

ACCOUNT

OF A

HAIL STORM,

WHICH FELL ON PART OF THE TOWNS OF

LEBANON, BOZRAH AND FRANKLIN,

ON THE 15th OF JULY, 1799;

Perhaps never equalled by any other ever known,
not even in Egypt.

BY SHERMAN DEWEY.

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WALPOLE, NEWHAMPSHIRE.

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PREFACE TO THE READER.

I WAS a spectator of the scene of distress, which I am about to narrate. I was at Mr. Joseph Metcalf's in Lebanon, and I think no place has suffered more than his, and the farms which lie in the direction in which the storm went, as it passed from the southward to the northward. The appearance of it was so singular that I paid particular attention to the clouds, while they were forming; and as soon as the hail ceased, I went and viewed it very attentively.

I have since endeavoured to obtain as accurate information as possible, which I mean to lay before the public, in as impartial a manner as possible. I am not one of the sufferers, therefore I cannot be under any inducement to exaggerate it, from motives of interest. The following sheets are dedicated to a candid and impartial public, for their perusal, by their obedient and humble servant,

S. DEWEY.

ACCOUNT

ACCOUNT OF A HAIL STORM.

AS I am about to give an account of a hail storm, which happened on the 15th of July, perhaps never equalled since that in Egypt, according to the Mosaic account, 3290 years since, I hope my readers will pardon my making a few observations, that will naturally occur to my mind, in giving an account of such an extraordinary phenomenon.

I have wished for some time that a more able pen might be employed on the subject than mine; but as no one has undertaken it, in any other way than for a public newspaper, which will soon be lost and worn out, so that future generations will have no description of it, and those who are now children will have nothing to help their memory, and when they come to manhood, will have only a confused and bewildered idea of it, by the pressing desire of a number of friends, I have undertaken a description of it.

Monday, the 15th of July, 1799, the day on which this ever memorable hail storm happened, was very warm; by Fahrenheit's thermometer, I should judge it to have been from 90 to 92; but as I had not the benefit of one, I cannot ascertain what the degree of heat was.

About one o'clock a cloud passed over from the west. This cloud I observed rose very high; the drops of rain which fell were uncommonly large, but it was nothing more than a light shower. After this cloud passed, it seemed to collect a great quantity of electricity, which produced a continued roar, for some time, that did not appear to be wholly the effect of lightning. I observed to a friend that I thought it was hail, for the cloud appeared like it. I have since been informed that hail fell from it at Preston, several miles east of this, as large as a robin's egg, but in small numbers. This cloud kept its course to the eastward, till it met the more dense air of the sea, when it appeared to lie without motion. About two o'clock,

o'clock, another cloud rose from the west, and settled to the S. E. till it met the sea breeze, which threw it back over the land.

There was no threatening appearance in this cloud ; it was attended with some lightning and thunder, which were at a distance. About five o'clock a third cloud appeared in the W. N. W. attended with lightning and thunder, and looked darker than the former ones. Between six and seven o'clock, that in the south looked uncommonly black, and moved with great swiftness, taking its course to the northward, preceded by flying clouds of a lead colour, such as are not uncommon to be seen in a heavy thunder storm. The two clouds in the east and west then seemed to move as if to form a junction, whilst that in the south still kept its course with great rapidity, and soon overhadowed us, rolling in various forms, like pillars of smoke, and almost entirely obscured the light of the sun. The heavens seemed clad in sackcloth, and shrouded with darkness, whilst lightning and thunder witnessed the war of the elements. The appearance was truly frightful ; but the scene which soon followed surpassed the scenery. Where shall I find language to paint this in its true colours ?

As the painter falls short of giving a likeness for want of colours, so shall I fail for want of words ; for words can only convey such ideas as have been in our minds ; and I conceive that none of my readers, who were not present, ever beheld such a sublime, grand and awful scene as this presented. A few minutes before seven the cloud exhibited a brassy appearance in the west. This was immediately followed by the rain, which poured down as if fed by a water spout, and lasted three or four minutes, when hail began to fall, larger than any which I had ever seen. They were as large as a turkey's egg, in vast numbers, and many were larger. Terror now pervaded even the brute creation ; every creature sought for shelter ; but our houses were scarce able to afford us an asylum from this dreadful storm. The hail, urged on by the rapidity of the wind, soon demolished the glass, and the roar of this tempestuous storm silenced the loudest thunder, so that it could not be heard. The rain still continued. The lightning was incessant and seemed to hail mingled with fire. All countenances turned pale, and every heart gathered sadness. The terrific sound of this war of elements ;

