; but the aid to be derived from government will be proportionate to the li--berality of the Subscriptions.

[Written insert follows] so the beneficial effects

will be

felt not only in this

town but extended to

all those parts of the

country which can

participate in its ad

vantages

[Printed text continues]

LET not, then, the plant of SCIENCE languish in its infancy for want of those genial supplies necessary to bring it to perfection. Let not the exertions of its friends fail when most wanted. The future importance of this Institution de--pends on the spirit displayed at its commencement,

we may therefore justly conclude in the words of a great man, THEY MAY LIVE

#### LONG, THEY MAY DO MUCH, BUT THEY CAN NEVER EXCEED IN USEFULNESS,

WHAT THEY DO ON THIS OCCASION.

[Written insert follows]

Let your hand be extended to the very bottom of your pockets and place no bounds to your generosity, but bring forth all those stores of wealth so long hidden from public view

[Journal turned on side. Journal page shown in PDF 86]

[Heavily edited printed pageproof with many lines crossed through and marginal additions:]

The Committee having presented their Report, beg leave to observe, that, though they have proceeded as far as they felt authorised,

They have only drawn the general outline, which must here-

-after be filled up, according to the opinion of those who will be entitled to finish and execute what is here offered for public approbation. They have proceeded on general principles, but these are such as may be rendered most extensively useful in practice, by a judicious and steady application.

IN forming a System of EDUCATION, they are sensible,

that the principles of Learning becomes most perma-

nently fixed when early instilled into the mind; and that

the ease and certainty of future improvement in a great measure

depends on the ability and judgement with which the first rudiments had been in-

culcated. When these have been firmly imprinted, the subsequent course of Education must take a two-fold direction, according to the destination of its object; they have therefore proposed the Establishment of two distinct Schools, in which the studies necessary for either path of life may be separately pursued, or those requisite for both, be combined, according to the wishes of the Parent, or the of the pupil; and in the arrangement of the schools they have endevoured to extend their advantages by rejecting whatever bore the appearance of exclusion or limitation.

IF, however, the Institution rested here, the plan though laudable, would

not have answered the wishes and expectations of the founders. The Committee therefore, by introducing Lectureships in all the most useful branches of Science, have endeavoured to lay before the public a complete, uniform and extensive system of education, with the elementary parts and

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[repeat of part of PDF 85 i.e. edited printed page with lines cross through partially obscured by folded sheet on which is written:]

-vourable circumstances which may never again present themselves, the Public mind appeal

# The

86

matter to others which were not so high--ly charged, that the cause of the noise was the air rushing into the vacuum caused by the passage of the electric fluid accounted for the rumbling noise by the time sound to travel from different distances of this vacant space for instance that which was distant 1142 would arrive at our ear in one se--cond the next distance in a longer time and so on, but this appears to be an improper explanation, for without im--pediments to break the connection this must be one continued sound, the better explanation appears that one sound is re echoed or reverberated a--mong the surrounding clouds, rendered dense and capable of reflecting sound by the quantity of vapour which they

contain, and in a mountainous count -try this is prolonged by repeated re echo -ings. I have heard the sound of a Can--non fired on Belfast Lough so much

# resemble

May 1807

resemble Thunder when reverberated among the Rocks of the Cave hill that I could not distinguish any dif -ference. He also said Philosophers had been at a loss to account how the clouds acquiring their electrici--ty I think this must be a mistake for is not water well known to be a conductor of Electricity, therefore this is easily accounted for by Sup--posing the rising vapours conduct the electric fluid into the upper regions and again communicate it to the earth, when not so abundant as to be sensible in a Thunder storm when the superabundant Electricity is apparent in an Explosion

19 Fine brilliant day Swifts very abundant as likewise Rails
Gave to Mr. Mackay the following an--swer to my paper see Feb<sup>y</sup>. 28 and pub

