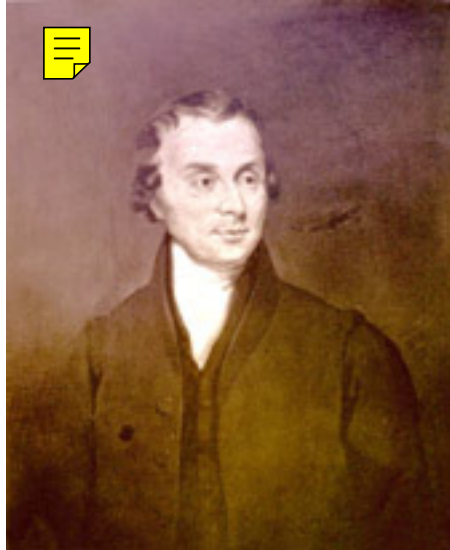


LUKE HOWARD



"The sky too belongs to the Landscape. The ocean of air in which we live and move, in which the bolt of heaven is forged, and the fructifying rain condensed, can never be to the zealous Naturalist a subject of tame and unfeeling contemplation."



FRIEND LUKE HOWARD

LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

1772

November 28, Saturday: [Luke Howard](#) was born on Red Cross street in the Cripplegate ward of London, a birthright [Quaker](#). His father Friend Robert Howard (1738-1812) was a manufacturer of wrought item and tinware items such as the Argand lamp, and his mother Friend Elizabeth Leatham Howard would send him to the Quaker grammar school at Burford, near Oxford. He would be there for seven years beginning in his 8th year:

The school was situated on the top of a bleak hill, rising from the town, but surrounded by a country affording opportunity for a great deal of healthful exercise and enjoyment to the young scholar. The nutting season was a time of great delight; the long pinafore, then worn, was sewed up so as to form a bag, for the convenience of receiving the gathered nuts ... only one vacation, at Whitsuntide, of four weeks, was allowed in the year, and in the winter the pupils had about a week's recess at the school, when a box was regularly sent from home, containing a cake, mince pies, oranges and chestnuts.

He would become a manufacturing chemist and pharmacist, and spend much of his life working as a retail chemist in London (part of that time in partnership with the British Friend William Allen), while developing skills as a meteorologist:¹



Many of his meteorological studies would be carried out in the garden of his family's home in Tottenham near London. When he would be away, Friend Mariabella Howard, his wife, would continue the weather readings.

1. Hamblyn, Richard. THE INVENTION OF CLOUDS: HOW AN AMATEUR METEOROLOGIST FORGED THE LANGUAGE OF THE SKIES. Farrar Straus & Giroux, 2001



LUKE HOWARD

FRIEND LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

1783

Following two eruptions of Asama Yama on the island of Honshu in [Japan](#), the first in May and the second in August, from this year into 1788 there would be severe [famine](#) (Japanese historians refer to this as the Tenmei famine; over a period of four years some 300,000 died).

May/August: In early May, Reykjaneshryggur erupted off Iceland.² On June 8th, the Laki (Lakagigar) basalt fissure of Iceland began to erupt. A quarter of the people in Iceland would die. According to Professor John A. Day's THE BOOK OF CLOUDS (Silver Lining Books, 2002), [Friend Luke Howard](#)'s fascination with clouds was kindled by this period in which the skies of the Northern Hemisphere were laden with dust and ash from the eruptions of Iwaki crater and Asama Yama on the island of Honshu and Aoga-Shima on the island of Izu in [Japan](#) and of Reykjaneshryggur off the coast and the Laki basalt fissure on the mainland of Iceland, a period termed the "Great Fogg."

[William Cowper](#) would in 1785 in THE TASK describe the "dim and sickly eye" of this summer as "portentious, unexampled, unexplained." The smell of sulfur was everywhere. As far as this poetic "unexplained" went, [Benjamin Franklin](#) would in 1785 prepare a paper for the Manchester Literary and Philosophical Society, suggesting that this might be the result of unusual volcanic activity.

August 18, Monday: [Friend Luke Howard](#), at eleven years of age, watched a fiery [meteor](#) flash across the early evening skies of western Europe. —Might this be the meteor that inspired the meteorologist?

CHANGE IS ETERNITY, STASIS A FIGMENT

Friend Luke Howard

"Stack of the Artist of Kouroo" Project

2. According to Thordarson, Thomas & Self, S. "The Laki (Skaftar Fires) and Grimsvotn eruptions in 1783-1785." [Bulletin of Volcanology](#), Volume 55, pages 233-263, this was probably one of the events known to volcanologists as the Laki and Grimsvotn eruptions. Soufrière on St. Vincent would blow in 1812, Mayon in the Philippines would blow in 1814, but these would become almost as pop-tarts popping up in a toaster when Tambora in Indonesia would blow in 1816, as it would be by far the most powerful volcanic blast since the Santorini volcano on island of Thera in the Aegean Sea blew its top in 1,628 BCE. All but 26 of the 12,000 Sumbawa islanders would lose their lives. We would have a mild taste of this volcano weather, in our own lives, in the series of cool summers after 1991 when Mount Pinatubo in the Philippines would blow its top — remember?



FRIEND LUKE HOWARD

LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

1787

In this year [Friend Luke Howard](#) reached his 15th year of age, and was apprenticed to Ollive Sims, chemist and druggist of Stockport. The study of Botany was young Luke's "principal relaxation." He kept a botanical collection.

BOTANIZING



LUKE HOWARD

FRIEND LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

May 22, Tuesday: The twelve founder members of the new nonsectarian Society for Effecting the Abolition of the Slave Trade were three Anglicans ([Granville Sharp](#), Philip Sansom, and [Thomas Clarkson](#)) and nine [Quakers](#) (William Dillwyn, Samuel Hoare, Jr, George Harrison, John Lloyd, Joseph Woods, John Barton, Joseph Hooper, James Phillips, and Richard Phillips).

INTERNATIONAL SLAVE TRADE

Influential figures such as John Wesley would give their support to the campaign. Later they would persuade [William Wilberforce](#), the MP for Hull, to be their spokesman in the House of Commons. Thomas Clarkson initially took responsibility for collecting information to support the abolition of the slave trade. This included interviewing 20,000 sailors and obtaining equipment used on the slave-ships such as iron handcuffs, leg-shackles, thumb screws, instruments for forcing open slave's jaws, and branding irons. In this year he would be publishing a pamphlet, A SUMMARY VIEW OF THE SLAVE TRADE AND OF THE PROBABLE CONSEQUENCES OF ITS ABOLITION.



The work of this anti-slavery movement would continue beyond the ending of the English slave trade in 1807, as slavery still existed. The movement actually would grow substantially after the passing of the Emancipation Act which came into force in 1834. A group of Quakers, including Friend William Allen (not the same person as the William Allen of Concord, Massachusetts) and Friend [Luke Howard](#), would form the African Institution. Recognizing that slavery had destroyed the whole basis of African society, the Institution would seek to improve the lives of African people by means of Christianity and education and would survive until 1827.

"EMANCIPATION IN THE ... INDIES...": All the great geniuses of the British senate, Fox, Pitt, Burke, Grenville, Sheridan, Grey, Canning, ranged themselves on its side; the poet Cowper wrote for it: Franklin, Jefferson, Washington, in this country, all recorded their votes.

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FRIEND LUKE HOWARD

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GO TO MASTER HISTORY OF QUAKERISM

Josiah Wedgewood, another influential member of the Society—which was, it must be noted, despite the best



efforts of the abolitionist Sharp in that direction, decidedly not a society the aim of which was to abolish slavery—, produced the jasperware cameo “an African in Chains in a Supplicating Posture” at his pottery factory. The design was by William Hackwood or Henry Webber:



Black servants or supplicants typically knelt in the art of this period, a period in which the upper classes did not kneel while praying, so the above image conflates themes of humility and of gratitude and of conversion from heathenism with the concept of emancipation from foreign servitude. Curiously, the primary impact of such a depiction would be to confirm the common white perception of Negro inferiority, and this supplicant



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posture for black figures would persist long after the abolition of slavery as a standard feature of Western art.

In this year efforts began to repatriate black people back to Sierra Leone in Africa:

Paul Cuffe likely heard of Sierra Leone as early as 1787. In that year, a British philanthropist, Granville Sharp, sent three shiploads of former American slaves, since living in London and known as the "black poor of London," to West Africa to establish a "Province of Freedom." Sharp spoke out strongly against the institution of slavery and the horrors of the famed "Middle Passage" through which most slaves destined for the colonies traveled. News of Sharp's endeavor spread quickly among the Society of Friends. Cuffe, however, did not initially agree with the idea of emigration. He believed that the United States, and particularly Massachusetts, was his province of freedom. It was not until 1808 that Cuffe began seriously entertaining the idea of traveling to West Africa.

W.E. Burghardt Du Bois: In the individual efforts of the various colonies to suppress the African slave-trade there may be traced certain general movements. First, from 1638 to 1664, there was a tendency to take a high moral stand against the traffic. This is illustrated in the laws of New England, in the plans for the settlement of Delaware and, later, that of Georgia, and in the protest of the German Friends. The second period, from about 1664 to 1760, has no general unity, but is marked by statutes laying duties varying in design from encouragement to absolute prohibition, by some cases of moral opposition, and by the slow but steady growth of a spirit unfavorable to the long continuance of the trade. The last colonial period, from about 1760 to 1787, is one of pronounced effort to regulate, limit, or totally prohibit the traffic. Beside these general movements, there are many waves of legislation, easily distinguishable, which rolled over several or all of the colonies at various times, such as the series of high duties following the Assiento, and the acts inspired by various Negro "plots."

Notwithstanding this, the laws of the colonies before 1774 had no national unity, the peculiar circumstances of each colony determining its legislation. With the outbreak of the Revolution came unison in action with regard to the slave-trade, as with regard to other matters, which may justly be called national. It was, of course, a critical period, – a period when, in the rapid upheaval of a few years, the complicated and diverse forces of decades meet, combine, act, and react, until the resultant seems almost the work of chance. In the settlement of the fate of slavery and the slave-trade, however, the real crisis came in the calm that succeeded the storm, in that day when, in the opinion of most men, the question seemed already settled. And indeed it needed an exceptionally clear and discerning mind, in 1787, to deny that slavery and the slave-trade in the United States of America were doomed to early annihilation. It seemed certainly a legitimate deduction from the history of the preceding century to conclude that, as the



FRIEND LUKE HOWARD

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GO TO MASTER HISTORY OF QUAKERISM

system had risen, flourished, and fallen in Massachusetts, New York, and Pennsylvania, and as South Carolina, Virginia, and Maryland were apparently following in the same legislative path, the next generation would in all probability witness the last throes of the system on our soil.

To be sure, the problem had its uncertain quantities. The motives of the law-makers in South Carolina and Pennsylvania were dangerously different; the century of industrial expansion was slowly dawning and awakening that vast economic revolution in which American slavery was to play so prominent and fatal a rôle; and, finally, there were already in the South faint signs of a changing moral attitude toward slavery, which would no longer regard the system as a temporary makeshift, but rather as a permanent though perhaps unfortunate necessity. With regard to the slave-trade, however, there appeared to be substantial unity of opinion; and there were, in 1787, few things to indicate that a cargo of five hundred African slaves would openly be landed in Georgia in 1860.

Strangely, there is no plaque to mark the spot in London –2 George Yard– at which this movement began:

2 GEORGE YARD

It is almost as if the matter were too shameful to mention:



We are now so used to thinking about English slavery from the vantage point of its abolition and the humanitarian discourse surrounding it that we have forgotten that at one point to oppose slavery was considered un-English and unpatriotic. As Eric Williams argued powerfully in the second chapter of *CAPITALISM AND SLAVERY*, from Quakers to cardinals and admirals, supporting the slave trade was at one point expected of every true English man and woman. There was a time when William Wilberforce, the abolitionist, was the most hated man in England, his cause considered to be anti-English. Lord Nelson, the hero of Trafalgar, couched his disdain for the abolitionists in the language of patriotism: "I was bred in the good old school, and taught to appreciate the value of our West Indian possessions, and neither in the field nor the Senate shall their just rights be infringed, while I have an arm to fight in their defence, or a tongue to launch my voice against the damnable doctrine of Wilberforce and his hypocritical allies." If Nelson was irritated by abolitionists, it is because the true, unsung heroes and patriots of England in the eighteenth century were slave traders, men like Thomas Golightly, owner of a slaving ship and the mayor of Liverpool, a city built on slave money. On February 14, 1788, Golightly and the slaving interest in Liverpool sent a petition to the House of Commons calling attention to the threat that abolitionism posed to British commerce. The petition is worth quoting in detail, because it illustrates how central slave trading had become to the identity



LUKE HOWARD

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of nation and empire:

FEBRUARY 14, 1788

A few months after Friend [Luke Howard](#)'s apprenticeship with Ollive Sims had been completed, he was working for a large wholesale druggist in Bishopgate Street when he seriously injured one of his hands. Some of the effects of this injury would linger for many years.

**“NARRATIVE HISTORY” AMOUNTS TO FABULATION,
THE REAL STUFF BEING MERE CHRONOLOGY**



FRIEND LUKE HOWARD

LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

1796

7th of Twelfth Month: At the Peel Meeting, Friend [Luke Howard](#) and Friend Mariabella³ Eliot were wedded according to the manner of the [Religious Society of Friends](#). He was 24, she 27. The couple's first child, Mary, who would become an invalid and would die during the spring of 1816, would be born during Eleventh Month, 1797. Their second child, Robert, would be born in 1801. Their third child, Elizabeth, would be born during First Month, 1803. Their fourth child, Rachel, would be born during Seventh Month, 1804. Their fifth child, John Eliot, would be born in 1807. An infant Mariabella would die of whooping cough at eighteen months. Their youngest, Joseph, would be born in 1811.

President George Washington's Eighth Annual Message to Congress.

3. Because Mariabella had a cousin who also was named Mariabella, the cousin was customarily referred to as "Maria" while she was customarily referred to as "Bella."



LUKE HOWARD

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GO TO MASTER HISTORY OF QUAKERISM

1800



[Friend Luke Howard](#) presented a paper on pollens at the Linnaean Society of London. He also during this year prepared a paper on the “Average Barometer” (whatever that is).

WEATHER



HOWARD PUBLICATIONS

During the earlier part of this year a daughter, Rachel Howard, was born.



FRIEND LUKE HOWARD

LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

1802



Two cloud classification schemes were independently developed, a simpler one in “Theories of Rain” and “On the Modification⁴ of Clouds” presented to the Askesian Society in England by [Friend Luke Howard](#) and another one, in France, slightly earlier and considerably more elaborate. Here is the earlier and more elaborate one, Jean-Baptiste de Monet de Lamarck’s “On Cloud Forms” per the 3d volume of his *ANNUAIRE MÉTÉOROLOGIQUE*:

It is not in the least amiss for those who are involved in meteorological research to give some attention to the form of clouds; for, besides the individual and accidental forms of each cloud, it is clear that clouds have certain general forms which are not all dependent on chance but on a state of affairs which it would be useful to recognize and determine.

Lamarck was proposing to recognize five main types of clouds “related to general causes which are easily ascertained”:

- Hazy clouds (en forme de voile)
- Massed clouds (attroupés)
- Dappled clouds (pommelés)
- Broom-like clouds (en balayeurs)
- Grouped clouds (groupés).

Three years later, Lamarck would devise a classification scheme of twelve forms.

4. “Modification” meaning, of course, “Classification.”



LUKE HOWARD

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GO TO MASTER HISTORY OF QUAKERISM



December: [Friend Luke Howard](#) presented a paper to the Askesian Society, “On the Modification⁵ of Clouds.”



In his lecture, Friend Luke announced that he had been able to generalize three basic cloud types and gave each a Latin name befitting its appearance: cirrus for fiber, cumulus for heap or pile, and stratus for layer or sheet. Other cloud forms, he believed, were mere variations or aggregations of these genera. The rain cloud nimbus (Latin for cloud), for instance, he inferred to be a combination of all three:

Cumulus:

(Latin for heap) “Convex or conical heaps, increasing upward from a horizontal base – Wool bag clouds.”

Stratus:

(Latin for layer) “A widely extended horizontal sheet, increasing from below.”

Cirrus:

(Latin for curl of hair) “Parallel, flexuous fibres extensible by increase in any or all directions.”

To denote “a cloud in the act of condensation into rain, hail or snow,” he added a fourth category:

Nimbus:

(Latin for rain) “A rain cloud – a cloud or systems of clouds from which rain is falling.”

According to Friend Luke, “While any of the clouds, except the nimbus, retain their primitive forms, no rain can take place; and it is by observing the changes and transitions of cloud form that weather may be predicted.” Clouds could also alter their forms, thus, Howard reasoned, when cumulus clouds bunched together so that they crowded the sky, they became:

Cumulo-stratus:

“The cirro-stratus blended with the cumulus, and either appearing intermixed with the heaps of the latter, or super-adding a widespread structure to its base.”

5. By “modification” meaning, of course, “classification.”



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GO TO MASTER HISTORY OF QUAKERISM

Similarly, he defined other intermediate categories of transformation:

Cirro-cumulus:

"Small, well defined, roundish masses increasing from below."

Cirro-stratus:

"Horizontal or slightly inclined masses, attenuated towards a part or the whole of their circumference, bent downward or undulated, separate, or in groups, or consisting of small clouds having these characters."

What Friend Luke needed to disabuse his audience of was the commonsense attitude that had been prevailing for almost a century, a "vesicule" or "aura" theory according to which clouds were made up of tiny hollow spherules of water — bubbles or "vesicules" full of a rarefied atmosphere referred to as "aura." When rain occurred, according to this commonsense viewpoint, what had happened was that these vesicles had popped, with their lighter aura going upward and their water falling in drops. Alexander Tilloch, publisher of a popular science monthly Philosophical Magazine, was in the audience and insisted to Friend Luke that he expand his talk into an article.



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FRIEND LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

1803



Late in the year: [Friend Luke Howard](#)'s ESSAY ON THE MODIFICATIONS OF CLOUDS was printed in London, as a flimsy offprint, after having been serialized in the July, September, and October editions of the Philosophical Magazine:

Stratus, a widely extended, continuous, horizontal sheet, increasing from below upward. footn. This application of the Latin word stratus is a little forced. But the substantive stratum, did not agree in its termination with the other two [cirrus, cumulus], and is besides already used in a different sense even on this subject, e.g. a stratum of clouds; yet it was desirable to keep the derivation from the verb sterno, as its significations agree so well with the circumstances of this Cloud.

It may be allowable to introduce a Methodical nomenclature, applicable ... to the Modifications of Cloud ... Cumulus, convex or conical heaps, increasing upward from a horizontal base.

It may be allowable to introduce a Methodical nomenclature, applicable ... to the Modifications of Cloud ... Cirrus, parallel, flexuous, or diverging fibres, extensible by increase in any or in all directions.

Cirro-cumulus, small, well defined, roundish masses, in close horizontal arrangement or contact.

Cirro-stratus, horizontal or slightly inclined masses attenuated towards a part or the whole of their circumference, bent downward, or undulated; separate, or in groups consisting of small clouds having these characters.

HOWARD PUBLICATIONS



FRIEND LUKE HOWARD

LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

1806



[Friend Luke Howard](#) began a "Meteorological Register" which would, beginning in the following year, regularly be published in the Athenaeum Magazine.

WEATHER



HOWARD PUBLICATIONS



LUKE HOWARD

FRIEND LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

1807



Friend Luke Howard's "Meteorological Register" began to regularly be published in The Athenaeum: A Magazine of Literary and Miscellaneous Information. His portrait was painted by John Opie:

WEATHER



HOWARD PUBLICATIONS

Friend Luke prepared a digest entitled "Cloud" for Volume 8 of Abraham Rees's THE CYCLOPÆDIA; OR, UNIVERSAL DICTIONARY OF ARTS, SCIENCES, AND LITERATURE (39 text volumes and 6 plates volumes. London: Longman, Hurst, Rees, Orme, and Brown, that would be complete in 1820).⁶



Ree's THE CYCLOPÆDIA

Edward Kennion engraved a new set of cloud illustrations for him, and for this received £3 11s.

6. He would also contribute articles on "rain," on "dew," on "Penn," and on "Quakers."



FRIEND LUKE HOWARD

LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

As early as 1761, British Friends had declared the international slave trade to be “a practice repugnant to our Christian profession.” In 1787, Friend William Dillwyn had helped to set up an anti-slavery committee in London, all but three of whose members were Quakers. When the ending of English participation in the international slave trade in this year, it was recognized that this international trade in new slaves was not the only evil connected with human enslavement and that this work therefore would need to continue, and so a group of Quakers, including Friends William Allen and [Luke Howard](#), in this year formed an “African



Institution.” The focus of the movement would come to be on ending slavery in America. Recognizing that slavery had destroyed the whole basis of African society, the Institution would seek to improve the lives of black Africans through Christianity and through education. The African Institution would also campaign for the abolition of the slave trade in other countries and press for legitimate trade with Africa as well as for strict enforcement of the ban upon the English slave trade. The African Institution would survive until 1827.⁷

7. Refer to Wayne Ackerson’s 2005 monograph, *THE AFRICAN INSTITUTION (1807-1827) AND THE ANTISLAVERY MOVEMENT IN GREAT BRITAIN* (Ceredigion, United Kingdom: Edwin Mellen Press).



LUKE HOWARD

FRIEND LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

1808

 Establishment, in England, of the SDKPD.⁸ Friend William Allen, a [Quaker](#) philanthropist (not the same



person as the William Allen of Concord, Massachusetts), was a co-founder of this new anti-[hanging](#) group, and Friend Peter Bedford and Friend Samuel Hoare and Friend [Luke Howard](#) were among its leaders.

Friend Luke wrote A BRIEF APOLOGY FOR QUAKERISM, INSCRIBED TO THE EDINBURGH REVIEWERS (London, printed for the author, and sold by Darton & Harvey, Gracechurch-Street; Longman & Co. Paternoster-Row; and J. Hatchard, Piccadilly). This was a graceful reply to "a production of your own, now of several months standing, in which the peculiarities of *the Friends* are censured in a manner which convinces me that your writer has not well understood them."

"It is quite plain to us," adds he, "that their founder George Fox was exceedingly insane!" *Gentle reader*, is this criticism?

...

But our critic *suspects*, that when Fox *dwelt in a hollow tree*, in the vale of Beavor, he taught sublime absurdities; and I suspect, that when he himself shall have learned in what liberal criticism consists, he will be sensible of an absurdity, not very sublime, in the employment of such methods to deprecate Fox's character and doctrines. It will be to the purpose to produce here a passage in Fox's Journal, which appears to have furnished this *innuendo*. "I fasted much, walked abroad in solitary places many days; and often took my Bible, and sat in hollow trees and lonesome places till night came on." *Pa.* 6, *Edit.* 1765. Such retirements, for private devout meditation and prayer, were the common practice of the age; the most prominent feature of which was, that zeal and fervour in religion now called enthusiasm.

HOWARD PUBLICATIONS

8. Don't try to pronounce this at home. The Society for the Diffusion of Knowledge upon the Punishment of Death and the Improvement of Prison Discipline would oppose the hanging of convicts for any crime other than premeditated murder. Eventually, in 1969, even that sort of retribution, a life for a life, would be eliminated from England as barbaric.



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GO TO MASTER HISTORY OF QUAKERISM

WOMEN HANGED IN ENGLAND DURING 1808

Date	Name	Age	Place of execution	Crime
10/02	Barbara Malcolm		Edinburgh	Murder of child
28/03	Sarah Pugh		Hereford	Murder
09/04	Mary Chandler	19	Lancaster Castle	Stealing in dwelling house



LUKE HOWARD

FRIEND LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

1811



In London, [Friend Luke Howard](#) prepared an anonymous tract against profane swearing, A CARD FOR THE POCKET (AGAINST PROFANE SWEARING), SIGNED "CHRISTIAN."

HOWARD PUBLICATIONS



September: William Nicholson's Journal of Natural Philosophy printed [Friend Luke Howard](#)'s cloud categories as "The Natural History of Clouds."



FRIEND LUKE HOWARD

LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

1812

➡ [Friend Luke Howard](#) moved to Tottenham near London, where there was a monthly meeting of the Religious Society of Friends. His family would live in a large house built by William Forster on the corner of what is now Philip Lane and Arnold Road East (7 Bruce Grove, not the same residence but a subsequent residence in Tottenham, is the one now marked with a historical plaque), a house with a garden in which he would set up his meteorological instruments.

➡ January 10, Friday: The steamboat *New Orleans* arrived in New Orleans. And yes, despite the dire prediction of the mayor of Cincinnati, it would be able to make its way back upriver against the current (since it was almost empty).

[Friend Luke Howard](#) observed what we would now term smog above the great metropolis of London:

...the sky, where any light pervaded it, showed the aspect of bronze. Such is, occasionally, the effect of the accumulation of smoke between two opposite gentle currents, or by means of a misty calm. I am informed that the fuliginous cloud was visible, in this instance, for a distance of forty miles.



[Friend Stephen Wanton Gould](#) wrote in his journal:

6th day 10 of 1 Mo// My mind has been brought under feelings which are pleasant, tho' of a serious nature, for which I desire to be thankful

RELIGIOUS SOCIETY OF FRIENDS



LUKE HOWARD

FRIEND LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

1813

➡ Friend Luke Howard's classification scheme for clouds appeared in Dr. Thomas Ignatius Maria Forster's RESEARCHES ABOUT ATMOSPHERIC PHAENOMENAE.



They also appeared in this year in Thomas Thomson's Annals of Philosophy; or, Magazine of Chemistry, Mineralogy, Mechanics, Natural History, Agriculture and the Arts.

“When the cirrus is seen in detached tufts, called Mare’s Tails, it may be regarded as a sign of wind.” “Of the cloud ... the other part remains cirriform.” —Obviously, we need to figure out whether, and if so when, [Henry Thoreau](#) consulted such derivative presentations.

[HDT](#)[WHAT?](#)[INDEX](#)**FRIEND LUKE HOWARD****LUKE HOWARD****GO TO MASTER HISTORY OF QUAKERISM**

[Johann Wolfgang von Goethe](#) would use Friend Luke's classification scheme in his weather journals — and



would dedicate four poems to him. Apparently unaware of the slightly earlier and more elaborate classification scheme by Jean-Baptiste de Monet de Lamarck, he would praise this Quaker meteorologist as “the first to hold fast conceptually the airy and always changing form of clouds, to limit and fasten down the indefinite, the intangible and unattainable and give them appropriate names.” Goethe would write one of these four poems between 1817 and 1821 and first publish it in 1822. He would in 1827 insert this among his collected poems in the section “God and world”:

Atmosphäre/Howards Ehrengedächtnis⁹

Wenn Gottheit Camarupa, hoch und hehr,
Durch Lüfte schwankend wandelt leicht und schwer,
Des Schleiers Falten sammelt, sie zerstreut,
Am Wechsel der Gestalten sich erfreut,
Jetzt starr sich hält, dann schwindet wie ein Traum,
Da staunen wir und traun dem Auge kaum;

Nun regt sich kühn des eignen Bildens Kraft,
Die Unbestimmtes zu Bestimmtem schafft;
Da droht ein Leu, dort wogt ein Elefant,
Kameles Hals, zum Drachen umgewandt,
Ein Heer zieht an, doch triumphiert es nicht,
Da es die Macht am steilen Felsen bricht;
Der treuste Wolkenbote selbst zerstiebt,
Eh er die Fern erreicht, wohin man liebt.

Er aber, Howard, gibt mit reinem Sinn
Uns neuer Lehre herrlichsten Gewinn.
Was sich nicht halten, nicht erreichen läßt,
Er faßt es an, er hält zuerst es fest;
Bestimmt das Unbestimmte, schränkt es ein,
Benennt es treffend! — Sei die Ehre dein! —
Wie Streife steigt, sich ballt, zerflattert, fällt,
Erinnre dankbar deiner sich die Welt.

9. Goethe: Gedichte (Ausgabe letzter Hand. 1827), S. 746.



LUKE HOWARD

FRIEND LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

In honour of Mr. Howard

When Camarupa, wavering on high,
Lightly and slowly travels o'er the sky,
Now closely draws her veil, now spreads it wide,
And joys to see the changing figures glide,
Now firmly stands, now like a vision flies,
We pause in wonder, and mistrust our eyes.

Then boldly stirs imagination's power,
And shapes there formless masses of the hour;
Here lions threat, there elephants will range,
And camel-necks to vapoury dragons change;
An army moves, but not in victory proud,
Its might is broken on a rock of cloud;
E'en the cloud messenger in air expires,
Ere reach'd the distance fancy yet desires.

But Howard gives us with his clearer mind
The gain of lessons new to all mankind;
That which no hand can reach, no hand can clasp,
He first has gain'd, first held with mental grasp.
Defin'd the doubtful, fix'd its limit-line,
And named it fitly. —Be the honour thine!
As clouds ascend, are folded, scatter, fall,
Let the world think of thee who taught it all.

Stratus

When o'er the silent bosom of the sea
The cold mist hangs like a stretch'd canopy;
And the moon, mingling there her shadowy beams,
A spirit, fashioning other spirits seems;
We feel, in moments pure and bright as this,
The joy of innocence, the thrill of bliss.
Then towering up in the darkening mountain's side,
And spreading as it rolls its curtains wide,
It mantles round the mid-way height, and there
It sinks in water-drops, or soars in air.

Cumulus

Still soaring, as if some celestial call
Impell'd it to yon heaven's sublimest hall;
High as the clouds, in pomp and power arrayed,
Enshrined in strength, in majesty displayed;
All the soul's secret thoughts it seems to move,
Beneath it trembles, while it frowns above.

Cirrus

And higher, higher yet the vapors roll:
Triumph is the noblest impulse of the soul!
Then like a lamb whose silvery robes are shed,
The fleecy piles dissolved in dew drops spread;
Or gently waft to the realms of rest,
Find a sweet welcome in the Father's breast.



FRIEND LUKE HOWARD

LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

Nimbus

Now downwards by the world's attraction driven,
That tends to earth, which has upris'n to heaven:
Threatening in the mad thunder-cloud, as when
Fierce legions clash, and vanish from the plain;
Sad destiny of the troubled world! but see,
The mist is now dispersing gloriously:
And language fails us in its vain endeavour—
The spirit mounts above, and lives forever.



LUKE HOWARD

FRIEND LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

Among painters, J.M.W. Turner,



John Constable,



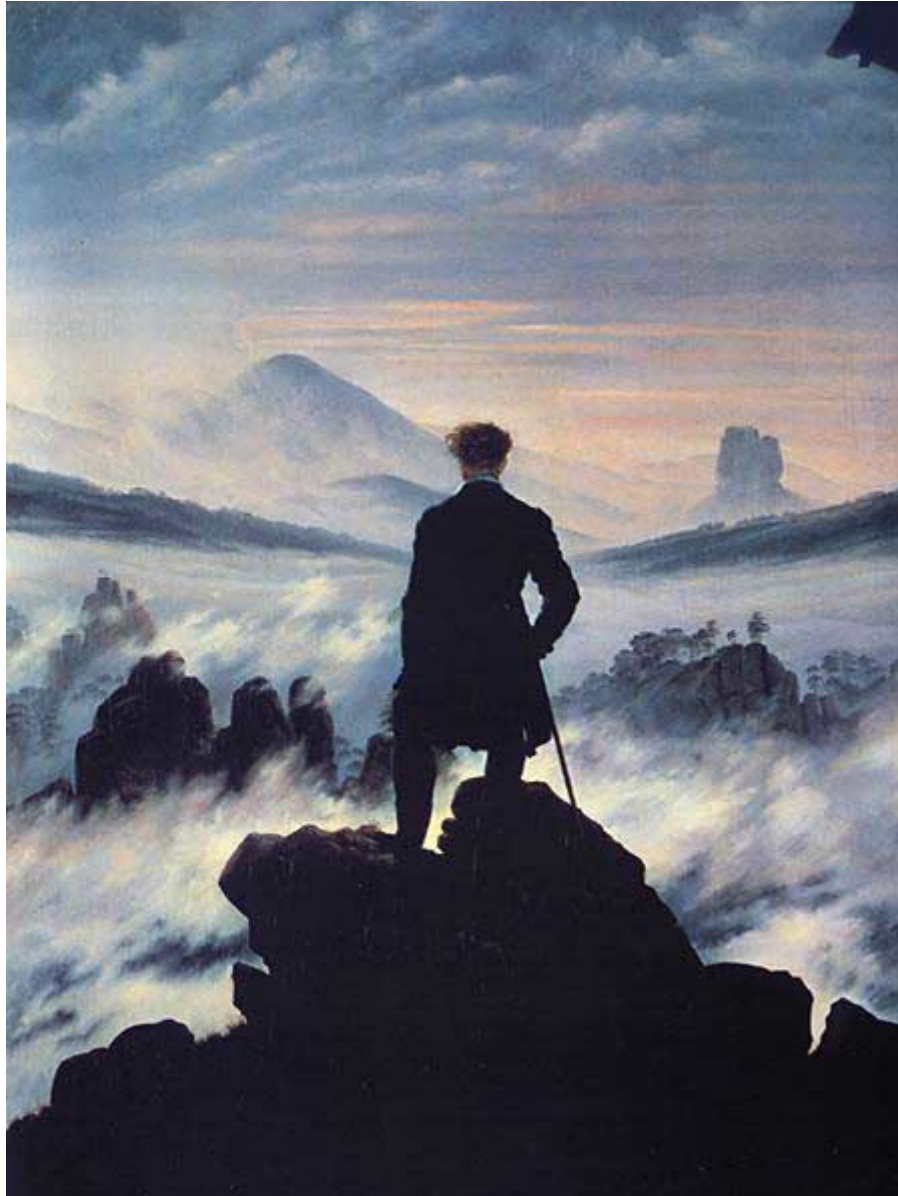


FRIEND LUKE HOWARD

LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

and Caspar David Friedrich



would rely on [Friend Luke Howard](#)'s classification scheme in their depictions of clouds.



LUKE HOWARD

FRIEND LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

1815

➡ [Johann Wolfgang von Goethe](#)'s JOURNEY TO [ITALY](#).



[Goethe](#)'s *Sprichwortlich*, from which [Henry Thoreau](#) would extrapolate lines 458-9 "Would you know the ripest cherries? / Ask the boys and blackbirds" and produce:

WALDEN: Sometimes, having had a surfeit of human society and gossip, and worn out all my village friends, I rambled still farther westward than I habitually dwell, into yet more unfrequented parts of the town, "to fresh woods and pastures new," or, while the sun was setting, made my supper of huckleberries and blueberries on Fair Haven Hill, and laid up a store for several days. The fruits do not yield their true flavor to the purchaser of them, nor to him who raises them for the market. There is but one way to obtain it, yet few take that way. If you would know the flavor of huckleberries, ask the cow-boy or the partridge. It is a vulgar error to suppose that you have tasted huckleberries who never plucked them. A huckleberry never reaches Boston; they have not been known there since they grew on her three hills. The ambrosial and essential part of the fruit is lost with the bloom which is rubbed off in the market cart, and they become mere provender. As long as Eternal Justice reigns, not one innocent huckleberry can be transported thither from the country's hills.



FRIEND LUKE HOWARD

LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

[Goethe](#) began to deal at this point with issues of meteorology. In this year he read a translation of [Friend Luke Howard](#)'s essay into German, done by Ludwig Wilhelm Gilbert for the Annalen der Physik, and it would be this morphological cloud classification scheme which would be used in the weather observation network that would be established under Goethe's supervision after 1821 in the grand duchy of Sachsen-Weimar-Eisenach. The "simple modifications" designated as stratus, cumulus, cirrus, and nimbus by Howard would be described in a poem dedicated to Howard and this poem would be published both in German and in English translation in Goethe's journal on natural sciences in 1820 and in 1822. Goethe would include an autobiographical sketch supplied to him by Howard.¹⁰ Later, a review of Friend Luke's THE CLIMATE OF LONDON would appear in the same journal and special mention would be made of the urban heat-island effect he had discovered. Goethe would develop his own concept of a three-layer atmospheric stratification. He would enlarge upon and refine Howard's classification scheme by distinguishing between cumulus clouds with horizontal bases and those ragged cumulus which nowadays are designated as cumulus fractus.

In this year Dr. Thomas Ignatius Maria Forster again presented his elaboration of Friend Luke's nomenclature of clouds (plus chapters on meteors and electricity) as RESEARCHES ABOUT ATMOSPHERIC PHAENOMENAE printed in London: "When the cirrus is seen in detached tufts, called Mare's Tails, it may be regarded as a sign of wind." "Of the cloud ... the other part remains cirriform." –Obviously, we need to figure out whether, and when, [Thoreau](#) consulted this derivative presentation:



10. Where Friend Luke self-described as "I am a man of domestic habits and very happy in my family and a few friends, whose company I quit with reluctance to join other circles," Goethe was vastly impressed. This was the sort of mentality, Goethe suspected, for which nature would gladly disclose her secrets.



LUKE HOWARD

FRIEND LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

1816



[Friend Luke Howard](#)'s A CHRISTIAN MEMENTO. [London], W. & S. Graves, [1816?]. Tract no. 10, 3d ed., of the Tract Association of the Society of Friends, London. A reprint of his A CARD FOR THE POCKET (AGAINST PROFANE SWEARING), SIGNED "CHRISTIAN," London, 1811.

