

Awful Phenomena of Nature!

EARTHQUAKES.

BEING AN ACCOUNT OF

THE

The Earthquake at LISBON in 1755,—
at CARACCAS in 1812,—in SCOTLAND
in 1816,—and at ALEPPO in 1822.

"He looketh on the earth and it trembleth."



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THE OF TUNCOA

—The Earthquake at Lisbon in 1755
EARTHQUAKE AT LISBON,

in 1816, and at Aleppo in 1809.

—**BY A SPECTATOR.**—

—The looking on the earth and its tremors.

There never was a finer morning seen than the first of November, 1755. The sun shone in his full lustre, and the whole face of the sky was perfectly serene and clear. Not the least sign or warning was afforded of the approaching event, which rendered the once flourishing, opulent and populous city of Lisbon a scene of the utmost horror and desolation.

On the morning of this fatal day, between the hours of nine and ten, I was sitting in my apartment, and had just finished

letter, when the table I was writing on began to tremble with a gentle motion, which surprised me, as I could not perceive a breath of wind stirring. Whilst I was reflecting on what could be the cause, the whole house began to shake from the very foundation, which at first I imputed to the rattling of coaches in the street; but on listening more attentively, I found it was owing to a frightful noise under ground, resembling the rumbling of distant thunder. All this passed in less than a minute. I now began to be alarmed, as it occurred to me, that the noise might possibly be the presage of an approaching earthquake.

I threw down my pen, and started upon my feet, remaining for a moment in suspense, whether I should stay in the apartment, or run into the street; but in an instant I was roused from my dream, being stunned with a most horrid crash, as though every edifice in the city had tumbled down at once. The house I was in shook with such violence, that the upper stories immediately fell in; and though my apartment (which was on the first floor) did not immediately share the same fate, yet every thing was thrown out of its place, and it was with difficulty that I kept my feet. I expected nothing less than to be crushed to death, as the walls continued rocking to

and fro in the most frightful manner, and opening in several places; large stones fell down on every side by the cracks, and the end of most of the rafters started at the same time from the wall. The sky in a moment became so gloomy, that I could distinguish no particular object. It was an Egyptian darkness, such as might be felt; owing to the prodigious clouds of dust and lime, raised from so violent a concussion, and from the overthrow of so many buildings, and, as some reported, from sulphurous exhalations. However, it is certain that I found myself almost choked for nearly ten minutes.

As soon as the gloom began to disperse and the violence of the shock to abate, the first object I perceived in my room was a woman sitting on the floor, with an infant in her arms, covered with dust, pale and trembling. I asked her how she came there; but her consternation was so great that she gave me no account. She asked me in the utmost agony, if I did not think the world was at an end; at the same time she complained of being choked, and begged I would procure her a little drink. I told her she must not think of quenching her thirst, but of saving her life, as the house was just falling on our heads, and a second shock would certainly bury us.

I hurried down stairs, the woman holding by my arm, and made directly to the end of the street which opens to the river Tagus: but finding the passage completely blocked up by the fallen houses, I turned back; having helped the woman over a vast heap of ruins, with no small hazard to my own life. Just as we were going into the street, there was one part which I could not climb over without the assistance of my hands as well as my feet. I therefore desired her to let go her hold, which she did, remaining two or three feet behind me: and at this moment there fell a vast stone from a tottering wall, and crushing both her and the child in pieces!

I had now a long narrow street to pass, in which the houses on each side were four or five stories high, all very old, and the greater part of them already thrown down, or continually falling, and threatening the passengers with death at every step, numbers of whom lay killed before me, or what was more deplorable, so wounded and bruised, that they could not move so as to escape the destruction which impended over them.

As self-preservation, however, is the first law of nature, I proceeded as fast as I could: and having got clear of the narrow street, I found myself in safety in the large open

space before St. Paul's church, which had been thrown down a few minutes before, and had buried a great part of a numerous congregation. Here I stood for some time, considering what I should do; but not thinking myself safe, I climbed over the ruins of the west end of the church to get to the river-side, that I might be removed as far as possible from the tottering houses, in the dreadful event of a second shock.

This with some difficulty I accomplished; and by the river-side I found a prodigious concourse of both sexes, and of all ranks and conditions. All these, whom their mutual dangers had here assembled as to a place of safety, were on their knees at prayer, with the terrors of death in their countenances, every one striking his breast and crying incessantly to heaven for mercy and protection.