-lished

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May 1807

-lished in the Belfast Newsletter of May 15

Mr. Editor it was not without surprize I beheld a paper in the Belfast News which under the Name of Aquarius pretends to direct the inhabitants how best to supply themselves with water. Now Sir, however desirable it might be to have an abundant supply, surely any reasonable man would first con--sider the practicability of the plan and whether the advantages were equal to the expense before he de--termined to adopt it. It is much to be wished that, that quantity of water could be procured which would not only supply the necess--ities of the inhabitants, but also sufficient to allow for waste for if you please to be conducted into the upper stories where it might on

turning

turning a Cock be ready to extinguish any fire") how is all this to be accomplish--ed without incurring an expense ill suited to the funds of the Charitable Society. Indeed it appears to me that's your Correspondent (has been scarce of water for his Grog conse--quently) has entirely lost sight of the object and however plausible the scheme of purification and fil--tration, it must be attended with great inconvenience. the advocate for this scheme has paid very little attention to the rivers which flow around the town of Belfast after heavy rains else he would soon have perceived how peculiarly turbid they were rendered by the minute particles of earthly matter suspended in them, which they

de-

90

deposit on the overflowed grounds and with which the most extensive Mill ponds are soon filled, I would ad--mit that when water flows over a hard rocky or gravelly soil and where no drains from cultivated grounds can run into it, it may arrive at any place destined for its reception with so small a portion of impurity that standing undisturbed for a short time will make them sufficiently pure. but as none of those favouring circumstances are to be met with in the neighbourhood of Belfast,
General filtration appears totally unpracticable, and it is greatly to be feared that if every family was obliged to filter for its own use it would soon be totally neglected among those who had not acquired strong prejudices against dirt.

Bel

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Belfast has hitherto been reckoned a town in which the health of the in--habitants was remarkable, the puri--ty of the water with which the town has hitherto been supplied may have contributed in no small degree to this, and if this admits of even a conjecture would it be prudent to risk a change, and what inducement can your correspondence have for recom--mending such an intricate business to the attention of the Public, when they have it in their power to add 137 Gallons per minute of pure Spring water to their present supply 48 Gallons per minute, which 185 Gallons it is calculated is equal to the ample supply of a population of 50,000 inhabitants a Number

to

92

to which the population of Belfast will not reach for a Number of years (but if our sanguine expectations should be realised and a further supply was demanded the inhabitants would then be very well able to purchase a sufficiency of the purest water from some of our Mountain springs)

Pices

The parts included between circumflex -es were not given for publication.

One of the projects of M. de Lamoig--non keeper of the great seal, was to reform Public instruction in France and to render it more flourishing, on application to him M Marmontel presented a Memorial" divided into eight principal articles, the distribution of the schools and of the objects of instruct -tion according to general utility, or

local

local convenience; the establishments relative to both these objects; the discipline; the method; the gradual advancement and well proportioned relation between the different classes; the general inspec--tion; the means of encouragement; the knowledge and employment of those who should have well completed their studies.

In the whole and in the details of this vast composition, I had taken as my model the institution of the Jesuits, where all were submitted to one single rule, inspected, main--tained, governed by one central au--thority, and put into action by one universal power. The greatest dif--ficulty was the substitute for the tie of a religious society, and for the spirit which that tie excited, a motive of interest and spring of emulation

#### that

#### 94

that should reduce liberty to terms of obe--dience. For the Morals and discipline to be established in the class of Masters as well as that of Pupils, were necessari--ly to be the bias of this institution. It was requisite then that the places there should be desirable, not only in their actual state but for the prospect and hopes they encouraged; and, in order that exclusion or dismission should be a punishment, I required that the continuance and duration of these honourable functions should pro-gressively have assured advanta-

-ges

Memoirs of Marmontel written by himself Vol. 3 p 284

20 A Brilliant day *Sedum latifolium* Flowering.

## 95

21

May 1807

A Brilliant day Went to town to see some Fish found one to be the Gadus Pollachius. Pollock or Lythe. another I suppose the *Pleuronectes loevis* or Smear dab Pen Zoo. 106 and another I could not refer to any description. Pleuronectes with the eyes on the left side lateral line curved 1/4 of its length over the pectoral fin. Underjaw having a bonny protube--rance or chin. length to the insertion of the tail ab--out four lengths of the head Breadth a little less than half the brea--dth Dorsal Fin 80 or 83 rays - Anal 65 pect. 10 1/2 Ventral of six rays running parallel to each other along the side. Caud:17: and a little rounded Teeth very small and a little curved Pupil black iris yellow

Scales pretty large

Colour a pale brown with a tinge of rosy, Membranes of the rays dusky Fin rays with numerous small dark bands about One diameter asunder

May 1807

Spe. Cha Pale reddish brown *Pleuronec--tes,* with the lateral line curved a bony protuberance on the Chin, and the ven-*-tral decurrent (or running parralell in each side of the breast) see my figure* They were all caught between Ailsa and the White head