HOWARD PUBLICATIONS

The amateur meteorologist traveled in Europe with a group of Quaker philanthropists, helping distribute charity to German refugees of the Napoleonic Wars (he would be awarded a medal by the King of Prussia; refer to D.F. Scott's LUKE HOWARD (1772-1864): HIS CORRESPONDENCE WITH GOETHE AND HIS CONTINENTAL JOURNEY OF 1816, York, England: William Sessions Limited, 1976). Meanwhile, back home in Tottenham, England, from the garden of their home, his wife Mariabella Eliot Howard was continuing his meteorological observations in his absence.



FRIEND LUKE HOWARD

LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

1817

→ Edward Scoresby, a 2nd-generation whaling man of the Greenland waters, was not content to lead the simple sea-captain's seasonal life. During the winters he took university courses. He proceeded to invent several tools of Arctic exploration and to write *THE POLAR ICE*, known as "the foundation stone of Arctic science." Passed over by the Admiralty for a mission command of his own, he would openly disdain the central thesis to the British approach to the Arctic, the concept of the "Open Polar Sea." He was greatly impressed by the cloud-category work of [Friend Luke Howard](#).

THE FROZEN NORTH

→ [Friend Luke Howard](#) delivered a series of lectures on meteorology (in 1837, *SEVEN LECTURES IN METEOROLOGY* would become the 1st textbook on the weather).



[Johann Wolfgang von Goethe](#)'s essay "*Wolkengestalt nach Howard*" ("Cloud-shapes according to Howard") appeared in *ZUR NATURWISSENSCHAFT ÜBERHAUPT*, along with Goethe's poetic fragments honoring Friend Luke.

Atmosphäre/Howards Ehrengedächtnis¹¹

Wenn Gottheit Camarupa, hoch und hehr,
Durch Lüfte schwankend wandelt leicht und schwer,
Des Schleiers Falten sammelt, sie zerstreut,
Am Wechsel der Gestalten sich erfreut,
Jetzt starr sich hält, dann schwindet wie ein Traum,
Da staunen wir und traun dem Auge kaum;

Nun regt sich kühn des eignen Bildens Kraft,
Die Unbestimmtes zu Bestimmtem schafft;
Da droht ein Leu, dort wogt ein Elefant,
Kameles Hals, zum Drachen umgewandt,

11. Goethe: Gedichte (Ausgabe letzter Hand. 1827), S. 746.



LUKE HOWARD

FRIEND LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

Ein Heer zieht an, doch triumphiert es nicht,
Da es die Macht am steilen Felsen bricht;
Der treuste Wolkenbote selbst zerstiebt,
Eh er die Fern erreicht, wohin man liebt.

Er aber, Howard, gibt mit reinem Sinn
Uns neuer Lehre herrlichsten Gewinn.
Was sich nicht halten, nicht erreichen läßt,
Er faßt es an, er hält zuerst es fest;
Bestimmt das Unbestimmte, schränkt es ein,
Benennt es treffend! — Sei die Ehre dein! —
Wie Streife steigt, sich ballt, zerflattert, fällt,
Erinnre dankbar deiner sich die Welt.



FRIEND LUKE HOWARD

LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

1818



The 1st volume of [Friend Luke Howard](#)'s THE CLIMATE OF LONDON, DEDUCED FROM METEOROLOGICAL OBSERVATIONS, MADE AT DIFFERENT PLACES IN THE NEIGHBOURHOOD OF THE METROPOLIS (London, W. Phillips, sold also by J. and A. Arch, two volumes, 1818-1820).



HOWARD PUBLICATIONS



LUKE HOWARD

FRIEND LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

1819



The 2d volume of [Friend Luke Howard](#)'s THE CLIMATE OF LONDON, DEDUCED FROM METEOROLOGICAL OBSERVATIONS, MADE AT DIFFERENT PLACES IN THE NEIGHBOURHOOD OF THE METROPOLIS (London, W. Phillips, sold also by J. and A. Arch, two volumes, 1818-1820):

The names ... were intended as arbitrary terms for the structure of clouds, and the meaning of each was carefully fixed by a definition ... (Local terms) take away from the nomenclature its present advantage of constituting ... an universal language, by means of which the intelligent of every country may convey to each other their ideas without the necessity of translation. And the more this facility of communication can be increased, by our adopting by consent uniform modes, terms, and measures for our observations, the sooner we shall arrive at a knowledge of the phenomena of the atmosphere in all parts of the globe, and carry the science to some degree of perfection.

HOWARD PUBLICATIONS



FRIEND LUKE HOWARD

LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

Friend Luke had discovered the phenomenon we now understand as the urban heat island, by noticing that an urban center like London was warmer at night than the surrounding countryside. After making a 9-year comparison between temperature readings in London and its environs showing that on average “Night is 3.70° warmer and day 0.34° cooler in the city than in the country,” he inferred that the extensive consumption of heating fuel and the resultant production of chimney smoke in the city was enough to alter the local climate.



It is of course no wonder that London was modifying the local climate! By this point, 288 miles of gas pipes had been laid under its pavements to supply 51,000 burners.

WILLIAM MURDOCK

LIGHTING THE NIGHT

According to Volume VIII of REES’S ENCYCLOPÆDIA, edition of 1819, containing Friend Luke’s entry for CLOUD, “a vifible aggregate of minute drops of water fufpended in the atmofphere,” what follows is a statement of the previous hypothesis as to the nature of clouds, the prevailing concept that is to be challenged by his new theory and classification:

It is concluded, from numerous obfervations, that the particles of which a cloud confifts are always more or lefs electrified. The hypothefis, which affumes the exiftence of veficular vapour, and makes the particles of clouds to be hollow fpheres, which unite and defcend in rain when ruptured, however functioned by the authority of feveral eminent philofophers, does not feem neceffary to the fcience of meteorology in its prefent ftate ; it being evident that the buoyancy of the particles is not more perfect than it ought to be, if we regard them as mere drops of water. In fact they always defcend, and the water is elevated again only by being converted into invifible vapour.

Having written that, Friend Luke proceeds almost directly to his scheme of classification:

Clouds are fufceptible of various modifications.

By this term is intended the ftructure or manner of aggregation, in which the influence of certain conftant laws is fufficiently



LUKE HOWARD

FRIEND LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

evident amidft the infinite leffer diverfities refulting from occafional caufes.

Hence the principal modifications are as diftinguifhable from each other, as a tree from a hill, or the latter from a lake ; although clouds, in the fame modification, compared with each other, have often only the common refemblances which exift among trees, hills, and lakes, taken generally.

There are three fimple and diftinct modifications, which are thus named and defined.

And Friend Luke proceeds directly into his nomenclature scheme.

(I conclude from the above that Dr. Brad Dean's hypothesis –that Thoreau obtained his cloud categories from a perusal of the 1832 republication of Howard's 1803 pamphlet– is unfounded. Thoreau could at any time have obtained the information that he obtained, not out of some special but undocumented source, but instead out of a readily available encyclopedia.)



FRIEND LUKE HOWARD

LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

1820



July: [Johann Wolfgang von Goethe](#)'s verses in honor of [Friend Luke Howard](#) appeared in Gold's and Northhouse's London Magazine and Theatrical Inquisitor.

Atmosphäre/Howards Ehrengedächtnis¹²

Wenn Gottheit Camarupa, hoch und hehr,
Durch Lüfte schwankend wandelt leicht und schwer,
Des Schleiers Falten sammelt, sie zerstreut,
Am Wechsel der Gestalten sich erfreut,
Jetzt starr sich hält, dann schwindet wie ein Traum,
Da staunen wir und traun dem Auge kaum;

Nun regt sich kühn des eignen Bildens Kraft,
Die Unbestimmtes zu Bestimmtem schafft;
Da droht ein Leu, dort wogt ein Elefant,
Kameles Hals, zum Drachen umgewandt,
Ein Heer zieht an, doch triumphiert es nicht,
Da es die Macht am steilen Felsen bricht;
Der treuste Wolkenbote selbst zerstiebt,
Eh er die Fern erreicht, wohin man liebt.

Er aber, Howard, gibt mit reinem Sinn
Uns neuer Lehre herrlichsten Gewinn.
Was sich nicht halten, nicht erreichen läßt,
Er faßt es an, er hält zuerst es fest;
Bestimmt das Unbestimmte, schränkt es ein,
Benennt es treffend! — Sei die Ehre dein! —
Wie Streife steigt, sich ballt, zerflattert, fällt,
Erinnre dankbar deiner sich die Welt.

In honour of Mr. Howard

When Camarupa, wavering on high,
Lightly and slowly travels o'er the sky,
Now closely draws her veil, now spreads it wide,
And joys to see the changing figures glide,
Now firmly stands, now like a vision flies,
We pause in wonder, and mistrust our eyes.

Then boldly stirs imagination's power,
And shapes there formless masses of the hour;
Here lions threat, there elephants will range,
And camel-necks to vapoury dragons change;
An army moves, but not in victory proud,
Its might is broken on a rock of cloud;
E'en the cloud messenger in air expires,
Ere reach'd the distance fancy yet desires.

But Howard gives us with his clearer mind
The gain of lessons new to all mankind;
That which no hand can reach, no hand can clasp,
He first has gain'd, first held with mental grasp.
Defin'd the doubtful, fix'd its limit-line,
And named it fitly. —Be the honour thine!
As clouds ascend, are folded, scatter, fall,

12. Goethe: Gedichte (Ausgabe letzter Hand. 1827), S. 746.



LUKE HOWARD

FRIEND LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

Let the world think of thee who taught it all.

Stratus

When o'er the silent bosom of the sea
The cold mist hangs like a stretch'd canopy;
And the moon, mingling there her shadowy beams,
A spirit, fashioning other spirits seems;
We feel, in moments pure and bright as this,
The joy of innocence, the thrill of bliss.
Then towering up in the darkening mountain's side,
And spreading as it rolls its curtains wide,
It mantles round the mid-way height, and there
It sinks in water-drops, or soars in air.

Cumulus

Still soaring, as if some celestial call
Impell'd it to yon heaven's sublimest hall;
High as the clouds, in pomp and power arrayed,
Enshrined in strength, in majesty displayed;
All the soul's secret thoughts it seems to move,
Beneath it trembles, while it frowns above.

Cirrus

And higher, higher yet the vapors roll:
Triumph is the noblest impulse of the soul!
Then like a lamb whose silvery robes are shed,
The fleecy piles dissolved in dew drops spread;
Or gently waft to the realms of rest,
Find a sweet welcome in the Father's breast.

Nimbus

Now downwards by the world's attraction driven,
That tends to earth, which has upris'n to heaven:
Threatening in the mad thunder-cloud, as when
Fierce legions clash, and vanish from the plain;
Sad destiny of the troubled world! but see,
The mist is now dispersing gloriously:
And language fails us in its vain endeavour—
The spirit mounts above, and lives forever.



FRIEND LUKE HOWARD

LUKE HOWARD

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1821

[Friend Luke Howard](#) was on the governing committee of the Lancasterian School in Borough Road.


[Friend Luke Howard](#) helped the Greeks in their struggle for independence (1821-1832).



LUKE HOWARD

FRIEND LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

 [Friend Luke Howard](#) prepared a temperance tract, THE CONFESSIONS OF A DRUNKARD; A NARRATIVE FOUNDED ON FACT (London, printed for Harvey and Darton).

HOWARD PUBLICATIONS

A member of the Society Against Cruelty to Animals, he prepared a tract on the proper treatment of animals.

The Royal Society elected [Luke Howard](#), amateur meteorologist, as a Fellow.



His classification scheme for clouds was again reprinted, in the 2d edition of Dr. Thomas Ignatius Maria Forster's RESEARCHES ABOUT ATMOSPHERIC PHAENOMENAE.



Joseph M.W. Turner, John Constable, and Caspar David Friedrich would rely on [Friend Luke](#)'s classification scheme, and on his watercolors of typical clouds, in their own oil paintings depicting clouds. These depictions



FRIEND LUKE HOWARD

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GO TO MASTER HISTORY OF QUAKERISM

are by Friend Luke rather than by Turner, Constable, or Friedrich:





LUKE HOWARD

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(In a later timeframe, meteorologists would be adding an “alto” or “middle” category typical of everyday cloud cover. The names of the cloud forms would come more closely to resemble the naming scheme used for plants and animals: Cumulus congestus, Cirrus uncinus, Stratus nebulosus.)



FRIEND LUKE HOWARD

LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

Largest Scale Global Weather Oscillations around 1821

	Southern Oscillation	South Pacific current reversal
1814	strong	warm El Niño strong
1815	absent	cold La Niña
1816	absent	cold La Niña
1817	moderate +	warm El Niño moderate +
1818	absent	cold La Niña
1819	moderate +	warm El Niño moderate +
1820	absent	cold La Niña
1821	moderate	warm El Niño moderate
1822	absent	cold La Niña
1823	absent	cold La Niña



The southern ocean / atmosphere “seesaw” links to periodic Indonesian east monsoon droughts, Australian droughts, deficient Indian summer monsoons, and deficient Ethiopian monsoon rainfall causing weak annual Nile floods. This data is presented from Tables 6.2-6.3 of Quinn, William H. “A study of Southern Oscillation-related climatic activity for AD 622-1900 incorporating Nile River flood data,” pages 119-49 in Diaz, Henry F. and Vera Markgraf, eds. EL NIÑO: HISTORICAL AND PALEOCLIMATIC ASPECTS OF THE SOUTHERN OSCILLATION. Cambridge: Cambridge UP, 1992.

ENSO



LUKE HOWARD

FRIEND LUKE HOWARD

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1822



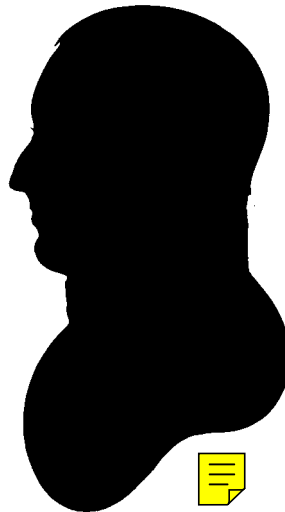
January 1, Tuesday: At Piada, near the ancient city of Epidaurus, the National Assembly of Greece adopted a constitution. Corinth was named the provisional capital of Greece and Alexandros Mavrokordatos became nominal president.

Furthering the work of the African Institution, publication of [Friend Luke Howard](#)'s A WORD TO THE SONS OF AFRICA (London: Printed and sold by W. Phillips).

HOWARD PUBLICATIONS

In [Newport, Rhode Island](#), [Friend Stephen Wanton Gould](#) wrote in his journal:

3rd day 1st of 1 M 1822 / I enter the New Year with rather better feelings than I closed the old one, — but I am yet poor & weak & under various discouragements¹³



*4th day 2nd of 1 M / This day recd a letter from Benj Dix which closes a concern between us of four years standing Namely - The settlement of the Estate of Asa Brooks on which I Administerd & he being Attorney to Matthew Brooks the buisness was transacted thro' him, & while I have to acknowledge his gentleman like treatment in all [crossed out] respects, it was truly cordial to my feelings to find I have enjoyed his entire confidence & Approbation in a protracted settlement of four Years & now closed in harmony & good feelings on both Sides the question. —
- "his concluding clause in his letter dated 26 ult is this -
As this letter will probably close our buisness respecting this estate, I cannot close without giving you, & your family my*

13. Stephen Wanton Gould Diary, 1815-1823: The Gould family papers are stored under control number 2033 at the Division of Rare and Manuscript Collections of Cornell University Library, Box 7 Folder 12 for August 24, 1815-September 25, 1823; also on microfilm, see Series 7



FRIEND LUKE HOWARD

LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

*respect & esteem, & that your Son may be a Comfort to the Family
& a blessing to society."*




LUKE HOWARD

FRIEND LUKE HOWARD

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1823

 [Friend Luke Howard](#) provided an “Advertisement to the reader” (signed only “L. H.”) for a volume printed in London by W. Phillips and entitled EXTRACTS FROM THE SPIRITUAL BEE: OR, A MISCELLANEY OF SPIRITUAL, HISTORICAL, NATURAL OBSERVATIONS, AND OCCASIONAL OCCURRENCES, APPLIED IN DIVINE MEDITATIONS / BY AN UNIVERSITY PEN. This 1823 volume is a reprint of the 1667 edition that had been printed by W.H. for John Crosley of Oxford. Although the preface of this edition alleges that the meditations in the text originated with Friend William Penn (1644-1718), F. Madan, in his Oxford Books (Volume 3, page 164) has alleged that actually they had been originated instead by Nicholas Horseman (florut 1662).

HOWARD PUBLICATIONS



FRIEND LUKE HOWARD

LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

1825



Publication of [Friend Luke Howard](#)'s "A letter from Luke Howard, of Tottenham, near London, to a friend in America; containing observations upon a treatise written by Job Scott, entitled Salvation by Christ, &c." (This treatise ON SALVATION BY CHRIST by Friend Job Scott had been published in [Providence, Rhode Island](#) in the year of his death, 1793. You can inspect it at <http://www.qhpress.org/texts/jobscott/>. Friend Job had been one to urge a less worldly, more inward or mystical/spiritual practice of the Quaker faith, but his disparagement of militant materialism had grown so strident that he had fallen afoul of hidebound and wealthy Friends in Philadelphia. His children became Swedenborgians and, when one of them married a Quaker, the result was that that person was [disowned](#).)

HOWARD PUBLICATIONS

**A LETTER FROM LUKE HOWARD
of Tottenham, near London,
TO A FRIEND IN AMERICA;
containing observations upon a treatise
written by
JOB SCOTT
entitled
SALVATION BY CHRIST, &c.
[1825]**

Should the following sheets obtain circulation among the members of the Religious Society of Friends, (for whose use they are exclusively written,) the author entreats for his argument a patient and candid perusal. He believes that a hasty glance over the piece will by no means suffice, to put a reader in possession of what it contains: and that the same careful reference to the passages of Scripture quoted, and the same deliberate consideration of the whole, which he has found it his duty (in justice to the character, whose opinions are called in question) to bestow, will become every one who shall incline, on this occasion to enter again into the subject. The present letter, (he must also premise,) is not the result of any correspondence previously had with any friend in the United States: and the author alone, and not the Society in England, is responsible for its contents.

London, Second Month, 1825

My Dear Friend,

Among other publications by members of our society in the United States, which have lately issued from the press, and been transmitted to this country, I observe two or three of a



LUKE HOWARD

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posthumous character, purporting to be from the MSS. of the late *Job Scott*. I have perused one of these, entitled, "Salvation by Christ," attached to which, is a kind of second part, entitled "On the Nature of Salvation by Christ" — the whole making about 88 pages, the matter of which is stated to have been penned more than thirty years ago, and left in the hands of his friends, when he embarked on his last voyage in the work of the ministry. Having heard him preach with much power and energy, when he was in England on that occasion, I was interested (I remember,) and affected by the circumstances of his death in Ireland, soon afterwards: and the regard which I have cherished for his memory, makes me a little concerned for his religious reputation. Had he lived to near the present time (as he might have done in the course of nature,) and left his MSS. *revised* for publication, I suppose no one could have complained that justice was not done to him, by the appearance of the present pamphlet: but my own decided opinion, after mature consideration is, *that he never would have published it as it now appears*, nor probably, at this time of day *at all*. The Yearly Meeting of New England therefore, or its committee, did certainly evince both a prudent care, and a due regard for his reputation, and that of our religious Society, in so long declining to sanction this piece. But it seems now to have made its appearance in opposition to their judgment.

We have extant, among us here, a small collection of "letters from Job Scott, written whilst in Europe to his relations and friends," &c. first published in America, and reprinted in England. In one of these dated 14th of 11th Month 1793, I find the following remarks. "There is scarce any thing that makes longer life desirable, [he was then within eight days of its termination,] but to finish the field of religious labour, which I had hitherto mostly thought was not yet done; especially with regard to digesting my Journal and some other writings. [Then follow allusions to the peculiar doctrine advanced in this Essay on Salvation, and which it appears he still regarded as true — but he adds,] On the ocean, I wrote over about a quire of paper, which I believe is now in my trunk at — , respecting which, I was ever a good deal doubtful, whether some parts of it, not particularly upon these points, were not more in a way of abstruse reasoning, than might be best for a Friend to publish. Be that as it may, I am very apprehensive that most of my writings are far from properly digested, and some of them I believe might be a good deal better guarded. Our views of things do not usually open all at once: it is so in the individual — it is so in the world."

There was certainly in the character of this dear Friend, a perceptible excess on the side of the imagination and the feelings. This had been the case with many good and useful men before him: and such a temperament makes a minister faithful, or courageous and energetic in the discharge of duty — but in measure disqualifies him from being a competent judge of doctrine and controversies. It is nevertheless, sometimes



FRIEND LUKE HOWARD

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corrected by experience, and by intercourse, in a spirit of charity, with others as zealous and knowing as himself. I remember an honest man's remark, who had been hired as a "help" from a distant county, and had had to follow his employer for the first time through our crowded metropolis. "I never saw such a place as London in my life: why nobody would get out of my master's way!" Just so it is with powerful, but secluded minds, when they emerge from their circle of assenting hearers and weak opponents, into a wider horizon, and have to compare the contents of *their* budget, with the variety of conflicting opinions around them. It is in vain that the man says to himself and others, "I am *quite* sure of this." For, if religion, for instance, be the subject, and there be not in the Scriptures of Truth, a preponderating mass of evidence in his favour, another may soon fall in his way who is quite *as sure* of the contrary – and then who is to judge between them? If either of them refuse the test of the Scripture, in its plain and obvious meaning, he may indeed decide the matter *for himself*, and be quite sure in his own opinion still, but in vain will he expect to do it for the other. He may now, if he incline so to do, ascribe his own persuasion, which he calls his certainty, to the Testimony of the Spirit of Truth in himself. But then, the other may pretend to this likewise, and with as plausible appearances (it may be,) on his side, to support him in his pretensions. For this reason it is wisely proposed by Robert Barclay in his Apology, that both doctrine and practice shall be tried by the Test of Scripture. We are very willing, (he says, Prop. 3 Sect. 6) that *all* our doctrines and practices be tried by the Scriptures; which we never refused, nor ever shall, in all controversies with our adversaries as the *Judge* and *Test*. And if in controversies with adversaries, then much more in differences of opinion about doctrine, or differences of *belief*, between members of the same religious society. By this test therefore, I shall proceed to try some opinions of Job Scott – he himself having admitted, at a time when men are not used to express themselves lightly, that he was very apprehensive, most of his writings were far from being properly digested: and that some of them (he believed) might be a good deal better guarded. The subject of this pamphlet is regeneration, and the *new birth*: that doctrine which our Lord chose to propound but to one person, and that in privacy; as if on purpose to instruct us, that it should be learned in secret, and brought to the test of individual experience, not talked about in crowds, or discussed in religious assemblies – a doctrine, moreover, which would bear to be treated, in those ancient times, with a freedom of terms which does not so well comport, now, with the due restraints of Christian conversation. A subject, which he, who is clothed with right authority, under the influence of the Holy Spirit, may at times profitably impress upon the minds of serious hearers, in the solemnity of public preaching, but which, when cast before the sensual and worldly minded, is as pearls among swine; and may serve to bring the great and precious truth which lies under



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it, into doubt if not into derision. I shall strive not to make this letter the vehicle of improper thoughts, by quoting expressions which could not be read, I think, in a mixed company of Friends of both sexes, without bringing confusion over some of their faces; but I *must* specify enough (and I may as well do it at once) to make myself intelligible.

The fundamental proposition then of the whole book, and which the author seems to have regarded as a special revelation to himself, is, that the human soul is in a spiritual sense, and in relation to its God and Saviour, a *female*; and that salvation by Christ consists in, or is effected by a real process of generation, conception and birth; by which it is made the mother of Christ, the only begotten Son of God! He insists again and again, that those things are *real*, which sober Christians have regarded only as lively and apposite metaphors, in the sayings of Christ and his Apostles on the subject of that change of heart and life, which all must experience, who become qualified for the kingdom of heaven. Before I proceed to show the bearings and consequences of this opinion of his, I will make some observations upon the text of Scripture, on a misapplication of which, the most part of what is *original* in his views of the subject, will be found to rest.

It is related in *Matt.* xii.47-50, and in *Mark* iii.32-35, that on a certain occasion the mother, and brethren of Jesus were without, desiring to speak with him, while he was in the house, teaching the people: and that before he went out he took occasion, as his manner was, to spiritualize the occurrence; reminding those who were about him, that there was a spiritual union and relation to be experienced, by doing the will of God, in which they should be as near to him in the inward life, as were his brother and sister, and mother naturally. In this speech he puts his mother *last*, (in both places) I apprehend as being the least appropriate in the comparison, yet not to be slighted by the want of all mention of her, now that she was on the spot. But what does Job Scott make of it – or rather what does he not make of it? Putting *mother* first (in one of his quotations) he insists that "Jesus meant as he said," and that "had he not carefully confined his words to a strict meaning, he might have called such his father too:" "but in the spiritual sense in which he was speaking, no man can possibly be his father, but God" [only] and that "man *at most* can be his mother!" He spake then in a spiritual sense – and yet he made these, *really* and not metaphorically his different *relations*, as *mother*, *sister*, and *brother*! But in a spiritual sense what is the distinction among these? *none at all*: The apostle Paul says, *Gal.* iii.28. "In Christ, there is neither male nor female," alluding to the very kind of union that our Lord here pointed out. Though the meaning therefore was spiritual, and the *thing* spoken of, *real* in that sense, yet the *form of speech* was figurative, importing only a most near and intimate union in spirit: and he made no mention of his father; first, because it would have been an improper figure, or comparison, he having no



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natural father; secondly, because no mention was made of his reputed father to him. The expressions are encouraging when thus simply taken: but if they were really meant to convey this new doctrine, I would ask, is it likely, a thing so deep and so wonderful as this, the very *mystery of Christ*, (as this author deemed it,) should have been dropt by our Lord, in the act of rising from his seat to go out of the house, and at no other time further spoken of by him? I trust I need say no more here, for the satisfaction of any unprejudiced person, that the saying here was figurative not literal. I may just refer, however, to the expressions used in *Mark x.30*, as a proof of the freedom with which the like terms were used by our Lord on another occasion.

Of the various figures made use of in the New Testament, to represent the great and permanent change wrought, in every person, who comes to experience "salvation, through sanctification of the spirit and belief of the truth," *2 Thes. ii.13*, there is not any thing which is more appropriate, or more insisted on, than that of being born again, or born *from above*: but this is by no means the sole or exclusive idea, that even Christ himself presents to us, in illustration of the subject. The word and power of God entering into minds, variously disposed as to its reception, is compared, very aptly to seed sown in various soils: *Matt. xiii*. One man forgets the instruction received, almost immediately, being careless and unwatchful: another gives out in the first season of difficulty, being impatient: another prefers gain or pleasure, and so stifles conviction: but of him that prospers in religion, it is simply said, that "he heareth the word and understandeth it and *bringeth forth fruit*," according to his capacity, watchfulness and diligence. How simple, natural and intelligible is all this; which is the exposition of Christ himself.

The small portion of secret help and guidance at first afforded to believers, is pointed out (that we might not despise or overlook it in the heart,) by the parable of the grain of Mustard seed, verse 31,32, and its efficacy in producing in time a *total reformation of the man*, by a comparison with the working of leaven, in the meal of which bread is made: and the necessity, in order to success in religion, of making this our primary concern, and letting all other things give place to duty, by the treasure hid in a field, and by the pearl which would enrich the purchaser, *by taking it into another country with him*, (for such is probably the intent of the parable,) verse 44,46. In like manner, as the estates of individuals, differing in their talents and improvement, so is that of the Church at large, illustrated, by most apt comparisons in the New Testament. But in all these, there is nothing that tends to the thing so much insisted on by the author of this piece: nor is the subject, *in his sense*, so much as once mentioned or alluded to by our Saviour! In reply to a question of the apostle Peter, in *Matt. xix.28*, as to what they should acquire who followed him, as the reward of their adherence to him, he says indeed; "Ye who have



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followed me in the regeneration, when the Son of man shall sit in the throne of his glory, ye also shall sit upon twelve thrones, &c." But if the English were made to agree with the construction of the text, according to the punctuation that may (and probably should) be given in the Greek, it would be seen that the term regeneration or *renovation*, belongs to the latter part of the sentence; and points to the future state of the visible church in this new and spiritual dispensation, with Christ, its King and High Priest at its head. That he could not mean any such thing as our author has attached to the term elsewhere, nor even the individual *conversion*, or change from a carnal to a spiritual state of the disciples, is plain from hence, that in *this* respect, Christ who had never sinned, had not *gone before them*; nor could they as yet have been said to have *followed*. Matt. xviii.3. Luke xxii.32.

The only occasion of our Lord's treating "of the new birth" in strict terms, (so far as appears from the New Testament,) was upon that visit of Nicodemus to him: and he seems here to have followed his own rule, as laid down, Luke viii.10. of speaking to them that were "without," (or who had not shown their faith by following him) "in parables." This would humble an inquirer, if he were sincere; and put him upon the exercise of faith, instead of curiosity. Nicodemus stumbled at first upon the "stone of offence," when emphatically told this truth, that "except a man be born again, he cannot see the kingdom of God," John iii.3. but our Saviour in compassion, probably to a sincere but prejudiced mind, condescended to *add* to his statement, the terms "of water and of the spirit," (by which we may understand, the being first washed, and then *inspired*, or in other words, first purified from sin, and then filled with holy dispositions and desires,) terms from which the Jewish teacher was able to gather something; assisted as he most probably was, by the further conversation of Christ at that time and by that "*power of the Lord*," Luke v.17, which, when many "Pharisees, and doctors of the law" were sitting on another occasion under his teaching "was present to heal them." These terms of being "born of water, and of the spirit," are quite inconsistent with the main proposition of the pamphlet, as already stated: they are delicate and appropriate metaphors, expressive of a thing which *in itself*, is to us incomprehensible, and to be known only by its effects. *This* also Christ teaches us, by that comparison of it to the wind, which blows on in its course, and we hear the sound of it, and see plainly its effects on the bodies around; yet in itself it is invisible; we cannot tell whence it comes, nor whither it goes, as we can of visible substances. "So is the way of every one that is born of the spirit." He gives the most evident proofs of having become a new man, of a thorough change of heart, effected by a divine power within him: of the *manner, origin, progress* and *final accomplishment* of which, however, God alone is in full possession – and man (pretend what he will of spiritual discerning) can neither describe nor define it, in terms that shall apply alike to every case of *conversion*, under



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all the varieties of constitution, habits, character and circumstances of those who may be the subjects of it.

The metaphor *thus employed, but not first introduced* by Christ (for the Jews applied it in the case of a proselyte to their religion, whom they compared to a *new born child*) was taken up and applied by the apostles in a variety of apt illustrations; which so well suit the case, and become so natural by use, that they are ready at times to supersede the real sense, that lies underneath, unchangeable. Hence the great wisdom of the Teacher of all truth himself may be inferred, in having so set it forth under a variety of similitudes, that it is impossible for any one of these, finally to usurp the place of the *divine reality*. But the author of the pamphlet has fallen into this mistake: and in trying to establish his own views of doctrine, he has in a variety of ways wrested the sense of Scripture; of which take the following instances: –

Matt. i.1. "The beginning of the gospel of Jesus Christ, the son of David, the son of Abraham." "Christ," says Job Scott, "is not only the son of David, and David the son of Abraham, but *Christ himself* is the son (strictly so in spirit) both of Abraham and of David." Is this the way to prove doctrine by reference to Scripture? The text relates, not to Christ as a "Spirit" or principle of holiness in men, but to the man Jesus Christ, whose outward descent from Abraham, by the mother's side, was in the first place to be set forth in this book. He confounds the outward *person* with the inward *life*; and then seeks the latter where it is not at all treated of.

The pamphlet says, page 19, "that babe of life, that true child of God *that cries* Abba, Father, is never brought forth but through a union of the two seeds, the human and divine." Now it happens that in the only two places in Scripture, in which this figure of the infantile cry to its parent is introduced, each passage exhibits the infant as an *adopted child*! Rom. viii.14,17. "For as many as are *led by the Spirit of God*, they are the sons of God. [We see here, why, and how, they are sons,] For ye have not received the spirit of bondage again to fear, but ye have *received the spirit of adoption, whereby* we cry Abba, Father." Who is it that is led by the spirit of God, but *he* that before went astray? 1 Peter ii.25. Who is it that receives the spirit of adoption, but *he*, that before was the servant of sin. Rom. vi.16,23. "And such were some of you (says Paul to the Corinthians, after enumerating different kinds of evil doers, 1 Cor. vi.9,11) but ye are washed, but ye are sanctified but ye are justified in the name of the Lord Jesus, and by the Spirit of our God." Is there any thing here, other than, or beyond a change of heart and life, the *same soul* being saved that sinned before? Yet these are the "common notions" of sanctification held by the Christian Church at large, that is, by the sound members in all denominations: but to proceed to the other text, – Gal. iv.1-7. It is clear from the context here, that the figure has relation to the two dispensations of the Law and the Gospel. Under the former, the Galatians "were in bondage under the



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rudiments of the world:" they were redeemed by Christ that they might "receive *the adoption* of sons," the effect and consequence of believing in Him. "And because ye are sons (continues the apostle) God hath sent forth the Spirit of his Son into your hearts, crying, Abba, Father." Thus he describes, *in a figure*, that happy change which was then proceeding in them, and concerning which he was jealous, lest it should be impeded by others who were leading them back and *preaching to them "another Gospel."* Now, let these texts be fairly taken along with the context, in the full and plain acceptation of both; and it will be seen at once, that the author derives no support to his hypothesis from either of them. For generation is not adoption; nor the Law, the old man, nor the Gospel, the new man. The pamphlet says, page 54, "This is the great mystery of godliness. *God manifest in the flesh, is not confined to the flesh of that one body.*" And then it proceeds to quote John xiv.21.23. as before, verses 16,21. also Rom. i.19. and Col. i.27. But take with the first cited text, *the context also*, 1 Tim. iii.16. "And without controversy great is the mystery of godliness. God was manifest in the flesh, justified in the spirit, seen of angels, preached unto the Gentiles, believed on in the world, received up into glory." Observe first, that all this is said in the *past* tense, God *was* manifest, not *is*: secondly, that the whole is connected together as the proper attributes of Jesus Christ, even of Him that was crucified. Are we to take *these* upon us – are we preached unto the Gentiles, believed on in the world, received up into glory? Nay, says some advocate of this mystical doctrine, but Christ *within* is. But *this*, according to them, is the new birth itself, the heir of the promise, the believer *himself*: then one believer is preached to another, and believed on by him as his Saviour. Let us for argument sake transfer the meaning *in a figure*, to Christ within, or the Life which is the light of men, &c. then, what becomes of the new opinion? For *this* Christ is not an individual "production," but a Divine principle, holy and unchangeable: a light shining in darkness, and *giving power* to as many as receive and follow it, *to become* the sons of God, even to them that believe in *his name*, John i. "No man (says J.S.) can receive any one that *Jesus* sendeth (observe the inaccuracy of the term, for Jesus is the man) and not as really receive *him*; I mean absolutely *him*, the only begotten Son of God: any more than we can receive Christ, and not receive the Father that *sent him*." I give this with the *italics* as I find them. It is a perversion of that speech of our Lord's, Matt. x.40. in which he confirms his disciples, then going forth as apostles, and encourages all to receive them as such, by this consideration, that the power and presence of the Father, and of the Son *as the Divine Word*, should go along with them. "It is not ye that speak, (he says, verse 20.) but the Spirit of our Father which speaketh in you:" the Omnipresent Spirit of God. It need scarcely to be added now, that the pamphlet supersedes the promised Comforter, the Spirit of Truth, John xiv. in his office of instructing and supporting



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believers, giving it all to the new birth; or God and man in "immediate" union, *our own spirits* being one of the component parts of this "production"!

Rom. vi.1-11. Out of this whole passage he selects the 10th verse: "For in that he died, he died unto sin, once and in that he liveth, he liveth unto God:" making it signify that Christ "died to the motions of sin in himself," (instantly, that is, "once,") and placing this mystical death of Christ by the side of the great atonement on the cross: in the same way it may be made to supersede all acknowledgment of the merit and efficacy of this sacrifice.

The pamphlet says, page 63,64. "Can a birth of real life [note, of the *Divine* and human conjoined!] be stifled and slain? It can. Was, 'the Lamb slain from the foundation of the world' – was *this* said only of what *should be afterwards*, [note, it was written by John, of what *had been before!* Rev. xiii.8.] or was it really done from the very foundation? It was really done: it is done still in thousands. In the very day that Adam ate the forbidden fruit he died. Death took instant place in him, upon that which was before alive in him, only in the life of the Lamb. Here the Lamb was slain in him, here the branch was cast forth and withered."

Is not this to assert the death, not of a creature who had sinned, but of Him by whom all things were made? For how is the life of Christ to be separated from his proper divinity, but in a figure only. John the Baptist said, pointing out the man Jesus Christ, Behold the Lamb of God! John i.29.36. According to our author this was quite in vain. It was impossible for the "man" who was to be "made manifest" to Israel, thus to be shown to them: even he then is mystical, and not to be beheld outwardly! The "common notions" of the Christian world, which I believe to be quite right here (and the pamphlet quite wrong), make the Lamb of God to be *the man Jesus Christ*, who was foreshown by the lamb in the Jewish passover; and who came accordingly, and offered up for us his most precious life, "as of a Lamb without blemish and without spot" – "foreordained before the foundation of the world," 1 Peter i.18-21.