ments; the air filled with solid substances, which cut the leaves, fruit and small limbs of the trees, whilst continued flashes of lightning tinged every thing of a livid appearance, added horror to the gloom, and filled every one with astonishment. It seemed as if the laws of nature were changed, or that the elements had waged war with each other. For the space of ten or twelve minutes, it presented a scene which I cannot describe. It appeared, as if the final dissolution of all things had now commenced. I expected every thing would be laid prostrate before it. The earth trembled, as if shocked by an earthquake. Children were crying to their parents for help, whilst they stood the astonished spectators of this indescribable scene. Every heart seemed to melt like wax before the fire. In short, nothing could surpass the sensations of a feeling mind on this occasion. After ten or twelve minutes it abated for a short space, when the rain again fell like a torrent, and lasted some time, attended with sharp lightning and heavy thunder. After this a solemn stillness prevailed during the whole night, which, when compared with the confused noise that had been sounding in our ears, it seemed as if we were possessed with different sensations, or that all nature was hushed in silence. There was the most perfect calm I ever saw. The day following was calm and pleasant; but nothing appeared beautiful; no tuneful bird was left to welcome in the cheerless day. The inhabitants of the airy regions fell the first victims to the relentless hand of disordered elements, and were found in the fields and woods, some dead, others with their wings broken, and not one was to be seen or heard unhurt. The small animals of all kinds, who had no shelter, shared the same fate: among which were fowls, pigs, &c. In many instances, sheep were killed. I saw one that was killed; it appeared as if struck on the top of the head by a hail stone, which beat off the skin two inches in length, and one in breadth.

When the storm first began, the cattle shewed the greatest signs of terrour they could express. They ran and roared like bullocks, who were going to the slaughter, and sought for shelter. Some broke out of the fields, and ran to the first covert that could be found: those who had no shelter were cut and bruised very much.

No person was killed, for there was no one out but a few minutes. A Mr. Johnson was a few rods from his house,

house, and before he could reach it he was knocked down three times ; a number of others were knocked down and bruised very much.

The fields of grass and grain were not only beaten down, but cut to pieces, and only fit for the hogs and cattle. A gentleman informed me that he reapt or mowed up ten shocks of the best rye he had, which, on threshing, produced only three quarts to a shock. Fields of grass, which were mown but a few hours before the storm commenced to walk over them, the day following it was difficult to tell which had been mown and which had not. The feeding lands were cut to pieces so that the feed was spoiled for some weeks. In corn fields, which were as good as any I had seen this year, and which I was observing the same afternoon, on the day following not a spire was left standing, and almost every one cut off within four inches of the ground. In fields in general, scarce a spire was left, and the industrious husbandman immediately ploughed his fields, and sowed them with buck wheat ; this being the only resource left by which he could obtain something to supply the calls of nature for himself and family. Barley, flax, beans, peas, potatoes, gardens, &c. are entirely destroyed.

The trees are cut and bruised very much. Young fruit trees are almost, if not entirely destroyed. Peach and Cherry trees suffered most ; many of them are dead already ; others I think will die, a great part of the bark being bruised or beaten off on that side toward the south. Some orchards are almost stripped of leaves, as well as fruit. Many fruit and forest trees are blown down. Trees, buildings, and fences are so marked they will remain, many years, the standing monuments of the violence of the storm. The bark on large trees begins to grow out, as if scarified by the head of an ax. A week or ten days after, the wood lands exhibited the appearance of woods through which large fires have passed. The shingles on the houses are split to pieces very much. All the glass on that side next the storm was broken ; and, in many instances, the sash was not proof against its violence. Two barns in Bozrah were entirely demolished, and one unrooted.

The storm began in the westernmost part of Bozrah, in the County of Newlondon, in Connecticut, and took its course from S. W. to N. E. was about nine miles in length,

length, and four in width. In its course it took the greatest part of the towns of Bozrah, Franklin, and some part of Lebanon. The east part of the parish of Goshen, in Lebanon, and the east edge of the old town, suffered as severely as any part of the three towns.

I said this storm began in Bozrah; but I would remark that a few small hail stones fell from this cloud at Lyme and Easthaddam, as it passed to the northward. It stripped the leaves of corn a little, but the damage was trifling.

When it began in Bozrah, it was very severe, and the hail was nearly as large as in any place where the storm went. When this cloud moved to the north, it moved very quick, till it came nearly over the place where the hail began to fall first, when it rolled into the atmosphere, like the smoke of buildings on fire.

I stood and viewed the cloud till it overshadowed and almost deprived us of light. The lightning was almost one continued blaze, but so high that it did not seem to affect the earth; and the thunder roared as if at a distance, and was nearly one continued peal, till the hail began to fall, when it had to submit to superior sound, as musketry are silenced when a cannonade begins.

Whilst these movements were taking place, there was but little air, till the hail began to fall, when it blowed with great violence. It blew in the same direction, that is, from S. W. to N. E. except in one or two instances, where it whirled so as to break the glass on the opposite side of the house from that on which the storm had been beating.