In the midst of our devotions, the second shock came with little less violence than the first, and it completed the ruin of those buildings which had already been shattered. The consternation now became so universal, that shrieks and cries could be distinctly heard from a considerable distance: at the same time we heard the fall of the parish church, whereby many were killed on the spot. The force of the shock was so great

at I could scarcely support myself on my knees; and it was attended with some circumstances still more dreadful than the former. On a sudden I heard a general cry, "The sea is coming in; we shall all be lost." Upon this, turning my eyes towards the river Tagus, which in that place is near four miles broad, I perceived it heaving and swelling in a most unaccountable manner, nor no wind was stirring. In an instant there appeared, at a small distance, a large body of water, rising like a mountain. It approached foaming and roaring, and rushed towards the shore with such rapidity, that we all ran for our lives as fast as possible. Many were actually swept away: for my own part, I had a narrow escape, and should certainly have been lost had I not grasped a large beam that lay on the ground, till the water returned again to its channel, which it did almost at the same instant, with equal rapidity.

As there now appeared at least as much danger from the sea as the land, I scarcely knew whither to retire for safety: I therefore took a sudden resolution to return back to the area of St. Paul's. Here I stood some time, and observed the ships tumbling and tossing about, as in a violent storm. Some had broken their cables, and were carried to the other side of the Tagus, others

were whirled round with incredible swiftness, several large boats were turned keel upwards; and all this without any wind. It was at this time that the new quay, built of rough marble, was entirely swallowed up with all the people on it, who had fled there for safety, and had reason to consider themselves out of danger. At the same time, a great number of boats and small vessels, which were anchored near it, all full of people, (who had retired to them for the same purpose) were all swallowed up, as in a whirlpool, and never more appeared.

I did not see this last dreadful incident with my own eyes, as it occurred a quarter of a mile from the spot where I was, but I had the account from several masters of ships, who were anchored near the quay and who saw the whole catastrophe. One of them informed me, that during the second shock, he perceived the whole city moving backwards and forwards, like the sea when the wind begins to rise: and the agitation of the earth was so great, even under the river, that it threw up his large anchor from the mooring, which seemed to swim on the surface of the water. This immediately on this extraordinary concussion, the river rose at once near twenty feet, and in a moment subsided; at which instant he saw the quay, with the immens

concourse of people upon it, sink down; and at the same time, the boats and vessels that were near it were also drawn into the cavity, which instantly closed, inasmuch that no sign of a wreck was ever afterwards seen. I went myself in a few days, but could not find even the ruins of a place where I had taken so many agreeable walks; I found it all deep water, and in some parts so deep as scarcely to be fathomed.

I had not been long in the area of St. Paul's church-yard, when I felt the third shock; which though less violent than the former, the sea rushed in again, but retired in like manner. I took notice that the waters retired so impetuously, as to leave some vessels quite dry, which rode in seven-fathoms water.

Perhaps you may think the subject concluded: but, alas! the horrors of this day are enough to fill a volume. As soon as it grew dark in the evening, another scene presented itself, little less shocking than those already described. The whole city appeared in a blaze, so bright that I could see to read. It was, without exaggeration, on fire in a hundred different places at once, and it continued burning for six days together without intermission, or without the least attempt to stop its progress, such were the distress and consternation of the survivors.

I could not learn that this terrible fire was owing to any subterraneous eruption. The first of November being All Saints day, every altar in every church and chape (some of which have more than twenty) was illuminated with a number of wax tapers and lamps; which setting fire to the curtains and timber work that fell with the shock, the conflagration soon spread to the neighbouring houses. The fire, in consequence destroyed the whole city, at least every thing that was grand or valuable.

The number of persons that perished, including those who were burnt or were afterwards crushed to death whilst digging in the ruins, is supposed on the lowest calculation to have amounted to more than sixty thousand. This extensive and opulent city was nothing but a vast heap of ruins; the rich and poor were all upon a level, and some thousands of families, who but the day before, had been easy in their circumstances, were scattered in the fields, wanting every convenience, and finding none able to relieve them.

EARTHQUAKE AT THE CARACCAS.