Let us proceed. In page 58 we read thus: "The *natural man*, the *mere creature*, as the work of God is a created being: he never saw God, cannot know him, nor receive the *testimony* respecting the mystical union and sonship: but the *babe*, the *begotten*, that with a true and living knowledge of its sonship, cries Abba, Father, both *sees* and *knows* the Father, and receives the heavenly testimony. For Christ, speaking of this mystery, says, 'Take heed that ye despise not one of these little ones, for I say unto you, that in heaven their angels do always behold the face of my Father which is in heaven.' Matt. 18.10."

There are in this short passage several perversions of scripture. In the first place, I suppose it will not be controverted, that Adam "the mere creature" (for such he was in strictness, though a noble and a perfect one) saw and knew God, in some sense, while in paradise. Secondly, I have already shown



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who it is that cries Abba, Father, in the sense of Paul, who wrote it; and that it is *not* the "babe" of this pamphlet. Thirdly, it does not appear that Christ was "speaking of *this mystery*" in that passage: it *does* appear, from the forepart of the chapter, that he was speaking of a *converted* state, a state also of great *self-humiliation* and *docility*: in which they who abide "as little children" shall experience, notwithstanding their outward weakness, the watchful care (implied by the *ministration of angels*) of their Father in heaven. It would be tedious, and it may not probably be necessary for me, to follow the author through at least as many more unwarrantable applications of scripture, by which he endeavours to make as much as possible appertain to his "babe." of that which is written concerning the Redeemer of mankind, *in his own proper person*. Taking the author now, therefore, upon his own hypothesis, let us see what follows from it.

First; that there is no such thing as *redemption* by Christ, properly speaking, and restoration of mankind from the fall; (a conclusion which he could scarcely have intended:) for, upon his system, Adam who fell, is not he who is restored: he is a mere creature, cannot see God, nor know him. Yet, strange to tell, he was redeemed, *in and by* the very transgression by which he fell, for in that very day that he sinned, the Lamb was slain in him, being a part of himself! It is difficult to get through the labyrinth of our author's doctrine on this subject; but the result of it plainly is, that one man sins, and another being, is *born of him*, who is saved instead of him!

Secondly. If the human soul be the mother of this babe, not by a "metaphorical expression," but by "as perfect a reality as any in nature," as he affirms – and if the soul be immortal, and created for a future state of happiness or misery, which will not probably be controverted – then, upon the supposition of the salvation of the *son*, what becomes of the *mother*? This is a part of the "mystery," which he has not explained to us; though as necessary to have been made clear as any. It should seem upon this hypothesis, either that the mortal part is the mother, which would make a very strange confusion in the matter, besides that we know that "what is born of the flesh is flesh;" or that *all* human souls are *eternally lost* and perish, some leaving offspring to inherit the realms of bliss, and others not! But no – I go too fast:

For, thirdly, he says in another place, "If it be objected, that Christ is his [God's] only son, his only begotten, and that therefore none else can be his son in the same sense, I answer:

1. It is not pretended that any other visible person or human being was ever begotten in the same manner as was Jesus the son of Mary: so, *in* that respect, that was a singular and only instance of sonship.

2. But a second part of the answer to this objection is, that though the sonship as brought forth in a plurality of persons, is expressed in the plural number in relation to them; and so



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is called *sons*, children and heirs; yet in relation to God, with *whom* the union is *immediately* formed in all those persons *wherein* the *sonship* takes place, the whole is but one sonship. The seed of which they are begotten is one in all, that is, 'the incorruptible seed and word of God,' of which all that are, or ever was born again of God, are begotten." Pa. 80. If we now keep still to the *real* system, it appears that the many persons constituting the visible church, as to us, are in relation to God, but one person, or no person at all: contradicting our Lord's declaration that *He is the God* of Abraham *and* of Isaac *and* of Jacob – not the God of the dead, but of the living. Matt. xxii.32, &c. Consequently now, instead of heaven being peopled at a double rate, as it would be on the supposition that men's souls were saved, and that our author's doctrine were also true, there will be gathered from the high and glorious mission of the Redeemer, instead of an innumerable multitude before the throne, no increase of blessed spirits at all!

In order to escape from some such inference, our author here, towards the conclusion of his work, and perhaps upon a little further reflection, begins to slide out of his realities; making the son, a *sonship*, and admitting *other scripture metaphors* into his statements; out of which metaphors others have just as much right to constitute what is *real*, as he had to make this so. If conversion and sanctification be *really* a process of generation, then it is also really a dying and rising again inwardly, a being washed from our sins in water or in blood, a being leavened with leaven, purified by fire, &c. all of which are impossible in a *real* sense. In the use of metaphors, Holy Scripture will always be found, I believe, consistent with itself. He who is "converted" becomes at first "as a little child:" the direction of his will and desire is effectually changed: and he afterwards grows in grace and in the knowledge of our Lord and Saviour Jesus Christ; until he arrives at "the measure of the stature of *his* fulness." 2 Peter iii.18. Eph. iv.13. Not so the "babe" of this pamphlet. For our author seems greatly perplexed in himself, to decide whether he *be born* at all, until sanctification is fully accomplished; that is, until he *be arrived* at manhood! "If any man in whom this birth has some real existence, finds himself still in a degree under the power of sin, he may be assured, that so far as he is so, he is not born of God." "No man is ever *wholly* born of God, who is not brought under his rule and government *in all things*." – "That which sinneth, in any man, is not born of God; is not the *new* man, but the *old* man, which is corrupt, and in which sin yet dwelleth." Note this monosyllable yet, which at once refutes the *real* doctrine, for it would imply, in *his* sense, that there may be in us, really one man already saved, and another in a capacity of salvation! The apostle John says, "Whosoever is born of God doth not sin; for his seed [the principle of Truth and righteousness, the Eternal Word] remaineth in him." &c. 1 John iii.9. But he also says, "*Whatsoever* is born of God, overcometh the world," 1 John v.4, which is a great and self-evident truth, closely connected



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with the former, and, as it were, the root of it. For nothing can be "born of God" in us, but what shall be pure, holy and harmless; *Light* in the understanding and *Love* in the affections, the two great preservatives (as every child of God knows) from the act and power of sin. The apostle says also: "He that committeth sin is of the devil." [but as if to prevent the too literal acceptation (of his being *born* of him) he adds] "for the devil sinneth from the beginning." Ch. iii.8. But our author has a person much nearer to ourselves to lay the blame upon. He imputes all the "babe's" sins, to the *old* man "which is corrupt [as if it were really the original principle of Evil in us] and in which sin yet dwelleth" [as if it could notwithstanding be yet purified and saved.]

Such are the consequences of affecting to be wise above that which is written – of making that real which is metaphorical; that figurative or mystical which is literal – of not being content to take the plain text along with the context, and draw from both in humility and faith the instruction they may thus well afford – in short, of rejecting, from an apprehension of our own superior attainments and greater spirituality, the doctrines deduced from scripture, by Christians in all ages, concerning *salvation by Christ*.

It is greatly to be feared, that a spirit of self-righteousness may sometimes be lurking under these exalted pretensions. For how can a man be supposed to entertain and feed his mind upon such doctrine, without *applying* it to his own case and to his neighbours? He himself, forsooth, is regenerate and born again; he has in him, the only begotten, the son and heir of the promises, who ever beholds the kingdom, and dwells in it; nay, *claims* it as his rightful inheritance! *He* is the brother, and of late, it seems, also the *mother* of Christ! He needs no teaching of man – the anointing is in him, by which he knows all things – or if not as yet so, they will in due time be revealed to him, without research or inquiry on his part. *He* can do without the scriptures: he will be led and guided into all Truth without them: *the letter kills* [a text often perverted thus] *it is the spirit that giveth life*: – with much more of the like, that may be traced in what escapes from persons in this state of mind. As to the letter killing, let us here explain the text. 2 Cor. iii.3-6. "Ye are manifestly declared to be the epistle of Christ ministered by us, [here is a strong figure!] written not with ink, but with the Spirit of the living God, [the same thing with 'the anointing,' 1 John ii.27.] not in tables of stone, [as was the law of Moses] but in fleshly tables of the heart. And such trust have we, through Christ, to Godward. Not that we are sufficient of ourselves, to think any thing as of ourselves, [to arrive at positive conclusions concerning your state] but our sufficiency is of God; who also hath made us able ministers of the New Testament, [or Covenant] not of the letter [to wit, the law of Moses] but of the spirit: for the letter [of that law] *killeth* [by denouncing death for the breach of the commandment, and yet providing no remedy or escape] but the



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Spirit [of the living God in the new covenant] giveth life." Now, let any candid person try for his own satisfaction, whether he can bring any thing from this, or any other part of the Scriptures of Truth, which implies that the doctrines contained in that book, which (after the subject it treats of) is called the New Testament, do *kill*, or in any way prejudice the believer in Christ, by being *simply read and received into his understanding*: It was plainly not the *letter of this book* to which the apostle applied the text – but mark! his words will often be found so applied by those who think themselves highly spiritual. It is true, that "knowledge" without charity "puffeth up," and that charity edifieth, or *buildeth up*: but it buildeth, in part, with the very materials that inquiry and knowledge furnish. And the apostle in the very same Epistle had said, "Brethren be not children in understanding – howbeit in [freedom from] *malice* be ye children, [here is the 'babe' of the apostle Paul] but in understanding be *men*." 1 Cor. xiv.20. For which end he had written them so many instructive advices.

The letter, then, killeth, and the spirit giveth life: but to whom does it give life? To those exclusively who have in their minds this view of it? By no means. One man may have been taught, that he is saved by the righteousness of Christ imputed to him, and by this merely, without any respect to his works: another may have imbibed the sentiment, that what Christ did and suffered *outwardly*, (as he may inconsiderately term it,) effected nothing for his eternal good: I think them both wrong: but as I believe that men are not saved merely by a *notion* of religion, so neither that they are lost merely through it: though, when fondly cherished and uncharitably contended for, their notions may hurt them as Christians, and impede or endanger their sanctification.

Our author himself, I am sorry to have to remark, does not appear to have had his charity towards others extended, or his humility deepened, by these speculations. "No doubt (he says in his preface) *professors* will object, as they always have done, to every unfolding of truth: but what avails their cavils, or indeed what avails their quiet, with us, if it is in a way that allows them to live at ease in sin, under a mistaken notion that they are going to heaven by Christ?" – "The Lord is on his way, gradually unveiling himself to his inquiring, seeking children; and wo, wo, from an all-righteous judge, to those who dare to lift a hand against the right-timed openings and revelations of his heavenly mysteries!" This note of admiration, I conclude, is the editors – but probably not in the sense in which *I admire* at the passage. For, let it be recollected, that not fire and faggot, personal restraint, or persecution, is here alluded to, but simply *the objections* (which he calls cavils) of professors of the same religion! But he proceeds, "I care not how soon their false rest is disturbed." – "I would as soon trust my immortal state upon the profession of *Deism*, as upon the common notions of salvation by Christ." These highly improper concessions to unbelieving spirits, are found in more than one or two places



LUKE HOWARD

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in the book. "I am as sure (says J. S.) there is no salvation out of Christ, as I am of any thing in the world: I am also as sure, that the common ideas of salvation are very greatly beside the true doctrine of salvation by Christ." So much for the sweeping sentence, which the author *is made, by this imprudent publication*, to pass upon his fellow professors of the Christian religion, without distinction of name or sect. Now, let us hear him speak of himself and his own experience — which he does towards the conclusion, in the following terms: "The substance of what I have written, I have at least learned mostly of the Father. I learned the mystery of it, not of man; neither was I ever clearly and livingly taught it by man, as man; but by the revelation of Jesus Christ." Are these the terms in which it becomes a poor finite being, endued with such limited powers, to speak of the Great Author and Finisher of our faith; and of those things, which, as the apostle himself says, we now know but in part, and see as through a glass, darkly? Not one of the apostles of Christ any where mentions God the Father as his teacher, in this familiar manner. And surely he had forgotten, at the moment, that he had ever read the New Testament; from the "letter" of which, his memory at least furnished him with another man's words, in which to clothe his own thoughts of his own attainments. Let *this* source of magnificent expression (to which preachers and disputants so freely resort) be removed, and it would soon be seen into what, both the spirit of paradoxical inference from detached portions of the letter, and an exalted, mystical mode of expounding the hidden sense (where it is not,) would degenerate! But rather let it not be removed — for it is greatly needed on these occasions, to serve as a touchstone for the false gold, and detect the fallacy.

Let it not be thought, that in thus meeting the author of this piece, or rather the piece itself, as unceremoniously as it comes, (though there is more that is exceptionable left unnoticed,) I am actuated by any degree of hostility towards the memory or character of this deceased Friend. *Truth*, and above all, "the very Truth of God," as he has expressed it, is too precious a thing to be deserted by its advocate, were it even certain that he would lose all his friends (in this world) by defending it: the author himself would have joined me in this conclusion. I believe *him* to have been a very sincere and spiritually minded man, a fervent, and in some respects, a useful and effectual preacher, and a good example in life and conversation. With the strong perception which he seems to have had of some doctrinal errors of *others*, (such as the Antinomians, who probably came frequently in his way,) I think it quite probable that with further humbling experience of the power of Truth, and further opportunities of conference with his equals, he might have come to see and correct *his own*. That with all these strange notions about *the manner* of salvation, he was enabled, through the mercy of God in Jesus Christ, and the sanctifying efficacy of the Holy Spirit, to experience (through faith) *the thing itself*, is what I entertain no doubt of. And



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here I trust I may safely leave him and conclude the subject. Were I to be inquired of, whether there be at the present time any religious society or body of men on the face of the whole earth, who are entitled to draw between themselves and other "professors" a clear line of distinction, and say, "We know the rest are ignorant; we *possess* and *enjoy*; the rest are aliens: we are *the church*, they, the world that lieth in wickedness:" I must honestly reply, that I know of no such body or society. I believe that religious knowledge, accompanied by a heartfelt experience of the great work of sanctification, has of late years greatly spread and increased among mankind; and in quite as great a proportion without, as within, the pale of our own religious society, taken in its whole extent. In forming this conclusion, I have been guided by the rule which our Lord himself lays down concerning doctrines and teachers, By their fruits ye shall know them: for men do not gather grapes of thorns, nor figs of thistles. Matt. vii.6. And when, with unimpeachable integrity and unquestionable piety, I see joined, in many whom I know of other denominations, a lively concern and diligent endeavour to spread the knowledge of Christ; to promote (what I hope no sound member of our society will deny to be of great importance, and of great probable future utility to mankind) the reception and perusal of the Holy Scriptures: when I am obliged to admit, on certain evidence, that these labours have been blessed, and have succeeded to the turning of many to righteousness, Dan. xii.3, who before were dark, ignorant of the true God and of Jesus Christ whom he hath sent, sensual and unprincipled – when I behold these things in which we (as a body) have taken hitherto so little part, I own I feel for the Christian character and reputation of that part of the visible professing church on earth, to which I belong. We are, it may be said, a peculiar people, and have peculiar Testimonies, in some respects, to bear to the simplicity, peaceableness and purity of Christ's kingdom. Granted – no one believes this, I trust, more firmly than I do: not many, perhaps, more sincerely desire that we may be faithful to our duty in these respects. The day will come, however, soon or late, when we must merge (if we remain so long a society) into the great assembly of the visible Church. For it is said, They shall see eye to eye, when the Lord shall bring again Zion. Isa. lii.7-10. No squinting then upon each other, for differences of opinion among sound and faithful members of the true Church: but a universal charity at least – if not a most perfect agreement in the Truth!

But, O that before that day come, we the Religious Society of Friends, who have sometimes called ourselves the Lord's people, and who believe that we have Testimonies committed unto us to bear for His name, may not, by departing from the true humility and fear of God; by letting in the wide-wasting love of this world and its treasure; and by following strange doctrines, which have no root in scripture, and which vary with the mental complexion of every teacher, be scattered and come to nought. But I am persuaded better things (though I write thus to provoke



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to Christian zeal and emulation) of the sincere in our own society. I trust that they will yet more and more become, and long continue, a sober yet spiritually minded, a consistent, self-denying company of believers; bearing testimony to the Truth of God; not in words alone, in which we may err from want of knowledge, but in practice, where the way is safe and plain; and where our Great Example has gone before us, leaving us his footsteps that we might follow Him. We acknowledge, that our own opinions of the Christian religion, received by others, *merely as notions*, will effect no more for them, than they could for us: will constitute but the "letter" of the New Covenant, until written with the finger of God on fleshly tables of the heart. How important is it, then, for *all*, that they thus come to feel and possess that which they hear and speak of! In order to which, let us in humility and faith, commune in private with the Blessed Saviour, in his inward appearance in our minds. Here we may learn of him, *practically*, what it is to be born again, and what is the nature of his salvation: and having received *the Truth* "as little children," grow therein from stature to stature, till being finally gathered from the east and from the west, from the north and from the south, we may be permitted to sit down with the faithful and saved of all generations in the kingdom of God. I am thy affectionate friend,
LUKE HOWARD



FRIEND LUKE HOWARD

LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

1826



Friend [Elias Hicks](#) and his cousin Friend [Edward Hicks](#) the painter visited the Friends meetings of New York, preaching.¹⁴

It is a dreadful crisis, the spiritual Jerusalem seems to be invested from every side.... If there were less tattling and scribbling, and more praying, there would be happiness among us.

In this year occurred the first recorded public use of the sarcastic phrase “get religion” in America. –And the chasm within [Quakerism](#) which would lead to the Great Split was widening as more and more people “just weren’t getting it” (to employ an idiom new to the 1990s).

Here is an example of the “tattling and scribbling” that was being preached against by Friend Elias. In this year an anonymous 16-page pamphlet was being issued in Philadelphia, entitled AN EXPOSE OF SOME OF THE MISREPRESENTATIONS CONTAINED IN A PAMPHLET, ENTITLED A LETTER FROM A FRIEND IN AMERICA TO LUKE HOWARD, OF TOTTENHAM, NEAR LONDON. This pamphlet is attributed to “a [Friend](#) in America” and describes itself as a response to the pamphlet by “Luke Howard, of Tottenham, near London,” LETTER TO A FRIEND IN AMERICA ... UPON A TREATISE WRITTEN BY JOB SCOTT, ENTITLED “SALVATION BY CHRIST.” (In this year Friend [Luke Howard](#) was preparing for publication in London by W. Phillips a volume entitled GLEANINGS, MORAL AND RELIGIOUS, FROM VARIOUS AUTHORS / BY JOHN KENDALL [1726-1815], by selecting and arranging passages from that author’s manuscript collections.)

HOWARD PUBLICATIONS

WEATHER



January 16, Monday: [Friend Luke Howard](#) described the smog above London:

At one o’clock yesterday afternoon the fog in the city was as dense as we ever recollect to have known it. Lamps and candles were lighted in all shops and offices, and the carriages in the street dared not exceed a foot pace. At the same time, five miles from town the atmosphere was clear and unclouded with a

14. SERMON DELIVERED BY ELIAS HICKS AND EDWARD HICKS IN FRIENDS MEETINGS IN NEW YORK. New York, 1825, pages 50-51.



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brilliant sun.



ENGLISH EVENTS OF 1826

THE FUTURE CAN BE EASILY PREDICTED IN RETROSPECT





FRIEND LUKE HOWARD

LUKE HOWARD

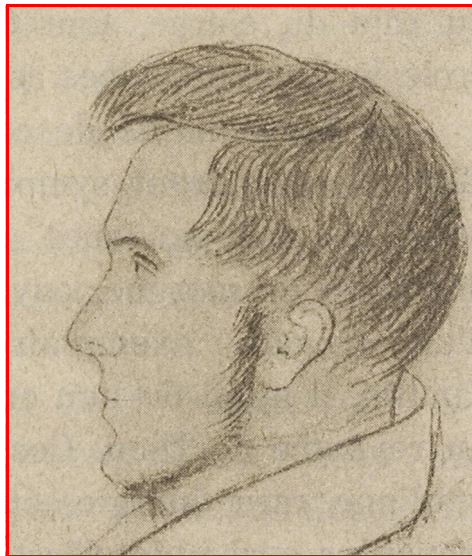
GO TO MASTER HISTORY OF QUAKERISM

1827

➡ [Friend Luke Howard](#)'s LIBER ECCLESIASTICUS, THE BOOK OF THE CHURCH, OR ECCLESIASTICUS, TRANSLATED FROM THE LATIN VULGATE BY LUKE HOWARD and his LIBER SAPIENTIAE, THE BOOK OF WISDOM, COMMONLY CALLED, THE WISDOM OF SOLOMON, TRANSLATED FROM THE LATIN VULGATE. BY LUKE HOWARD. (London, Printed for the translator, sold by J. and A. Arch, etc., 1827).¹⁵

HOWARD PUBLICATIONS

➡ Winter: [John Nelson Darby](#), Edward Cronin, John Bellett, and Francis Hutchinson, like-minded members of the Church of England, met together for prayer and Bible study in Francis Hutchinson's house in Dublin, Ireland. The group called itself together in the name of the Lord Jesus (MATTHEW 18:20), owning the presence and sovereign action of the Holy Spirit in their midst (1 CORINTHIANS 12:4-11), and seeking to keep the unity of the Spirit in the uniting bond of peace (EPHESIANS 4:3-4). This group would later become known as the "[Plymouth Brethren](#)" because the meeting at Plymouth, England was the most well-known. Darby had not founded this group, but would quickly become its leader. The two guiding principles of the movement were to be the breaking of bread every Lord's Day, and ministry based upon the call of Christ rather than the ordination of man.



THE RAPTURE

Eventually, in his old age, [Friend Luke Howard](#) would leave the Quakers and join with these "[Plymouth Brethren](#)."

15. [Friend Luke Howard](#) was editing a series of volumes from this year into 1829, entitled TRANSLATIONS FROM THE VULGATE LATIN OF FOUR BOOKS OF THE APOCRYPHA; ECCLESIASTICUS, WISDOM, TOBIT, AND PART OF DANIEL (London, printed for the translator, sold by J. and A. Arch, etc., etc., 1827-29).



LUKE HOWARD

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1828



[Friend Luke Howard](#) moved from Tottenham to Ackworth in Yorkshire.



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1829



[Friend Luke Howard](#)'s THE APOCRYPHA OF THE BOOK OF DANIEL CONTAINING THE STORY OF SUSANNAH; THE PRAYER OF AZARIAH WITH THE HYMN OF THE THREE CHILDREN, AND THE HISTORY OF BEL AND THE DRAGON. TRANSLATED FROM THE VULGATE LATIN, WITH NOTES AND A SHORT TREATISE ON THE MATTER CONTAINED IN THESE PIECES (London).

HOWARD PUBLICATIONS

[HDT](#)[WHAT?](#)[INDEX](#)**LUKE HOWARD****FRIEND LUKE HOWARD****GO TO MASTER HISTORY OF QUAKERISM****1832**

[Joseph Emerson Worcester](#)'s ELEMENTS OF GEOGRAPHY, ANCIENT AND MODERN: WITH AN ATLAS. A NEW EDITION (Illustrated by Alexander Anderson; Boston: Hilliard, Gray, & Company). This text was required for admission to [Harvard College](#) and has been found in [Henry Thoreau](#)'s personal library.

NEW HAMPSHIRE.*White Mountains.***ELEMENTS OF GEOGRAPHY**

[Friend Luke Howard](#)'s ESSAY ON THE MODIFICATIONS OF CLOUDS. / BY LUKE HOWARD, F.R.S. &C. / [FIRST PUBLISHED 1803.] / LONDON: / PUBLISHED BY HARVEY AND DALTON, / GRACECHURCH-STREET. / MDCCCXXXII. At Widener Library of [Harvard University](#), this is now cataloged as "KE 31948" and bears the following inscriptions:

B Sept. 1856

[BOOKPLATE WITH OLD HARVARD SEAL] "Christo et Ecclesiæ" "Bought / with the Fund bequeathed by Horace A. Haven / of Portsmouth, N.H. / (Class of 1842.) / Rec^d Dec. 2, 1851."

[ON TITLE PAGE] "From the Author — Manchester / 28 June 1842."

HOWARD PUBLICATIONS




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1833

 [Friend Luke Howard](#)'s THE CLIMATE OF LONDON: DEDUCED FROM METEOROLOGICAL OBSERVATIONS MADE IN THE METROPOLIS AND AT VARIOUS PLACES AROUND IT / BY LUKE HOWARD appeared in a 2d, much enlarged and improved edition, as three volumes rather than two, in which the observations were continued to the year MDCCCXXX; illustrated by engravings on wood and copper (London: Harvey and Darton, J. and A. Arch, Longman, Hatchard, S. Highley [and] R. Hunter, 1833). Friend Luke by this point recognized that human cities were capable of significantly altering the local weather. One impact of cities on the weather, what we now term "smog," he termed "city fog," and this is how he described the London atmosphere of January 10, 1812:

...the sky, where any light pervaded it, showed the aspect of bronze. Such is, occasionally, the effect of the accumulation of smoke between two opposite gentle currents, or by means of a misty calm. I am informed that the fuliginous cloud was visible, in this instance, for a distance of forty miles.

This is how he described the smog above London on January 16, 1826:

At one o'clock yesterday afternoon the fog in the city was as dense as we ever recollect to have known it. Lamps and candles were lighted in all shops and offices, and the carriages in the street dared not exceed a foot pace. At the same time, five miles from town the atmosphere was clear and unclouded with a brilliant sun.



By this point, it would appear, Friend Luke had acquired a rudimentary understanding of what in the 20th Century our TV news weatherpeople would come to speak of as "fronts," and was able to provide a detailed description of the sort of cloudiness and precipitation changes which typically accompany the replacement of a warmer air mass by a cooler one, or of a cooler air mass by a warmer one:

...if fine hail should fall after a period of damp, sultry weather during which thunderclouds with lightning gather



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gradually, to be followed by large hail and, finally, rain, and it after this a cold westerly or northerly wind begins to blow, then I would be quite certain that the latter, as a cold body, had suddenly replaced *en masse* the warm air which was there before the beginning of the thunderstorm.

HOWARD PUBLICATIONS




FRIEND LUKE HOWARD

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1836

 [Friend Luke Howard](#) edited a volume MEMORANDA OF THE LAST ILLNESS AND DEATH OF JOSEPH HOWARD [1811-1833]: WITH SHORT EXTRACTS OF LETTERS WRITTEN AND RECEIVED BY HIM. (London: Darton and Harvey, 1836).



HOWARD PUBLICATIONS



LUKE HOWARD

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GO TO MASTER HISTORY OF QUAKERISM

1837

➡ Friend Luke Howard's SEVEN LECTURES IN METEOROLOGY (Pontefract, 1837), the first textbook on meteorology.



HOWARD PUBLICATIONS

Looking back, we can now know some things about the global weather during this period, which were at the time quite opaque even to the most informed:

Largest Scale Global Weather Oscillations 1833-1839

	Southern Oscillation	South Pacific current reversal	Indonesian monsoon	Australian droughts	Indian monsoon	Annual Nile flood
1833	very strong	cold La Niña	drought	adequate	deficient	extremely poor
1834	absent	cold La Niña	adequate	adequate	adequate	adequate
1835	moderate	cold La Niña	drought	adequate	adequate	extremely poor
1836	moderate	cold La Niña	adequate	adequate	adequate	2d year, very low
1837	strong	warm El Niño moderate +	adequate	drought	deficient	3d year, extremely poor
1838	strong	cold La Niña	drought	adequate	deficient	4th year, quite weak
1839	strong	cold La Niña	adequate	adequate	adequate	5th year, very low

The southern ocean / atmosphere “seesaw” links to periodic Indonesian east monsoon droughts, Australian droughts, deficient Indian summer monsoons, and deficient Ethiopian monsoon rainfall causing weak annual Nile floods. This data is presented from Tables 6.2-6.3 of Quinn, William H. “A study of Southern Oscillation-related climatic activity for AD 622-1900 incorporating Nile River flood data,” pages 119-49 in Diaz, Henry F. and Vera Markgraf, eds. EL NIÑO: HISTORICAL AND PALEOCLIMATIC ASPECTS OF THE SOUTHERN OSCILLATION. Cambridge: Cambridge UP, 1992.




FRIEND LUKE HOWARD

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[Friend Luke](#) returned from Ackworth in Yorkshire to Tottenham near London, to live with his son at Bruce Grove.

 June: [Friend Luke Howard](#) was one of the “50 influential members” of the London Yearly Meeting of the Religious Society of Friends who signed “A Faithful and Affectionate Address to the Society of Friends on the Temperance Subject.”

It must therefore have been after this point in time, that the Howards departed from the Religious Society of Friends. According to page 11 of a small booklet entitled *SHORT MEMORIALS OF THE LATE LUKE & MARIABELLA HOWARD, OF ACKWORTH VILLA, YORKSHIRE. BY AN AGED RELATIVE, FOR PRIVATE CIRCULATION ONLY* (London, Printed by Edward Newman, Devonshire Street, Bishopsgate, 1865), “L.H.’s views differing in some respects from those held by the Society of Friends, he wished to have the connection dissolved, which was accordingly done, much to the regret of his friends, with many of whom he maintained a sincere friendship. M.H. also withdrew from the Society. They afterwards established a meeting on their own premises, in which some of their neighbors joined them, and it is believed that the simple form of worship in which they united was to the edification, and the satisfaction of their own minds.” It is clear, also, from this booklet, that they never formally returned to the Society, for their burial at Winchmore Hill is described as “with the full acquiescence of Friends,” and had their requested [disownment](#) ever been reversed, such “acquiescence” in burial in a Quaker cemetery could not have been an issue.



HOWARD PUBLICATIONS



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1838

Michael Faraday discovered the phosphorescent glow produced by electrical discharges through gases kept at low pressure.

William Frédéric Edwards (1777-1842)'s ON THE INFLUENCE OF PHYSICAL AGENTS ON LIFE, BY W.F. EDWARDS ... [*DE L'INFLUENCE DES AGENS PHYSIQUES SUR LA VIE*], TRANSLATED FROM THE FRENCH BY DR. HODGKIN [Thomas Hodgkin (1798-1866)] AND DR. FISHER. TO WHICH ARE ADDED, IN THE APPENDIX, SOME OBSERVATIONS ON ELECTRICITY, BY DR. EDWARDS, M. POUILLET [M. Claude Servais Mathias Pouillet (1790-1868)], AND [LUKE HOWARD](#) ... AND SOME NOTES TO THE WORK OF DR. EDWARDS. (Philadelphia, Haswell, Barrington and Haswell, 1838).



FRIEND LUKE HOWARD

LUKE HOWARD

GO TO MASTER HISTORY OF QUAKERISM

1839

[Luke Howard](#)'s MEMORANDA OF RACHEL HOWARD, IN 3 PARTS (London, Simpkin and Marshall, 1839). It has to do with his daughter Rachel Howard who had died at Tottenham, the 24th of 9th month, 1837, age 37.

HOWARD PUBLICATIONS



LUKE HOWARD

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1840

At the suggestion of Ludwig Kaemtz, [Luke Howard](#)'s category "Cumulo-stratus" became "Strato-cumulus," thus recognizing this as a type of cumulus cloud that occurred at higher altitudes.



In this timeframe the author of the cloud-category theory was becoming intrigued at a possible influence of the declination of the moon on weather cycles.

Largest Scale Global Weather Oscillations 1837-1843

	Southern Oscillation	South Pacific current reversal	Indonesian monsoon	Australian droughts	Indian monsoon	Annual Nile flood
1837	strong	warm El Niño moderate +	adequate	drought	deficient	3d year, extremely poor
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1840	absent	cold La Niña	adequate	adequate	adequate	adequate
1841	absent	cold La Niña	adequate	adequate	adequate	adequate
1842	absent	cold La Niña	adequate	adequate	adequate	adequate
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LUKE HOWARD

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1842

Publication of [Luke Howard](#)'s A CYCLE OF EIGHTEEN YEARS IN THE SEASONS OF BRITAIN; DEDUCED FROM METEOROLOGICAL OBSERVATIONS MADE AT ACKWORTH, IN THE WEST RIDING OF YORKSHIRE, FROM 1824 TO 1841; COMPARED WITH OTHERS BEFORE MADE FOR A LIKE PERIOD (ENDING WITH 1823) IN THE VICINITY OF LONDON. BY LUKE HOWARD ... WITH FIVE PLATES. (London, J. Ridgway, 1842), an attempt to understand why

HOWARD PUBLICATIONS

the weather was changing from one year to the next. In this volume he reported on his observations in Ackworth, Yorkshire and at his home in Tottenham near London that had led him to suspect the existence of some sort of natural weather cycle bringing sometimes warm years and other times cold ones. (Could it be that what he was noticing was the derivative impact in the North Atlantic of the El Niño/La Niña ENSO switcheroo in the South Pacific?)

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LUKE HOWARD

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1843

[Luke Howard](#)'s SEVEN LECTURES ON METEOROLOGY ... FIRST PUBLISHED IN 1837. A 2D ED. CAREFULLY REV.
BY THE AUTHOR (London, Harvey and Darton, 1843).

HOWARD PUBLICATIONS



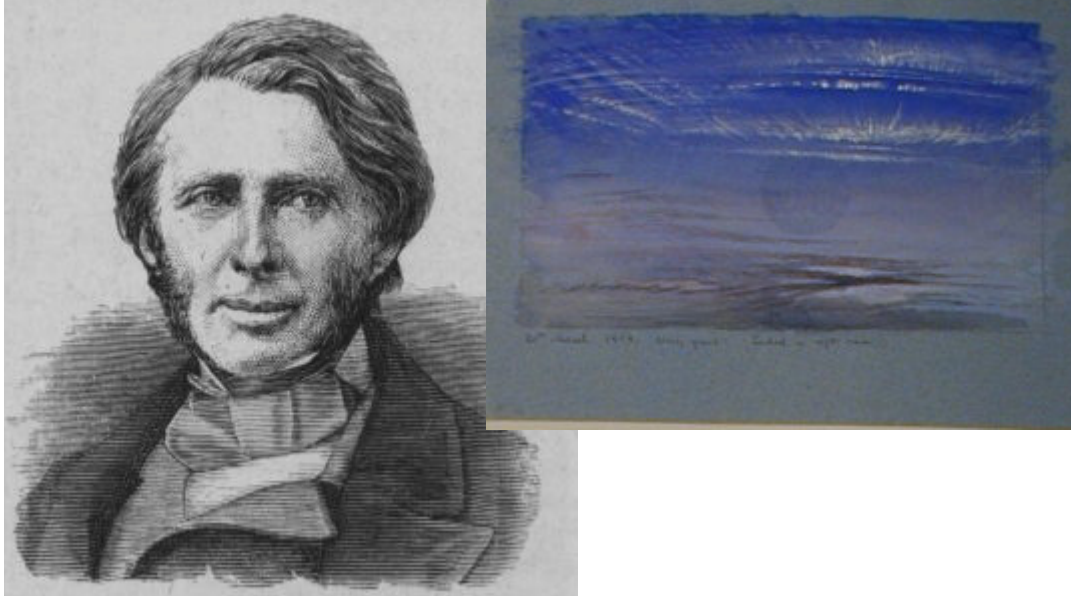
LUKE HOWARD

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1846

April: Soon after graduating from Oxford, John Ruskin had met J.M.W. Turner and had undertaken a campaign to



rescue this painter from his undeserved obscurity. In 1843, in his MODERN PAINTERS I, it had been Turner's work which he had touted. However, when at this point he issued MODERN PAINTERS II, we can see that he had become the champion of the pre-Raphaelites. (This work includes three chapters on the painterly depiction of clouds in the three layers of the earth's atmosphere, including such remarks as "In the lower cumuli ... the groups are not like balloons or bubbles, but like towers or mountains," but [Henry Thoreau](#) would not consult Ruskin for the 1st time until October 1857 and, therefore, would not have acquired the cloud nomenclature of [Luke Howard](#), which he would begin to use in his journal in 1852, from this source.)

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CHAPTER IV.

OF TRUTH OF CLOUDS: THIRDLY, OF THE REGION OF THE RAIN-CLOUD.

THE clouds which I wish to consider as characteristic of the lower, or rainy region, differ not so much in their real nature from those of the central and uppermost regions, as in appearance, owing to their greater nearness. For the central clouds, and perhaps even the high cirri, deposit moisture, if not distinctly rain, as is sufficiently proved by the existence of snow on the highest peaks of the Himalah; and when, on any such mountains, we are brought into close contact with the central clouds,¹ we find them little differing from the ordinary rain-cloud of the plains, except by being slightly less dense and dark. But the apparent differences, dependent on proximity, are most marked and important.

In the first place, the clouds of the central region have, as has been before observed, pure and aerial greys for their dark sides, owing to their necessary distance from the observer; and as this distance permits a multitude of local phenomena capable of influencing colour, such as accidental sunbeams, refractions, transparencies, or local mists and showers, to be collected into a space apparently small, the colours of these clouds are always changeful and palpitating; and whatever degree of grey or of gloom may be mixed with them

¹ I am unable to say to what height the real rain-cloud may extend; perhaps there are no mountains which rise altogether above storm. I have never been in a violent storm at a greater height than between 8,000 and 9,000 feet above the level of the sea. There the rain-cloud is exceedingly light, compared to the ponderous darkness of the lower air.



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1847

[Luke Howard](#)'s *BAROMETROGRAPHIA*.