But a few seconds had elapsed, after the first hail stones fell, before they fell as fast as at any time during the storm. It run in what is called veins. In the western part of the extent of the storm the hail were the largest, and fell so as to cover the ground, if they had been srewed equally on it. After this cloud had passed four or five miles, the hail gradually decreased in numbers and bigness, till the storm ceased. In some places they fell four inches deep. It differed very much in depth, even in places that lay in the direction in which it went. In some places, by travelling forty rods, you might go from where vegetation was in its highest perfection to where nothing but desolation srewed the face of nature. The two heaviest veins were on the west and east side of this tract of desolation.

The great quantity of rain, which fell during the storm, and a few minutes after, washed it into heaps, so that, where it lodged against walls and fences, it was three or four feet deep, which lay some time. In the meadow of Benjamin Throop, Esq. hail stones were taken up on the ninth day after, as large as a musket ball. The weather was very hot, during this time. I would not be understood that they were wholly uncovered, for they were covered with grass, which was cut up and washed together with them. In some places the rain fell before the hail, in others the hail fell first.

The state of the air was changed in a few minutes, from being very hot, to the degree of cold that it felt like a hail storm in winter; by means of which many took cold, and injured their health very much. In general, they used every precaution, which was in their power; such as addition of clothing, use of spirits, building of fires, &c. Notwithstanding all these precautions, many were seized with cramps and ague fits.

Persons who visited the place twenty-four hours after, said that, in travelling half a mile, it seemed as if they had got into another climate. People who went from the place said the same.

When this storm abated, or more properly had passed over, the noise gradually ceased, like the noise of an earthquake. I have observed that the earth trembled; whether it was occasioned by the wind and hail-beating on it, or from there being an uncommon quantity of electricity received into it from the cloud, is not for me to say.—The jar of it was like that which we feel in a violent thunder storm.

The hail stones, as I have observed, were as large as a turkey's egg, and many were larger. I measured some, which were four inches and a quarter by five and a half in circumference, and were uncommonly hard; the appearance of them was like a number of small ones congealed together, and very rough. Some were of a conical figure; others were shaped somewhat like a chestnut bur, when open, being notched on the out side, and appeared as if you had taken a number of small ones and put them into a large one about half their diameter, which left a small hollow, or cavity, about the bigness of the end of a finger on one or both sides. Some were round and smooth as glass, looked white and clear, like ice that is congealed
from

from pure water; in extreme cold weather. The other kind were of the colour of common ice, and of a dirty cast, especially those that were largest, and fell first.— Many of these lumps of ice were shaped like a snow ball, that is pressed with a hand, inclining to be round, but not smooth. There were none, which I saw, smaller than a musketball; and there were more of them that exceeded the bigness of a small hen's egg, than there were of that size, except those which were round, and they were not in large numbers. The greatest part of the ice fell in pieces larger than a small hen's egg, that is, the balance of weight was on that side.

This is as it appeared where I was, but they were not so large in any other vein, as that which was on the west edge.

On viewing some of the largest hail stones, I observed black specks and streaks in them, which, on examining, I found to be specks of dirt, and leaves of dry grass, of an eighth of an inch in length, in the middle of the solid ice. This is an observation which perhaps no one has made beside me. There were a number of persons present, and no one observed it, till I spake of it to them.— The mentioning of this circumstance obliges me to make some observations, to make it plain and obvious to my readers; and, as I am not a philosopher, I hope they will pardon me, if I do not satisfy their minds on this head.— This storm began with considerable wind, some miles to the southward of the place where the hail first fell, that in some places was attended with a whirl, which would consequently throw those light particles of matter into the air to a great height. I would not be understood that it was a proper whirlwind; it only whirled in some places, as it does many times in the beginning of a thunder storm, this was what carried them into the clouds. The next thing is to shew what occasioned the hail to form as it did. When that cloud in the south moved toward the north, those two in the east and west, whether impelled by the more dense air of the sea from the east, and the cool breezes from the great lakes in the west, or from the power of attraction in themselves, I say from which of these, or from both operating together, is not for me to determine, these clouds moved toward each other. They then lay, as I judged, in a direction from that in the south, about N. E. and N. W. at such a distance as nearly to
form

form a right angle, and all seemed to rush to the centre. That in the east moved on, while that in the west moved with much more force, and at the same time that in the south approached us with great rapidity, as if it would bear down all before it, when it met those two from the east and west. These three currents of air meeting each other, it was impossible for them to have vent any other way than by rolling into the empty space which was above them.