The following statement of this calamitous event is taken from a supplement to the St. Thomas's gazette, dated 9th April, 1812.

The 26th March has been a day of woe and horror to the province of Venezuela. At four P. M. the city of Caraccas stood in all its splendour. A few minutes latter, 4500 houses, 19 churches and convents, together with all the public buildings, monuments, &c. were crushed to atoms by a sudden shoke of an earthquake, which did not last a minute, and burried thousands of its inhabitants in ruins and desolation. That day happened to be Holy, or Maunday-Thursday; and at the precise hour, every place of worship being crowded to commemorate the commencement of our Saviour's passion by public procession, which was to proceed through the streets a few minutes afterwards, augmented the number of hapless sufferers to an incredible amount, as every church was levelled to the ground before any person could be aware of the danger. The number of sufferers taken out of one of the churches amounting (two days after this disaster) alone, to upward of 300 corpses, besides those it may be presumed could not yet have been taken out of such ruins, gives an idea of the extent of the calamity. The number of dead

differently stated, from four to six, and as far as eighteen thousand. Horrible as this catastrophe appears, it would be a matter of some consolation to know, that the vicinity of that city offered some support to surviving mourners; but the next town and sea port thereto, viz. La Guira, has, in proportion, suffered still more, as well as its immediate coast. Huge masses of the mountains detached themselves from the summits, and were hurled down into the vallies. Deep clefts and separations of the immense bed of rocks still threaten future disasters to the hapless survivors, who are now occupied in burying and burning the dead, and in relieving the numerous wounded and cripples perishing for want of surgical and medical aid, shelter, and other comforts."

Ruins of La Guira, April 2nd, 1812.

"DEAR SIR,—Many a time in my life have I experienced the goodness of a merciful God towards me, but never so conspicuously as in my preservation during the tremendous exertion of his power, which has shaken the mountains to their foundation, and levelled the greatest part of this city, as also that of Caraccas, with the ground—more than 10,000 have been buried, and most of them now lie beneath

he ruins! The stench arising from the dead bodies, is intolerable—such of them as could be come at, have been thrown into the sea, or collected into heaps and burned to ashes.

It is imagined that seven-eighths of the houses in this city are demolished, and of those which still stand there are not perhaps twenty that will be found tenable. The customhouse, which was built very strong, is not much injured—the house which I occupy is three stories high, and was likewise very strong—it stood the shock without falling, but it was so much injured that I do not intend to sleep in it, especially as we are continually kept in a state of alarm by the frequent shocks which have daily taken place ever since the 26th ult. When the first great shock occurred, I ran out of my house, and in my amazement, I turned round, and beheld it rocking like a cradle, which, with the roaring of the earthquake, the screams of the people, and the crashing perhaps of a thousand buildings, made the scene horrible beyond description.

EARTHQUAKES IN SCOTLAND

August, 1816.

Although Britain happily is not naturally a seat of these dreadful agitations of nature it has yet occasionally experienced them in a minor degree. During the earthquake which destroyed Lisbon in 1756, the waters both of Loch Lomond and of Loch Trossa rose, in five minutes, very considerably above their natural level, and then subsided as rapidly. At the same time shocks were felt in different parts of England; and in one place in Yorkshire, a rock was raised from its place, and thrown to some distance in shattered fragments. In 1801, a very smart shock was felt entirely across the island, from Greenock to Edinburgh. The centre appears, however, to have been near Strathearn. Three years afterwards, in 1804, a series of less severe shocks were felt in the latter quarter, particularly at Conington.

The present earthquake appears to have extended entirely across the island, at least at one point considerably more to the north than any of those now alluded to. Its direction seems to have been from WNW. to ESE. The shock was felt on the western coast of Ross-shire, at Gairloch and Applecross.

most strongly, we believe, at the latter place. At Coul, 18 miles to the west of Inverness, it was very strong. Inverness and the vicinity might be considered as its centre; and it reached with little diminution to Aberdeen and Montrose. To the north of Inverness it seems to have rapidly decayed. At Cromarty it was much less severe; and at Geanies, ten or twelve miles farther to the north-east, it was very slight, and by some not felt at all. At Perth, and along the Earn and Tay, it seems to have been sensibly, but not so violently felt. In Edinburgh it was just perceptible; was unnoticed by the majority of the inhabitants; and most, even of those who felt the shock, did not recognise it as proceeding from this cause, till they learned its more sensible action in other quarters. We have ascertained, however, on the most respectable authority, that it was noticed and mentioned by several individuals before any such accounts could have been received.