HOWARD PUBLICATIONS



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1851

December 2, Tuesday: [Dr. Thaddeus William Harris](#), [Harvard College](#)'s librarian, received materials that he had purchased out of funds bequeathed to the [Harvard Library](#) by Horace A. Haven of Portsmouth, New Hampshire, an alumni of the Class of 1842. Among these materials was a copy of the 1832 edition of [Luke Howard](#)'s 1803 pamphlet ESSAY ON THE MODIFICATIONS OF CLOUDS, a pamphlet of 39 pages.¹⁶ (This copy of the pamphlet had been inscribed by the author to its original owner on 28 June 1842 in Manchester, England.)

B Sept. 1856

[BOOKPLATE WITH OLD HARVARD SEAL] "Christo et Ecclesiæ" "Bought / with the Fund bequeathed by Horace A. Haven / of Portsmouth, N.H. / (Class of 1842.) / Rec^d Dec. 2, 1851."

[ON TITLE PAGE] "From the Author – Manchester / 28 June 1842."

HOWARD PUBLICATIONS

16. On page 31, the author expresses a desire that we not "be accused of building a castle in the air by attempting further conjectures" in regard to the Cumulus modification.



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1852

Mariabella Eliot Howard, [Luke Howard](#)'s wife, died.

February 4, Wednesday: [Henry Thoreau](#) attended William Blasius (1818-1899)'s lecture at the Concord Lyceum, on tornados. This lecturer was the one who would in 1875 author STORMS: THEIR NATURE, CLASSIFICATION, AND LAWS. WITH THE MEANS OF PREDICTING THEM BY THEIR EMBODIMENTS IN THE CLOUDS, a volume in which he would be paying a whole lot of attention to the tornado that had struck on August 22, 1851, a storm which he had spent five weeks studying along its entire 2½-mile track across West Cambridge, Massachusetts. Would it be possible, Dr. Bradley P. Dean asks, that Thoreau learned of [Luke Howard](#)'s cloud modifications in the course of this lyceum presentation, rather than through a direct reading of the text of Friend Luke's ESSAY ON THE MODIFICATIONS OF CLOUDS in its 1803 edition that had just been acquired by Harvard Library, or in its 1832 edition which that library now has and possibly at that time already had on its shelf?

[I] had found the existence of two opposing currents of air of different temperature, coming respectively from north-west and from south-west, acting suddenly against each other after a sultry calm of some duration, and shortly a third gyratory force making its appearance between them, traveling in their diagonal, growing to such magnitude as to obliterate all traces of the straight line forces of the opposing currents, and finally abruptly disappearing. The two currents must have been during the period of sultry calm in a state of equilibrium, since the clouds were observed to remain for some time almost stationary. South of the tornado's track the south-west wind prevailed until the beginning of the tornado, and from information obtained for me by ex-President Hill it appeared that a storm had traveled from north-west to south-east over the States of New Hampshire and Vermont, and that during its progress a south-west wind was replaced by a north-west wind. I was thus led to conclude that the storm announced that afternoon by the black bank of cloud consisted in the conflict of two aerial currents of different temperature — that the colder northern current displaced the warmer southern current in the direction from north-west to south-east, gradually decreasing in velocity until, north of Waltham, West Cambridge and Medford, it came to a perfect standstill, producing the sultry calm felt before the tornado. Here the two currents, being in equilibrio, exerted a great compressive force against each other. The equilibrium was disturbed by the uneven configuration of the earth around Prospect Hill. This disturbance produced the tornado, which traveled, not in the direction of the storm toward the south-east, but in the diagonal of the two opposing currents over the region of calm at their line of meeting, and in and underneath the black bank of clouds stretched out from west to east which must have marked this line of meeting. I came thus to two distinct phenomena, the tornado and the storm in the ordinary sense of the word, both different in their origin, nature,



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direction, progress and appearance, and governed by entirely different laws. It would therefore be an error to base theories regarding the laws of storms in general upon the tornado as a type, which Redfield and Espy have done. In order to witness, if possible, the phenomenon from beginning to end, I repaired during the same autumn and the succeeding year to Prospect Hill as often as I saw indications in the clouds of the approach of another tornado. I thus obtained many valuable experiences which confirmed me in my views, but I had not the pleasure of witnessing a tornado, because the state of the atmosphere was never entirely in the proper condition. The clouds were in these studies my principal guides. Toward the winter I found that they changed their usual form and came from a different quarter; the storms also changed in direction and nature. I became thus exclusively engrossed in these observations for about three years. Finding that the phenomena repeated themselves in regular order during this time, I became satisfied that storms in the temperate zone at least, and over the United States, are the effect of the conflict of opposing aerial currents of different temperatures, and not the cause of these currents and temperatures, as seems to be assumed by some cyclonists. The question naturally arose: Where do these currents and their conflicts originate? and I was led to find the answer in disturbances of the general circulation of the atmosphere, and in the cause of these – the origin of all life and power and motion – the sun acting in combination with local circumstances. In the mean time, however, after the completion of my investigation of the tornado, I had arrived at the following general results:

1. This tornado was in intimate connection with the storm I had seen approaching, but was not the storm itself.
2. The origin, mode of progress and appearance of both are totally different.
3. The storm consisted in the conflict of two opposing aerial currents of different temperature and pressure.
4. This conflict commenced at some point to the north, and shifted its place, the northern, cooler current in its course from north-west to south-east displacing the southern, warmer current.
5. This conflict was accompanied along the region of meeting of the two currents with copious rain.
6. The wind blew in straight lines from the north-west and from the south-west toward the region of meeting.
7. The long black bank of clouds had a defined relation to this region of meeting: it was parallel to it.
8. The region of conflict must have slackened its progress, as was evident by the black bank of clouds becoming almost stationary, which fact I had observed while fishing, before I knew of the tornado.
9. The tension between these two currents must have been at this time at its maximum, the opposing currents balancing each other.
10. When, in this critical condition of the state of the



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atmosphere, a disturbance occurred which made the colder, heavier current rush suddenly forward, or made it sink at one point, the other more elastic, warmer current rushed over that portion of the colder current upward, producing an eddy or whirl which traveled in the diagonal of the forces of the two currents along the line of meeting or underneath the black bank of cloud which indicates it.

11. This disturbance was produced by Prospect Hill, the highest elevation near Boston, and by the valley east of it.

12. The coincidence of a certain condition of the atmosphere with the peculiar configuration of the ground will not only explain the origin of the tornado, but also its gradual development and its final dissolution. Toward the end of the year 1851 I communicated these results, with the facts on which they were based, to the Academy of Science in Boston, being introduced by Prof. Agassiz, who took a deep interest in my discoveries, seeing at once their importance scientifically and practically. He proposed that my investigations should be published at the expense of the academy; but a statement being made by a member that he too was making a survey of the tornado, and had not found such a law, his impression being that "the whole was a confused mass," it was resolved to defer the publication of my investigations until the completion of this gentleman's survey. As, however, he unfortunately did not begin it until the destruction was two weeks old, when the debris had been largely removed and the position of fallen objects in most cases changed, there was little hope that he should find anything but "a confused mass," especially as he had also fallen into my original error of beginning in the middle.



February 4, Wednesday: A mild thawy day. The needles of the pine are the touch-stone for the air—any change in that element is revealed to the practiced eye by their livelier green or increased motion. They are the tell-tales. Now they are (the white pine) a cadaverous misty blue—anon a lively silvery light plays on them—& they seem to erect themselves unusually—while the pitch pines are a brighter yellowish green than usual—The sun loves to nestle in the boughs of the pine & pass rays through them.

The scent of bruised pine leaves where a sled has passed is a little exciting to me now— I saw this afternoon such lively bloodred colors on a white pine stump recently cut—that at first I thought the chopper had cut himself. The heart of the tree was partly decayed—& here & there the sounder parts were of this vermilion? color alternating with the ordinary white of the wood. here it was apparently in the earlier stages of decay. The color was the livelier for being wet with the melting snow.

11 P m Coming home through the village by this full moon light it seems one of the most glorious nights I ever beheld. Though the pure snow is so deep around—the air by contrast perhaps with the recent days—is mild and even balmy to my senses—and the snow is still sticky to my feet & hands— And the sky is the most glorious blue I ever beheld—even a light blue on some sides—as if I actually saw into day— While small white fleecy clouds at long intervals are drifting from West N W to S S E— If you would know the direction of the wind—look not at the clouds which are such large bodies & confuse you—but consider in what direction the moon appears to be wading through them. The outlines of the elms were never more distinctly seen than now. It seems a slighting of the gifts of God to go to sleep now.— as if we could better afford to close our eyes to day-light of which we see so much. Has not this blueness of the sky the same cause with the blueness in the holes in the snow—& in some distant shadows on the snow!— if indeed it is true that the sky is bluer in winter when the ground is covered with snow.

Heard Prof. Blazius Lecture on the Tornado this evening. He said that 9 vessels were wrecked daily in the world



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on an average— That Professor Dover? of Berlin was the best meteorologist in his opinion — but had not studied the effects of wind in the fields so much as some here.

These nights are warmer than the days; but by morning it is colder.

Head's theory of Am. Cold founded on the unmelted snows of our forests reminds me of the fish & bucket of water dispute— Is it a fact that such vast quantities of snow are slow to melt in our forests?

The audience are never tired of hearing how far the wind carried some man woman or child—or family bible—but they are immediately tired if you undertake to give them a scientific account of it.¹⁷

February 18, Wednesday: Caleb G. Forshey reported in the Boston Medical Surgical Journal that “When death results from a cause, which can readily be removed, after death re-animation may be effected, and the machinery of life set in motion, by artificially inflating of the lungs.”

Dr. Bradley P. Dean has noticed that on this day, a couple of months after Harvard Library had acquired a secondhand 1st edition copy of Luke Howard's ESSAY ON THE MODIFICATIONS OF CLOUDS, Thoreau wrote suggestively that “One discovery in Meteorology, one significant observation is a good deal. I am grateful to the man who introduces order among the clouds.” Would that be an indication that he had just been reading this meteorological essay?



February 18, Wednesday: When Eystein the Bad ravaged the land of Drontheim “He then offered the people either his slave Thorer Faxe, or his dog, whose name was Sauer, to be their king. They preferred the dog, as they thought they would sooner get rid of him. Now the dog was, by witchcraft, gifted with 3 men's wisdom; and when he barked, he spoke one word and barked two. A collar and chain of gold and silver were made for him, and his courtiers carried him in their hands when the weather or ways were foul. A throne was erected for him, and he sat upon a high place, as kings are used to sit. — It is told that the occasion of his death was that the wolves one day broke into his fold, and his courtiers stirred him up to defend his cattle; but when he ran down from his mound, and attacked the wolves, they tore him to pieces.” Now I think if he had spoken two words & barked only one —he would have been wiser still —and never fallen into the clutches of the wolves.

By some traits in the saga concerning King Hakon the Good —I am reminded of the concessions which some politicians & religionists, who are all things to all men— make. Hakon was unpopular on account of his attempts to spread Christianity — and to conciliate his subjects he drank out of the horn which had been blessed in Odin's name at a festival of sacrifice, but as he drank he made the sign of the cross over it. & one of his earls told the people that he was making the sign of Thor's hammer over it. “On this” it is said “there was quietness for the evening. The next day, when the people sat down to table, the bonders pressed the king strongly to eat of horse-flesh; [this was an evidence of paganism] and as he would on no account do so, they wanted him to drink of the soup; and as he would not do this, they insisted he should at least taste the gravy; and on his refusal they were going to lay hands on him. Earl Sigurd came & made peace among them, by asking the king to hold his mouth over the handle of the kettle, upon which the fat smoke of the boiled horse-flesh had settled itself; and the king first laid a linen cloth over the handle, and then gaped over it, and returned to the throne; but neither party was satisfied with this” On another day the Earl “brought it so far that the king took some bits of horse-liver, and emptied all the goblets the bonders filled for him”; This Hakon had a daughter Thora.

Thorer Klakke was one “who had been long on viking expeditions”.

Thorer Hiort “was quicker on foot than any man.”

I have a common place book for facts and another for poetry — but I find it difficult always to preserve the vague distinction which I had in my mind — for the most interesting & beautiful facts are so much the more poetry and that is their success. They are translated from earth to heaven— I see that if my facts were sufficiently vital & significant — perhaps transmuted more into the substance of the human mind — I should need but one book of poetry to contain them all.

Pm to Fair Haven Hill: One discovery in Meteorology, one significant observation is a good deal. I am grateful to the man who introduces order among the clouds. Yet I look up into the heavens so fancy free, I am almost glad not to know any law for the winds.

I find the partridges [Ruffed Grouse Bonasa umbellus] among the fallen pine tops on Fair Haven these

17. Brooks, Reverend Charles. THE TORNADO OF 1851, IN MEDFORD, WEST CAMBRIDGE AND WALTHAM, MIDDLESEX COUNTY, MASS., BEING A REPORT BY ... AND REPORTS OF OTHER COMMITTEES. Boston: Usher, 1852. The author described the storm and reprinted the report of the Committee on Appraisals on damage done and settlements allowed.



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afternoons an hour before sundown ready to commence budding in the neighboring orchard.
The mosses on the rocks look green when the snow has melted— This must be one of the spring signs —
when spring comes
It is impossible for the same person to see things from the poet's point of view and that of the man of science.
The poet's second love may be science—not his first.— when use has worn off the bloom. I realize that men may
be born to a condition of mind at which others arrive in middle age by the decay of their poetic faculties.

I have my doubts about Brad's hypothesis. What's wrong with it is that he hadn't thought to look it up in the encyclopedias current at the time at which Thoreau was writing. At this point all of Howard's cloud terminology was already totally available as encyclopedia information! If Thoreau had needed a source for this cloud terminology, he could at any time simply look up the article "Clouds" in Volume 8 of Abraham Rees's THE CYCLOPÆDIA; OR, UNIVERSAL DICTIONARY OF ARTS, SCIENCES, AND LITERATURE, a widely available source. At that point, for 45 years nobody had needed to have recourse to any specially printed and catalogued scientific monograph!

April 10, Saturday: [Henry Thoreau](#) and [Ellery Channing](#) borrowed Stedman Buttrick's boat, a gunner's boat smelling of muskrats and provided with slats ("slates") for pulling the boat ashore ("for bushing the boat"). They rowed down the Concord River and went ashore and rambled below Carlisle Bridge.

Thoreau for the first time (Dr. Bradley P. Dean has noticed) deployed in his journal a weather term that had been originated by [Luke Howard](#): "I observed it [the aspect of the sky] in the south composed of short clouds horizontal & parallel to one another, each straight & dark below with a slight **cumulus** resting on it, a little marsh-wise."



April 10, Saturday: 8 Am— Down river to $\frac{1}{2}$ miles below Carlisle Bridge the river being high—yet not high for the spring. Saw & heard the white bellied swallows this morning for the first time.

Took boat at Stedman Buttrick's—a gunner's boat smelling of muskrats.— & provided with slats for bushing the boat. Having got into the Great Meadows—after grounding once or twice on low spits of grass ground—we begin to see ducks which we have scared flying low over the water—always with a striking parallelism in the direction of their flight. They fly like regulars. They are like rolling pins with wings. A few gulls sailing like hawks seen against the woods— — crows [**American Crow** *Corvus brachyrhynchos*] — white bellied swallows even here already. Which I suppose proves that their insect food is in the air. The water on our left *ie.* the N W is now dark; on our right has a silvery brightness on the summits of the waves—scarcely yellowish—waves here do not break— Ducks most commonly seen flying by 2s or three's.

From Ball's? Hill the Great meadow looks more light—perhaps it is the medium between the dark & light above mentioned. Mem. Try this experiment again. *ie.* look not toward nor from the sun but athwart this line. Seen from this hill in this direction—there are here and there dark-shadows spreading rapidly over the surface here & there where the wind strikes the water. The water toward the sun seen from this height—shows not the broad silvery light but a myriad fine sparkles. The sky is full of light this morning—with different shades of blue—lighter below darker above separated perhaps by a thin strip of white vapor.— Thicker in the east.

The first painted tortoise—*Emys picta*—at the bottom on the meadow.

Look now toward Carlisle Bridge. See ahead the waves running higher in the middle of the meadow where they get the full sweep of the wind—& they break into white caps— —but we yet in the lee of the land feel only the long smooth swells—as the day after a storm. It is pleasant now that we are in the wind—to feel the chopping sound when the boat seems to fall on the successive waves which it meets at right angles or in the eye of the wind. Why are some maples now in blossom so much redder than others. I have seen then the maples & the alders in blossom but not yet the maple keys. From Carlisle Bridge we saw many ducks $\frac{1}{4}$ of a mile or more northward.— black objects on the water—& heard them laugh something like a loon— Might have got near enough to shoot them—a fine sight to see them rise at last about 50 of them apparently black-ducks— While they float on the water they appear to preserve constantly their relative distance. Their note not exactly like that of a goose [**Canada Goose** *Branta canadensis*], yet resembling some domestic fowls cry—you know not what one. like a new species of goose. See very red cranberry vines now budded. The now brownish red shrub growing



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everywhere in & about bogs (originally green) with fine-dotted leaf is probably the dwarf andromeda. When we go ashore & ramble inland below Carlisle Bridge—find here & there the freshly cut woodpiles which the choppers have not yet carted off—the ground strewn with chips— A field lately cleared (last fall perhaps) with charred stumps & grain now greening the sandy & uneven soil reminds me agreeably of a new country. Found a large bed of *Arbutus Uva ursi* **with fruit** in Carlisle $\frac{1}{2}$ mile below bridge— Some of the berries were turned black—as well as the buried stems & leaves next the ground at bottom of the thick beds—an inky black. This vine red in the sunniest places—never saw its fruit in this neighborhood before.— As we ate our luncheon on the peninsula off Carlisle shore saw a large ring round the sun. The aspect of the sky varies every hour about noon I observed it in the south composed of of short clouds horizontal & parallel to one another, each straight & dark below with a slight cumulus resting on it,





a little marsh-wise. Again in the North I see a light but rather watery looking flock of clouds—at mid afternoon slight wisps & thin veils of whitish clouds also.

This meadow is about 2 miles long at one view from Carlisle Bridge Southward appearing to wash the base of Pine Hill? can it be the hill near C. Smith's? and it is about as much larger Northward & from $\frac{1}{3}$ to $\frac{1}{2}$ a mile wide we sailed this whole distance with 2 or 3 pitch pine boughs for a sail.— though we made lea-way the whole width of the meadow.— If the Bridge & its causeway were gone there would not be so long a reach to my knowledge on this river. There is a large swamp on the east above the Bridge maples & birches in front—with pines in the rear—making a low wild shore—the shore opening farther south to one or two solitary farm-houses.— on the west low hills covered with woods but no house— The young trees & bushes now making apparent islands on the meadows are there nearly in this proportion I should think i.e. in deep water—Young maples—willows—button bushes—red osier where less water alder—sweet gale & dwarf? andromeda—&c. We lay to in the lea of an island a little north of the Bridge—where the surface is quite smooth—and the woods shelter us completely while we hear the roar of the wind behind them with an agreeable sense of protection & see the white caps of the waves on either side. Where there is a ripple—merely in our calm port we see the sunny reflections of the waves on the bottom. & the cranberries &c It is warm here in the sun and the dog is drying his wet coat after so many voyages. & is drowsily nodding

April 14, Wednesday: Thoreau for the 2d time (Dr. Bradley P. Dean has noticed) deployed in his journal a weather term that had been originated by [Luke Howard](#): “With snow on the ground the sky appears once more to wear the peculiar blue of winter.— & contrasts in like manner with small whitish **cumulus**.— but there is not yet in the air the vapor you would expect from the evaporation from so much snow.”



April 14, Wednesday: Going down the RR at 9 Am I hear the lark [**Eastern Meadowlark**  *Sturnella magna*] singing from over the snow. This for steady singing comes next to the robin now. It will come up very sweet from the meadows erelong. I do not hear those peculiar tender die away notes from the pewee yet Is it another pewee, or a later note? The snow melts astonishingly fast.— The whole upper surface when you take it up in your hand is heavy & dark with water. The slate colored snowbirds [**Dark-eyed Junco**  *Junco hyemalis*] (for they are still about) is a somewhat shrill jingle like the sound of ramrods—when the order has been given to a regiment to “return ramrods” & they obey stragglingly. It is oppressively hot in the deep cut, the sun is now so high & reflected from the snow on both sides— When I inquire again of Riaden where he gets his water now—seeing that the ditch by the RR is full of rainwater & sand, he answers cheerfully as ever I get it from the ditch, sir, It is good Spr-ring water” with a good deal of burr to the r. Certainly it will not poison him so soon for his contentedness.

Walden is only melted 2 or 3 rods from the north shore yet. It is a good thermometer of the annual heats—because having no outlet nor inlet on the surface it has no stream to wear it away more or less rapidly or early as the water may be higher or lower—and also being so deep it is not warmed through by a transient change of temperature. Is that *Cornus Florida* at the Howard's Meadow Dam? Many red oak leaves have fallen since yesterday for now they lie on the surface of the snow—perchance loosened by the moisture. The white oak leaves are more bleached & thinner than the red. The squareish leaved shrub oak appears to bear the winter still better. The leaves of the hornbeam are well withered. The snow in the sunshine is more white & dazzling now than in the winter, at least this is the effect on our eyes. Haynes told me of breams caught through the ice. The surface



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of the meadow is very attractive now seen through a foot or more of calm water while the neighboring fields are covered with snow.

The evenings have for a long time been grievously shortened. The pond holes are filled with snow which looks like ice.

With snow on the ground the sky appears once more to wear the peculiar blue of winter.— & contrasts in like manner with small whitish cumulus.— but there is not yet in the air the vapor you would expect from the evaporation from so much snow. On the Cliffs— If it were not for the snow it would be a remarkably pleasant as well as warm day. It is now perfectly calm.— The dif. parts of Fair Haven P. the Pond—the meadow beyond the Buttonbush & willow curve—the Island, & the meadow between the island & mainland with its own defining lines—are all parted off like the parts of a mirror—a fish hawk [**Osprey** ■ *Pandion haliaetus*] is calmly sailing over all looking for his prey. The gulls are all gone now, though the water is high, but I can see the motions of a muskrat on the calm sunny surface a great way off. So perfectly calm & beautiful & yet no man looking at it this morning but myself. It is pleasant to see the zephyrs strike the smooth surface of the Pond from time to time. & a darker shade ripple over it.

The streams break up the ice goes to the sea; Then sails the fishhawk over head looking for his prey— I saw the first White-bellied swallows (about the house) on the morning of the 10th, as I have said—and that day also I saw them skimming over the great meadows—as if they had come to all parts of the town at once— Can we believe when beholding this landscape—with only a few buds **visibly** swollen—on the trees & the ground covered 8 inches deep with snow—that the grain was waving in the fields & the appletrees were in blossom Ap. 19th 1775. It may confirm this story however—what Grandmother said that she carried ripe cherries from Weston to her brother in Concord Jail the 17th of June the same year.

It is probably true what E Wood senior says, that the grain was just beginning to wave, and the apple blossoms beginning to expand.

Abel Hunt tells me tonight that he remembers that the date of the old Hunt house used to be on the chimney & it was 1703 or 4 within a year or 2—that Gov. Winthrop sold the farm to a Hunt & they have the deed now— There is one of the old fashioned diamond squares set in lead still in the back part of the house

The snow goes off fast for I hear it melting & the eaves dripping all night as well as all day.

I have been out every afternoon this past winter, as usual, in sun & wind snow & rain, without being particularly tanned— This **forenoon** I walked in the woods and felt the heat reflected from the snow so sensibly in some parts of the cut on the R R that I was reminded of those oppressive days 2 or 3 summers ago when the laborers were obliged to work by night— Well since I have come home—, this afternoon & evening,—I find that I am suddenly tanned even to making the skin of my nose sore. The sun reflected thus from snow in April perhaps especially in the forenoon, possesses a tanning power—

July 12, Monday: [Alfred Russel Wallace](#)'s ship sailed from South America on his return to England, with an abundance of collected biological specimens.

[Henry Thoreau](#) for the 3d time (Dr. Bradley P. Dean has noticed) deployed in his journal a weather term that had been originated by [Luke Howard](#): “The clouds —**cumuli** lie in high piles along the Southern horizon — glowing downy or cream colored —broken into irregular summits in the form of bears erect —or demigods or rocking stones —infant Herculeses —and still we think that from their darker bases a thunder shower may issue. In other parts of the heavens are long stratified whitish clouds —and in the NW floating isles —white above & darker beneath.”¹⁸



July 12, Monday: I observed this morning a row of several dozen swallows perched on the telegraph wire by the bridge —& ever & anon a part of them would launch forth as with one consent —circle a few moments over the water or meadow and return to the wire again.

2 Pm to the Assabet.

Still no rain— The clouds —cumuli lie in high piles along the Southern horizon —glowing downy or cream colored —broken into irregular summits in the form of bears erect —or demigods or rocking stones —infant Herculeses — and still we think that from their darker bases a thunder shower may issue. In other parts of the heavens are **long** stratified whitish clouds —and in the NW floating isles —white above & darker beneath. The king bird is active over the causeway notwithstanding the heat. & near the woods I hear the huckleberry bird [**Field Sparrow**



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Spizella pusilla] –& the song sparrow. The Turtle dove [**Mourning Dove** *Zenaida macroura*] flutters before you in shady wood paths or looks out with extended neck –losing its balance –slow to leave its perch. Now for another fluvial walk. There is always a current of air above the water blowing up or down the course of the river –so that this is the coolest highway. Divesting yourself of all clothing but your shirt & hat which are to protect your exposed parts from the sun –you are prepared for the fluvial excursion. You choose what depth you like –tucking your toga higher or or lower –as you take the deep middle of the road or the shallow side-walks. Here is a road where no dust was ever known –no intolerable drouth. Now your feet expand on a smooth sandy bottom –now contract timidly on pebbles –now slump in genial fatty greasy saponaceous mud amid the pads. You scare out whole schools of small breams & perch & sometimes a pickerel which have taken shelter from the sun under the pads. This river is so clear compared with the South branch or main stream –that all their secrets are betrayed to you. Or you meet with & interrupt a turtle taking a more leisurely walk up the stream. Ever and anon you cross some furrow in the sand made by a muskrat leading off to right or left to their galleries in the bank –& you thrust your foot into the entrance which is just below the surface of the water –& is strewn with grass & rushes of which they make their nests. In shallow water near the shore your feet at once detect the presence of springs in the bank emptying in –by the sudden coldness of the water –& there if you are thirsty you dig a little well in the sand with your hands, and when you return after it has settled & clarified itself get a draught of pure cold water their–¹⁹ The fishes are very forward to find out such places– And I have observed that a frog will occupy a cool spring however small. The most striking phenomenon in this stream is the heaps of small stones about the size of a walnut –more or less –which line the shore –in shallow water –one every rod or two. The recent ones frequently rising by more than 1/2 their height above the water at present ie a foot or 1 1/2 feet –& sharply conical –the older flattened by the elements and greened over with the thread like stem of ranunculus filiformis with its minute bright yellow flowers Some of these heaps contain two cartloads of stones –and as probably the creature that raised them took up one at a time It must have been a stupendous task– They are from the size of a hen’s egg down to the smallest gravel –and some are so perfect that I cannot believe they were made before the river fell. Now you walk through fields of the small Potamogeton (heterophyllus or hybridus) now in flower.– Now through the glossy pads of the white or the yellow water-lily –stepping over the now closed buds of the latter –now pause in the shade of a swamp white oak (–up to your middle in the cool element) to which the very skaters and water-bugs confine themselves for the most part It is an objection to walking in the mud that from time to time you have to pick the leaches off you The stinkpots shell covered with mud & fine green weeds –gives him exactly the appearance of a stone on the bottom –& I noticed a large

18. William M. White has incorporated some of this talk of the clouds in his “found poetry” based on Thoreau’s journal entries:

*In other parts of the heavens
Are long stratified whitish clouds,
And in the northwest floating isles,
White above and darker beneath.*

*The kingbird is active over the causeway,
Notwithstanding the heat,
And near the woods
I hear the huckleberry-bird
And the song sparrow.*

*The turtle dove flutters before you
In shady wood-paths,
Or looks out with extended neck,
Losing its balance,
Slow to leave its perch.*



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snapping turtle on one of the dark brown rocks in the middle of the river— (apparently for coolness in company with a painted tortoise) so completely the color of the rock—that if it had not been for his head curved upwards to a point from anxiety I should not have detected him. Thus nature subjects them to the same circumstances with the stones & paints them alike as with one brush for their safety.

What art can surpass the rows of maples & elms & swamp white oaks which the water plants along the river — I mean in variety & gracefulness —conforming to the curves of the river—

Excepting those fences which are mere boundaries of individual property —the walker can generally perceive the reason for those which he is obliged to get over— This wall runs along just on the edge of the hill & following all its windings to separate the more level & cultivateable summit from the slope which is only fit for pasture — or woodlot —& that other wall below divides the pasture or woodlot—from the richer low grass ground or potatoe field. &c— Even these crooked walls are not always unaccountable & lawless.

The mower perchance cuts some plants which I have never seen in flower. I hear the toads still at night together with bull frogs but not so universally nor loud as formerly. I go to walk at twilight—at the same time that toads go to their walks and are seen hopping about the sidewalks or the pump. Now a quarter after nine—as I walk along the river bank long after starlight—and perhaps an hour or more after sunset I see some of those high pillared clouds of the day in the SW still reflecting a downy light from the regions of day they are so high. It is a pleasing reminiscence of the day in the midst of the deepening shadows of the night. —The daw bugs hum around me as I sit on the river bank beyond the ash-tree— Warm as is the night—one of the warmest in the whole year—there is an aurora a low arch of a circle in the north. The twilight endstonight apparently about 1/4 before 10. There is no moon

“The Iron Horse” was appearing in Sartain’s Union Magazine (related to “Sounds,” paragraphs 5-13):

A stereotyped but unconscious despair is concealed under what
19. William M. White’s version of a portion of the journal entry is:

*Ever and anon you cross some furrow in the sand,
Made by a muskrat,
Leading off to right or left
To their galleries in the bank,
And you thrust your foot into the entrance,
Which is just below the surface of the water
And is strewn with grass and rushes,
Of which they make their nests.*

*In shallow water near the shore,
Your feet at once detect the presence of springs
In the bank emptying in,
By the sudden coldness of the water,
And there, if you are thirsty,
You dig a little well in the sand with your hands,
And when you return,
After it has settled and clarified itself,
Get a draught of pure cold water there.*



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are called the games and amusements of mankind. There is no play in them, for this comes after work.

It is worth the while to remember always that whether we are well or sick rich or poor virtuous or vicious, we are equally and continuously invited to pursue the only right way -& that this is always glorious beyond conception- Indeed to forget this to lose our faith is really the greatest misfortune that can befall us.

How much stereotyped & what is worst of all unconscious despair is concealed under what are called the games & amusements of mankind. [Undecipherable words] have given up or indeed have never taken up or been taken up by Hope - They not only [undecipherable words] but they have the slenderest expectations on the future. They are moral bankrupts. (Shanley 53)

I was also serenaded by a hooting owl. Near at hand you could fancy it the most melancholy sound in Nature, as if she meant by this to stereotype and make permanent in her choir the dying moans of a human being, -some poor weak relic of mortality who has left hope behind, and howls like an animal, yet with human sobs, on entering the dark valley, made more awful by a certain gurgling melodiousness,- I find myself beginning with the letters gl and I try to imitate it, -expressive of a mind which has reached the gelatinous mildewy stage in the mortification of all healthy and courageous thought. It reminded me of ghouls and idiots and insane howlings. But now one answers from far woods in a strain made really melodious by distance, -*Hoo hoo hoo, hooer hoo*; and indeed for the most part it suggested only pleasing associations, whether heard by day or night, summer or winter. (125)

I rejoice that there are owls. Let them do the idiotic and maniacal hooting for men. It is a sound admirably suited to swamps and twilight woods which no day illustrates, suggesting a vast and undeveloped nature which men have not recognized. They represent the stark twilight and unsatisfied thoughts which all have. All day the sun has shone on the surface of some savage swamp, where the double spruce stands hung with usnea lichens, and small hawks circulate above, and the chickadee [Black-capped Chickadee *Parus Atricapillus*] lisps amid the evergreens, and the partridge [Ruffed Grouse *Bonasa umbellus*] and rabbit skulk beneath; but now a more dismal and fitting day dawns, and a different race of creatures awakes to express the meaning of Nature there. (126)

I should not have wondered by this time to find that they had their respective musical bands stationed on some eminent chip, and played their national airs the while, to excite the slow and cheer the dying combatants. I was myself excited somewhat even as if they had been men. The more you think about it, the less the difference. (230)



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August 2, Monday: [Ellery Channing](#) walked past the red farmhouse next-door to the [Waldo Emersons](#) in which he and his wife Ellen had lived in 1843-1844, and waxed nostalgic:

There is a house in which I spent one of the most happy years of my life.

[Henry Thoreau](#) for the 4th time (Dr. Bradley P. Dean has noticed) deployed in his journal a weather term that had been originated by [Luke Howard](#): “We have had a day or two (and here is another) of hanging clouds not threatening rain yet affording shade, so that you are but little incommoded by the sun in a long walk. Varied, dark, and downy **cumulus** –fair-weather clouds, well nigh covering the sky– with dark bases and white glowing fronts and brows.” Thoreau sat on Fair Haven Hill and thought some thoughts which lead me to infer that whatever “knowledge” he had of the historical events which had occurred in the vicinity of Wachusett and in the vicinity of Mount Misery –historical events relating to his personal Huguenot ancestry and to his honest concern over genocide against Native American groups– could at most have been a subliminal and intuitive “knowledge” and must be considered to have been completely severed from any actual historical record available to him. —For he displays, in the following passage from his journal, no awareness whatever that there had been a Huguenot settlement near Wachusett in Nipmuc Country, or that these religious refugees had been driven into the Calvinist and Puritan towns by the threat from the Nipmuc tribe when it allied with Metacom, or that the local center of forest resistance to the Europeans in 1675-1676 had been the vicinity of Wachusett, or that there had been Concord Native Americans living on Sandy or Flint’s Pond, or that some of the Native American women and children had been murdered by white Concordians on the slopes of Mount Misery:



August 2: At 5.30 this morning, saw from Nawshawtuct the trees on the Great Meadows against and rising out of the dispersing wreaths of fog, on which the sun was shining. Just before sunset. At the window. — The clear sky in the west, the sunset window, has a cloud both above and below. The edges of these clouds about the sun glow golden, running into fuscous. A dark shower is vanishing in the Southeast. There will commonly be a window in the west. The sun enters the low cloud, but still is reflected brightly, though more brassily perhaps, from the edges of the upper cloud. There is as yet no redness in the heavens. Now the glow becomes redder, tingeing new edges of the clouds near and higher up the sky, as they were clipped in an invisible reddening stream of light, into a rosy bath. Far in the southwest, along the horizon, is now the fairer rose-tinted or flesh-colored slay, the west being occupied by a dark cloud mainly, and, still further south, a huge boulder shines like a chalk cliff tinged with pink. The rear of the departing shower is blushing.

Before this, at 2 P.M., walked to Burnt Plain.

I do not remember to have heard tree-toads for a long time. We have had a day or two (and here is another) of hanging clouds, not threatening rain, yet affording shade, so that you are but little incommoded by the sun in a long walk. Varied dark and downy cumulus, fair-weather clouds, well-nigh covering the sky. with (lark bases and white Y; lowing fronts and brows. You see the blue slay on every side between clouds. Is this peculiar to this season, early August? the whole cope equally divided into sky and cloud. Merely a rich drapery in the sky. Arras or curtains to adorn the gorgeous days. The midday is very silent. *Trichostema dichotomum* just out. The common St. John’s-wort is now scarce. The reddening sumach berries are of rare beauty. Are they crimson or vermilion? Some sumach leaves, where the stem has broken, have turned red. Blue-eyed grass lingers still. Is the dodder out of bloom, or merely budded? It is a new era with the flowers when the small purple fringed orchis, as now, is found in shady swamps standing along the brooks. It appears to be alone of its class. Not to be overlooked, it has so much flower, though not so high-colored as the arethusa. Together with the side-flowering skull-cap, etc. The arethusas, pogonias, calopogons all gone, and violets of all kinds.

We had a little rain after all, but I walked through a long alder copse, where the leafy tops of the alders spread like umbrellas over my head, and heard the harmless pattering of the rain on my roof.

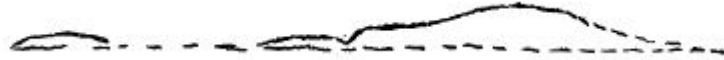


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Wachusett from Fair Haven Hill looks like this: —



the dotted line being the top of the surrounding forest. Even on the low principle that misery loves company and is relieved by the consciousness that it is shared by many, and therefore is not so insignificant and trivial, after all, this blue mountain outline is valuable. In many moods it is cheering to look across hence to that blue rim of the earth, and be reminded of the invisible towns and communities, for the most part also unremembered, which lie in the further and deeper hollows between me and those hills. Towns of sturdy uplandish fame, where some of the morning and primal vigor still lingers, I trust. Ashburnham, Rindge, Jaffrey, etc.,—it is cheering to think that it is with such communities that we survive or perish. Yes, the mountains do thus impart, in the mere prospect of them, some of the New Hampshire vigor. The melancholy man who had come forth to commit suicide on this hill might be saved by being thus reminded how many brave and contented lives are lived between him and the horizon. Those hills extend our plot of earth; they make our native valley or indentation in the earth so much the larger. There is a whitish line along the base of Wachusett more particularly, as if the reflection of bare cliffs there in the sun. Undoubtedly it is the slight vaporous haze in the atmosphere seen edgewise just above the top of the forest, though it is a clear day. It, this line, makes the mountains loom, in fact, a faint whitish line separating the mountains from their bases and the rest of the globe.