Suppose three streams of water, of great force, should meet each other, they would naturally boil into the air to a considerable height, and that stream which was of the greatest force would still keep its course, pressing the other two into that space which was void. This I have done to illustrate the idea. The two currents of air from the N. E. and N. W. meeting with that from the south, which was much stronger than either of the other two, or both of them united, and each being supported by a fresh breeze of wind, it rolled them into the atmosphere, almost, if not quite, above the circumambient, or surrounding air, when the intense cold congealed the water, which was in the cloud; and that, when congealed, fell, having a great degree of frost in themselves, and falling through the great body of water, which lay below, they struck each other and congealed into a solid mass before they fell to the earth, which occasioned them to be of such an uncommon bigness.

To support this idea, I shall make some observations, which I think are in favour of it. The day being uncommonly warm, the air was expanded very much, which occasioned the clouds to rise higher than usual, and, being forced together, would naturally rise to a vast height.

Air is of such a nature that it may be pressed to a certain degree, and when it comes to have vent, being of a more elastic quality than water, it rises much easier, and, consequently, much higher, with the same force. As water, being put in motion at the bottom, rises to the surface, and boils into the air; so the air, being pent up or pressed together in some degree, and then getting vent upward, being crowded on by the same winds, it must rise far above the surface of the common air, when in a state of equilibrium, or equal balance. As water rises above the surface of water in proportion with the force that puts it in motion, at the bottom; so these clouds must rise above the surface of the common air, in proportion
with

with the force with which they were supported. These clouds being thrown to a great height, and being deprived of heat, it gave the cold (which is only a less degree of heat) a greater chance to operate on them.

To strengthen this idea, I would observe that the hail stones were larger in the western extent of the storm than in the eastern part of it; that cloud from the west being supported by a much stronger wind, which would throw it higher into the cold regions, above the reflection of heat.

I shall now make a few observations, for which I am indebted to particular gentlemen, on whose veracity I may rely. Some miles west of the storm, a number of gentlemen informed me that the wind blew very hard from the west, when the cloud passed from the westward toward that in the south.

In Norwich, a few miles east, a number of gentlemen informed me, that when the cloud in the east moved toward the S. W. that in the south moved very swift to meet it, and that in the west coming up, they seemed to roll into the air, for some time, when the other clouds gave way, or rather united, with that in the south, and rolled on to the northward. The wind blew fresh from the N. E. at that place, all the while these clouds were forming, and continued so till that from the south appeared to overpower the other two, when they moved on, attended with sharp lightning and heavy thunder.

In Goshen, three or four miles west, it appeared to roll in a wild, confused, disordered form, exhibiting an appearance that was very singular; the cloud looked of a perfect black, and streams of lightning ran in every direction. Spectators viewed it with a degree of anxiety, for those who were doomed to feel its violence. The roar was one continued sound, all the time these clouds were passing. Sometimes the peals of thunder could be distinguished, at others they could not. I was at Easthaddam, five days after the storm, a number of persons informed me that the wind blew heavy from the south while this was passing and continued some time after it passed.

Major Throop, of Bozrah, a man of observation, says he stood and viewed it from a north window, and that at one time it fell so fast it appeared like a bank of hail in the air, and an object could not be distinguished at the distance of three rods. The hail looked whiter in the last of

the form than in the fore part of it. The rain immediately followed, which fell like a solid body of water and washed them into heaps.

If the observations which I have made are just, I think, it will be easy to account for the particles of matter being in the middle of these pieces of ice. On cutting them open it was evident, they were a number of small ones congealed together, and the particles of matter appeared to lie between those first congealed pebbles of ice.

The following is what cannot be ascertained, therefore I shall only lay it down as a conjectural idea, which is this, that those hail stones were kept in the air for some time, by whirling. This, perhaps, you will say is a chimera of my own brain, and true, the whole theory which I have advanced is mine, and from my own observation; but, in the present case, it is not so easily demonstrated from facts, as the former ones have been; notwithstanding this I will make a few remarks on the subject. When currents of water are forced against each other they produce whirlpools, eddies, &c. When currents of air are forced against each other they produce whirlwinds. The objector will say, who ever heard of a whirlwind in the air, when there was none on the earth? In answer to this, I would ask, if they ever saw a whirlpool on the surface of the water, when objects lay unmoved and unaffected at the bottom? He will then say, that that condensity of air, which forms a rapid whirlwind, would certainly settle to the earth, if it began in the air? In answer to it, I will state one proposition, which is this, suppose a large tube to be placed so as to have three streams of water forced into it; would they not boil into the air and run over the top? Place this tube several feet under water, and would it not produce whirlpools and commotions in the water, which was above it, but I think it would not affect the water any great depth below the top of the tube? That there were three currents of air forced together, has been proved. The compression of the surrounding atmosphere sufficiently supplied the place of a tube. When these three breezes of wind met, the clouds, filled with water, were driven into the empty space above, where the air immediately became expanded, by being where there was no surrounding air, to keep it condensed, as it had been, and when this rarification, or thinning of the air, took place, those heavy particles of water instantly