- A brilliant day some flowers on theWhite Water lily in the Pond Rose colored*Azalea* in Flower
- 23 A brilliant day
- A Brilliant day *Geranium Sylva- -ticum* in the Garden Flowering *Nym- phoea lutea* in the Marl pit. *Lotus corniculatus* Flowering, and Hawthorn
  just beginning Thermometer 71
  at 3 1/2 PM.
- A Brilliant Morning Thermometer
  in the inside of my Bookcase 68 at
  9 1/2 AM. at 3 1/2 P.M 71 1/2 at the tree at
  5 PM. 70 1/2 in the Bookcase
- Centle rain most part of the day
- 27 Dry Morning Clouds and Sunshine

May 1807

- 28 Cold NE. wind Showers *Pania officinalis* single in Flower Double not quite blown yesterday examined Mr Mackay's *Saxifra--ges* and described them as under
  - No. 3 *Saxifraga Desendens* of Wild <u>snow</u> Adsending stemed *Saxifrage* with the lower leaves palmated either divided into 5 or 3 parts ovate pointed hairy the Nerves visible to the naked eye calyx segments ovate acuminate, petals oval and the styles small and coniving.
  - No. 4 Brandon *Saxifrage* with the lower leaves 3 or 5 parted divisions ovate acuminate hairy nerves not visible to the naked eye calyx segments ovate ob--tuse petals ovate styles large and divar -icate\_This has thriven worst with me so that I may find its Characters to Change if the young shoots throw out shoots with leaves in Rose like bunches at the extremi -ties as it appears to do it will distinguish it sufficiently, with me at present it is some--what like *S. cespitosa* En Bot 794
    No. 5 Brandon *saxifrage* with the leaves pal--mate

May 1807

mate tripartite divisions subulate shining with

three nerves (not visible to the naked eye, but when looked through with a moderate mani -fier) calyx segments subulate, petals oblong styles small and coniving.

This is nearest to *Saxifraga <u>aqugoefolia</u>* or it may perhaps be *S. tricuspidata* Wild. and Flo



Ellen discovered on the Mud at Listers Spring *Helix palustris* Turton. 537. Montagu 370.+.16./10.

- 29 Cold easterly wind dry *Rhododen* -dron Ponticum Flowering Azalea procumbens Rosa alpina Flowering and Berberis vulgaris
- 30 Cold Easterly wind observed *Cimex linearis* on the Pond.
- Brilliant day wind still Easterly and
   Cold. Asperula odorata & Lysimachia
   Nimorum Flowering

# 99

June 1807

Dark day apparently drawing to rain
 In the evening went to Mr Davidsons
 last lecture wherein he gave a Gene-

-ral View of the Dignity Extent and happy tendency of Philosophical Re--searches, and on the Influence of Su--perstition, in retarding the Progress of this department of Knowledge In the first he gave a comprehensive view of Man as an intellectual Being elevated by a comprehensive mind a--bove all his kindred animals, capable of beholding and admiring the magni -tude and beauty of the surroun--ding Creation Secondly the happy tendency of Philosophical researches in reducing the mind to that Calm observance of the most tremendous op--perations of Nature, whilst the Tem--pest troubled ocean heaves its mighty billows to the Skies, and exposes

the

## 100

the hidden recesses of its depths seemingly hid forever from our view, whilst the glare of lightning darts around and solid rocks tremble the Philosophic mind stands unmoved amidst this mighty war of Elements Thirdly The Influence of Superstition propagated and supported by an interested and Bigoted Priesthood spread a baneful influence over the Minds of Men, persecuted as enimies to religion those who attempted to unfold the book of truth and turn the attention towards the works of God, fearing least the light of knowledge should display their impositions, and expel the gloom under which this direful Monster exercised its horri--ble sway, hardy indeed must be that Man who with torture and imprisonment would dare to tell the most self evident truths, under these terrors Galileo bent his knee, and was forced to declare

#### contrary

101

2

contrary to his conviction that the Sun moved round the earth. But even yet when the Powerful Splendour of Know--ledge captivates the Philosopher, Bigotry and Superstition have not re--signed their powers, and summoning to their aid the reverence of Mankind what their ancestors held sacred for antient tales, retain their influ--ence assistanced by antient miracles of Supernatural appearances said to have been exhi--ted, before knowledge had attempted to lift the veil which conceals the Secrets of Nature. Dark day In the evening rain ap--parently to the Southwest.