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1853

January 2, Sunday: [Henry Thoreau](#) was written to by [Horace Greeley](#) in New-York.

*New York,
[J]an. 2, 1853.
Friend Thoreau,
I have yours of
the 29th, and credit you
\$20[.] Pay me when and in
such sums as may be conve-
nient.
I am sorry you and
Curtis cannot agree so
as to have your whole Ms.
printed. It will be worth
nothing elsewhere after
having partly appeared in*

Page 2
*Putnam. I think it is
a mistake to conceal the
authorship of the several
articles, making them all
(so to speak) Editorial;
but if that is done, don't
you see that the el[i]mina-
tion of very flagrant here-
sies (like your defiant
Panthéism) becomes a neces-
sity?-- If you had ~~refused~~
withdrawn
^ your M[S]. on account of the
abominable misp[r]ints in
the first number, your ground
would have been far more
tenable.*

Page 3
*However, do what you
will. Yours,
Horace Greeley.
(unwell)*



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H. D. Thoreau, Esq.

[Thoreau](#) for the 5th time deployed in his journal a weather term that had been originated by [Luke Howard](#): “A clear day – a pure sky with **cirrh**i ...”



January 2nd: 9 Am Down RR to Cliffs.

A clear day – a pure sky with cirrh*i* In this clear air & bright sunlight the ice-covered trees have a new beauty. Especially the birches along under the edge of Warren’s wood on each side of the railroad – bent quite to the ground in every kind of curve. At a distance as you are approaching them end-wise they look like white tents of Indians under the edge of the wood. The birch is thus remarkable perhaps because from the feathery form of the tree whose numerous small branches sustain so great a weight bending it to the ground – and moreover because from the color of the bark the core is less observable. The oaks not only are less pliant in the trunk but have fewer & stiffer twigs & branches. The birches droop over in all directions like ostrich feathers. Most wood paths are impassible now to a carriage almost to a foot traveller from the number of saplings & boughs bent over even to the ground in them. Both sides of the deep cut now shine in the sun as if silver plated – & the fine spray of a myriad brushes on the edge of the bank – sparkle like like silver. The telegraph wire is coated to ten times its size – & looks like a slight fence scalloping along at a distance. Is merged in nature. When we climb the bank at Stows wood lot and come upon the piles of freshly split white pine wood – (for he is ruthlessly laying it waste) the transparent ice like a thick varnish beautifully exhibits the color of the clear tender yellowish wood – pumpkin-pine? – and its grain and we pick our way over a bed of pine boughs & twigs a foot or two deep covering the ground, each twig & needle thickly coated with ice – into one vast gelid mass – which our feet crunch as if as if we were walking through the laboratory of some confectioner to the gods. The invigorating scent of the recently cut pines refreshes us – if that is any atonement for this devastation. The beauty of the oak tops all silvered o’er. Especially now do I notice the hips – barberries & winter berries – for their red.

The red or purplish catkins of the alders are interesting as a winter-fruit. & also of the birch. But few birds about, apparently their granaries are locked up in ice – with which the grasses & buds are coated.

Even far in the horizon the pine tops are turned to firs or spruce by the weight of the ice bending them down – so that they look like a spruce swamp. No two trees wear the ice alike. The short plumes & needles of the spruce make a very pretty & peculiar figure. I see some oaks in the distance which by their branches being curved or arched downward & massed are turned into perfect elms, which suggests that that is the peculiarity of the elm – Few if any other trees are this wisp-like – the branches gracefully drooping. I mean some slender red & white oaks which have recently been left in a clearing – Just apply a weight to the ends of the boughs which will cause them to droop on all sides – & to each particular twig which will mass them together & you have perfect elms. Seen at the right angle each ice incrusting stubble shines like a prism with some color of the rainbow – intense blue or violet & red. The smooth field clad the other day with a low wiry grass – is now converted into rough-stubble land – where you walk with crunching feet. It is remarkable that the trees ever recover from this burden which bends them to the ground. I should like to weigh a limb of this pitch-pine. The character of the tree is changed. I have now passed the bass and am approaching the cliffs. The forms & variety of the ice are particularly rich here – there are so many low bushes & weeds before me as I ascend toward the sun – especially very small white pines almost merged in the ice-incrusted ground. All objects – even the apple trees, & rails are to the eye polished silver. It is a perfect land of faery. As if the world were a great frosted cake with its ornaments – The boughs gleam like silver candlesticks. [Le Jeune](#) describes the same in Canada in 1636 as “nos grands bois ne paroissent qu’une forest de cristal.” The silvery ice stands out an inch by 3/4 an inch in width on the N side of every twig of these apple trees – with rich irregularities of its own in its edge. When I stoop and examine some fat icy stubbly in my path, I find for all core a ridiculous wiry russet thread scarce visible not a hundredth part its size, which breaks with the ice under my feet, yet where this has a minute stub of a branch only a particle of an inch in length – there is a corresponding clumsy icy protuberance on the surface 1/8 of an inch off. Nature works with such luxuriance & fury that she follows the least hint. And on the twigs of bushes for each bud there is a corresponding icy swelling. The bells are particularly sweet this morning. I hear more methinks than ever before. How much more religion in their sound, than they ever call men together to – men obey their call & go to the stove-warmed church – though God exhibits himself to the walker in a frosted bush today as much as in a burning one to Moses of old. We build a fire on the cliffs. When kicking to pieces a pine stump for the fat knots which alone would burn in this icy day – at the risk of spoiling my boots having looked in vain for a stone I thought how convenient would be and Indian stone axe to batter it with. The bark of white birch though covered with ice burned well. We soon had a rousing fire of fat pine on a shelf of rock from which we



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overlooked the icy landscape. The sun too was melting the ice on the rocks & the water was bubbling & pulsing downward – in dark bubbles – exactly like pollywogs. What a good word is flame expressing the form & soul of fire – lambent with forked tongue – We lit a fire to see it rather than to feel it, it is so rare a sight these days. To have our eyes ache once more with smoke What a peculiar perhaps indescribable color has this flame – a reddish or lurid yellow – not so splendid or full of light as of life & heat. These fat roots made much flame and a very black smoke commencing where the flame left off which cast fine flickering shadows on the rocks – There was some bluish white smoke from the rotten part of the wood – Then there was the fine white ashes which farmer's wives sometimes use for pearlash. Fire is the most tolerable 3d party. I hear the wiry phoebe note of the chickadee as if the spring were coming in. Brown thinks my ruby-wren may be the lesser red pole linnet.

Walden begins to freeze in the coves or shallower water on the N side where it was slightly skimmed over several weeks ago

January 7, Friday: [Henry Thoreau](#) for the 6th time deployed in his journal a weather term that had been originated by [Luke Howard](#): “This is one of those pleasant winter mornings—when you find the river firmly frozen in the night, but still the air is serene & the sun feels gratefully warm—an hour after sunrise – though so fair a healthy whitish vapor fills the lower stratum of the air concealing the mts – the smokes go up from the village you hear the cocks with immortal vigor & the children shout on their way to school – & the sound made by the RR. men hammering a rail is uncommonly musical. This promises a perfect winter day. In the heavens, except the altitude of the sun, you have as it were the conditions of summer. Perfect serenity & clarity—& sonorousness in the earth— All nature is but braced by the cold. It gives tension to both body & mind. About 10 minutes before 10 Am I heard a very loud sound & felt a violent jar which made the house rock and the loose articles on my table rattle – which I knew must be either a powdermill blown up or an earth quake– Not knowing but another & more violent might take place I immediately ran down stairs, but I saw from the door a vast expanding column of whitish smoke rising in the west directly over the Powder mills 4 miles distant. It was unfolding its volumes above which made it widest there.... In 3 or 4 minutes it had all risen & spread it self into a lengthening somewhat copper colored cloud parallel with the horizon from N to S—and in about 10 minutes after the explosion it passed over my head being several miles long from north to south & distinctly dark & smoky toward the north not nearly so high as the few **cirrhi** in the sky.”

At 9:50AM three workmen were apparently in the kernel mill of the Acton gunpowder works, near Concord, turning a roller with a chisel, and the building blew up. Three seconds later there was a secondary explosion in one of the mixing houses, apparently unoccupied at the time. “Are there not two powers?”²⁰

TIMELINE OF ACCIDENTS

20. Randall Conrad's “‘I Heard a Very Loud Sound’ Thoreau Processes the Spectacle of Sudden, Violent Death.” (ATQ, June 2005, Volume 19 Issue 2, pages 81-94) would examine Thoreau's 1853 analysis of a powder-mill explosion: “Thoreau was in fact a professional when it came to the powder-milling industry, now that he had become manager of the graphite-grinding that was the lifeline of the family business. Apart from the need for safety precautions, milling gunpowder is akin to milling graphite. Professionalism notwithstanding, Thoreau's journal for January 7 presents internal clues that invite a more complex interpretation of its narrative voice. Consider first the immediate context of this passage—the whole journal entry for this date. Thoreau's account of the disaster occurs, like the explosion itself, as a disruption of broader and more peaceful reflections on nature and the seasons' cycle which comprise the overall entry for the day. The disruption dispels a morning mood of oneness and rightness induced by the promise of a perfect winter day. Visiting Nawshawtuct Hill very early that morning, Thoreau had been cheered by the serene air and sky, and by the sounds of everyday activities in the village below. Taking a closer look at vocabulary, we read that pieces of timber are strewn over the hills and meadows, as if sown. The simile as if sown continues, faintly, Thoreau's preceding imagery of birch seeds scattered on the ground: even upon this field of death, a theme of regeneration in spite of winter persists. (And the snow is for the most part melted around.) ...”

HDT

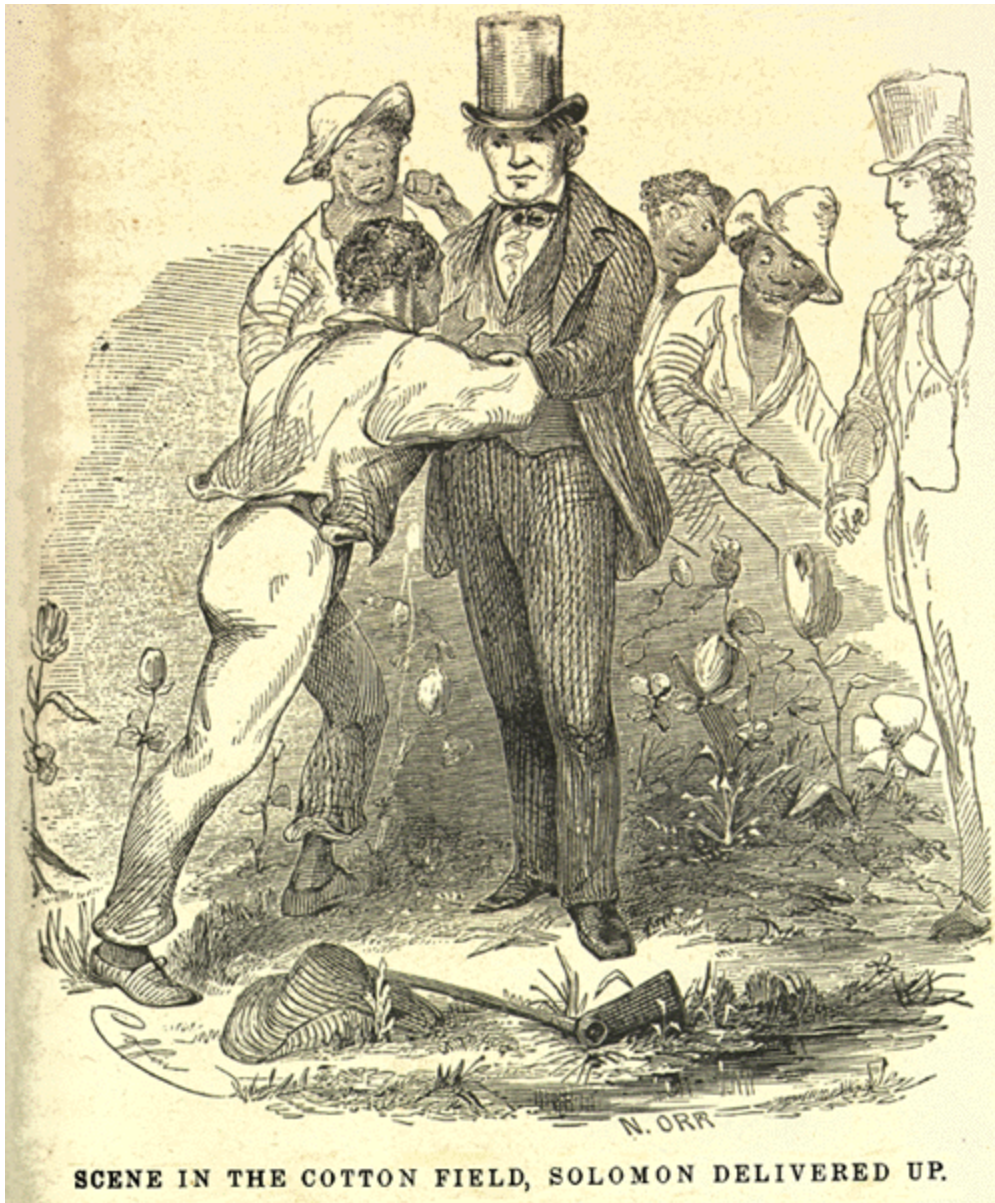
WHAT?

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Jan 7th 53: To Nawshawtuct—

This is one of those pleasant winter mornings—when you find the river firmly frozen in the night, but still the air is serene & the sun feels gratefully warm—an hour after sunrise—though so fair a healthy whitish vapor fills the lower stratum of the air concealing the **mts**—the smokes go up from the village you hear the cocks with immortal vigor & the children shout on their way to school— & the sound made by the RR. men hammering a rail is uncommonly musical. This promises a perfect winter day. In the heavens, except the altitude of the sun, you have as it were the conditions of summer. Perfect serenity & clarity—& sonorousness in the earth— All nature is but braced by the cold. It gives tension to both body & mind.

Still the snow is strewn with the seeds of the birch—the small winged seeds or samarae & the larger scales or bracts shaped like a bird in flight a hawk or dove—the least touch or jar shakes them off—& it is difficult to bring the female catkins home in your pocket. They cover the snow like coarse bran.

On breaking the male catkins I am surprised to see the yellow anthers so distinct promising spring. I did not suspect that there was so true a promise or prophesy of spring. These are frozen in december or earlier—the anthers of spring—filled with their fertilizing dust.

About 10 minutes before 10 Am I heard a very loud sound & felt a violent jar which made the house rock and the loose articles on my table rattle—which I knew must be either a powdermill blown up or an earth quake—

Not knowing but another & more violent might take place I immediately ran down stairs, but I saw from the door a vast expanding column of whitish smoke rising in the west directly over the Powder mills 4 miles distant. It was unfolding its volumes above which made it widest there.

In 3 or 4 minutes it had all risen & spread it self into a lengthening somewhat copper colored cloud parallel with the horizon from N to S—and in about 10 minutes after the explosion it passed over my head being several miles long from north to south & distinctly dark & smoky toward the north not nearly so high as the few cirri in the sky. I jumped into a man's wagon & road toward the mills. In a few minutes more I saw behind me far in the east a faint salmon colored cloud carrying the news of the explosion to the sea—& perchance over head of the absent proprietor. Arrived probably before half past 10. There were perhaps 30 or 40 wagons there. The Kernel mill had blown up first & killed 3 men who were in it said to be turning a roller with a chisel—in 3 seconds after one of the mixing houses exploded. The Kernel house was swept away & fragments mostly but a foot or 2 in length were strewn over the hills & meadows as if sown for 30 rods—& the slight snow then on the ground was for the most part melted around. The mixing house about 10 rods W was not so completely dispersed for most of the machinery remained a total reck— The press house about 12 rods east had 2/3 its boards off. & a mixing house next westward from that which blew up had lost some boards on the E side. The boards fell out— (ie of those buildings which did not blow up) the air within apparently rushing out to fill up the vacuum occasioned by the explosions—& so the powder being bared to the fiery particles in the air another building explodes. The powder on the floor of the bared Press house was 6 inches deep in some places—and the crowd were thoughtlessly going into it. A few windows were broken 30 or 40 rods off. Timber 6 inches square & 18 feet long was thrown over a hill 80 feet high at least—a dozen rods—30 rods was about the limit of fragments—

The Drying house in which was a fire was perhaps 25 rods dist. & escaped. Every timber & piece of wood which was blown up was as black as if it had been dyed except where it had broken on falling other breakages were completely concealed by the color— I mistook what had been iron hoops in the woods—for leather straps. Some of the clothes of the men were in the tops of the trees where undoubtedly their bodies had been & left them. The bodies were naked & black— Some limbs & bowels here & and there & a head at a distance from its trunk. The feet were bare—the hair singed to a crisp. I smelt the powder half a mile before I got there. Put the diff. buildings 30 rods apart and then but one will blow up—at a time.

Brown thinks my read headed bird of the winter the lesser red-pole. He has that Fall snow bird he thinks the young of the Purple Finch. What is my Pine knot of the sea Knot or Ash colored Sandpiper—? or Pharope? Brown's Pine knot looks too large & clumsy. He shows me the Spirit Duck of the Indians—of which Peabody says the Indians call it by a word meaning spirit “because of the wonderful quickness with which it disappears at the twang of a bow.”

I perceive? the increased length of the day on returning from my afternoon walk. Can it be? The sun sets only about 5 minutes later & the day is about 10 minutes longer.

Le Jeune thus describes the trees covered with ice in Canada in the winter of '35-&6 — He **appears** to be at Quebec. “There was a great wind from the NE accompanied by a rain which lasted a very long time, and by a cold great enough to freeze these waters as soon as they touched anything, so that as this rain fell on the trees from the summit to the foot, there was formed (il s'y fit) a crystal of ice which enchased both trunk (tige) & branches, so that for a very long time all our great woods appeared only a forest of crystal; for in truth the ice which clothed them universally par tout every where was thicker than a testoon (epaisse de plus d'un teston); in a word all the bushes & all that was above the snow was environed on all sides and enchased in ice: the



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Savages have told me that it does not happen often so. “(de meme).”



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“I HEARD A VERY LOUD SOUND”:

THOREAU PROCESSES THE SPECTACLE

OF SUDDEN, VIOLENT DEATH.

Publication: ATQ (The American Transcendental Quarterly)

Publication Date: 01-JUN-05

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This essay originates in a presentation given at the 2002 convention of the American Literature Association, just nine months after the fall of the World Trade Center Towers. Thoreau Society panelists had been asked to consider how (or whether) the Transcendentalists' philosophy can help twenty-first-century citizens cope with a disaster of the magnitude of September 11, 2001. Seeking some equivalent in Thoreau's experience, I decided to examine the following journal passage for 7 January 1853, in which the thirty-five-year-old philosopher writes of viewing burnt, scattered human remains, the fresh result of a powdermill explosion.



About 10 minutes before 10 Am I heard a very loud sound & felt a violent jar which made the house rock and the loose articles on my table rattle — which I knew must be either a powdermill blown up or an earth quake — Not knowing but another & more violent might take place I immediately ran down stairs, but I saw from the door a vast expanding column of whitish smoke rising in the west directly over the Powder mills 4 miles distant. It was unfolding its volumes above which made it widest there. In 3 or 4 minutes it had all risen & spread it self into a lengthening somewhat copper colored cloud parallel with the horizon from N to S — and in about 10 minutes after the explosion it passed over my head being several miles long from north to south & distinctly dark & smoky toward the north not nearly so high as the few cirri in the sky. I jumped into a man's wagon & road [sic] toward the mills. In a few minutes more I saw behind me far in the east a faint salmon colored cloud carrying the news of the explosion to the sea — & perchance over [the] head of the absent proprietor. Arrived probably before half past 10. There were perhaps 30 or 40 wagons there. The Kernel mill had blown up first & killed 3 men who were in it said to be turning a roller with a chisel — in 3 seconds after one of the mixing houses exploded. The Kernel house was swept away & fragments mostly but a foot or 2 in length were strewn over the hills & meadows as if sown for 30 rods — & the slight snow then on the ground was for the most part melted around. The mixing house about 10 rods W was not so completely dispersed for most of the machinery remained a total [w]reck — The press house about 12 rods east had 2/3 [of] its boards off. & a mixing house next westward from that which blew up had lost some boards on the E side. The boards fell out — (ie of those buildings which did not blow up) the air within apparently rushing out to fill up the vacuum occasioned by the explosions — & so the powder being bared to the fiery particles in the air another building explodes, The powder on the floor of the bared Press house was 6 inches deep in some places — and the crowd were thoughtlessly going into it. A few windows were broken 30 or 40 rods off.



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Timber 6 inches square & 18 feet long was thrown over a hill 80 feet high at least — a dozen rods — 30 rods was about the limit of fragments — The Drying house in which was a fire was perhaps 25 rods dist. & escaped. Every timber & piece of wood which was blown up was as black as if it had been dyed except where it had broken on falling other breakages were completely concealed by the color — I mistook what had been iron hoops in the woods — for leather straps. Some of the clothes of the men were in the tops of the trees where undo[u]btedly their bodies had been & lefte them. The bodies were naked & black — Some limbs & bowels here & and there & a head at a distance from its trunk. The feet were bare — the hair singed to a crisp. I smelt the powder half a mile before I got there. Put the diff. buildings 30 rods apart and then but one will blow up — at a time.²¹

Thoreau depicts the scene unsentimentally and apparently mean-mindedly. In a detached style highlighted with flashes of irony, he marshals observed details, some horrid, in order to deduce the sequential phases of the conflagration — and then, wasting no breath lamenting the tragedy, suggests a better design for future factories. To any reader with an animus against the hermit of Walden, these six hundred words can only confirm the stereotypical curmudgeon and misanthrope (Bridgeman xii). Any champion of Thoreau, on the other hand, will assume that the acid social satirist who wrote Walden's "Economy" chapter had to be aware of the irony in a gunpowder worker's death by explosion — the ultimate wage of "driving for Squire Make-a-Stir." Thus Laura Dassow Walls, in a rich discussion of chance and necessity in Thoreau's philosophy, stretches toward social consciousness by interpreting Thoreau's punch line ("Put the different buildings ...") as a criticism of the reification introduced into society by "the factory system" (250). Actually Thoreau's narrative does not primarily express either misanthropy or progressive social criticism. In this essay I examine its themes and imagery in relation to several related journal entries during 1853 as well as related lectures, essays, and correspondence by Thoreau around this time. I establish that the horrifying vision continued to haunt Thoreau's imagination for months, perturbing his dreams and waking meditations, and unsettling his vital sense of oneness with nature — a state which brought him to the brink of despair. Consciously or not, Thoreau set himself the project of "working through" (as we now say) this emotionally painful experience: he would mediate the

21. J5:428-29 (bracketed interpolations are mine). The Assabet Manufacturing Company, situated along two miles of the Assabet River forming part of the Acton and Concord town line, produced gunpowder through various changes of name and ownership until 1940. See Jane G. Austin for a highly readable tour of this company's mills, virtually unchanged seventeen years after Thoreau's experience (apart from introducing steam-heat instead of fire). The "absent proprietor" was Nathan Pratt, who founded the company in 1835 and owned it until 1864.

The reason Thoreau can narrow the possibilities immediately upon first hearing the noise is that explosions at the Assabet mill happened at least every several years. "Explosions that shattered a few window panes as far away as Acton Centre while not common were by no means unheard of. Anyone who had lived in the vicinity for twenty five years had almost certainly experienced two or three" (Phalen 140).

Some acquaintance with the industrial process itself may be helpful here. Kernelling, also called corning, graining and granulating, consists of feeding the processed powder into sets of rollers to achieve a given fineness of grain. If the three mill-hands were "turning a roller with a chisel," the scrape of iron against iron ignited the fatal spark.

Powdermill structures were built on solid foundations and frames, but their boarding and roof were intentionally light so that an explosion would blow them off easily. This, it was hoped, would minimize damage to the framework and machinery (Austin 535). As Thoreau deduces, four buildings exploded in this order: kernel house, one mixing house, press house, and another mixing house. In the manufacturing process, of course, the order is otherwise. The mixing houses were used first, followed by the press house, kernel mill, glazing house (not observed by Thoreau), and drying house (Conant 5-6). One rod being equal to 5.5 yards or somewhat greater than five meters, the debris was flung nearly one-tenth of a mile distant.



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intolerable horror through his writing, finally employing the rich resources of his art to resolve the alarming philosophic contradictions he had discovered.

Until recently, few scholars took notice of this journal entry, even though its traumatizing content fairly leaps off the page. Among the pioneer modern writers, only Richard Lebeaux (1984) discusses this episode as one of the stressors which, evincing the inevitable finality of death, seriously shook Thoreau's comforting vision of a unified, cyclical Nature during the winter of 1853. Two twenty-first-century interpreters, Michael West and Michael Sperber, apply aesthetic and psychoanalytic criteria, respectively. West, analyzing the richly symbolic "sand foliage" passage in Walden's "Spring" chapter, describes Thoreau's image of the divine Artist's laboratory as a "charnel house" in which body parts are "indiscriminately strewn about" and infers a strong influence of the 1853 powdermill explosion (464-65). West offers absorbing discussions of Walden's sand-bank passage in terms of Thoreau's glossology (185-89; cf. 196-200), his "homespun fecal cosmology," and ultimately his anticipation of death (450, 465). Sperber, writing from a psychiatrist's standpoint, presents Thoreau's experience of the fatal explosion as one of several triggers which, that year, coincided to catalyze the recurring depression he had experienced every January since his brother's sudden, traumatizing death in January 1842 (17).²² Sperber argues persuasively that Thoreau's narrative voice in this journal entry is expressive of the "psychic numbing" that is a symptom of post-traumatic stress disorder, one facet of Thoreau's lifelong, complex depression.

The present essay considers the image-making in several interrelated pieces of Thoreau's writing not merely as biographical data – evidence of mental depression – but as cohesive fragments of an ongoing, self-healing therapeutic process which Thoreau undertook between January and November 1853. During these months, Thoreau realized that his very sanity was at risk, exerted his creative powers to recover stability, and in the end re-imagined himself as a seer in the presence of the divine.

Let us begin by accounting for the dispassionate tone Thoreau affects in his narrative, which alienates so many readers. A simple explanation, of course, is that Thoreau is merely expressing a certain professionalism. Only months before, the Boston surveyor and cartographer H.F. Walling had credited Thoreau with the title "Civ. Engr" (civil engineer) for the latter's contribution of his pond survey to a new, authoritative map of Concord Village (Stowell 11). Why should Thoreau not presume to propose, from an engineer's standpoint, a more efficient design idea for the powdermill campus?

Thoreau was in fact a professional when it came to the powder-milling industry, now that he had become manager of the

22. I showed an early version of this paper to Dr. Sperber in 2003 while assisting with research for his book. Reciprocally, this version is indebted to his key concept of Thoreau's "self-therapeutic successes" in discussing Thoreau's "processing" of emotional experience.



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graphite-grinding that was the lifeline of the family business. Apart from the need for safety precautions, milling gunpowder is akin to milling graphite. For example, Thoreau's contemporary Addison G. Fay, initially a minister, easily made the transition from operating a graphite mill to part ownership of the very gunpowder mill under discussion here, only to perish when the mill exploded in 1873 (Conant 7). Among Thoreau's engineering innovations in his own field, he designed and built with his father a seven-foot-tall mill-extension in 1838 that allowed finer grades of pencil-lead. He increased the efficiency of a lead mill in Acton by replacing iron grinding balls with a stone in 1859 (Harding 56-57, 397, 409). (Did he have the accident of 1853 in mind?)

Professionalism notwithstanding, Thoreau's journal for 7 January presents internal clues that invite a more complex interpretation of its narrative voice. Consider first the immediate context of this passage – the whole journal entry for this date. Thoreau's account of the disaster occurs, like the explosion itself, as a disruption of broader and more peaceful reflections on nature and the seasons' cycle which comprise the overall entry for the day. The disruption dispels a morning mood of oneness and rightness induced by the promise of "a perfect winter day." Visiting Nawshawtuct Hill very early that morning, Thoreau had been cheered by the "serene" air and sky, and by the sounds of everyday activities in the village below. Examining birch seeds in the snow, he had just written: "I am surprised to see the yellow anthers so distinct, promising spring. I did not suspect that there was so sure a promise or prophecy of spring. These are frozen in December or earlier, – the anthers of spring, tilled with their fertilizing dust" (J5: 428). At exactly this point, Thoreau's warmly affecting vision of the season's immanent regeneration yields to the explosion narrative. At the end of it, Thoreau concludes the day's entry by returning to nature observation: he believes he detects the lengthening of daylight, another promise of the spring that will recur (J5: 429).

Taking a closer look at vocabulary, we read that pieces of timber are "strewn over the hills and meadows ... as if sown." The simile "as if sown" continues, faintly, Thoreau's preceding imagery of birch seeds scattered on the ground: even upon this field of death, a theme of regeneration in spite of winter persists. (And the snow is "for the most part melted around.") Coincidentally or not, the double meaning of some plant-derived vocabulary adds to the effect. The fatal blast was ignited in the "kernel" house; Thoreau finds "limbs" and a "trunk" among the body parts. It is therefore conceivable that Thoreau in composing this passage was by no means being callous but in fact was already stirred by emotion, indeed conflicting emotions. Thoreau's biographers agree that he was in a generally grim mood during this winter of 1853. Sensitive to the approach of midlife, Thoreau saw mortality everywhere, a state strongly reinforced by the spectacle at the mills. According to Lebeaux



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in Thoreau's Seasons, the cyclical vision of life that usually sustained Thoreau yielded, for a time, to "the dreaded prospects of life's finite linearity and uncontrollability and of personal annihilation" (174).

If Thoreau was having a mid-thirties crisis of this tenor, it is not hard to identify circumstances that would aggravate it. First of all, as noted, the January anniversary of John Thoreau, Jr.'s, horrific death in his brother's arms surely stimulated feelings of guilt, as Lebeaux suggests, along with a pronounced longing for forgiveness and redemption. Second, Thoreau's sustaining friendship with Ralph Waldo Emerson, shaky in recent years, was nearing its nadir. Thoreau would complain to his journal on 25 May 1853: "Talked or tried to talk with R.W.E. Lost my time — nay almost my identity — he assuming a false opposition where there was no difference of opinion — talked to the wind — told me what I knew & I lost my time trying to imagine myself somebody else to oppose him" (J6: 149, Thoreau's italics and hyphen.). Third, compounding the grief and sense of loss, January also brought the anniversary of little Waldo Emerson's demise. Sympathy over the child's sudden death from scarlet fever in 1842 had once brought Thoreau as close to his friend and mentor as they were now distant. The five-year-old's passing had prompted Thoreau to console Emerson with his most eloquent statement of the reason for contemplating death with indifference.



How plain that death is only the phenomenon of the individual or class. Nature does not recognize it, she finds her own again under new forms without loss. Yet death is beautiful when seen to be a law, and not an accident — It is as common as life. (To R. W. Emerson, 11 March 1842. Correspondence 63)

Thoreau of course does not mean to seem indifferent to the dead child individually. As Emerson well knew, Thoreau had "come to love the boy" while living in the Emerson household in 1841 (Harding 129). It is simply that Thoreau cannot summon the customary sympathy-card sentiments, the conventional language of what Emerson would call "habitual" grief.²³ Thoreau will not employ, nor would Emerson accept, a conventional rhetoric of mourning prescribed by the prevailing culture. Eleven years later, he is all the less likely to do so in recording the deaths of total strangers at the explosion site. Thus we gain additional insight into Thoreau's narrative of 7 January: its very terseness may signal a deliberate refusal to mourn which is prompted by integrity rather than cynicism.

For comparison, the historical record furnishes a fortuitous and rich example of such a conventional rhetoric, lavished upon an identical event at the same powder mill at a time when several dangerous processes "usually carried on in separate buildings" had been grouped under one roof. On 16 November 1836 — the first year of the company's operation — three men were blown to pieces

23. In contrast to "trivial or 'habitual' grief," Jennifer Gurley ("Goodness and Grief...") considers whether genuine grief, for Emerson, is to be verbalized at all. How Emerson coped with Waldo's loss emotionally and philosophically — absent the traditional consolations of Christianity — is summarized by David Lyttle (66-72).



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when more than half a ton of powder exploded. A fourth worker lingered for hours before succumbing to acute burns and fractures.

Like Thoreau, the unnamed writer for the weekly Concord Freeman witnesses a panorama of horror and writes it up with comparable realism: "his mangled limbs, his tattered flesh, and parts of his body, were found in a neighboring field, twenty or thirty rods distant, and on a hill at least fifty feet higher than the mill." Quite differently from Thoreau, the reporter goes on to solicit pity. "There the miserable fragments of humanity were scattered, and the pieces hanging like rags on the bushes and trees about showed how effectual was the work of destruction." The writer laments the deaths as untimely (the mill-hands were in their 20s and 30s) and strikes chords of quasi-tragic irony:



It was heart rending to behold these poor relics of man, so torn, so mangled, so burned, and blackened, and so suddenly changed from the beauty and vigor of confident manhood to the shattered form of loathe-some death.... the swift death of these four men, only showed how sooner than was expected the powder had effected its intended purpose of destruction. ("Powder Mill Explosion")

In an era when the local newspaper in America increasingly served to codify middle-class values and to model appropriate sentimental responses to events, the bare prose of Thoreau's journal entry raises the standard of non-conformism.

Fourth and finally, we must consider one more depressive factor in 1853, possibly the most serious of all, involving Thoreau's life as an author. At this time, Thoreau was one year into his last and deepest revision of the manuscript that would be the masterwork of his lifetime, *Walden*. Undoubtedly, this periodic creative exertion obliged Thoreau on the one hand to relive the disturbing doubts and uncertainties of his quest in the woods, while on the other hand feeling pressed to present his experiences positively for posterity. If Thoreau was pouring his creative energy into composing a sustained affirmation of nature's life-cycles for publication, it is not surprising that his emotional reserves were depleted when it came to managing everyday mood changes. No wonder his unifying concept of life "wavered" upon viewing hair-raising evidence of life's "linearity and uncontrollability," feeling the finality of death, and conceiving mortality as divine punishment.

How natural then that Thoreau, drawing upon his creative abilities as a writer, would use his journal to process his intolerable feelings. In a number of instances, we will find Thoreau recalling the mill-yard scene, re-experiencing the deeply unsettling emotions it has roused, and finally weaving multiple memories and associated fantasies into a unifying vision. We may now consider this related material in the journal of 1853. Thoreau harks back to his experience of 7 January in three separate entries that he composed two days, two weeks, and five months after that date. In these passages there is no trace of the cold, factual narrating voice he initially assumed. Instead, Thoreau is demonstrably haunted by what he made himself



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see.

Perhaps surprisingly, Thoreau's response as he begins to process the experience is to moralize – to preach and scold almost as severely as if Calvinism were still alive and flourishing in Concord. Thoreau's reactions to intimations of mortality are colored by a stark dualism. As Lebeaux notes in Thoreau's Seasons (177), Thoreau admits only extreme alternatives, and these in the most judgmental terms – innocence or sin – redemption or damnation – nature ("infinite and pure") or man ("the source of all evil").

On 9 January, after two days of internalizing the experience, Thoreau writes: "Day before yesterday I looked at the mangled & blackened bodies of men which had been blown up by powder, and felt that the lives of men were not innocent, and that there was an avenging power in nature ..." (J5: 437). Then on 21 January Thoreau records a nightmare in which he feels defiled after unearthing and touching rotten corpses. He interprets the "moral" of the dream: "Death is with me and life far away" (J5: 448). It should be noted that Thoreau gets away with significant sleight of hand in the entry for 9 January. He attributes the destructive power of the gunpowder to nature, which he depicts as the divine agency of judgment and retribution, an "avenging" dispenser of a death deserved. Can this mean that Thoreau believes these three specific millworkers were "not innocent" – that they deserved their fate? Not literally. In the world of transcendental analogy, actual realities, mere details, and variable circumstances take a back seat to the (presumed) universal symbolism of an experience. These three men, who in reality were blown to pieces because they neglected procedure and mishandled equipment, have become symbolic stand-ins for the sinful human race. "Nature" stands in for a punishing God, while the blackened, smoking mill yard makes a picture-perfect Hell. In fact, it is Thoreau's rhetorical strategy of treating the explosion no differently from a force of nature that enables him to sermonize with such idealizing abstraction. His transcendentalist perspective gives him the privilege of glossing over workaday details that might undermine the universal truth of his meditation on mortality. After all, by most reckonings, a fatal industrial accident is to be reported differently from an accidental death caused, for example, by a lightning strike or a shipwreck.