noussly fell together; and formed into drops before the space, in which they then were, became cooled so as to give the cold a chance to operate on them; these drops were no sooner formed, than they were congealed into solid ice, and fell into those whirlwinds, which were below, that kept them from falling for some time, and every person must be sensible that the air, in a whirlwind, is very cold, and being fed by this cloud, filled with particles of water, they still kept increasing, by striking together and freezing. One thing is certain, these pieces of ice would stick together, so as to lift each other. I took three or four, and put them together, then took hold of one, it would lift the whole as a magnet lifts a bit of steel; this they would do, when but a small part touched each other. The reason of this, is that for which I shall not undertake to account, but leave it for the reader to make his own comment on it, as he pleases. I will close, with making one more remark on the subject, in order to prove the Hypothesis, which I have advanced, as far as I am capable of doing it, and which is this, that those hail stones, which were round fell last. In my own observation, I saw none till the last of the shower. As soon as the storm ceased, I went out and viewed the hail before the last shower fell, which followed in about three minutes. The round ones appeared to lie on the top of the piles of hail, as round snow lies on the top of the snow, after a snow storm. My idea, in this respect, is this, that those hail stones were high in the air, when congealed, and met with nothing but the remaining particles of water, through which the others had passed, which must be cooled to the freezing point, much nearer the earth, than when it began, and would consequently congeal much easier, which increased them to the size that I have mentioned. The rain, which fell after the hail, was very cold. It felt like the coldest water I ever saw. In my enquiry on this head, two persons informed me that the first hail stone they saw was round, but small; not larger than a musket ball; and that after this they saw none but those rough ones, till the last of the storm. This is a still farther confirmation of what I laid down, as a reason for those hail stones being round, which fell last, for those which fell first would not have any thing but water to pass, which was not cooled so much as to freeze so easily, therefore they were smaller than those which fell last.

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The foregoing hypothesis, which I have advanced, is the result of my own observation. I have compiled it, without any kind of assistance; and whether the arguments, which I have laid down, are founded on reason or not, I leave it for the candid and impartial reader to judge: and, if they are not conclusive, I hope he will rather pity than censure me for my weakness.

The above storm has laid waste one of the most beautiful and flourishing parts of the country: a place where the people lived in ease and plenty, but not in luxury and idleness. Their cows afforded milk, their fields afforded bread, their trees yielded fruit, all these they had in abundance; but the present year will not afford them the measure of pittance that the bogs of Ireland, and the inhospitable regions of Iceland afford the wretched inhabitants of their soil. No, not so much as a few potatoes. A great reverse of fortune, indeed, to have their situation changed, from one of the best to one of the poorest. When winter came they used to view their granaries filled with grain; their barns filled with hay, their wives and daughters fulfilling what Solomon says of the industrious wife, "She layeth her hand to the spindle, and her hands hold the distaff." The present year, their repositories of earthly good, will be to them as lonely as the tombs of their ancestors. They once stretched out their hands to the poor, but now they are empty; and have only to reflect, like the unhappy wretch, who is wrecked on the barren coast, that once he was in plenty, and then he did to others what he would wish them to do for him, still hoping that the sunshine of prosperity will gild the days of his future life, with that plenty, which he has ever received from the labours of his hands; and that he shall then enjoy, with a refined happiness, (unknown to any but those whose feelings have been strung with the tender cords of misery and misfortune) that it is good to be in prosperity, and not in adversity.

The present distressing storm serves many noble and wise purposes; a few of which I shall mention; not that I mean to say what were the motives in the innate Councils of JEROVAH for bringing this upon the land, but only such as it ought to serve us, as the creatures on whom it is sent. In the first place, it serves the noble purpose of trying the charity of the world, of which, I shall speak more at large in the following sheets. It
likewise

likewise serves the purpose of confirming, in some respects, the truth of sacred history. There are many things, spoken of in the Bible, at which infidelity laughs, and Christians look upon them as figures, and no doubt many of them are such; yet there are many, which have and will be literally fulfilled. The first, of which the sacred writings make mention, is that in Egypt, which happened 1491 years before the Christian æra. We find that it smote every thing that was in the field, both man and beast, and brake every tree of the field; notwithstanding all this, there is good ground to believe it was not more severe than the present one, and, by some things, it seems it was not quite so severe. We read that the wheat and rye were not smitten, because they were not grown up, but barley and flax were, for the flax was bowled, and the barley was in the ear; from this circumstance, many have imagined that it happened at the same time in the year. For the information of those, I shall take the liberty to quote a few passages from Charles Thompson's observations on the productions of Egypt.