3 Fine dry day *Spergula* and *Vicia* 

*sepium alba* in the Oak tree field ditch next the Spring Field Flowering

4 Dry day some dust Flying *Rosa hiber -nica* Flowering on the Road to Holly wood heavy rain at Night

5 Some showers *Geum urbanum* Flow

Fine day Went to Divis with Mr. Call
 -well Mr. Bailie &c &c Wind from the
 NE. observed rain approaching from

that

### 102

that direction but which afterwards appeared to go up Carnmoney Valley and fell at the back of the Mountain After dinner Mr. Getty represented how the Irish have been imposed upon by the English by fair promises given, of what should be done in Case of Union for bettering the Condition of Ireland, by abolishing Religious distinctions, and encouraging industry, some of which pro--mises had been performed, but when an attempt was made to bring the British Parliament to fulfil part of their Pro--mise. The horrid monster of Bigotry had been roused and the King shel--tered himself with sophistical argu--ments under his Coronation oath and the Prince of Wales involved in debts by thoughtless extravagance joins

against whatever administration he thinks will attempt to check his dissipation and debaucheries

103

7

Fine day somewhat cool Thermometer
near 1 O Clock only 59 1/2
On a Clod lifted yesterday on divis
mountain found *Conferva ericeterum*and a *Jungermania* without apparent
branches, creeping close to the earth, very
minute, the leaves cuniform and di-vided nearly to the base, sheaths large
and white, and the reticulations ap-pearing as if surrounded by double
lines, owing to a conspicuous margin
being round each reticulation, and the
Fructification to appearance terminal

- 8 Went to Lisburn, Wind raising the dust on the roads, but heavy show -ers in the Evening.
- 9 Wind raising the dust on the Shore road very much as I returned with Mr. Robt. Callwell from Break -fasting with Mr. Robt. Getty, eat a Peahen egg at Breakfast in my

opi

### **104** June 1807

opinion it is not so good as a common hen egg towards the middle of the day heavy showers 10 Cloudy with a gentle Breeze

Showers

This day Measured the Big Chesnut

		F	Ι	
	Found its girth at Brest high	11	10	
	Next	6	8	
	third or one next the crooked one	9	6 1/2	
	Larch on the east side of the seat			
	in Grove near the ground	3	10 1/2	
	Another and of the Largest next			
	the Fields road ———	3		
11	Constant Gentle rain went to Mr.			
	Henry Arthur Funeral			
12	Gentle wind from the west with			
	clouds Erica Daboccia Flow Dine			
	at Mr. Robt. Gettys Iris Pseudo Acorus F			
13	Windy with Showers			
	Went			
	to Dine at Mr Wm. Sinclairs green			
	observed Conferva bipunctata and Lichen			
	museicola? in the Crevices of Rock near the			
	fall on the Northern branch of the Forth River			
	Yallium saxatile Flowering			
	June 1807			

14 Cloudy and Windy Measured
the largest Chestnut in the Ave-nue planted by myself raised
from seed and register-

105

-ed Found the girt at the

F I

ground 3. 6 1/2 breast high 2. 9 1/4 Wrote to Mr. Turner sent him draw -ings of *Fucus Fascia Ulva squamaria Rivularia tuberculosa & Linkia gra--nulata* 

- 15 Gentle showers Wheat shooting
   *Filium bulbiferum & Budleja globosa* Flow
- 16 Gentle Breeze with clouds dry day showers
- 17 Gentle Showers Clouds Found Lych*-nis dioica* B among clover in Lysters field
- 18 Cloudy with showers *Rosa tomento-sa rubra* F. White and Yellow *Rose*.
- 19 Cloudy dry *Lilium camopatcin -se* F White *rose* Yellow Austrian x
  semidouble Sweet Briar comming
  into Flower. observed this evening
  that the *Lychnis vespertina* was
  highly scented like the *Lonicera grata* at 9 PM at the same time

the

## 106

	June 1807	
	Lychnis diuma was scentless Cuckoo	
	cries	
20	A shower appearing to have fallen	
	in the night Very fine day	
	Rubus corylipolius & Stellaria	

graminifolius F.