The key towards unlocking the nature of what is haunting Thoreau lies in the third of his subsequent journal entries, written amid the bloom of late spring. On 1 June, Thoreau reports seeing pieces of the mill buildings "[s]till black with powder" reappearing along the bank of the Concord. He exclaims: "How slowly the ruins are being dispersed!" – expressing perhaps a note of wonder at the persistence of his own morbid recollections (J6: 169). (Ironically, the Assabet mill would explode again in June, without fatalities and without comment from Thoreau [Conant 7].) Thoreau proceeds to imagine these pieces of wood pursuing their journey downriver and across the



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Atlantic, "[s]till capable of telling how & where they were launched to those who can read their signs." He draws a parallel with the cloud-as-sign that he saw in January: "The news of the explosion of the Powder Mills – was not only carried seaward by the cloud which its smoke made – but more effectually – though more slowly by the fragments which were floated thither by the river –" (J6: 169).²⁴

At this point in the journal, quite unexpectedly, the idea of the Atlantic Ocean unlocks an entirely different level of memory and image, as Thoreau vividly evokes the sight of a drowned man: "To see a man lying all bare lank & tender on the rocks like a skinned frog – or lizzard – we did not suspect that he was made of such cold tender clammy substance before" (J6: 169). Whence this drowned man? Until now, Thoreau had been remembering explosion victims. Following the association with the Atlantic takes us to the answer. Three years earlier, Thoreau had obliged himself to face the mangled, swollen bodies of shipwreck victims on two occasions – at Cohasset, Cape Cod, in 1849 and also during his fruitless mission to retrieve the effects of Margaret Fuller, who had drowned in a wreck on the shore of Fire Island, New York, in 1850.

In his journal at that time, Thoreau uses the image of parallel streams to depict the two worlds that we simultaneously inhabit, that of reality and that of the spirit – the latter alone having substance and value:



This stream of events which we consent to call actual & that other mightier stream which alone carries us with it — what makes the difference — On the one our bodies float, and we have sympathy with it through them; on the other, our spirits. We are ever dying to one world and being born into another — and possibly no man knows whether he is at any time dead ... or not. (after 29 July 1850 [J3: 95])

In Thoreau's metaphysics, we are all, at any given instant, so many corpses in the wash of tides. Death is our birth into another world (or, as Thoreau more often conceived it, our continuity in nature). "Who knows but you are dead already?" he repeats (J3: 96).

In a public version of these reflections – "The Shipwreck," composed and delivered as a public lecture as early as 1850 – Thoreau helps his audience visualize this birth into another world by playing upon the conventional idea of an afterlife in a parallel dimension.



Why care for these dead bodies? They really have no friends but the worms or fishes. Their owners were coming to the New World, as Columbus and the Pilgrims did, they were within a mile of its shores; but, before they could reach it, they emigrated to a newer world than ever Columbus dreamed of, yet one of whose existence we believe that there is far more universal and convincing

24. At the core of the drowned-man image is Thoreau's memory of his brother's horrid death. Forever unable to accept John's loss, Henry invested enormous emotional energy in seeing his dead brother as proof of the eternal reciprocity between death and life. In the concluding pages of *Young Man Thoreau*, Richard Lebeaux sensitively detects wide-ranging aspects of "private grief and guilt" underpinning the opening chapters of *Cape Cod* (199-204). "Can anyone doubt that the 'funeral' and 'corpse' that Thoreau had in mind were John's?" (201).



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evidence — though it has not yet been discovered by science ... I saw their empty hulks that came to land; but they themselves, meanwhile, were cast upon some shore yet further west, toward which we are all tending, and which we shall reach at last, it may be through storm and darkness, as they did. ("Cape Cod" 635)

"The Shipwreck" was polished for publication as the introductory section of "Cape Cod" by 1852, when Thoreau offered it to G. W. Curtis for Putnam's Monthly Magazine. By that time, Thoreau must have all but memorized his text, considering that he delivered his Cape Cod lecture before several audiences in 1850-51. (Putnam's ran "Cape Cod" — the opening four chapters of the posthumous book we now know — serially and unsigned in June, July, and August 1855.)

So fully does Thoreau in "The Shipwreck" conceive death as integral to life that the idea of an untimely, unfair, or undeserved death is meaningless. A psychological analyst of Thoreau's statement — noting in particular the abstract and universal voice adopted here by the writer — might well suspect that this highly rational denial of death is constructed as a defense against an intolerably painful affect, including sheer physical revulsion. John Thoreau, Jr., we recall, died in the arms of his adoring younger brother, who could only watch as the ghastly death-sneer (*risus sardonicus*) of lockjaw froze his brother's facial muscles into a mocking mask in the final moments of respiratory muscular paralysis and suffocation (Sperber 9-10). (Almost from the instant it took place, this death-scene became romanticized by friends and family as an exchange of beatific smiles, although Thoreau would later use the words "ugly pain" in a memorial poem.) As Lebeaux has well established in *Young Man Thoreau*, the unbearable pain of experiencing this extraordinarily wrenching loss "froze" the normal grieving process in Thoreau, initiating instead a chronic depressive cycling (167-68, 172).

Only substitute the 1853 explosion instead of death by drowning — and extend "the law of Nature" to include industrial fatalities — and Thoreau's comment in "The Shipwreck" could be read as a justification of his seemingly emotionless description of the fatalities at the Acton mill:



On the whole, it was not so impressive a scene as I might have expected. If I had found one body cast upon the beach in some lonely place, it would have affected me more. I sympathized rather with the winds and waves, as if to toss and mangle these poor human bodies was the order of the day. If this was the law of Nature, why waste any time in awe or pity? ... Take all the grave-yards together, they are always the majority. It is the individual and private that demands our sympathy. A man can attend but one funeral in the course of his life, can behold but one corpse. (635, my emphases)

Thoreau's grief-work on the first of June required him to dig down to the earlier recollection of the "bare, lank and tender" body on the beach. (He sensed soon after visiting the explosion site that this work of exhumation, though repugnant, would be necessary to bring resolution. His nightmare of 21 January, mentioned above, expresses this idea [J5: 448].) Writing his June entry, Thoreau succeeds in substituting a memory of a



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death-encounter that is "tender" (he uses the word repeatedly) for one that is limb-wrenching and bloody – a vision of birth/death cradled by the eternal rhythm of the salt-water tides instead of sudden, hideous dismemberment amid apocalyptic fire. He has recovered that "one body ... in some lonely place" that he wished to see on Cape Cod, and has allowed it to "affect" him. The figure of the drowned man embodies the eternal interchange of death and life. No sooner has Thoreau substituted the drowned man for the burnt men than he is free to begin reclaiming the redeeming vision that sustains him. That one affecting corpse holds the key to life.²⁵

The process traced above guided Thoreau out of his dualistic dead end. It recaptured his vanished closeness with Ralph Waldo Emerson. Most important for literature, it helped to shape one of the most inspired symbolic visions in *Walden*. Late in the stressful year of 1853, as J. Lyndon Shanley's work documents, Thoreau proceeded with final revisions to *Walden*, amplifying many passages and relocating some to better artistic advantage. One of these was the description of the thawing sand bank along the "deep cut" that had been dug southwest of the pond for the new railroad. As published, these enthusiastic lines in the climactic "Spring" chapter form one of the book's cardinal passages, the symbolic revelation of the earth as nature's infinite matrix of life.

In Thoreau's initial draft of 1846-47, the shapes assumed by the rivulets of sand as they flow down the embankment are limited to those of "vegetation, of vines and stout pulpy leaves" (Shanley 204). The expanded revision, which Thoreau worked up in October or November of 1853, adds a multitude of details and colors, bringing the tumbling cascade to life and deepening its symbolic meaning – while restating in a positive mode the theme of scattered organs and limbs. As revised, the shifting forms recall not only vegetal and coral shapes but also animal parts – "leopard's paws or birds' feet" – and finally "brains or lungs or bowels, and excrements of all kinds" (*Walden* 305). Thoreau sees in the thawing sand and clay "the different iron colors, brown, gray, yellowish, and reddish" (305). This is the same palette he uses to color his initial journal entry of 7 January describing the sky and earth at the explosion site.

Michael West finds it ironic that Thoreau's vision of life should be grounded in a mineral mixture "destined to sandy sterility" (465). However, this deficit is outweighed by the resonant personal – even heroic – meaning that clay held for

25. Fragments embedded in a hillside by the force of the January 1853 explosion (and others) remained visible six years afterward, as Thoreau noted during some Assabet River excursions. In a supreme use of irony, he now declares the victims' body parts expunged from this exhibit:



As you draw near the powder-mills, you see the hill behind bestrewn with the fragments of mills which have been blown up in past years, — the fragments of the millers having been removed, — and the canal is cluttered with the larger ruins. The very river makes haste past the dry-house, as it were for fear of accidents. (21 July 1859; *Journal* XII: 248)

This is, to my knowledge, the last reference to the blast in Thoreau's journal.



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Thoreau. By introducing the use of clay to create an improved pencil-lead after 1838, Thoreau brought an enormous boon to American artists, engineers, and writers – and he knew it. (Thoreau's intuitive research has been nicely reconstructed by Henry Petroski [110-12].) Quite conceivably, then, the idea of "the Artist" – God or Nature – working in a matrix of sand and clay contains some admixture of Thoreau the writer-inventor, bringer of benefit to scholars, poets, and scribes for all time. By his art Thoreau manages to redeem and purify the horrifying image of the millhands' torn corpses ("some limbs & bowels here & there"). Evoking the "laboratory of the Artist who made the world and me," he transfigures the lifeless organs of dead men into the material of birth, renewal, and creation.

Of course, the gruesome festoons in the Assabet millyard were not the sole inspiration for Thoreau's elaboration of the sand-bank passage. Well before the 1853 explosion, Thoreau was in the habit of visualizing all creatures' vital organs in the sand bank's spring-like, if "somewhat foecal and stercoral," outpouring. By playing upon the classic connotation of "bowels" (seat of the affections – sympathy or "heart"), he endows his complex image with poetic ambiguity in the journal. "There is no end to the fine bowels here exhibited – heaps of liver – lights & bowels. Have you no bowels? Nature has some bowels, and there again she is mother of humanity" (31 Dec. 1851 [J4: 231]. Cf. Walden 305). Much as the archetypal leaf, Goethe's famous *Urpflanze*, became Thoreau's template for every life form, so the dynamic "motion in the earth" that pushes it to the surface is Thoreau's *Urstuhl*, an archetypal flux that partakes of both unclean excretion and raw creativity. In the journal passage cited above, Thoreau incorporated this grand peristalsis into his symbol for poesis.

As this essay has sought to establish, selections from Thoreau's journalizing during 1853 present a continuing introspective process that is deliberate, yet is guided in part by unconscious association toward a goal of resolution of conflict and liberation from depression. This decidedly modern mode of journal-keeping offers a particularly rich illustration of the self-therapeutic practice that Sperber identifies as "writing it out," and which he sees as "a crucial part of the treatment program that Thoreau unconsciously devised to deal with his severe stress, mood and personality disorders" (119).

With myth-making force, Thoreau the seer celebrates in Walden the return of spring that he glimpsed even in the scorched millyard. Perhaps echoing the Psalmist as much as Genesis, Thoreau now asks, "What is man but a mass of thawing clay?" (307). He proclaims the oneness of plant and animal life-forms, a unity visible in the common clay from which they are pouring in profusion. Far from "soiling" his fingers in the putrid bodies of dead men as he did in his nightmare, the seer stands in the presence of the divine creative force, in the place where nature perpetually "finds her own again under new forms without



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loss."

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May 29: [Henry Thoreau](#) for the 7th time (Dr. Bradley P. Dean has noticed) deployed in his journal a weather term that had been originated by [Luke Howard](#): "These are afternoons when you expect a thunder shower before night—the outlines of cloudy **cumuli** are dimly seen through the hazy furnace like air rising in the west—"



May 29: How still the hot noon; people have retired behind blinds. Yet the kingbird [**Eastern Kingbird**  *Tyrannus tyrannus*]—lively bird, with belly and tail edged with white, and with its lively twittering—stirs and keeps the air brisk.



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1855

At the suggestion of Émilien Renou, the categories “altocumulus” and “altostratus” were added to [Luke Howard](#)’s classification of cloud types.

Largest Scale Global Weather Oscillations 1855-1864

	Southern Oscillation	South Pacific current reversal	Indonesian monsoon	Australian droughts	Indian monsoon	Annual Nile flood
1855	strong	cold La Niña	drought	adequate	deficient	very low
1856	absent	cold La Niña	adequate	adequate	adequate	adequate
1857	moderate +	warm El Niño moderate	drought	drought	adequate	low
1858	moderate +	warm El Niño moderate	adequate	adequate	deficient	quite weak
1859	moderate +	cold La Niña	adequate	adequate	deficient SBM	quite weak
1860	moderate	warm El Niño moderate	adequate	adequate	deficient	adequate
1861	absent	cold La Niña	adequate	drought	adequate	adequate
1862	moderate -	warm El Niño moderate -	adequate	drought	adequate	adequate
1863	absent	cold La Niña	adequate	drought	adequate	adequate
1864	very strong	warm El Niño strong	drought	drought	deficient SBM	extremely poor

The southern ocean / atmosphere “seesaw” links to periodic Indonesian east monsoon droughts, Australian droughts, deficient Indian summer monsoons, and deficient Ethiopian monsoon rainfall causing weak annual Nile floods. This data is presented from Tables 6.2-6.3 of Quinn, William H. “A study of Southern Oscillation-related climatic activity for AD 622-1900 incorporating Nile River flood data,” pages 119-49 in Diaz, Henry F. and Vera Markgraf, eds. EL NIÑO: HISTORICAL AND PALEOCLIMATIC ASPECTS OF THE SOUTHERN OSCILLATION. Cambridge: Cambridge UP, 1992.

March 1, Thursday: [Henry Thoreau](#) wrote to Ann E. Brown.

Concord Feb. 29th '55

Mrs. Brown,

Dear Madam,

Though I failed to recognise you last evening in the dusky entry, I assure you that I have not forgotten a pleasant call which I made at your house some years ago.

Yrs truly

Henry D. Thoreau

Thoreau for the 8th time (Dr. Bradley P. Dean has noticed) deployed in his journal a weather term that had been originated by [Luke Howard](#): “I did well to walk in the forenoon, the fresh and inspiring half of this bright day, for now, at midafternoon, its brightness is dulled, and a fine **stratus** is spread over the sky.”



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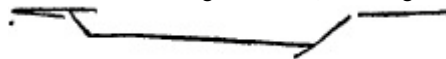
March 1. 10 A.M. — To Derby's Bridge and return by Sam Barrett's, to see ice cakes and meadow crust.

The last day for skating. It is a very pleasant and warm day, the finest yet, with considerable coolness in the air, however, — winter still. The air is beautifully clear, and through [it] I love to trace at a distance the roofs and outlines of sober-colored farmhouses amid the woods. We go listening for bluebirds, but only hear crows and chickadees. A fine seething air over the fair russet fields. The dusty banks of snow by the railroad reflect a wonderfully dazzling white from their pure crannies, being melted into an uneven, sharp, wavy surface. This more dazzling white must be due to the higher sun. I see some thick cakes of ice where an ice-car has broken up. In one I detect a large bubble four inches in diameter about a foot beneath the upper surface and six inches from the lower. In confirmation of my theory, the grain of the ice, as indicated by the linear bubbles within it,



was converging beneath this bubble, as the rays of light under a burning-glass, and what was the under surface at that time was melted in a concave manner to within one and a half inches of the bubble, as appeared by the curvature in the horizontal grain of the more recently formed ice beneath. I omit to draw the other horizontal grain. The situation of this bubble also suggests that ice perhaps increases more above than below the plane of its first freezing in the course of a winter, by the addition of surface water and snow ice.

Examined again the ice and meadow-crust deposited just south of Derby's Bridge. The river is almost down to summer level there now, being only three to four feet deep at that bridge. It has fallen about eight feet since February 17. The ice is piled up there three or four feet deep, and no water beneath, and most of the cakes, which are about one foot thick, have a crust of meadow of equal thickness (*i.e.* from six inches to a foot) attached beneath. I saw in one place three cakes of ice each with a crust of meadow frozen to it beneath, lying one directly upon another and all upon the original ice there, alternately ice and meadow, and the middle crust of meadow measured twenty eight by twenty-two feet. In this case the earth was about six inches thick only for the most part, three to four feet high in all above original ice. This lay on a gentle ridge or swell between the main Derby Bridge and the little one beyond, and it suggested that that swell might have been thus formed or increased. As we went down the bank through A. Hosmer's land we saw great cakes, and even fields of ice, lying up high and dry where you would not suspect otherwise that water had been. Some have much of the withered pickerel-weed, stem and leaves, in it, causing it to melt and break up soon in the sun. I saw one cake of ice, six inches thick and more than six feet in diameter, with a cake of meadow of exactly equal dimensions attached to its under side, exactly and evenly balanced on the top of a wall in a pasture forty rods from the river, and where you would not have thought the water ever came. We saw three white maples about nine inches in diameter which had been torn up, roots and sod together, and in some cases carried a long distance. One quite sound, of equal size, had been bent flat and broken by the ice striking it some six or seven feet from the ground. Saw some very large pieces of meadow lifted up or carried off at mouth of G.M. Barrett's Bay. One measured seventy-four by twenty-seven feet. Topped with ice almost always, and the old ice still beneath. In some cases the black, peaty soil thus floated was more than one and a half feet thick, and some of this last was carried a quarter of a mile without trace of ice to buoy it, but probably it was first lifted by ice. Saw one piece more than a rod long and two feet thick of black, peaty soil brought from I know not where. The edge of these meadow-crusted is singularly abrupt, as if cut with a turf-knife. Of course a great surface is now covered with ice on each side of the river, under which there is no water, and we go constantly *getting in* with impunity. The spring sun shining on the sloping icy shores makes numerous dazzling ice-blinks, still brighter, and prolonged with rectilinear



sides, in the reflection. I am surprised to find the North River more frozen than the South, and we can cross it in many places.

I think the meadow is lifted in this wise: First, you have a considerable freshet in midwinter, succeeded by severe cold before the water has run off much. Then, as the water goes down, the ice for a certain width on each



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side the river meadows rests on the ground, which freezes to it [Or rather all the water freezes where it is shallow and the grass is frozen into it. *Vide* Mar. 11th.]. Then comes another freshet, which rises a little higher than the former. This gently lifts up the river ice, and that meadow ice on each side of it which still has water under it, without breaking them, but overflows the ice which is frozen to the bottom. Then, after some days of thaw and wind, the latter ice is broken up and rises in cakes, larger or smaller with or without the meadow-crust beneath it, and is floated off before the wind and current till it grounds somewhere, or melts and so sinks, frequently three cakes one upon another, on some swell in the meadow or the edge of the upland. The ice is thus with us a wonderful agent in changing the aspect of the surface of the river-valley. I think that there has been more meadow than usual moved this year, because we had so great a freshet in midwinter succeeded by severe cold, and that by another still greater freshet before the cold weather was past.

Saw a butcher-bird, as usual on top of a tree, and distinguished from a jay by black wings and tail and streak side of head.

I did well to walk in the forenoon, the fresh and inspiring half of this bright day, for now, at midafternoon, its brightness is dulled, and a fine stratus is spread over the sky.


Is not "the starry puff (*Lycoperdon stellatum*)" of the "[Journal of a Naturalist](#)," which "remains driving about the pastures, little altered until spring," my five-fingered fungus? The same tells of goldfinches (*Fringilla carduelis*) ([Bewick](#) calls it the "thistle-finch") "scattering all over the turf the down of the thistle, as they pick out the seed for their food." It is singular that in this particular it should resemble our goldfinch, a different bird.

KNAPP

BEWICK'S LAND BIRDS

May 24: [Henry Thoreau](#) for the 9th time (Dr. Bradley P. Dean has noticed) deployed in his journal a weather term that had been originated by [Luke Howard](#): "Just before six, see in the northwest the first summer clouds, methinks, piled in **cumuli** with silvery edges, and westward of them a dull, rainy-looking cloud advancing and shutting down to the horizon; later, lightning in the west and south and a little rain."



May 24: Hear a rose-breasted grosbeak [**Rose-breasted Grosbeak**  *Pheucticus ludovicianus*]. At first thought it a tanager, but soon I perceived its more clear and instrumental – should say whistle, if one could whistle like a flute; a noble singer, reminding me also of a robin; clear, loud and flute-like; on the oaks, hillside south of Great Fields. Black all above except white on wing, with a triangular red mark on breast but, as I saw, all white beneath this. Female quite different, yellowish olivaceous [*sic*] above, more like a muscicapa. Song not so sweet as clear and strong. Saw it fly off and catch an insect like a flycatcher.

[HDT](#)[WHAT?](#)[INDEX](#)**FRIEND LUKE HOWARD****LUKE HOWARD****GO TO MASTER HISTORY OF QUAKERISM****1856**

January 19, Saturday: The great elm in from of postmaster Charles B. Davis's house in [Concord](#) was chopped down, as explained in [Henry Thoreau](#)'s journal: "Davis and the neighbors were much alarmed by the creaking in the late storms, for fear it would fall on their roofs. It stands two or three feet into Davis's yard" "Four men, cutting at once, began to fell the big elm at 10 A.M., went to dinner at 12, and got through at 2:30 P.M. They used a block and tackle with five balls, fastened to the base of a buttonwood, and drawn by a horse ..." "The tree was so sound I think it might have lived fifty years longer; but Mrs. Davis said that she would not like to spend another such a week at the last before it was cut down." Afterwards, Thoreau would write: "I have attended the felling and, so to speak, the funeral of this old citizen of the town..." (we note that someone has planted another elm in place of that old tree, on the east side of the Concord Art Center).

[Thoreau](#) for the 10th time (Dr. Bradley P. Dean has noticed) deployed in his journal a weather term that had been originated by [Luke Howard](#): "There were eight or ten courses of clouds, so broad that with equal intervals of blue sky they occupied the whole width of the heavens, broad white **cirro-stratus** in perfectly regular curves from west to east across the whole sky."

[Thoreau](#) made a reference to [Natick](#), Massachusetts and to [Oliver N. Bacon](#)'s and Samuel Hunt's A HISTORY OF NATICK, FROM ITS FIRST SETTLEMENT IN 1651 TO THE PRESENT TIME: WITH NOTICES OF THE FIRST WHITE FAMILIES, AND ALSO AN ACCOUNT OF THE CENTENNIAL CELEBRATION, OCT. 16, 1851, REV. MR. HUNT'S ADDRESS AT THE CONSECRATION OF DELL PARK CEMETERY, &C....

A HISTORY OF NATICK



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January 19: Another bright winter day.

P.M. — To river to get some water asclepias to see what birds' nests are made of.

The only open place in the river between Hunt's Bridge and the railroad bridge is a small space against Merrick's pasture just below the Rock.²⁶ As usual, just below a curve, in shallow water, with the added force of the Assabet.

The willow osiers of last year's growth on the pollards in Shattuck's row, Merrick's pasture, from four to seven feet long, are *perhaps* as bright as in the spring, the lower half yellow, the upper red, but they are a *little* shriveled in the bark.


Measured against the great elm in front of Charles Davis's on the Boston road, which he is having cut down. The chopper, White, has taken off most of the limbs and just begun, tried his axe, on the foot of the tree. He will probably fall it on Monday, or the 21st. At the smallest place between the ground and the limbs, seven feet from the ground, it is fifteen feet and two inches in circumference; at one foot from the ground on the lowest side, twenty-three feet and nine inches. White is to have ten dollars for taking off the necessary limbs and cutting it down merely, help being found him. He began on Wednesday. Davis and the neighbors were much alarmed by the creaking in the late storms, for fear it would fall on their roofs. It stands two or three feet into Davis's yard. As I came home through the village at 8.15 P.M., by a bright moonlight, the moon nearly full and not more than 18° from the zenith, the wind northwest, but not strong, and the air pretty cold, I saw the melon-rind arrangement of the clouds on a larger scale and more distinct than ever before. There were eight or ten courses of clouds, so broad that with equal intervals of blue sky they occupied the whole width of the heavens, broad white cirro-stratus in perfectly regular curves from west to east across the whole sky. The four middle ones, occupying the greater part of the visible cope, were particularly distinct. They were all as regularly arranged as the lines on a melon, and with much straighter sides, as if cut with a knife. I hear that it attracted the attention of those who were abroad at 7 P.M., and now, at 9 P.M., it is scarcely less remarkable. On one side of the heavens, north or south, the intervals of blue look almost black by contrast. There is now, at nine, a strong wind from the northwest. Why do these bars extend east and west? Is it the influence of the sun, which set so long ago? or of the rotation of the earth? The bars which I notice so often, morning and evening, are apparently connected with the sun at those periods.

BOTANIZING

In Oliver N. Bacon's History of Natick, page 235, it is said that, of phænogamous plants, "upwards of 800 species were collected from Natick soil in three years' time, by 11 single individual." I suspect it was Bacon the surveyor. There is given a list of those which are rare in that vicinity. Among them are the following which I do not know to grow here: *Actæa rubra* (W.),²⁷ *Asclepias tuberosa*,²⁸ *Alopecurus pratensis*,²⁹ *Corallorhiza odontorhiza* (?) (Nutt.), *Drosera filiformis* (Nutt.), *Ledum latifolium*,³⁰ *Malaxis lilifolia* (W.) (what in Gray?), *Sagina procumbens*.³¹ Among these rare there but common here are *Calla Virginica*, *Glechoma hederacea*, *Iris prismatica*, *Lycopus Virginicus*, *Mikania scandens*, *Prunus borealis*, *Rhodora Canadensis*, *Xyris aquatica*, *Zizania aquatica*. They, as well as we, have *Equisetum hyemale*, *Kalmia glauca*, *Liatris scariosa*, *Ulmus fulva*, *Linnæa borealis*, *Pyrola maculata*, etc., etc.

Bacon quotes White, who quotes Old Colony Memorial account of manners and customs, etc., of our ancestors. Bacon says that the finest elm in Natick stands in front of Thomas F. Hammond's house, and was set out "about the year 1760." "The trunk, five feet from the ground, measures fifteen and a half feet." [G. Emerson](#) gives it different account, *q.v.*

Observed within the material of a robin's nest, this afternoon, a cherry-stone.

Gathered some dry water milkweed stems to compare with the materials of the bird's nest [**Yellow Warbler**  *Dendroica petechia*] of the 18th. The bird used, I am almost certain, the fibres of the bark of the stem, —not the pods,— just beneath the epidermis; only the bird's is older and more fuzzy and finer, like worn twine or string. The fibres and bark have otherwise the same appearance under the microscope. I stripped off some bark about one sixteenth of an inch wide and six inches long and, separating ten or twelve fibres from the epidermis, rolled it in my fingers, making a thread about the ordinary size. This I could not break by direct pulling, and no man could. I doubt if a thread of flax or hemp of the same size could be made so strong. What an admirable material for the Indian's fish-line! I can easily get much longer fibres. I hold a piece of the dead weed in my hands, strip off a narrow shred of the bark before my neighbor's eyes and separate ten or twelve fibres as fine as hair, roll

26. Hubbard's Bridge and, I have no doubt. Lee's Bridge, as I learned in my walk the next day.

27. Found since.

28. Probably here.

29. Found since.

30. Found since.

31. Found since.



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them in my fingers, and offer him the thread to try its strength. He is surprised and mortified to find that he cannot break it. Probably both the Indian and the bird discovered for themselves this same (so to call it) wild hemp. The corresponding fibres of the mikania seem not so divisible, become not so fine and fuzzy; though somewhat similar, are not nearly so strong. I have a hang-bird's nest from the riverside, made almost entirely of this, in narrow shreds or strips with the epidermis on, wound round and round the twigs and woven into a basket. That is, this bird has used perhaps the strongest fibres which the fields afforded and which most civilized men have not detected.

Knocked down the bottom of that summer yellowbird's nest made on the oak at the Island last summer. It is chiefly of fern wool and also, *apparently*, some sheep's wool(?), with a fine green moss (apparently that which grows on button-bushes) innixed, and some milkweed fibre, and all very firmly agglutinated together. Some shreds of grape-vine bark about it. Do not know what portion of the whole nest it is.

June 8, Sunday: After Senator Preston Brooks of South Carolina beat Senator Charles Sumner with his cane while the senator from Massachusetts was seated at his desk in the federal legislature, the Unitarian Reverend Ezra Stiles Gannett preached at the Federal Street Meetinghouse of Boston on "The State of the Country."

194 residents of the Pitcairn Islands resettled on Norfolk Island and its two neighboring outcroppings, as the initial settlement that did not amount to a penal colony.³²



June 8. We have had six days either rain-threatening or rainy. The last two somewhat rainy or mizzling.

P.M. To Cedar Swamp.

Pulled up a yellow lily root, four feet long and branching, two and a half inches [in] diameter and about same size at each end where it had broken off, tree-like. Broken off, it floats. Great white rootlets put out all along it. I find no *Andromeda racemosa* in flower. It is dead at top and slightly leafed below. Was it the severe winter, or cutting off the protecting evergreens? It grows four or five rods from knoll near a sawed stump between two large red maple clumps. The three-leafed Solomon's-seal has almost entirely done, while the two-leaved is quite abundant. *Stellaria longifolia* opposite Barbarea Shore not yet out. It is obviously different from what I call *S. borealis*, much more tall (one foot high) and upright, with branches ascending (not spreading) (the other grows in a dense mass at Corner Spring); leaves longer and more linear, and not at all ciliate like the other; stem much sharper-angled, almost winged; flower-buds more long and slender; and grows in high grass and is later.

I observe in a mass of damp shavings and leaves and sand there, in the shade, a little prostrate willow just coming into flower, perhaps a black willow. Pulling it up, I find it to be a twig about sixteen inches long, two thirds buried in the damp mass. This was probably broken off by the ice, brought down, washed up, and buried like a layer there; and now, for two thirds its length, it has put out rootlets an inch or two long abundantly, and leaves and catkins from the part above ground. So vivacious is the willow, availing itself of every accident to spread along the river's bank.

The ice that strips it only disperses it the more widely.

It never says die. May I be as vivacious as a willow. Some species are so brittle at the base of the twigs that they break on the least touch, but they are as tough above as tender at base, and these twigs are only thus shed like seeds which float away and plant themselves in the first bank on which they lodge.

I commonly litter my boat with a shower of these black willow twigs whenever I run into them. A kingbird's

32. Captain Cook had come across this island group on October 10, 1774, and had reported tall, straight trees (the Norfolk pine) and flax-like plants. This had piqued interest due to the fact that the British Royal Navy was dependent on Baltic seaports for flax and hemp for sails and ropes. Norfolk Island promised a ready supply of these war items, and tall pines for ships' masts. Governor Arthur Phillip was instructed to colonise Norfolk Island before the French could arrive there. Following the arrival of the First Fleet in New South Wales, Lieutenant Philip Gidley King led a party of 15 convicts and 7 free men to Norfolk on March 6, 1788 and prepared for commercial development. Neither the flax nor the timber had proved useful and the island had been developed as a farm providing Sydney with some grain and vegetables. Many convicts elected to remain after completing their sentences. The initial settlement had been abandoned in 1813 but a 2d penal administration had arrived in 1824, this one intended for the most incorrigible of the convicts. This new administration had gained a reputation for viciousness and had also been abandoned, in 1855 when there was no longer transportation to Australia. These descendants of Tahitians and the *HMAV Bounty* mutineers had come because the water supply of the Pitcairn group of islands was too small for its growing population. After the creation of the Commonwealth of Australia in 1901, Norfolk Island would be one of its external territories. Self-government would begin in 1979.



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nest on a black cherry, above Barbarea Shore, loosely constructed, with some long white rags dangling; one egg. At Cedar Swamp, saw the pe-pe catching flies like a wood pewee, darting from its perch on a dead cedar twig from time to time and returning to it. It appeared to have a black crown with some crest, yellowish (?) bill, gray-brown back, black tail, two faint whitish bars on wings, a dirty cream-white throat, and a gray or ash white breast and beneath, whitest in middle. I had noticed when coming up the river two or three dead suckers, one with a remarkable redness about the anal fins; and this reminded me of the ephemerae. It was the 20d of June, 1851, that I observed them in such numbers. When I returned to my boat, about five, the weather being mizzling enough to require an umbrella, with an easterly wind and dark for the hour, my boat being by chance at the same place where it was in '51, I noticed a great flight of ephemera over the water, though not so great as that. The greater part were flying down-stream against the wind, but if you watched one long enough you would see him suddenly turn at length and fly swiftly back up the stream. They advanced against the wind faster than I floated along. They were not coupled nor coupling, — I only noticed two coupled, — but flew, most of them, with their bodies curved, thus:



or more, and from time to time each one descended to the water and touched it, or rested on it a second or two, sometimes several minutes. They were generally able to rise, but very often before it arose, or not being able to rise, it was seized by a fish. While some are flying down they are met by others coming up. The water was dimpled with the leaping fish. They reach about ten or fifteen feet high over the water, and I also saw a stream of them about as thick over a narrow meadow a dozen rods from the water in the woods. The weather was evidently unfavorable, what with the wind and the rain, and they were more or less confined to the shore, hovering high over the bushes and trees, where the wind was strong over the river. I had not noticed any on leaves. At one place, against Dodge's Brook, where they were driven back by a strong head wind at a bend, more than usual were wrecked on the water and the fishes were leaping more numerous than elsewhere. The river was quite alive with them, and I had not thought there were so many in it, — great black heads and tails continually thrust up on all sides of my boat. You had only to keep your eye on a floating fly a minute to see some fishy monster rise and swallow it with more or less skill and plashing. Some skillfully seized their prey without much plashing, rising in a low curve and just showing their backs; others rose up perpendicularly, half their length out of water, showing their black backs or white bellies or gleaming sides; others made a noisy rush at their prey and leaped entirely out of water, falling with a loud splash. You saw twenty black points at once. They seemed to be suckers; large fish, at any rate, and probably various kinds. What a sudden surfeit the fishes must have!

They are of various sizes, but generally their solid bodies about three quarters of an inch long or less, yellowish tinge, transparent, with rows of brown spots; wings gauze-like, with a few opaque brown spots.³³

June 9, Monday: [Henry Thoreau](#) for the 11th time (Dr. Bradley P. Dean has noticed) deployed in his journal a weather term that had been originated by [Luke Howard](#): "There are some large **cumuli** with glowing downy cheeks floating about."³⁴

June 11, Wednesday: Henry Thoreau for the 12th time deployed in his journal a weather term that had been originated by [Luke Howard](#): "Great **cumuli** are slowly drifting in the intensely blue sky, with glowing white borders."³⁵



June 11. P. M. -To Flint's Pond.

The locust in graveyard shows but few blossoms yet. It is very hot this afternoon, and that peculiar stillness of summer noons now reigns in the woods. I observe and appreciate the shade, as it were the shadow of each particular leaf on the ground. I think that this peculiar darkness of the shade, or of the foliage as seen between you and the sky, is not accounted for merely by saying that we have not yet got accustomed to clothed trees, but

33. Three which I brought home were dead the next morning. A shad-fly on our window is rather smaller than the average of the former; has but two streamers and no dark spots on wings.



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the leaves are rapidly acquiring a darker green, are more and more opaque, and, besides, the sky is lit with the intensest light. It reminds me of the thunder-cloud and the dark eyelash of summer. Great cumuli are slowly drifting in the intensely blue sky, with glowing white borders. The red-eye sings incessant, and the more indolent yellow-throat vireo, and the creeper, and perhaps the redstart? or else it is the parti-colored warbler. I perceive that, scent from the young sweet-fern shoots and withered blossoms which made the first settlers of Concord to faint on their journey.

Saw yesterday a *great* yellow butterfly with black marks.

See under an apple tree, at entrance of Goose Pond Path from Walden road, a great fungus with hollow white stem, eight or nine inches high, whose black funereal top has incited this morning, leaving a black centre with thin white scales on it. All the cistuses are shut now that I see, and also the veiny-leaved hieracium with one leaf on its stem, not long open. I notice no white lily pads near the bathing-rock in Flint's pond. See a bream's nest two and a quarter feet [in] diameter, laboriously scooped out, and the surrounding bottom for a diameter of eight feet (!) comparatively white and clean, while all beyond is mud and leaves, etc., and a very large green and cupreous bream with a red spot on the operculum is poised over the centre, while half a dozen shiners are hovering about, apparently watching a chance to steal the spawn.

A partridge [Ruffed Grouse] *Bonasa umbellus* (Partridge) with young in the Saw Mill Brook path. Could hardly tell what kind of creature it was at first, it made such a noise and fluttering amid the weeds and bushes. Finally ran off with its body flat and wings somewhat spread.

Utricularia vulgaris very abundant in Everett's Pool. A beautiful grass-green snake about fifteen inches long, light beneath, with a yellow space under the eyes along the edge of the upper jaw.

The *Rubus triflorus* apparently out of bloom at Saw Mill, before the high blackberry has begun.

Rice tells me he found a turtle dove's nest on an apple tree near his farm in Sudbury two years ago, with white eggs; so thin a bottom you could see the eggs through.



34. You can consult all Brad's findings in this regard in the lead article of the last Thoreau Society Bulletin he was able to put out before his unexpected and untimely death: Fall 2005, Number 253, "Science, Poetry, and 'Order among the Clouds': Thoreau and Luke Howard."





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1858

March 22, Monday: [Henry Thoreau](#) for the 13th time (Dr. Bradley P. Dean has noticed) deployed in his journal a weather term that had been originated by [Luke Howard](#): “I see those peculiar spring (?) clouds, scattered **cumuli** with dark level bases.”

May 12, Wednesday: Minnesota became a state.

[Henry Thoreau](#) for the 14th time (Dr. Bradley P. Dean has noticed) deployed in his journal a weather term that had been originated by [Luke Howard](#): “The peculiarity seems to be that the sky is not generally overcast, but elsewhere, south and northeast, is a fair-weather sky with only innocent **cumuli**, etc., in it.”

June 3, Thursday: John Brown left Boston with \$500 in gold and with permission to retain the rifles he had in the Kansas Territory.