"In Egypt they have two harvests. What is called the spring harvest is from January to May, and a winter harvest about October. For the latter, about March, before the land is overflowed, they sow rice, Indian wheat, and what they call corn of Damalcus, which produces a large cane, and has an ear like millet. At the same time, they plant sugar cane, for they all require a great deal of water, especially rice, which is reaped before the flood is quite gone, and removed to dry ground. The largest crops of this are produced near Damietta and Rosetta. The rice has an ear somewhat like oats, and the grain looks like barley before the husk is taken off. Their spring corn, and vegetables, are sown in November, or something sooner or later, according as the waters retire, but earlier where it is not overflowed by the river. These are wheat, which is all bearded, and barley, which has six rows of grain in one ear, and is used chiefly for horses: as also flax, lentiles, lupines, and things of the same nature. The wheat, which they sow at this time of the year, they reap in March and April." *Charles Thompson's Travels in the years 1732 and 1733, through Syria, Egypt, and the Holy Land, volume II.*

In regard to this, that so many lives were lost in that storm and none in this, some may say that it was not so severe

severe as it was in Egypt. On this I shall make some observations. Egypt is a low flat country, overflowed by the river Nile, which rises to a vast height, occasioned by the great rains, which fall on the mountains in Abyssinia, and Ethiopia, (for it never rains in Egypt) this occasions it to rise, and when it is at its height, the dikes are cut, and nearly the whole face of the country is overflowed.

This country, says a traveller, at two seasons affords one of the most beautiful prospects in nature, viz. at the time the flood is at its height, and when the country is in its verdure, after the flood has subsided. When the flood is at its height, it appears like one continued sea, interspersed with villages, which are built on eminences, raised by art, so that nothing can be seen, but small villages, the tops of orange trees, &c. which affords a most beautiful and picturesque appearance. I find no mention made by travellers, of any trees growing in that part of the country, except orange and fig trees, which any person must know, who is acquainted with them, that they would afford but an indifferent shelter from a hail storm, like the present one. The orange tree resembles the common pear tree, more than any other; only it grows more slender and not so high. The fig tree grows somewhat like a sumach in the bigness of its body and limbs. Such trees would afford but an indifferent shelter, for man or beast. The Egyptians, living, as I observed, in small villages, must work at a great distance from their houses, as men do with us, who work in meadows. Supposing this to be the case, no wonder all were killed, who were in the field, for it is certain no one could have lived, if he had been obliged to go but a small distance in this storm.— Beside this, the Egyptians were not used to the cold, which would kill them much sooner than it would the hardy sons of America, who are inured to heat and cold, with its various changes; but in the present case it was almost too hard for some constitutions. This storm lasted but a few minutes, and that lasted some time.

From all these circumstances, it is no ways strange, that man and beast both died, allowing that it was not so severe as the present one.

If any of my readers are not satisfied with the description, which I have given of Egypt, I wish them to view the travels of Doctors Pococke and Shaw, Messrs. Thompson, Bruce, and others. The

The next that is mentioned in Scripture, happened in the land of Palestine, forty years after that in Egypt, which was in the year 1451, and is thus recorded, in the book of Joshua, at the Xth chap. and the 11th verse: "And it came to pass as they fled from before Israel and were going down to Beth-horon, that JEHOVAH cast down great hail stones from heaven upon them unto Azekah, and they died: there were more which died with hail stones than they which the children of Israel slew with the sword.

In both these storms many lives were lost, but I would remark that it is no evidence the storms were more severe. It was the express purpose, for which GOD rained it upon them. In the present case, he did not design it for the purpose of destroying the people, but herbage and fruits of the earth. When judgments answer the end, for which they are designed, it is sufficient. One question I would ask, and that is, would not the slaughter have been great, had the present storm been rained on a flying army, for the space of a whole day?

I could produce more from the sacred pages, but I will now turn to what is called profane history, after making one remark, which is this; there are many things, which are spoken in scripture as certain to be fulfilled, which are not more improbable than what has happened before our eyes, and yet even Christians doubt of their being fulfilled, and spiritualize away the literal meaning of them, which tends greatly to injure the belief in, and reputation of the bible.

Diodorus, a very great historian, speaks of hail stones, which weighed a pound and more. Philostorgus mentions hail, which weighed eight pounds. Those writings, left by the philosophers, who lived in the early ages of the world are very often doubted, and true, we have not so much reason to give the same credit to them as we do to those which are esteemed the sacred oracles of Divine truth; yet we ought to do them the justice, to ask ourselves whether the same cause, which would produce a hail stone of the bigness of a goose egg would not produce one of a pound or eight pounds weight, providing the cause was increased in proportion to the effect.