- 21 Fine Warm day Lychnis Flos Cuculi
   Orchis mascula F. Tabanus plu -vialis appearing.
   Euonymus Europoeus in Full Flower
- 22 Warm cloudy day a few drops of rain in the Evening. *Lonicera perycli menum* F
- 23 Very Warm cloudy day with a light Shower in the Evening.
  Maritima Arinarius Flowering A Camellia Japonica which I planted in a Close corner near the pond after its buds were formed in the Autumn of 1805 remained through the Summer of 1806 in a state of suspended animation the leaves green and apparently in good health, but it did not shoot,

#### nor

### 107

June 1807

nor did the buds swell, during the winter of 1806.7. which was a very mild one with regard to frost the leaves began to turn brown many fell off and some of the branches appearing dead I cut them away in the spri -ng some time ago however the buds on the remaining branches began to swell and the plant is now grow -ing vigourously.

I have remarked that although last winter had very little frost and was apparently not unfavourable to ve--getation. yet whether it was the extraordinary wetness in the fore part of the winter which affected the roots or the dryness of the spring, it is not easy to say, but more trees have died this season than I ever remember. A Larch of 10 or 12 feet high has died in the grove, and in

the

**108** June 1807

the Avenue 2 *Pinasters* which made good shoots last year, and were about 6 feet high have died

- Warm Cloudy day *Robinia hispiola Lilium pomponium*, & Many anthes *Nymphoides* F. Yesterday found a
  Willow in the Shrubbery on the C. Down side of the Lagan, nearly a Quarter of a mile below Strandmills, which I think agrees pretty well with *Salix acuminata* of Smith F. Boi. Rain in the afternoon.
- 25 Cloudy Morning Cuckoo crying Thrush and Blackbird yet singing. Cloudy warm day with gentle rain, Cloudy mist after Sunset find flame color

over the Mountain top *Chrysanthe mum segetium & Leucanthemum* F

- 26 Misty soft rain in the Morning Fine warm dry day
- 27 Fine day a few clouds. Rosa Tomen-tosa alba & rubra, with rosa canina
  glauca, Vicia cracca and Pedicularis
  sylvatica and Orchis latifolia Flowering. Went in pursuit

of

### **109** June 1807

of Polygonum Bistorta, a spike of Flow--ers having been brought from that neigh -bourhood by Mr Saml. Robinson who said it was not uncommon in the fields be--tween that and Carmoney, after exam -ining several fields we were obliged to give up the pursuit. went to visit Cotton printing by water a very ingeni -ous piece of machinery, the Copperplate on which the pattern is engraved is by a quarter revolution of a wheel carried under the cylinder on which the Cali--co is rolled, which cylinder turns one quarter round is then lifted up and a reverse motion in the first wheel re--turns the print to the hands of the workman, who covers it with the colour--ing and wipes it clean with suffici--ent expedition to allow it to return to its place and continue the opera

-tion of Printing, here we were shown

what

# 110

June 1807

what was reckoned an improvement on the former method, the use of cylin -ders in place of the flat plate, this gave me great pleasure as it was bring -ing into execution what I proposed to Mr James Grimshaw several years ago. by this means any quantity may be printed without the atten--dance of a workman. the construc--tion need be only two cylinders 1 - 1 on the lower of which the pattern is en-



graved on copper, this and turning in the trough 2 containing the colour -ing matter arrives at 3 a scraper pressing upon it by means of a weight or spring which taking off the super

-fluous

**111** June 1807

fluous matter allows it to arrive at the junction of the two cylinders between which the cloth passes in a fit state for trans. -fering the pattern. the cloth in order to be delivered to the printing cylinders with regularity may pass over the cylinder 4, and on 5 it may be rol--led in order to its being conveyed to an--other appartment. Near the top of the High town hill found a *Lichen* which I think may be *Patellaria glaucoma* Hoff 57.53 Ach 56

Dry but cloudy. Moss Rose F. On an observation of the *Rivularia* found in
Kerrs Glen river June 2 1805. I at present found few globlular specimens
but they appeared to become a various
-ly inflated wrinkled gelatinous mem
-brane apparently adhering by their
whole undersurface to the stones.
On going along the shore near the mile
water I found washed on shore nume
-rous specimens of a *tremilla* or *Ulva*perhaps the same as that found near
Hollywood Sept.18 1806 which resem
-bled Ginelins Fig of *Ulva squamaria*

see

pass over three pages

28

Plan of the Rough Fort Parish of Templepatrick made June 27 1807



Granies grave 12 yards long

113 [blank page]

**114** [paper insert set on end:]

It is the fate of all human plans to be liable to error and we have often the misfortune to behold our favourite schemes turn out contrary to our expectations and our hopes blasted in the end. Among the most apparently benevolent institutions of the present period must certainly be reckoned the Foundling Hospital yet Parliamentary investigations proved it a most certain cause of des -truction