[Henry Thoreau](#) for the 15th time (Dr. Bradley P. Dean has noticed) deployed in his journal a weather term that had been originated by [Luke Howard](#): “Yet I was surprised to observe that a long, straggling downy **cumulus** extending north and south a few miles east of us, when the sun was perhaps an hour high, cast its shadow along the base of the Peterboro Hills, and did not fall on the other side, as I should have expected.”



June 3. At length, by 3 o'clock, the signs of dawn appear, and soon -we hear the robin and the *Fringilla hyemalis*, -its prolonged jingle, -sitting on the top of a spruce, the chewink, and the wood thrush. Whether you have slept soundly or not, it is not easy to lie abed under these circumstances, and we rose at 3.30, in order to see the sun rise from the top and get our breakfast there. Concealing our blankets under a shelving rock near the camp, we set out.

It was still hazy, and we did not see the shadow of the mountain until it was comparatively short. We (lid not get the most distant views, as of the Green and White Mountains, while we were there. We carried up fuel for the last quarter of a mile. A *Fringilla hyemalis* seemed to be attracted by the smoke of our fire, and flew quite near to us. They are the prevailing bird of the summit, and perhaps are baited by the crumbs left by visitors. It was flitting about there, and it would sit and sing, on the *top* of a dwarf spruce, the strain I have often heard.

35. You can consult all Dr. Bradley P. Dean's detective work in this regard in the lead article of the last [Thoreau Society Bulletin](#) he was able to put out before his unexpected and untimely death: Fall 2005, Number 253, “Science, Poetry, and ‘Order among the Clouds’: Thoreau and Luke Howard.”





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I saw just beneath the summit, and commencing some fifteen or twenty rods from it, dwarfish *Rhodora Canadensis*, not yet anywhere quite out, much later than in file valley, very common; lambkill; and checkerberry; in slightly boggy places, quite dwarfish specimens of *Eriophorum vaginatum*, quite common in similar localities all over the rocky part, six inches high or more. A little water andromeda with it, scarcer out, and Labrador tea., scarcely suggesting flowers. (This I observed only in two or three places on the northerly side.) A viburnum (probably *nudum* or a form of it) was quite common, just begun to leaf, and with nemopanthus, showing its transparent leaflets not yet expanded, a little behind the other, was quite sizable, especially the latter. These two, with the spruce, the largest shrubs at this height. In the little thickets made by these bushes, grew the two-leaved Solomon's-seal, not nearly out, and *Clintonia borealis*, not budded, though out in the valley. Within the folded leaves of the last, was considerable water, as within the leaves of the seaside goldenrod on the sands of the Cape. *Cornus Canadensis*, along the base of the rocks, not out. Diervilla. And, on the moist ground or in the small bogs, *Lycopodium annotinum*, resembling at first sight the *L. lucidulum*, but running, was very common in boggy places, sometimes forming quite conspicuous green patches.

Tile above plants of the mountain-top, except perhaps the mountain cranberry, extended downward over the whole top or rocky part of the mountain and were there mingled with a little *Polypodium vulgare*; a peculiar *Amelanchier Canadensis*, apparently variety *oligocarpa*, just begun to bloom, with few flowers, short roundish petals, and finely serrate leaves; red cherry, not out; *Populus tremuliformis*, not common and quite small; small willows, apparently *discolor*, etc., also *rostrata*, and maybe *humilis*; canoe birch and yellow birch, for the most part scrubby, largest in swampy places; meadow-sweet; *Lycopodium clavatum*; *Amelanchier Canadensis* var. *oblongifolia*, not quite out, a little of it; and also a little very dwarfish hemlock and white pine (two or three feet high); a little mayflower and *Chiogenes hispidula*.

We concluded to explore the whole rocky part of the mountain in this wise, to saunter slowly about it, about the height and distance from the summit. of our camp, or say half a mile, more or less, first going north from the summit and returning by the western semicircle, and then exploring the east side, completing the circle, and return over the summit at night.

To sum up, these were the *Plants of the Summit*, i.e. within a dozen rods of it: *Potentilla tridentata* (and lower); *Vaccinium Vitis-Idæa*; fine grass [Was it not *Juncus trifidus* of August, 1860?]; sericocarpus-like radical leaves [Was it not *Solidago thyrsoides* of August, 1860?]; *Arenaria Grænlantica*; dwarf black spruce; a little dry moss; the two kinds of cladonia, white and green, and the small leather-colored lichen of rocks [*U. erosa* (?) or *hyperborea* (?). *Vide* Sept. 21, 1858, and a specimen from Lafayette. *Vide* specimen of August, 1860.], mingled with the larger *Umbilicaria pustulata*. All these but the *V. Vitis-Idæa* generally dispersed over the rocky part [The *Vaccinium Vitis-Idæa* also in patches lower down. *Vide* August, 1860.].

Within fifteen or twenty rods of it, or scarcely, if at all, lower than the last: *Vaccinium Pennsylvanicum* and perhaps the variety *angustifolium*; *Pyrus arbutifolia*; mountain-ash. Generally distributed.

Commencing fifteen or twenty rods below it: *Rhodora*; lambkill; checkerberry; *Eriophorum vaginatum*; water andromeda; Labrador tea; *Viburnum*, (*nudum*,?); nemopanthus; two-leaved Solomon's-seal; clintonia; *Cornus Canadensis*; *Lycopodium annotinum*,; diervilla.

Generally lower than the above, in the rest of the bare rocky part, with all of the above: *Ribes prostratum*; *Polypodium vulgare*; *Amelanchier Canadensis* var. *oligocarpa* red cherry; *Populus tremuliformis*; *Salix* apparently *discolor*, perhaps also *humilis*, certainly *rostrata*,; meadow-sweet; canoe birch; yellow birch; *Lycopodium clavatum*; *Amelanchier oblongifolia*; a little red elder; hemlock; white pine; mayflower; chiogenes. [Saw the raspberry in '52 and '60.]

Did not examine particularly the larger growth of the swamps, but think it was chiefly spruce, white and yellow birch, mountain-ash, etc.

The *Vaccinium Pennsylvanicum* and the *Abies nigra* are among the most prevailing conspicuous plants.

We first descended somewhat toward the north this forenoon, then turned west over a ridge lay which some ascend from the north. There: are several large ponds not far from the mountain on the north, and I thought there was less forest to be seen on this side than on the south. We crossed chic or two now dry watercourses, there, however, judging from the collections of rubbish or drift, much water must have flown at some other season.

Jackson in his map in the Report on the Geology of Massachusetts calls this mountain "mica slate and porphyritic granite," and [says] that the rocks on the summit are "a hard variety of gneiss filled with small crystals of garnets."

We observed that the rocks were remarkably smoothed, almost polished and rounded, and also scratched. The scratches run from about north-northwest to south-southeast. The sides of the rocks often straight, upright walls, several rods long; from north to south and five to ten feet high, with a very smooth, rounded edge. There were many of these long, straight, rounded walls of rock, especially on the northwest and west. Some smaller or lower ones were so rounded and smooth as to resemble at a little distance long-fallen trunks of trees. The rocks were,



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indeed, singularly worn on a great scale. Often a vertical cross-section would show some such profile as this:



as if they had been grooved with a tool of a corresponding edge. There were occasionally conspicuous masses and also veins of white quartz, and very common were bright-purple or wine-colored garnets imbedded in the rock, looking like berries in a pudding'. In many parts, as on the southeast plateau especially, the rocks were regularly stratified, and split into regular horizontal slabs about a foot in thickness, projecting one beyond another like steps.

The little bogs or mosses, sometimes only a rod in diameter, are a similar feature. Ordinarily the cladia and other lichens are crackling under your feet, when suddenly you step into a miniature bog filling the space between two rocks and you are at a loss to tell where the moisture comes from. The amount of it seems to be that some spongy moss is enabled to grow there and retain some of the clouds which rest on it. Moisture and aridity are singularly near neighbors to each other up there. The surface is made up of masses of rock more or less smoothed and rounded, or else jagged, and the little soil between is a coarse, gravelly kind, the ruins of the rocks and the decayed vegetation that has grown there. You step unexpectedly from Arabia Pretax, where the dry lichens crackle under your feet, into a miniature bog, say Dismal Swamp, where you suddenly sink a foot in wet moss, and the next step carries you into Arabia Petraea again. In more extensive swamps I slumped through moss to water sometimes, though the bottom was of rock, while a fire would rapidly spread in the and lichens around. Perhaps the mosses grow, in the wettest season chiefly, and so are enabled to retain some moisture through the driest. Plants of the bogs and of the rocks grow close to each other. You are surprised to see a great many plants of bogs growing close to the most barren and driest spots, where only cladia cover the rocks. Often your first notice of a bog in the midst of the arid waste, where the lichens crackle under your feet, is your slumping a foot into wet moss. Methinks there cannot be so much evaporation going on up there, - witness the water in the clintonia leaves, as in the solidago by the sandy seashore, and this (which is owing to the coolness), rather than the prevalence of mist, may account for the presence of this moisture forming bogs.

In a shallow rain-water pool, or rock cistern, about three rods long by one or one and a half wide, several hundred feet below the summit, on the west side, but still on the bare rocky top and on the steepest side of the summit, I saw toad-spawn (black with white bellies), also some very large spawn new to me. There were four or five masses of it, each three or four inches in diameter and of a peculiar light misty bluish white as it lay in the water near the surface, attached to some weed or stick, as usual. Each mass consisted of but few large ova, more than a quarter of an inch in diameter, in which were pale-brown tadpoles flattened out. The outside of the mass when taken up was found to consist of large spherical or rounded gelatinous projections three quarters of an inch wide, and blue in the light and air, while the ova within were greenish. This rain-water pool was generally less than a foot deep, with scarcely a weed in it, but considerable mud concealing its rocky bottom. The spawn was unusually clean and clear. I suspect it to be that of bullfrogs, [Probably *Rana jontinalis*. *Vide* August, 1860.] though not a frog was to be seen; they were probably lurking beneath the rocks in the water at that hour. This pool was bounded on one or two sides by those rounded walls of rock five or six feet high. My companion had said that he heard a bullfrog the evening before. Is it likely that these toads and frogs ever hopped up there? The hylodes peeped regularly toward night each day in a similar pool much nearer the summit. Agassiz might say that they originated on the top. Perhaps they fell from the clouds in the form of spawn or tadpoles or young frogs. I think it more likely that they fell down than that they hopped up. Yet how can they escape the frosts of winter? The mud is hardly deep enough to protect them.

Having reached the neighborhood of our camp again and explored the wooded portion lower down along the path up the mountain, we set out northeast along the east side of the mountain. The southeast part of the mountain-top is an extended broad rocky *almost* plateau, consisting of large flat rocks with small bogs and rain-water pools and easy ascents to different levels. The black spruce tree which is scattered here and there over it, the prevailing tree or shrub of the mountaintop, evidently has many difficulties to contend with. It is generally of a yellowish green, its foliage. The most exposed trees are very stout and spreading close to the rock, often much wider close to the rock than they are high, and these lower, almost their only, limbs completely filling and covering openings between the rocks. I saw one which grew out of a narrow crack in the rock, which was three feet high, five inches in diameter at the ground, and six feet wide on the rock. It was shaped like a bodkin, - the main stem. The spruce commonly grows in clefts of the rocks; has many large limbs, and longer than the tree is high, perhaps, spreading close and low over the rock in every direction, sometimes eight or ten within a foot of the rock; then, higher up the stem, or midway for three or six feet, though perfectly perpendicular, is quite bare on the north side and commonly showing no trace of a limb, no stubs, but the limbs at this height all ray out southward, and the top is crowned with a tuft of tender twigs. This proves the violence of the storms which



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they have to contend with. Its branches love to run along flat on the rocks, filling the openings between the rocks. It forms dense coverts and forms, apparently, for the rabbits, etc. A single spruce tree of this habit would sometimes make a pretty good shelter, while the rocks on each side were your walls.

As I walked over this plateau, I first observed, looking toward the summit, that the steep angular projections of the summit and elsewhere and the brows of the rocks were the parts chiefly covered with dark brown lichens,



— umbilicaria, etc., — as if they were to grow on the ridge and slopes of a man's nose only. It was the steepest and most exposed parts of the high rocks alone on which they grew, where you would think it most difficult for them to cling. They also covered the more rounded brows on the sides of the mountain, especially the east side, where they were very dense, fine, crisp, and firm, like a sort of shagreen, giving a firm footing or hold to the feet where it was needed. It was these that gave that Ararat-brown color of antiquity to these portions of the mountain, which a few miles distant could not be accounted for compared with the more prevalent gray. From the sky-blue you pass through the misty gray of the rocks, to this darker and more terrene color. The temples of the mountain are covered with lichens, which color the mountain for miles.

The west side descends steeply from the summit, but there is a broad almost plateau on the southeast and east, not much beneath the summit, with a precipitous termination on the east, and the rounded brows of the last are covered with the above-named lichens. A spur of moderate length runs off northerly; another, but lower, southwesterly; another, much longer, a little Higher than the last, southerly; and one longer and higher than these, one or two miles long, northeasterly. As you creep down over those eastern brows to look off the precipice, these rough and rigid lichens, forming a rigid crust, as it were baked, clone brown, in the stuff of centuries, afford a desirable hand and foot hold.

They seemed to me wild robins that placed their nests in the spruce up there. I noticed one nest. William Emerson, senior, says they do not breed on Staten Island. They do breed at least at Hudson's Bay. They are certainly a hardy bird, and are at home on this cool mountain-top.

We boiled some rice for our dinner, close by the edge of a rain-water pool and bog, on the plateau southeast from the summit. Though there was so little vegetation, our fire spread rapidly through the dry cladonia lichens on the rocks, and, the wind being pretty high, threatened to give its trouble, but we put it out with a spruce bough dipped in the pool. [And wet the ground with it. You cook beside such a moss for the sake of water.] I thought that if it had spread further, it must soon have come to a bog. Though you could hardly tell what was moist and what dry till the fire came to it. Nothing could be drier than the cladonia, which was often adjacent to a mass of moss saturated with moisture.

These rain-water pools or cisterns are a remarkable feature. There is a scarcity of bubbling springs, but this water was commonly cool enough in that atmosphere and warm as the day was. I do not know why they were not warmer, for they were shallow and the nights were not cold. Can there be some concealed snow or ice about? Hardly. They are quite shallow, but sometimes four or five rods over and with considerable mud at the bottom at first, decayed lichens, and disintegrated rock. Apparently these were the origin of the bogs, *Eriophorum vaginatum*, moss, and a few other boggy plants springing up in them and gradually filling them; yet, though sometimes filled with sedge (?) or fine grass, and generally the dwarfish *Eriophorum vaginatum* in the moss, they were singularly barren, and, unless they were fairly converted into swamps, contained very little variety. You never have to go far to find water of some kind. On the top, perhaps, of a square half-acre of almost bare rock, as in what we called our wash-room by our camp, you find a disintegrated boy, wet moss alternating with dry cladonia (sign and emblem of dryness in our neighborhood), and water stands in little holes, or if you look under the edges of a boulder there, you find standing water, yet cool to drink.

After dinner we kept on northeast over a high ridge east of the summit, whence was a good view of that part of Dublin and Jaffrey immediately under the mountain. There is a fine, large lake extending north and south, apparently in Dublin, -which it would be worth the while to sail on. When on the summit of this, I heard the ring of toads from a rain-pool a little lower and northeasterly. It carried me back nearly a month into spring; (though they are still ringing and copulating in Concord), it sounded so springlike in that clear, fresh air. Descending to that pool we found toads copulating at the bottom of the water.

In one or two places on this side of the mountain, which, as I have said, terminated in an abrupt precipice, I saw bogs or meadows four or six rods wide or more, but with only grass and moss and *eriophorum*, without bushes, in them, close to the edge of the mountain or precipice, where, if you stood between the meadow and the summit, looking east, there would appear to be a notch in the rim of the cap or saucer on the east and the meadow

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ready to spill over and run down the mountain on that side; but when you stood on this notched edge, the descent



was seen to be much less precipitous than you had expected. Such spongy mountain bogs, however, are evidently the sources of rivers. Lakes of the clouds when they are clear water. Between this and the northeast spur or ridge was the largest swamp or bog that I saw, consisting, perhaps, of between one and two acres, as I remember. It was a grassy and mossy bog without large bushes, in which you sank a foot, with a great many fallen trees in it, showing their bleached upper side here and there but almost completely buried in the moss. This must once have been a dense swamp, full of pretty large trees. The trees buried in the moss were much larger than any now standing at this height. The outlet of this, if it had any, must have been northwesterly. This was a wild place enough.

Having ascended the highest part of the northeastern ridge north of this bog, we returned to the summit, first to the ridge of the plateau, and west on it to the summit, crossing a ravine between. I noticed, in many places upon the mountain, sandy or gravelly spaces from a few feet to a rod in diameter, where the thin sward and loam appeared to have been recently removed or swept away. I was inclined to call them scars, and thought of very violent winds and tempests of rain as the cause, perhaps, but do not know how to account for them.

We had thus made a pretty complete survey of the top of the mountain. It is a very unique walk, and would be almost equally interesting to take though it were not elevated above the surrounding valleys. It often reminded me of my walks on the beach, and suggested how much both depend for their sublimity on solitude and dreariness. In both cases we feel the presence of some vast, titanic power. The rocks and valleys and bogs and rain-pools of the mountain are so wild and unfamiliar still that you do not recognize the one you left fifteen minutes before. This rocky region, forming what you may call the top of the mountain, must be more than two miles long by one wide in the middle, and you would need to ramble about it many times before it would begin to be familiar. There may be twenty little swamps so much alike in the main that [you] would not know Whether you had seen a particular one before, and the rocks are trackless and do not present the same point. so that it has the effect of the most intricate labyrinth and artificially extended walk.

This mountain is said in the Gazetteer to extend northeast [and] southwest five miles, by three wide, and the streams on the east to empty into the Contoocook and Merrimack, on the west into the Ashuelot and Connecticut; is 3718 feet high; and, judging from its account, the top was wooded fifty years ago.

We proceeded to get our tea on the summit, in the very place where I had made my bed for a night some fifteen years before. There were a great many insects of various kinds on the topmost rocks at this hour, and among them I noticed a yellow butterfly and several large brownish ones fluttering over the apex.

It was interesting to watch from that height the shadows of fair-weather clouds passing over the landscape. You could hardly distinguish them from forests. It reminded me of the similar shadows seen on the sea from the high bank of Cape Cod beach. There the perfect equality of the sea, atoned for the comparatively slight elevation of the bank. We do not commonly realize how constant and amusing a phenomenon this is in a sunnier day to one standing on a sufficiently elevated point. In the valley or on the plain you do not commonly notice the shadow of a cloud unless you are in it, but on a mountain-top, or on a lower elevation in a plain country or by the seaside, the shadows of clouds flitting over the landscape are a never-failing source of amusement. It is commonly easy to refer a shadow to its cloud, since in one direction its form is preserved with sufficient accuracy. Yet I was surprised to observe that a long, straggling downy cumulus extending north and south a few miles east of us, when the sun was perhaps an hour high, cast its shadow along the base of the Peterboro Hills, and did not fall on the other side, as I should have expected. It proved the clouds not so high as I supposed. It suggested how with tolerable accuracy you might easily calculate the height of a cloud with a quadrant and a good map of the country; e. g., observe at what distance the shadow of a cloud directly overhead strikes the earth, and then take the altitude of the sun, and you may presume that you have the base and two angles of a right-angled triangle, from which the rest may be calculated; or you may allow for the angle of elevation of the mountain as seen from the place where the shadow falls. Also you might determine the breadth of a cloud by observing the breadth of the shadow at a given distance, etc., etc. Many such calculations would be easy in such a locality. It was pleasant enough to see one man's farm in the shadow of a cloud, -which perhaps he thought covered all the Northern



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States, - while his neighbor's farm was in sunshine. It was still too hazy to allow of our seeing the shadow of the mountain, so we descended a little before the sun set, but already the hylodes had been peeping for some time.

Again the wood thrush, chewink, etc., sang at eve. I had also heard the song sparrow.

As the sky was more cloudy this evening, we looked out a shelving rock near our camp, where we might, take shelter from the rain in the night if necessary, i.e., if our roof did not prove tight enough. There were plenty of clefts and small caverns where you might be warm and dry. The mosquitoes troubled us a little this night.

Lying up there at this season, when the nighthawk is most musical reminded me of what I had noticed before, that this bird is crepuscular in its habits. It was heard by night only up to nine or ten o'clock and again just before dawn, and marked those periods or seasons like a clock. Its note very conveniently indicated the time of night. It was sufficient to hear the nighthawk booming when you awoke to know how the night got on, though you had no other evidence of the hour. I did not hear the sound of any beast. There are no longer any wolves to howl or panthers to scream. One man told me that many foxes took refuge from (logs and sportsmen on this mountain. The plants of cold northern bogs grow on this mountain-top, and even they have a boreal habit here, more dwarfish than such of them as grow in our swamps. The more memorable and peculiar plants of the mountaintop were the mountain cranberry and the *Potentilla tridentata*, the dwarfish spruce, *Arenaria Grælandica* (not now conspicuous). The *Ribes prostratum*, or fetid currant, was very abundant from quite near the summit to near the base, and its currant-acid fragrance was quite agreeable to me, partly, perhaps, from its relation to the currant of the gardens. You also notice many small weed-like mountain-ashes, six or eight inches high, which, on trying to pull up, you find to be very firmly rooted, having an old and large root out of proportion to their top. I might also name in this connection not only the blueberry but the very common but dwarfish *Eriophorum vaginatum* and the *Lycopodium annotinum*, also the amelanchier, variety *oligocarpa*. I was not prepared to find vegetation so much later there than below or with its, since I once found blueberries ripe on Wachusett unexpectedly early. However, it was a pleasing lateness, and gives one a chance to review some of his lessons in natural history. On the rocky part, the only plants, as I noticed, which were or had been in bloom were the salix, now generally done; *Ribes prostratum*, in prime; *Eriophorum vaginatum*, *Vaccinium Pennsylvanicum*, just begun; *Amelanchier oligocarpa*, little, not long; water andromeda, ditto, ditto; and *probably* (?) the populus, birches (?), mayflower, and spruce.



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Note that in his journal, where [Thoreau](#) refers as above to “the Gazetteer,” he is referring as always to a volume now in Special Collections at the Concord Free Public Library, the 7th edition published in 1839 in Concord, New Hampshire and Boston of John Hayward’s [THE NEW ENGLAND GAZETTEER](#); CONTAINING DESCRIPTIONS OF ALL THE STATES, COUNTIES AND TOWNS IN NEW ENGLAND: ALSO DESCRIPTIONS OF THE PRINCIPAL MOUNTAINS, RIVERS, LAKES, CAPES, BAYS, HARBORS, ISLANDS, AND FASHIONABLE RESORTS WITHIN THAT TERRITORY. ALPHABETICALLY ARRANGED.



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THE
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BY JOHN HAYWARD,
Author of the *Columbian Traveller*, *Religious Creeds*, &c. &c.
SEVENTH EDITION.
CONCORD, N. H.:
ISRAEL S. BOYD AND WILLIAM WHITE.
BOSTON:
JOHN HAYWARD.
1839.

NEW ENGLAND GAZETTEER



LUKE HOWARD

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August 5, Thursday: The cable was brought ashore. Charles Briggs and Augustus Maverick would exult, in their THE STORY OF THE TELEGRAPH, about the laying of this transatlantic cable:

It shows that nothing is impossible for man.

HISTORY OF TELEGRAPHY

Not to be outdone, the Times of London exulted that:

The Atlantic Telegraph has half undone the Declaration of 1776.

DECLARATION OF INDEPENDENCE



World peace was breathlessly anticipated. This was the time to “make muskets into candlesticks.”

It is impossible that old prejudices and hostilities should longer exist, while such an instrument has been created for the exchange of thought between all the nations of the earth.

Due probably to the fact that the cable that had been laid was of much too small a diameter and the voltage being used much too high, transmitting Queen Victoria’s message to President Buchanan would require 16^{1/2} hours. (At that rate of transmission, class, how long would it have required to have transmitted the story of the Tower of Babel?)

Henry Thoreau for the 16th and 17th times (Dr. Bradley P. Dean has noticed) deployed in his journal a weather term that had been originated by Luke Howard: “The black willows are perhaps in their best condition,—airy, rounded masses of light green rising one above another, with a few slender black stems, like umbrella handles, seen here and there in their midst, low spreading **cumuli** of slender falcate leaves, buttressed by smaller sallows, button-bushes, cornels, and pontederias,—like long green clouds or wreaths of vapor resting on the riverside.... The willows slumber along its shore, piled in light but low masses, even like the **cumuli** clouds above.”



August 5: Thursday. 9.30 A. M.—Up river to Pantry Brook.

It clears up this morning after several cool, cloudy, and rainy dog-days. The wind is westerly and will probably blow us part way back. The river is unusually full for the season, and now quite smooth. The pontederia is apparently in its prime; the button-bush perhaps a little past, the upper halves of its balls in the sun looking brown generally. The late rose is still conspicuous, in clumps advanced into the meadow here and there. See the mikania only in one or two places beginning. The white lilies are less abundant than usual, methinks, perhaps on account of the high water. The water milkweed [*Asclepias incarnata*, the swamp milkweed] flower is an interesting red, here and there, like roses along the shore. The gratiola begins to yellow the shore in some places, and I notice the unobtrusive red of dense fields of stachys on the flat shores. The sium has begun to lift its umbels of white flowers above most other plants. The purple utricularia tinges the pools in many places, the most common of all its tribe.

The best show of lilies is on the west side of the bay, in Cyrus Hosmer’s meadow, above the willow row. Many



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of them are not open at 10 o'clock A. M. I noticed one with the sepals perfectly spread flat on the water, but the petals still held together in a sharp cone, being held by the concave, slightly hooked points. Touching this with an oar, it opens quickly with a spring. The same with many others, whose sepals were less spread. Under the influence of the light and warmth, the petals elevate or expand themselves in the middle, becoming more and more convex, till at last, being released at their overlapping points, they spring open and quickly spread themselves equally, revealing their yellow stamens. How satisfactory is the fragrance of this flower! It is the emblem of purity. It reminds me of a young country maiden. It is just so simple and unproved. Wholesome as the odor of the cow. It is not a highly refined odor, but merely a fresh youthful morning sweetness. It is merely the unalloyed sweetness of the earth and the water; a fair Opportunity and field for life; like its petals, uncolored by any experience; a simple maiden on her way to school, her face surrounded by a white ruff. But how quickly it becomes the prey of insects!

As we paddle slowly along the edge of the pads, we can see the weeds and the bottom distinctly in the sun, in this still August air, even five or six feet deep,—the countless utricularias, potamogetons, etc., etc., and hornwort standing erect with its reddish stems. Countless schools of little minnows of various species, chubby little breams not an inch long, and lighter-colored banded minnows are steadily passing, partly concealed by the pads, and ever and anon we see the dimple where some larger pickerel has darted away, for they lie just on the outer edge of the pads.

The foliage is apparently now in the height of its beauty, this wet year, now dense enough to hide the trunks and stems. The black willows are perhaps in their best condition,—airy, rounded masses of light green rising one above another, with a few slender black stems, like umbrella handles, seen here and there in their midst, low spreading cumuli of slender falcate leaves, buttressed by smaller sallows, button-bushes, cornels, and pontederias,—like long green clouds or wreaths of vapor resting on the riverside. They scarcely leave the impression of leaves, but rather of a low, swelling, rounded bank, even as the heaviest particles of alluvium are deposited nearest the channel. It is a peculiarity of this, which I think is our most interesting willow, that you rarely see the trunk and yet the foliage is never dense. They generally line one side of the river only, and that is the meadow, a concave, passive, female side.³⁶ They resound still with the sprightly twitter of the kingbird, that aerial and spirited bird hovering over them, swallow-like, which loves best, methinks, to fly where the sky is reflected beneath him. Also now from time to time you hear the chattering of young blackbirds or the link of bobolinks there, or see the great bittern flap slowly away.

The kingbird [**Eastern Kingbird Robin** *Tyrannus tyrannus*], by his activity and lively note and his white breast, keeps the air sweet. He sits now on a dead willow twig, akin to the flecks of mackerel sky, or its reflection in the water, or the white clamshell, wrong side out, opened by a musquash, or the fine particles of white quartz that may be found in the muddy river's sand. He is here to give a voice to all these. The willow's dead twig is aerial perch enough for him. Even the swallows deign to perch on it. These willows appear to grow best on elevated sand-bars or deep sandy banks, which the stream has brought down, leaving a little meadow behind them, at some bend, often mixed with sawdust from a mill. They root themselves firmly here, and spread entirely over the sand.

The rose, which grows along with the willows and button-bushes, has a late and rare look now.

From off Rainbow Rush Shore I pluck a lily more than five inches in diameter. Its sepals and petals are long and slender or narrow (others are often short, broad, and rounded); the thin white edges of the four sepals are, as usual, or often, tinged with red. There are some twenty-five petals in about four rows. Four alternate ones of the outmost row have a reddish or rosaceous line along the middle between the sepals, and both the sepals and the outmost row of petals have seven or eight parallel darkish lines from base to tip. As you look down on the lily, it is a pure white star centred with yellow,—with its short central anthers orange yellow.

The Scirpu~ lacu~tri~ and rainbow rush are still in bloom and going to seed. The first is the tule of California. Landed at Fair Haven Pond to smell the Aster macrophyllu~. It has a slight fragrance, somewhat like that of the Maine and northern New Hampshire one. Why has it no more in this latitude? When I first plucked it on Webster Stream I did not know but it was some fragrant garden herb. Here I can detect some faint relationship only by perseveringly smelling it.

The purple utricularia is the flower of the river to-day, apparently in its prime. It is very abundant, far more than any other utricularia, especially from Fair Haven Pond upward. That peculiar little bay in the pads, just below the inlet of the river, I will call Purple Utricularia Bay, from its prevalence there. I count a dozen within a square foot, one or two inches above the water, and they tinge the pads with purple for more than a dozen rods. I can distinguish their color thus far. The buds are the darkest or deepest purple. Methinks it is more abundant than usual this year.

I notice a commotion in the pads there, as of a musquash making its way along, close beneath the surface, and at its usual rate, when suddenly a snapping turtle puts its snout out, only up to the eyes. It looks exactly like a

36. Vide August 7th and 15th.



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sharp stake with two small knots on it, thus

While passing there, I heard what I should call my night-warbler's note, and, looking up, saw the bird dropping to a bush on the hillside. Looking through the glass, I saw that it was the Maryland yellow-throat!! and it afterward flew to the button-bushes in the meadow³⁷

I notice no polygonum out, or a little of the front-rank only. Some of the polygonums not only have leaves like a willow, especially like the *S. lucida*, but I see that their submerged leaves turn, or give place, to fibrous pink roots which might be mistaken for those of the willow.

Lily Bay is on the left, just above the narrow place in the river, which is just above Bound Rock. There are but few lilies this year, however; but if you wish to see how many there are, you must be on the side toward the sun. Just opposite this bay, I heard a peculiar note which I thought at first might be that of a kingbird, but soon saw for the first time a wren within two or three rods perched on the tall sedge or the wool-grass and making it,—probably the short-billed marsh wren. It was peculiarly brisk and rasping, not at all musical, the rhythm something like shar te dittle ittle ittle ittle, but the last part was drier or less liquid than this implies. It was a small bird, quite dark above and apparently plain ashy white beneath, and held its head up when it sang, and also commonly its tail. It dropped into the deep sedge on our approach, but did not go off, as we saw by the motion of the grass; then reappeared and uttered its brisk notes quite near us, and, flying off, was lost in the sedge again.

We ate our dinner on the hill by Rice's. This forenoon there were no hayers in the meadow, but before we returned we saw many at work, for they had already cut some grass next to the upland, on the drier sides of the meadow, and we noticed where they had stuck up green bushes near the riverside to mow to.

While bathing at Rice's landing, I noticed under my arm, amid the potamogeton, a little pickerel between two and a half and three inches long, with a little silvery minnow about one inch long in his mouth. He held it by the tail, as it was jerking to and fro, and was slowly taking it in by jerks. I watched to see if he turned it, but to my surprise he at length swallowed it tail foremost, the minnow struggling to the last and going alive into his maw. Perhaps the pickerel learn by experience to turn them head downward. Thus early do these minnows fall on fate, and the pickerel too fulfill his destiny.

Several times on our return we scared up apparently two summer ducks, probably of this year, from the side of the river, first, in each case, seeing them swimming about in the pads; also, once, a great bittern,—I suspect also a this year's bird, for they are probably weaned at the same time with the green one.

Though the river was high, we pushed through many beds of potamogeton, long leafy masses, slanting downward and waving steadily in the stream, ten feet or more in length by a foot wide. In some places it looked as if the new sparganium would fairly choke up the stream.

Huckleberries are not quite yet in their prime.

August 22, Sunday: [Henry Thoreau](#) mentioned for the 18th time (Dr. Bradley P. Dean has noticed) the cloud form "cumulus" of [Luke Howard](#): "[A large bird] screamed ... and finally soared higher and higher till it was almost lost amid the clouds or could scarcely be distinguished except when it was seen against some white and glowing cumulus."



August 22: P.M.—I have spliced my old sail to a new one, and now go out to try it in a sail to [Baker Farm](#). It is a "square sail," some five feet by six. I like it much. It pulls like an ox, and makes me think there's more wind abroad than there is. The yard goes about with a pleasant force, almost enough, I would fain imagine, to knock me overboard. How sturdily it pulls, shooting us along, catching more wind than I knew to be wandering in this river valley! It suggests a new power in the sail, like a Grecian god. I can even worship it, after a heathen fashion. And then, how it becomes my boat and the river, a simple homely square sail, all for use not show, so low and broad! Ajacean. The boat is like a plow drawn by a winged bull. If I had had this a dozen years ago, my voyages would have been performed more quickly and easily. But then probably I should have lived less in them. I land on a remote shore at an unexpectedly early hour, and have time for a long walk there. Before, my sail was so small that I was wont to raise the mast with the sail on it ready set, but now I have had to rig some tackling with which to haul up the sail.

As for the beauty of the river's brim: now that the mikania begins to prevail the button-bush has done, the pontederia is waning, and the willows are already somewhat crisped and imbrowned (though the last may be none the worse for it); lilies, too, are as good as gone. So perhaps I should say that the brim of the river was in


37. Thoreau was never sure about his night warbler. Though here he identified the Common Yellowthroat as his mysterious singer, Cruickshank says on most occasions it was probably the Ovenbird *Seiurus aurocapillus* giving its aerial song.



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its prime about the 1st of August this year, when the pontederia and button-bush and white lilies were in their glory. The cyperus (phymatodes, etc.) now yellows edges of pools and half-bare low grounds. See one or two blue herons [**Great Blue Heron**  *Ardea herodias*] every day now, driving them far up or down the river before me. I see a mass of bur-reed, etc., which the wind and waves are sweeping down-stream. The higher water and wind thus clear the river for us.

JAMES BAKER



August 22: At **Baker Farm** a large bird rose up near us, which at first I took for a hen-hawk, but it appeared larger. It screamed the same, and finally soared higher and higher till it was almost lost amid the clouds or could scarcely be distinguished except when it was seen against some white and glowing cumulus. I think it was at least half a mile high, or three quarters, and yet I distinctly heard it scream up there each time it came round, and with my glass saw its head steadily turned toward the ground, looking for its prey. Its head, seen in proper light, was distinctly whitish, and I suspect it may have been a white-headed eagle [**Bald Eagle**  *Haliaeetus leucocephalus*]. It did not once flap its wings up there, as it circled and sailed though I watched it for nearly a mile. How fit that these soaring birds should be haughty and fierce, not like doves to our race!

JAMES BAKER



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1859

December 13, Tuesday: [Henry Thoreau](#) instanced for the 19th time (Dr. Bradley P. Dean has noticed) the cloud form categories of [Luke Howard](#): “What an ever-changing scene is the sky with its drifting **cirrh**us and **stratus**! The spectators are not requested to take a recess of fifteen minutes while the scene changes, but, walking commonly with our faces to the earth, our thoughts revert to other objects, and as often as we look up the scene has changed. Now, I see, it is a column of white vapor reaching quite across the sky, from west to east, with locks of fine hair, or tow that is carded, combed out on each side,—surprising touches here and there, which show a peculiar state of the atmosphere. No doubt the best weather-signs are in these forms which the vapor takes. When I next look up, the locks of hair are perfect fir trees with their recurved branches. (These trees extend at right angles from the side of the main column.) This appearance is changed all over the sky in one minute. Again it is pieces of asbestos, or the vapor takes the curved form of the surf or breakers, and again of flames. But how long can a man be in a mood to watch the heavens? That melon-rind arrangement, so very common, is perhaps a confirmation of Wise the balloonist’s statement that at a certain height there is a current of air moving from west to east. Hence we so commonly see the clouds arranged in parallel columns in that direction. What a spectacle the subtle vapors that have their habitation in the sky present these winter days! You have not only ever-varying forms of a given type of cloud, but various types at different heights or hours. It is a scene, for variety, for beauty and grandeur, out of all proportion to the attention it gets. Who watched the forms of the clouds over this part of the earth a thousand years ago? Who watches them to-day?”



December 13: P. M.—On river to Fair Haven Pond.

My first true winter walk is perhaps that which I take on the river, or where I cannot go in the summer. It is the walk peculiar to winter, and now first I take it. I see that the fox too has already taken the same walk before me, just along the edge of the button-bushes, where not even he can go in the summer. We both turn our steps hither at the same time.