I will now turn to modern history. Arthur Young, a very credible Author, who travelled through France, in the years 1787, 1788, and 1789, in order to make observations

wons on the climate, and gain a knowledge of agriculture, after speaking of the climate, in the Province of Touraine, Limosin and Botrbonoise, as being the most salubrious, temperate, and healthful places in the world; says they suffer very much from severe storms of rain and

hail. Two years ago one violent storm of hail swept a track of desolation, in a belt across the whole Kingdom, to the damage of several millions sterling. Such extended ruin is not common, for if it were, the finest Kingdoms would be laid waste; but no year passes without whole parishes suffering, to a degree of which we have no conception, and to the amount of no inconsiderable proportion of the whole produce of the Kingdom.

It appears, from my friend Dr. Symonds's paper on the climate of Italy, that the mischief of hail is dreadful to the utmost. I have heard it calculated in the South of France, that the damage in some Provinces amounted to one tenth part of the whole produce of them, on an average. A few days before my arrival at Barbesieux, there had fallen at the Duke de la Rochefoucault's seat in the Agoumoise, and some neighbouring parishes, a shower of hail, that did not leave a single grape on the vines, and cut them so severely as to preclude all hope of a crop the year following, and allowed no well founded expectations of any beneficial produce, even the third year. In another place geese were killed, by the same storm; young colts were so much wounded that they died afterwards. It is even asserted, that men were killed by it, when unable to obtain any shelter. This storm destroyed a topsie of the duke's that were of two years' growth, with such effects it must be obvious to every one, that all sorts of corn and pulse must be destroyed." This storm happened in the summer of 1787.—*Arthur Young's Travels, vol. II.*

The provinces, which I have mentioned, lie near the Pyrennean mountains, between France and Italy.

I will now mention one of a later date. In August 1792, there was a most violent tornado and hurricane in the State of Vermont, which ended in a hail storm. This storm began near Lake Champlain, on Onion river, and took its course south, till it met what is called the Hog-backs, which are high lands on the north of said river.—This mountain parted the cloud; part of it went to the
S. W.

S. W. and lost itself on the highland, the other took a direction about S. E. and increased into a violent tornado and hurricane. Where it was confined among the mountains it was a proper whirlwind, twisting off the largest trees in the forest, in some places. Where it was not, it took more of a direct line, and was more like a hurricane. On or near the highlands, the tornado became violent, laying prostrate every thing before it. Happily this was in the forest, where there were no inhabitants. Soon after this, hail stones began to fall, which were as large as hen's eggs. This storm continued fifteen or twenty miles, scattering its icy contents on the towns of Thetford, Lyme, and many other places. The hail stones were rough, like those which I have mentioned. This storm was more than 100 miles in length, but abated soon after the hail began to fall; when it came into a more open country. This cloud appeared very black, and the roar was incessant. I was not in the storm, but was on a visit near the place, where I could view the cloud and hear the roar of it, and had the above information from gentlemen, on whose veracity I could rely.

From the foregoing observations, we see that those who have been visited with the late storm are not the only people, who have been doomed to see their fields desolated by the same elements, which serve to make them fruitful, when kept in perfect unison with each other.

Tornado at Bozrah, on the 2d of August, 1799.

Friday morning, August 2d, the day was ushered in with a thick clouded atmosphere, which about 10 o'clock A. M. assumed an appearance, as if pregnant with scenes of distress, like those which happened a few days since, and very much alarmed those, who were spectators of it. The clouds seemed in confusion, and rushed to the N. E. The lightning was extremely sharp, and instantly followed with heavy thunder; peal answered to peal, which kept vibrating in our ears for some time, attended with heavy rain, and a few small hail stones fell, of the size of hail in winter. After the storm, I heard there had been a tornado about three miles distant. I went and viewed it, and obtained as accurate information as I could, from a number of gentlemen, who were men of intorination.— It was first discovered on the Great Pond (alias) Gardner's Pond, which is in the S. W. part of the town of Bozrah, and took its course from S. W. to N. E. and followed

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the brook, which runs out of the pond, and is called the pond brook; after it had passed about three fourths of a mile it became violent, lying prostrate almost every thing before it, for three miles and a half, when it went into a heavy grove of wood, at the mouth of the brook, where it empties into Deep river. This grove seemed to break it, so that it did no damage more than 100 or 150 rods to the eastward of it. It began about three fourths of a mile farther east than the hail storm, and left a space untouched by either of that width, where they ran parallel with each other. In its width, it was from 60 to 140 rods. The pond on which it began, is surrounded by a country which gradually rises on every side, except to the N. E.; where the pond brook has its source. The water of the pond is quite warm, considering the bigness of it, which is three miles in length, and about one and a half in breadth. The brook, like all others, is covered on both sides by rising ground.