The following extract will afford a pretty full view of the phenomena which attended this great convulsion of nature, at the principal points of its action:—

Inverness, August 14.

“Last night, exactly a quarter before 11 o'clock, the town of Inverness and the surrounding country was fearfully shook by

one of the most awful phenomena in the dispensation of Providence—an earthquake. C. and I were sitting chatting together after supper, when we were suddenly startled by one of the most sudden and uncomin percussions I had ever felt, and which instantly suggested to us the cause. I could think of nothing that could give so good an idea of what we felt, as that of a person being on the back of a horse, when he suddenly and violently shakes himself. We flew to the street, where we found almost every inhabitant, women and children screaming, and a very considerable proportion of them naked. Many flew to the fields, and there remained for the greater part of the night. Chimney-tops were thrown down or damaged in every quarter of the town. The Masc Lodge, occupied as an hotel, was rent from top to bottom, the north stalk of the chimney partly thrown down—one of the capin stones, weighing, I should think, from fifty to sixty pounds, was thrown to the other side of the street, a distance not less than sixty feet. The spire of the steeple, which I think one of the handsomest in Scotland has been seriously injured, and must in part be taken down. The spire is an octagon; and within five or six feet of the top, the angles of the octagon are turned

nearly to the middle of the square or flat side of the octagon, immediately under it.— What is more wonderful than any thing attending this memorable event, notwithstanding the vast quantities of stones and bricks that have been thrown from such immense heights, not one single person has received any hurt. I have only further to remark, that it was not attended with any of those phenomena that have been said to accompany earthquakes. The day had been beautiful and serene, and still continues so; no agitations or raising was observable in the river; and it has been frequently observed, that in countries subject to these awful visitations, the mercury suddenly falls in the barometer; this I incessantly attended to, but no alteration took place.”

Montrose, August 14th.

“Last night, a few minutes before eleven o'clock, a shock of an earthquake was most distinctly felt here, which had the effect of seriously alarming many families; and many who were in bed were awakened by the concussion. Those who had newly retired to rest were most sensible of the shock, as they felt their beds move, first in a horizontal direction, and then back to the former situation; after which a tremulous motion was felt, as when a thing settles on its basis, after being in commotion.

Others describe the effect as similar to that which is experienced by the slight rolling of a ship at sea.—The chairs and tables in many houses were put in motion; and, in some cases, the leaves of folding tables were heard to rattle; the fire-irons in many instances rung against the fenders; and bells in rooms and passages were set a-ringing; in many kitchens, the cooking utensils and dishes made a noise, and next morning many of the doors were found difficult to open.—One gentleman observed his book-case move from the wall and fall back again upon it. It is impossible to describe the state of alarm which most people were thrown into by this unusual occurrence. Many leaped from bed, imagining their houses were falling, while others ran down stairs in great anxiety, supposing that some accident had happened in the lower part of their house; as it did not readily occur to many what was the real cause of the motion they felt.—Nor was the terror confined alone to the human species; a bird in a cage was so alarmed, that it burst through it, and flew towards the light. The shock lasted for about three or four seconds; and I understand was felt for a considerable distance round, as far as Johnshaven. In this neighbourhood, two excisemen, who were on the watch, for smugglers, whom they expected in a certain direction, had lain down on the ground, and when

shock took place one of them leaped up, running to his companion—"There they are; I feel the ground shaking under their feet." Fortunately we have heard of no serious injury having been occasioned by the event. The weather here had been cold and rainy for about six weeks, but cleared up about mid-day on Sunday, when we had a dry westerly breeze. The two following days were warm, and last night quite and bright. It continued clear till late this morning, when it became dull, and we have had some rain. It is now one o'clock, rather sultry, with no sunshine."

"Aberdeen, August 14th.