There is now, at 2.30 P. M., the melon-rind arrangement of the clouds. Really parallel columns of fine mackerel sky, reaching quite across the heavens from west to east, with clear intervals of blue sky, and a fine-grained vapor like spun glass extending in the same direction beneath the former. In half an hour all this mackerel sky is gone.

What an ever-changing scene is the sky with its drifting cirrh^{us} and stratus! The spectators are not requested to take a recess of fifteen minutes while the scene changes, but, walking commonly with our faces to the earth, our thoughts revert to other objects, and as often as we look up the scene has changed. Now, I see, it is a column of white vapor reaching quite across the sky, from west to east, with locks of fine hair, or tow that is carded, combed out on each side,—surprising touches here and there, which show a peculiar state of the atmosphere. No doubt the best weather-signs are in these forms which the vapor takes. When I next look up, the locks of hair are perfect fir trees with their recurved branches. (These trees extend at right angles from the side of the main column.) This appearance is changed all over the sky in one minute. Again it is pieces of asbestos, or the vapor takes the curved form of the surf or breakers, and again of flames.

But how long can a man be in a mood to watch the heavens? That melon-rind arrangement, so very common, is perhaps a confirmation of Wise the balloonist’s statement that at a certain height there is a current of air moving from west to east. Hence we so commonly see the clouds arranged in parallel columns in that direction. What a spectacle the subtle vapors that have their habitation in the sky present these winter days! You have not only ever-varying forms of a given type of cloud, but various types at different heights or hours. It is a scene, for variety, for beauty and grandeur, out of all proportion to the attention it gets. Who watched the forms of the clouds over this part of the earth a thousand years ago? Who watches them to-day?

Now that the river is frozen we have a sky under our feet also. Going over black ice three or four inches thick, only reassured by seeing the thickness at the cracks, I see it richly marked internally with large whitish figures suggesting rosettes of ostrich-feathers or coral. These at first appear to be a dust on the surface, but, looking closely, are found to be at various angles with it internally, in the grain. The work of crystallization. Often you



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see as it were a sheaf of feathered arrows five or six feet long, very delicate but perfectly straight, their planes making a very slight angle with the surface of the ice, and yet no seam is to be detected. The black floor is by these divided into polygonal segments, for the most part geometrically straight-sided. Their position merely suggests a cleavage which has no existence. Perhaps it is the angle of exidence answering to the angle of incidence at which the sun's light and heat strikes the ice at different hours!!

I walk thus along the riverside, perhaps between the button-bushes and the meadow, where the bleached and withered grass—the *Panicum virgatum* and blue-joint and wool-grass—rustle amid the osiers which have saved them from the scythe.

When the snow is only thus deep, the yellowish straw-color of the sedge in the meadows rising above the snow is now first appreciated, seen between the ice and the snow-clad land.

Near the mouth of Well Meadow Brook, I see a musquash under the black ice of the pond. It is ten or twelve rods from a cabin, which must be the nearest open place, and it moves off slowly, pushing against the ice with its feet, toward the middle of the pond, and as I follow, it at length sinks to the bottom and is lost. Did it go down for concealment or for air? Here was a musquash at least a dozen rods from any hole, and it did not swim toward its cabin.

I see, in the Pleasant Meadow field near the pond, some little masses of snow, such as I noticed yesterday in the open land by the railroad causeway at the Cut. I could not account for them then, for I did not go to them, but thought they might be the remainders of drifts which had been blown away, leaving little perpendicular masses six inches or a foot higher than the surrounding snow in the midst of the fields. Now I detect the cause. These (which I see to-day) are the remains of snowballs which the wind of yesterday rolled up in the moist snow. The morning was mild, and the snow accordingly soft and moist yet light, but in the middle of the day a strong northwest wind arose, and before night it became quite hard to bear.

These masses which I examined in the Pleasant Meadow field were generally six or eight inches high—though they must have wasted and settled considerably—and a little longer than high, presenting a more or less diluted appearance externally. They were hollow cylinders about two inches in diameter within, like muffs. Here were a dozen within two rods square, and I saw them in three or four localities miles apart, in almost any place exposed to the sweep of the northwest wind. There was plainly to be seen the furrow in the snow produced when they were rolled up, in the form of a very narrow pyramid, commencing perhaps two inches wide, and in the course of ten feet (sometimes of four or five only) becoming six or eight inches wide, when the mass was too heavy to be moved further. The snow had been thus rolled up even, like a carpet. This occurred on perfectly level ground and also where the ground rose gently to the southeast. The ground was not laid bare. That wind must have rolled up masses thus till they were a foot in diameter. It is certain, then, that a sudden strong wind when the snow is moist but light (it had fallen the afternoon previous) will catch and roll it up as a boy rolls up his ball.

These white balls are seen far off over the fields.

When I reach the causeway at the Cut, returning, the sun has just set,—a perfect winter sunset, so fair and pure, with its golden and purple isles. I think the summer rarely equals it. There are real damask-colored isles or continents north of the sun's place, and further off northeast they pass into bluish purple. Hayden's house, over which I see them, seems the abode of the blessed. The east horizon also is purple. But that part of the parallel cloud-columns overhead is now invisible. At length the purple travels westward, as the sun sinks lower below the horizon, the clouds overhead are brought out, and so the purple glow glides down the western sky.

Virgil's account of winter occupations in the First Georgic, line 291, applies well enough to New England:—

“Some keep at work by the late light of the winter
Fire, and point torches with a sharp iron.
In the meanwhile the wife, relieving her long labor with her
Singing, thickens the webs with the shrill slay;
Or boils down the liquor of sweet must with fire,
And skims off the foam of the boiling kettle with leaves.

Winter is an idle time to the husbandman.
In cold weather they commonly enjoy what they have laid up,
And jovial they give themselves up to mutual feasting:
Genial winter invites this and relaxes their cares;
As when now the laden keel has touched its port,
And the joyful sailors have placed a crown on the stern.



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However, now is the time to gather acorns,
And laurel berries, and the olive, and bloody (colored) myrtle
berries;
Now to set snares for cranes, [Say partridges] and deer,
And chase the long-eared hares;

When the snow lies deep, and the rivers are full of drifting
ice.”

I saw yesterday where fox-hunters with a sleigh and hounds had improved the first shallow snow to track their
game. They thread the woods by old and grown-up and forgotten paths, where no others would think to drive.



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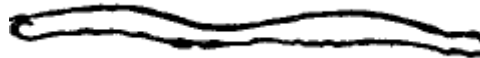
1860

January 30, Monday: Recognizing, after any number of votes in which he had failed to win the necessary 119 supporters, that his endorsement of Helperism had destroyed any possibility of his becoming Speaker of the House, Representative Sherman withdrew his name. The Republicans in the House selected another person, not even a member of their party, a member instead of [Know-Nothings](#), William R. Pennington of New Jersey, as their candidate for the Speakership. However, Pennington had been a Sherman supporter during the previous ballots, which made his name virtually as unacceptable to them as Sherman's: "The endorser of an endorser is just as accountable, in the eyes of the law, as the principle." In subsequent ballots Pennington would be unable to achieve the necessary 119, until the Democratic candidate, to break the logjam and allow government to continue, withdrew from the contest.

[Henry Thoreau](#) instanced for the 20th time (Dr. Bradley P. Dean noticed) a cloud form category of [Luke Howard](#): "Fair with a few **cumuli** of indefinite outline in the north and south, and dusky under sides. A gentle west wind and a blue haze."



Jan. 30. 2 P.M.—To Nut Meadow and White Pond road.
Thermometer 45°. Fair with a few cumuli of indefinite outline in the north and south, and dusky under sides. A gentle west wind and a blue haze. Thaws.
The river has opened to an unusual extent, owing to the very long warm spell, — almost all this month. Even from Hubbard's Bridge up and down it is breaking up, is all mackerelled, with lunar-shaped openings and some like a thick bow.



They [ARE] from one to twelve feet long.
Yesterday's slight snow is all gone, leaving the ice, old snow, and bare ground; and as I walk up the river-side, there is a brilliant sheen from the wet ice toward the sun, instead of the crystalline rainbow of yesterday. Think of *that* (of yesterday), — to have constantly before you, receding as fast as you advance, a bow formed of a myriad crystalline mirrors on the surface of the snow!! What miracles, what beauty surrounds us! Then, another day, to do all your walking knee-deep in perfect six-rayed crystals of surpassing beauty but of ephemeral duration, which have fallen from the sky.
The ice has so melted on the meadows that I see where the musquash has left his clamshells in a heap near the riverside, where there was a hollow in the bank.
The small water-bugs are gyrating abundantly in Nut Meadow Brook. It is pleasant also to see the very distinct ripple-marks in the sand at its bottom, of late so rare a sight.
I go through the piny field northwest of M. Miles's. There are no more beautiful natural parks than these pastures in which the white pines have sprung up spontaneously, standing at handsome intervals, where the wind chanced to let the seed lie at last, and the grass and blackberry vines have not yet been killed by them.
There are certain sounds invariably heard in warm and thawing days in winter, such as the crowing of cocks, the cawing of crows, and sometimes the gobbling of turkeys. The crow, flying high, touches the tympanum of the sky for us, and reveals the tone of it. What does it avail to look at a thermometer or barometer compared with listening to his note? He informs me that Nature is in the tenderest mood possible, and I hear the very flutterings of her heart.
Crows have singular wild and suspicious ways. You will [SEE] a couple flying high, as if about their business, but lo, they turn and circle and caw over your head again and again for a mile; and this is their business, — as if a mile and an afternoon were nothing for them to throw away. This even in winter, when they have no nests to be anxious about. But it is affecting to hear them cawing about their ancient seat (as at F. Wheeler's wood) which the choppers are laying low.
I saw the other day (apparently) mouse (?) -tracks which had been made in slosh on the Andromeda Ponds and

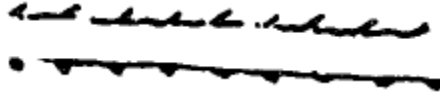


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then frozen, — little gutters about two inches wide and nearly one deep, looking very artificial with the nicks on the sides.



I sit on the high hilltop south of Nut Meadow, near the pond. This hazy day even Nobscot is so blue that it looks like a mighty mountain. See how man has cleared commonly the most level ground, and left the woods to grow on the more uneven and rocky, or in the swamps. I see, when I look over our landscape from any eminence as far as the horizon, certain rounded hills, amid the plains and ridges and cliffs, which have a marked family likeness, like eggs that belong to one nest though scattered. They suggest a relation geologically. Such are, for instance, Nashoba, Annursnack, Nawshawtuct, and Ponkawtasset, all which have Indian names, as if the Indian, too, had regarded them as peculiarly distinct. There is also Round Hill in Sudbury, and perhaps a hill in Acton. Perhaps one in Chelmsford. They are not apparently rocky.

The snow-flea seems to be a creature whose summer and prime of life is a thaw in the winter. It seems not merely to enjoy this interval like other animals, but then chiefly to exist. It is the creature of the thaw. Moist snow is its element. That thaw which merely excites the cock to sound his clarion as it were calls to life the snow-flea.

March 23, Friday: [Henry Thoreau](#) instanced for the 21st time (Dr. Bradley P. Dean has noticed) a cloud form category of [Luke Howard](#): “40°; rather windy. Small dark-based **cumuli** spring clouds, mostly in rows parallel with the horizon.”



March 23. 2 P. M.—40°; rather windy. Small dark-based cumuli spring clouds, mostly in rows parallel with the horizon.

I see one field which was plowed before the 18th and spring rye sowed. The earlier the better, they say. Some fields might have been plowed earlier, but the ground was too wet. Farmer says that some fifty years ago he plowed and sowed wheat in January, and never had so good a crop.

I hear that [Coombs](#) has killed half a dozen ducks, one of them a large gray duck in Goose Pond. He tells me it weighed five and a half pounds,—while his black ducks weigh only three and a half,—and was larger than a sheldrake and very good to eat. Simply gray, and was alone, and had a broad flat bill. Was it the gadwall? or a kind of goose?

It will be seen by the annexed scrap [TABLES FROM THE PATENT OFFICE REPORTS, 1853, P. 332; 1854, P. 427; 1855, P. 375.] that March is the fourth coldest month, or about midway between December and November. The same appears from the fifteen years’ observation at Mendon. [AMERICAN [ALMANAC](#) AND REPOSITORY OF USEFUL KNOWLEDGE FOR 1830-61, page 86. (Boston: Grey & Bowen.) Thoreau had in his personal library the issues for 1846, 1849, 1850, and 1851.] The descent to extreme cold occupies seven months and is therefore more gradual (though a part of it is more rapid) than the ascent to extreme heat, which takes only five months. The mean average temperature of the coldest month (February) being 23.25, and of the warmest (July) being 72.35, the whole ascent from extreme cold to extreme heat is 49.10°, and in March (32.73) we have accomplished 8.48°, or a little less than one sixth the ascent. (According to the Mendon fifteen years’ average the whole ascent is 47.5, and in March we have advanced 9.2, a little more than one fifth.) It appears (from the scrap) that December, January, and February, the three winter months, differ very little in temperature, and the three summer months and September are next most alike, though they differ considerably more. (Same from Mendon tables.) The greatest or abruptest change is from November to December (in Mendon tables from September to October), the next most abrupt from April to May (in Mendon tables from March to April). The least change (according to the above tables) is from December to January. (According to Mendon tables, the same from December to January as from January to February.) The three spring months, and also October and November, are transition months, in which the temperature rapidly changes.

March 24, Saturday: [Henry Thoreau](#) instanced for the 22d time (Dr. Bradley P. Dean has noticed) a cloud form category of [Luke Howard](#): “They are real wind-clouds this afternoon; have an electric, fibry look. Sometimes it is a flurry of snow falling, no doubt. Peculiar cold and windy **cumuli** are mixed with them, not black like a thundercloud, but cold dark slate with very bright white crowns and prominences.”




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March 24. The sheldrakes [**Common Merganser**  *Mergus merganser*] appear to be the most native to the river, briskly moving along up and down the side of the stream or the meadow, three-fourths immersed and with heads under water, like cutters collecting the revenue of the river bays, or like pirate crafts peculiar to the stream. They come the earliest and seem to be most at home.

The water is so low that all these birds are collected near the Holt. The inhabitants of the village, poultry-fanciers, perchance, though they be, [know not] these active and vigorous wild fowl (the sheldrakes) pursuing their finny prey ceaselessly within a mile of them, in March and April. Probably from the hen-yard fence with a good glass you can see them at it. They are as much at home on the water as the pickerel is within it. Their serrated bill reminds me of a pickerel's snout. You see a long row of these schooners, black above with a white stripe beneath, rapidly gliding along, and occasionally one rises erect on the surface and flaps its wings, showing its white lower parts. They are the duck most common and most identified with the stream at this season. They appear to get their food wholly within the water.

March 24. Cold and rather blustering again, with flurries of snow.

The boatman, when the chain of his boat has been broken with a stone by some scamp, and he cannot easily transport his boat to the blacksmith's to have it mended, gets the latter to bend him a very stout iron wire in the form of an S, then, hooking this to the two broken ends and setting it upright on a rock, he hammers it down till it rests on itself in the form of an 8, which is very difficult to pry open.

2 P. M.—About 39. To Copan.

I see a male frog hawk beating a hedge, scarcely rising more than two feet from the ground for half a mile, quite below the level of the wall within it. How unlike the hen-hawk in this!

They are real wind-clouds this afternoon; have an electric, fibry [sic] look. Sometimes it is a flurry of snow falling, no doubt. Peculiar cold and windy cumuli are mixed with them, not black like a thundercloud, but cold dark slate with very bright white crowns and prominences.

I find on Indian ground, as to-day on the Great Fields, very regular oval stones like large pebbles, sometimes five or six inches long, water-worn, of course, and brought hither by the Indians. They commonly show marks of having been used as hammers. Often in fields where there is not a stone of that kind in place for a mile or more.

From Holbrook's clearing I see five large dark-colored ducks, probably black ducks, far away on the meadow, with heads erect, necks stretched, on the alert, only one in water. Indeed, there is very little water on the meadows. For length of neck those most wary look much like geese. They appear quite large and heavy. They probably find some sweet grass, etc., where the water has just receded.

There are half a dozen gulls on the water near. They are the large white birds of the meadow, the whitest we have. As they so commonly stand above water on a piece of meadow, they are so much the more conspicuous. They are very conspicuous to my naked eye a mile off, or as soon as I come in sight of the meadow, but I do not detect the sheldrakes around them till I use my glass, for the latter are not only less conspicuously white, but, as they are fishing, sink very low in the water. Three of the gulls stand together on a piece of meadow, and two or three more are standing solitary half immersed, and now and then one or two circle slowly about their companions.

The sheldrakes appear to be the most native to the river, briskly moving along up and down the side of the stream or the meadow, three-fourths immersed and with heads under water, like cutters collecting the revenue of the river bays, or like pirate crafts peculiar to the stream. They come the earliest and seem to be most at home. The water is so low that all these birds are collected near the Holt. The inhabitants of the village, poultry-fanciers, perchance, though they be, [know not] these active and vigorous wild fowl (the sheldrakes) pursuing their finny prey ceaselessly within a mile of them, in March and April. Probably from the hen-yard fence with a good glass you can see them at it. They are as much at home on the water as the pickerel is within it. Their serrated bill reminds me of a pickerel's snout. You see a long row of these schooners, black above with a white stripe beneath, rapidly gliding along, and occasionally one rises erect on the surface and flaps its wings, showing its white lower parts. They are the duck most common and most identified with the stream at this season. They appear to get their food wholly within the water. Less like our domestic ducks.

I saw two red squirrels in an apple tree, which were rather small, had simply the tops of their backs red and the sides and beneath gray!

Fox-colored sparrows go flitting past with a faint, sharp chip, amid some oaks.

According to a table in the "American [Almanac](#)" for '49, page 84, made at Cambridge, from May, '47, to May,



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'48, the monthly mean force of the wind for the twelve months (I putting January, February, March, and April, '48, before May, etc., of '47), numbering them 1, 2, 3, etc., from the highest force downward, was—

Table with 12 columns (Jan. to Dec.) and 2 rows of data for 1848 and 1847.

For quantity of clouds, they stood—

Table with 12 columns (Jan. to Dec.) and 1 row of data for quantity of clouds.

For depth of rain in inches,—

Table with 12 columns (Jan. to Dec.) and 1 row of data for depth of rain.

That is, for force of wind, March, April, and May were equal, and were inferior to July and June; for quantity of clouds March and May were equal, and were preceded by December, November, September, January, June, and August. For depth of rain, September stood first, and March ninth, succeeded only by May, October, and April.

At Mendon, Mass., for the whole year 1847 alone (i. e. a different January, February, March, and April from the last) it stood, for force of wind,—

Table with 12 columns (Jan. to Dec.) and 2 rows of data for Mendon, Mass. 1847.

For clouds

Table with 12 columns (Jan. to Dec.) and 1 row of data for clouds in Mendon, Mass. 1847.

According to which, for force of wind, March, July, September, November, and December were equal, and were inferior to April, June, August, and October; and for clouds March was sixth. The wind's force for March was greatest at 9 A.M. and 3 P. M., which were equal; but for the year greatest at 9 A. M. and least at sunrise.

In the last table eight points of the wind were noticed, viz. northwest, north, northeast, east, southeast, south, southwest, west. During the year the wind was southwest 130 days, northwest 87, northeast 59, south 33, west 29, east 14, southeast 10, north 3 days.

May 2, Wednesday: Henry Thoreau was being written to again by L. Johnson & Company in Philadelphia, Pennsylvania.

Thoreau instanced for the 23d time (Dr. Bradley P. Dean has noticed) a cloud form category of Luke Howard: "There was considerable wind on the surface, from the northeast, and the above clouds were moving west and southwest, — a generally distributed cumulus. What added to the remarkableness of the sight was a very fine, fleecy cirrhus, like smoke, narrow but of indefinite length, driving swiftly eastward beneath the former, proving that there were three currents of air, one above the other. (The same form of cloud prevailed to some extent the next day.)"



May 2. River three and five sixteenths below summer level.

I observed on the 29th that the clams had not only been moving much, furrowing the sandy bottom near the shore, but generally, or almost invariably, had moved toward the middle of the river. Perhaps it had something to do with the low stage of the water. I saw one making his way — or perhaps it had rested since morning — over that sawdust bar just below Turtle Bar, toward the river, the surface of the bar being an inch or two higher than the water.

Probably the water, falling, left it thus on dry (moist) land. I notice this forenoon (11.30 A.M.) remarkably round-topped white clouds just like round-topped hills, on all sides of the sky,





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often a range of such, such as I do not remember to have seen before.



There was considerable wind on the surface, from the northeast, and the above clouds were moving west and southwest, — a generally distributed cumulus. What added to the remarkableness of the sight was a very fine, fleecy cirrus, like smoke, narrow but of indefinite length, driving swiftly eastward beneath the former, proving that there were three currents of air, one above the other. (The same form of cloud prevailed to some extent the next day.)

Salix alba apparently yesterday.

The early potentillas are now quite abundant.

P. M.—To stone-heaps and stone bridge.

Since (perhaps) the middle of April we have had much easterly (northeast chiefly) wind, and yet no rain, though this wind rarely fails to bring rain in March. (The same is true till 9th of May at least; i. e., in spite of east winds there is no rain.)

I find no stone-heaps made yet, the water being very low. (But since — May 8th — I notice them, and perhaps I overlooked them before.)

I notice on the east bank by the stone-heaps, amid the bushes, what I supposed to be two woodchucks' holes, with a well-worn path from one to the other, and the young trees close about them, aspen and black cherry, had been gnawed for a foot or more upward for a year or two. There were some fresh wounds, and also old and extensive scars of last year partially healed.

The naked viburnum is leafing. The sedge apparently Carex Pennsylvanica has now been out on low ground a day or two.

A crowd of men seem to generate vermin even of the human kind. In great towns there is degradation undreamed of elsewhere, — gamblers, dog-killers, rag-pickers. Some live by robbery or by luck. There was the Concord muster (of last September). I see still a well-dressed man carefully and methodically searching for money on the muster-fields, far off across the river. I turn my glass upon him and notice how he proceeds. (I saw them searching there in the fall till the snow came.) He walks regularly and slowly back and forth over the ground where the soldiers had their tents, — still marked by the straw, — with his head prone, and poking in the straw with a stick, now and then turning back or aside to examine something more closely. He is dressed, methinks, better than an average man whom you meet in the streets. How can he pay for his board thus? He dreams of finding a few coppers, or perchance a half-dime, which have fallen from the soldiers' pockets, and no doubt he will find something of the kind, having dreamed of it, — having knocked, this door will be opened to him.

Walking over the russet interval, I see the first red-winged grasshoppers. They rise from the still brown sod before me, and I see the redness of their wings as they fly. They are quite shy and hardly let me come within ten feet before they rise again, — often before I have seen them fairly on the ground.

It was 63° at 2 P. M., and yet a good deal of coolness in the wind, so that I can scarcely find a comfortable seat. (Yet a week later, with thermometer at 60 and but little wind, it seems much warmer.)

We have had cool nights of late.

May 13, Sunday: The body of beloved children's author Samuel Griswold Goodrich best known under his pen name "Peter Parley," who had died on the 9th in New York, was taken to a church in Southbury, Connecticut — and, so that all would be able to attend that Sunday's funeral service, the other Protestant churches within a 20-mile radius were closed.

[Henry Thoreau](#) instanced for the 24th time (Dr. Bradley P. Dean has noticed) a cloud form category of [Luke Howard](#): "It is a remarkable day for this season. You have the heat of summer before the leaves have expanded. The sky is full of glowing summer **cumuli**. There is no haze; the mountains are seen with perfect distinctness."

[Lloyd's Weekly Newspaper](#) of London, England reviewed a medley of books the first of which was THE PUBLIC LIFE OF CAPTAIN JOHN BROWN, by James Redpath, just published by Thickbroom and Stapelton.



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The career of John Brown is now authentically set before the world. It was well to gather the *dissecta membra* of the courageous old man, and to let the public know all that can be known of the enthusiastic servant of a noble cause. "When the news of the arrest of John Brown reached Boston," writes the captain's biographer, "I could neither work nor sleep; for I loved and revered the noble old man, and had perfect confidence in his plan of emancipation." Mr. Redpath believes that Brown did right in invading Virginia and attempting to liberate her slaves. And he dedicates his record of a life which he honours to "Wendell Phillips, Ralph Waldo Emerson, and Henry D. Thoreau, defenders of the faithful, who, when the mob shouted 'Madman!' said 'Saint!'" Let us add that a large percentage on each copy of this biography sold "is secured by contract to the family of Captain John Brown; and every purchaser thereby becomes a contributor to a charitable object, which appeals to all freemen with a voice that is irresistible." We trust that many of our readers will send to Messrs. Thickbroom and Stapelton, Paternoster row.



May 13. I observe this morning the dew on the grass in our yard,—literally sparkling drops, which thickly stud it. Each dewdrop is a beautiful crystalline sphere just below (within an eighth of an inch more or less) the tip of the blade. Sometimes there are two or three, one beneath the other, the lowest the largest. Each dewdrop takes the form of the planet itself.

What an advance is this from the sere, withered, and flattened grass, at most whitened with frost, which we have lately known, to this delicate crystalline drop trembling at the tip of a fresh green grass-blade. The surface of the globe is thus tremblingly alive.

A great many apple trees out, and probably some for two days.

P. M.—82°; warmest day yet.

This and the last two days remarkably warm. Need a half-thick coat; sit and sleep with open window, the 13th. Row to Bittern Cliff.

The celtis is not yet in bloom.

The river is now six and fifteen sixteenths inches below summer level.

At Clamshell, one cerastium flower quite done and dry. Ranunculus bulbosus abundant, spotting the bank; maybe a week. Tall buttercup. Horsemint seen springing up for a week, and refreshing scent.

Hear several bobolinks distinctly to-day.

Hear the pebbly notes of the frog.

See the coarse green rank canary grass, springing up amid the bare brown button-bushes and willows. Redwings are evidently busy building their nests. They are sly and anxious, the females, about the button-bushes.

See two crows pursuing and diving at a hen-hawk very high in the air over the river. He is steadily circling and rising. While they, getting above, dive down toward him, passing within a foot or two, making a feint, he merely winks, as it were, bends or jerks his wings slightly as if a little startled, but never ceases soaring, nor once turns to pursue or shake them off. It seemed as if he was getting uncomfortably high for them.

At Holden Swamp, hear plenty of parti-colored warblers (tweezer-birds) and redstarts. Uvularia sessilifolia abundant, how long? The swamp is so dry that I walk about it in my shoes, and the Kalmia glauca is apparently quite backward accordingly,—can scarcely detect any buds of it,—while the rhodora on shore will apparently bloom to-morrow. Hear the yorrick.

The intermediate ferns and cinnamon, a foot and a half high, have just leafeted out. The sensitive fern is only six inches high,—apparently the latest of all. Sorrel.

It is a remarkable day for this season. You have the heat of summer before the leaves have expanded. The sky is full of glowing summer cumuli. There is no haze; the mountains are seen with perfect distinctness. It is so warm that you can lie on the still brownish grass in a thin coat, and will seek the shade for this purpose.



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What is that fern so common at Lee's Cliff, now sprung up a foot high with a very chaffy stem? Marginal shield? Is that Polypodium Dryopteris in the bank behind the slippery elm? Now six or seven inches high. There is no mouse-ear down even there. Those heads which have looked most expanded and downy are invariably cut off by some creature (probably insect) and withered. The crickets creak steadily among the rocks. The Carex varia (?) at Lee's all gone to seed. Barberry in bloom. Myosotis stricta. Arum triphyllum, how long? Cardamine rhomboidea, apparently to-morrow, just above Bittern Cliff.

It is so warm that I hear the peculiar sprayey note of the toad generally at night. The third sultry evening in my chamber. A faint lightning is seen in the north horizon.

The tender yellow green of birches is now the most noticeable of any foliages in our landscape, as looking across the pond from Lee's Cliff. The poplars are not common enough. The white birches are now distinguished simply by being clothed with a tender and yellow green, while the trees generally are bare and brown,—upright columns of green dashing the brown hillsides.

May 19, Saturday: Documentation of the [international slave trade](#), per W.E. Burghardt Du Bois: "Message of the President ... relative to the capture of the slaver *Wildfire*, etc." —SENATE EXECUTIVE DOCUMENT, 36 Cong. 1 sess. XI. No. 44.

[Henry Thoreau](#) instanced for the 25th time (Dr. Bradley P. Dean has noticed) a cloud form category of [Luke Howard](#): "The grass, especially the meadow-grasses, are seen to wave distinctly, and the shadows of the bright fair-weather **cumuli** are sweeping over them like the shades of a watered or changeable stuff,—June-like."



May 19. A. M.—River seven inches below summer level.

Wind south, and a gentle intermittent warm rain at last begins. This has been the longest drought that I remember. The last rain was April 16th, except that some detected a few drops falling on the 9th; was literally the last drop we had. If this had occurred a month later, after the crops were fairly growing, it would have been a great calamity. As it is, there has been very little growth. My potatoes, planted May 1st, are but just beginning to peep here and there. My corn, planted the 2d, has not a quarter part showed itself, and grass seed sown ten days ago has not germinated. But weeds have not grown as much as usual. It must have been a severe trial for young fruit and other trees. Plowing and planting have been uncommonly dirty work, it has been so dusty.

P. M.—To Second Division. Thermometer 72°.

It cleared up at noon, to our disappointment, and very little rain had fallen.

There is a strong southwest wind after the rain, rather novel and agreeable, blowing off some apple blossoms. The grass, especially the meadow-grasses, are seen to wave distinctly, and the shadows of the bright fair-weather cumuli are sweeping over them like the shades of a watered or changeable stuff,—June-like. The grass and the tender leaves, refreshed and expanded by the rain, are peculiarly bright and yellowish-green when seen in a favorable light.

This occurrence of pretty strong southwest winds near the end of May, three weeks after the colder and stronger winds of March and April have died away, after the first heats and perhaps warm rain, when the apple trees and upland buttercups are in bloom, is an annual phenomenon. Not being too cold, they are an agreeable novelty and excitement now, and give life to the landscape.

Sorrel just begins to redden some fields.

I have seen for a week a smaller and redder butterfly than the early red or reddish one. Its hind wings are chiefly dark or blackish. It is quite small. The forward wings, a pretty bright scarlet red with black spots.

See a green snake, a very vivid yellow green, of the same color with the tender foliage at present, and as if his colors had been heightened by the rain.

White thorn in bloom at Tarbell's Spring, considerable of it; possibly a little yesterday.

What they say of the 19th of April, '75,—that "the apple trees were in bloom and grass was waving in the fields,"—could only have been said within a week past this early year. This is the season when the meadow-grass is seen waving in the wind at the same time that the shadows of clouds are passing over it.

At the Ministerial Swamp I see a white lady's-slipper almost out, fully grown, with red ones.

By the path-side near there, what I should call a veery's nest with four light-blue eggs, but I have not heard the veery note this year, only the yorrick. It is under the projecting edge or bank of the path,—a large mass of fine



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grass-stubble, pine-needles, etc., but not leaves, and lined with pine-needles.

In Second Division Meadow, *Eriophorum polystachyon*, apparently two or three days, though only six or eight inches high at most. The Second Division rush is not quite in bloom yet. The panicle is quite fresh, one eighth to one quarter inch long, but the sepals are not green but light-brown. Is it a new species?

Going along the Second Division road, this side the brooks, where the woods have been extensively cut off, I smell now, the sun having come out after the rain of the morning, the scent of the withered pine boughs which cover and redden the ground. They part with their tea now.

You see now, on all sides, the gray-brown, lumbering woodchucks running to their subterranean homes. They are but poor runners, and depend on their watchfulness and not being caught far from their burrows.

The reddish-brown loosestrife is seen springing up in dry woods, six or eight inches high.

Now, sitting on the bank at White Pond, I do not see a single shad-bush in bloom across the pond, where they had just fairly begun on the 6th. The small *Populus grandidentata*, with their silvery leaflets not yet generally flattened out, represent it there now,—are the most like it. I see some tall shad-bush without the reddish leaves—what I think I have thought a variety of the *Botryapium*—still well in bloom apparently with the oblongifolium. Is it the last?

The largest shrub oak that I have noticed grows by the north side of the White Pond road, not far from the end of the lane. It measures sixteen inches in circumference at two feet from the ground, and looks like a Cape Cod red oak in size and form,—a scraggly small tree (maybe a dozen feet high).

Pyrus arbutifolia out. Beach plum by Hubbard's wall, perhaps a day. Lilac, the 17th. The fresh shoots of the white pine are now perpendicular whitish marks about two inches long, about six inches apart on a glaucous-green ground.

I measure a bear's foot which F. Monroe brought from Vermont, where it was killed in a trap within a few years. It was formed very much like a boy's foot, with its five toes, and the solid part measured seven and one half inches in length by three and three quarters.

The claws extended one inch further, and with the fur (not allowing anything for shrinkage all this while) it must have made a track nine by four and a half inches at least. The fur came down thick all around to the ground. There was a seam or joint across the middle of the sole.

River raised one and a half inches at night by rain of forenoon,—i. e. five and a half inches below summer level.



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1864

[Luke Howard](#) died on the 21st of Third Month near London: “in the ninety-second year of his age, “he most gently departed this life, to enter upon the life that knows no death, and to be fore ever with the Lord.” For a considerable period prior to his death he had been unable to remember the names he had assigned to the various types of clouds. (He and his wife Mariabella “Bella” had formally left the [Quakers](#) to become members of the [Plymouth Brethren](#), a nondenominational Christian movement which had originated in Ireland and England during the 1820s and 1830s. Nevertheless, his body was interred in the Quaker cemetery at Winchmore Hill on the 26th of Third Month “with the full acquiescence of Friends.”)



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1865

A small booklet was published, SHORT MEMORIALS OF THE LATE LUKE & MARIABELLA HOWARD, OF ACKWORTH VILLA, YORKSHIRE. BY AN AGED RELATIVE, FOR PRIVATE CIRCULATION ONLY (London, Printed by Edward Newman, Devonshire Street, Bishopsgate).³⁸ From it we derive the following information about [Luke Howard](#) and Mariabella Howard: “L.H. ’s views differing in some respects from those held by the Society of Friends, he wished to have the connection dissolved, which was accordingly done, much to the regret of his friends, with many of whom he maintained a sincere friendship. M.H. also withdrew from the Society. They afterwards established a meeting on their own premises, in which some of their neighbors joined them, and it is believed that the simple form of worship in which they united was to the edification, and the satisfaction of their own minds.”

QUAKER DISOWNMENT

38. A curiosity of this publication is that it makes no reference whatever to the discoveries about the classification of clouds for which Luke Howard had become famous.



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GO TO MASTER HISTORY OF QUAKERISM

2002

April: The British Meteorological Office honored the memory of [Luke Howard](#) by mounting a plaque at 7 Bruce Grove in Tottenham, North London, where this Quaker meteorologist had spent his retirement with his eyes on the sky.





LUKE HOWARD

FRIEND LUKE HOWARD

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2005

Wayne Ackerson's *THE AFRICAN INSTITUTION (1807-1827) AND THE ANTISLAVERY MOVEMENT IN GREAT BRITAIN* was published by the Edwin Mellen Press of Ceredigion, United Kingdom. (This "African Institution" was an antislavery group formed by a group of members of the [Religious Society of Friends](#), including British Friends William Allen and [Luke Howard](#) during the early 19th Century, and its members had included royalty, prominent lawyers, Members of Parliament, and noted reformers such as [William Wilberforce](#), Thomas Clarkson, and Zachary Macaulay. Focusing on the spread of Western civilization to Africa, the abolition of the foreign slave trade, and improving the lives of slaves in British colonies, the group's influence extended far into Britain's diplomatic relations in addition to the government's domestic affairs. The 20-year period of its existence was a crucial transitional period for the antislavery movement.)



"NARRATIVE HISTORY" IS FABULATION, HISTORY IS CHRONOLOGY



FRIEND LUKE HOWARD

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"It's all now you see. Yesterday won't be over until tomorrow and tomorrow began ten thousand years ago."

- Remark by character "Garin Stevens"
in William Faulkner's INTRUDER IN THE DUST



Prepared: January 7, 2014



LUKE HOWARD

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ARRGH AUTOMATED RESearch REPORT

GENERATION HOTLINE



This stuff presumably looks to you as if it were generated by a human. Such is not the case. Instead, someone has requested that we pull it out of the hat of a pirate who has grown out of the shoulder of our pet parrot "Laura" (as above). What these chronological lists are: they are research reports compiled by ARRGH algorithms out of a database of modules which we term the Kouroo Contexture (this is data mining). To respond to such a request for information we merely push a button.



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Commonly, the first output of the algorithm has obvious deficiencies and we need to go back into the modules stored in the contexture and do a minor amount of tweaking, and then we need to punch that button again and recompile the chronology – but there is nothing here that remotely resembles the ordinary “writerly” process you know and love. As the contents of this originating contexture improve, and as the programming improves, and as funding becomes available (to date no funding whatever has been needed in the creation of this facility, the entire operation being run out of pocket change) we expect a diminished need to do such tweaking and recompiling, and we fully expect to achieve a simulation of a generous and untiring robotic research librarian. Onward and upward in this brave new world.

First come first serve. There is no charge.
Place requests with <Kouroo@kouroo.info>. Arrgh.



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