I shall not undertake to philosophize on this, but leave it for a more able pen. I shall now mention the effects of it. It passed through the centre of the town, which is a beautiful, fertile country, and laid waste some of the finest orchards in the country; the trees lay in every direction. I was informed that there were more than six hundred apple trees blown down, and the sturdy oak had to yield in its turn. Many buildings were damaged, and some almost entirely demolished. Mr. Jabez Hough had one barn unroofed, Mr. Jabez Hough, jun. two barns blown down, and his house partly unroofed. Mr. Ebenezer Hough's house blown to pieces. Capt. Randall's barn unroofed, and house injured; some of the shingles and clapboards were carried several miles. The greatest damage was their orchards.

The wonderful displays of Omnipotent power and goodness to mankind have formed, and been the subject of most of the books which have been written for the benefit of them. In vain have many eminent Divines faithfully laboured in the vineyard of their Master, to convince the world of their entire dependence on him, who made man, to reverence and obey his Creator. I say many have laboured in vain, because man is not convinced of this truth; that the Almighty dispenses his judgments with an equal hand, and disposes of events as he chooses, and giveth not an account of his matters. He saith of Pharaoh,

Pharaoh, "And in very deed, for this cause have I raised thee up, to shew in thee my power; and that my name may be declared throughout all the earth." From this, it is evident that these things are sent to us, creatures, to make us sensible of our dependance on the former and fashioner of our mortal bodies. It appears that GOD had used means to reclaim the Egyptians from their idolatrous and wicked practices, by sending them a variety of the most distressing judgments that had ever been sent on the world of mankind; still sending them greater and heavier judgments, and the Egyptians increasing in wickedness, not feeling any gratitude to their GOD for the preservation of their lives in the midst of such dangers. It is true they would seem to repent, while they thirsted for water, or were covered with sores, and their kneading troughs filled with filthy vermine and reptiles; but no sooner were they removed, than they returned to their old course of wickedness, and forgot their former troubles, for which reason GOD spake unto them by Moses, saying: "For now I will stretch out my hand, that I may smite thee and thy people with pestilence; and thou shalt be cut off from the earth. Behold, to-morrow about this time, I will cause it to rain a very grievous hail, such as hath not been in Egypt since the foundation thereof, even until now."

Judgments of all kinds, shew us the absolute omnipotence of Deity; yet man is a being possessed of a variety of senses, which serve to convey ideas to his mind, and consequently those ideas make the most lasting impressions, which fall with the greatest weight on his external senses, and it seems nothing could fall with a greater weight on the senses of the Egyptians than hail, lightning and thunder. For those who never saw so much as a shower of rain fall on the earth, to see the air filled with solid substances, that killed and brake every thing on which it fell, and streams of livid fire running on the ground like serpents, and were ushered in with the elemental voice of thunder, which was a new and dreadful sound to the Egyptians. What could appear with more solemn pomp, and awful majesty than this! The giving of the law at Mount Sinai, was not attended with more displays of omnipotence than the plagues of Egypt.

It is true it requires the same omnipotent power to produce a spire of grass, that it does to remove a mountain.

tain, or to bring into existence the meanest reptile, as the most perfect man; yet we are apt to view those of the former with calm indifference, in comparison with the latter. The judgment of hail, lightning, and thunder, it seems, must appear as great, and fill their minds with as much awe and reverence, as any that could be inflicted on them. We find that the most strong figures of GOD's awful judgments on the world, are represented by great hail stones, fire and brimstone. Notwithstanding all this, the Egyptians became hardened under their afflictions, which is a standing monument of the depravity of human nature.

On taking a cursory view of the subject, we are apt to say, what wicked and idolatrous set of men, that should so long abuse and oppress the people of GOD, when they saw his immediate hand executing his judgments upon them for their wickedness; but what is our surprize, when we come to a view of the conduct of the people, who were favoured with as many signal blessings, for whom GOD wrought all these miracles—dividing the Red Sea for them—directing them by day and night—making a covenant with them in the most solemn manner. This was a most solemn covenant; the preliminaries were drawn up, and then read in the hearing of all the people. They consented to it: then Moses took the blood of the sacrifice and sprinkled it on the people and on the book, thereby sealing it in the most solemn manner. After all this, no sooner was Moses absent a longer time than usual, than they went and made a calf—worshipped it: and even the high priest himself had the wickedness to go and make this image, in order that the people might worship it.

Astonishing stupidity! This was so scandalous a transaction, that Josephus (being ashamed of it in his nation) has left it out of his history. Now, which of the two was guilty of the greatest stupidity and wickedness; the Egyptians, or the children of Israel? In the present case, let us examine ourselves—is not our land corrupted? has not vice become fashionable among us? are not our hearts corrupted? have we not got an idol set up in them, as much as the children of Israel or the Egyptians had? have we not something beside the mercy of GOD, and merits of Jesus Christ, by which we mean to be saved? Let us examine ourselves, and see if we offer a pure sacrifice upon the altar? are we not more fond of being thought strict observers