It is with feelings of awe we have to state, that last night, about eleven o'clock, a shock of an earthquake was distinctly felt in the various quarters of this city. It took place at four minutes before eleven, and continued, as nearly as we could estimate, about six seconds. The undulation appeared to come from the N.E. and was simultaneously felt at the distance of some miles in the direction of NNW. From the late hour at which it happened, we have been unable to select, for this day's paper, the particulars of those terrific appearances which it may have exhibited in different quarters of the city.—Where we sat, the house was shaken to its foundation, the heaviest articles of furniture were moved, and that rumbling noise was heard, as if some heavy body was rolling along the roof. In many houses the bells were set ringing, and the agitation of the wires continued sensible for some time after the cessation of the shock. It has been described to us, by one who was in Lis-burn at that period, as exactly resembling the com-

mencement of the earthquake in that city, on the 1st of June, 1807. A second; but more partial shock was felt at half-past eleven; since which time we have had no return of this awful and unusual exhibition of Providence. The air, during the night, was mild and calm, with clear moonlight; and the appearance after the shock was, that of a thin white vapour settling on the surrounding hills."

Forres, August 1st.
 "A most extraordinary thing happened to me in this quarter, about ten minutes before eleven o'clock last night—nothing more than less than a shock of an earthquake, which might last about the third of a minute. The houses shook, and the inhabitants were dreadfully alarmed, as nothing of that kind had happened before.—No damage was done, farther than a good fright. We had happened not to be in bed at the time, so we had an opportunity of perceiving the effects of the shock. The glasses on the table shook, as well as the tables and chairs—the doors also opened with a noise, and a few things in the garret rattled about. I believe in one house the shock was so great, that the bells were set a-ringing by it."

Peterhead, August 1st.
 "A slight shock of an earthquake was felt here last night, a few minutes before eleven o'clock. I was just gone to bed, and noticed the concussion, without being at the time, being aware of its nature.—The house seemed to be shaken, as if some heavy piece of furniture had been dragged on the floor of the adjoining apartment. The hurling sound continued for a few seconds. The clock on the stairs was observed by the other inmates of the house to warn twice before eleven was struck; and the rumbling was so general that almost every family in the town and neighbourhood was disturbed. Several people thought robbers were breaking into their houses; and sundry other interruptions were fortunately the only consequences."

this tremendous phenomenon. The evening was
ite calm; and a friend of mine, who was roused
m bed by the shock, looked at his barometer,
rich, however, was not affected. There was no per-
ptible influence on the sea. The shock was felt at
aserburgh."

"Perth, August 15th.

"On Tuesday night, about a quarter before eleven
clock, two smart shocks of an earthquake, the
cond of which succeeded the first at the interval of
lf a minute, were felt in this city and over the
eater part of the neighbourhood, particularly in
e low grounds. The effects of this shock were per-
ptible for several seconds, and in some places were
violent, as to shake the windows, and cause a rat-
ng noise among the slates. Persons in bed felt a
nsible agitation, or rather concussion, in an upward
rection; and if the bed happened to be in contact
lth the wall, a lateral shock was also felt. In some
uses the chairs and tables were moved backwards
d forwards, and even the bells set a-ringing. Birds
cages were thrown down from the sticks on which
ey perched, and exhibited evident signs of fear. A
llow rumbling noise was heard by different indi-
iduals, which seemed to die away in the west. The
r at the time was clear and serene. Similar effects
ere perceived, about the same time, at Dunkeld, in
e Carse of Gowrie, and Strathearn."

EARTHQUAKES AT ALEPPO.

Aleppo, one of the most beautiful cities of the Turkish empire, containing 40,000 houses and 200,000 inhabitants, has been visited by an earthquake resembling those which laid waste Lisbon and Calabria, in the last century.

The first and most severe shock occurred on the 13th of August, 1822, about ten in the evening, and instantly buried thousands of the inhabitants under the ruins of their elegant mansions of stone, some of which deserve the name of palaces. Several other shocks succeeded; and even on the 16th, shocks were still experienced, some of which were severe. Two thirds of the houses of this populous city are in ruins, and along with them an immense quantity of valuable goods of all kinds from Persia and India have been destroyed.

According to the first accounts of this event, which through alarm may have been exaggerated, the number of the sufferers amounts to from 25 to 30,000. Among them is one of the best men in the city, the Imperial Consul-General, the Chevalier Esdras V. Picotto.—Having escaped the danger of being buried under the ruins of his own house he hastened with some of his family towards the gate of the city; but as he was passing a Khan, a new shock occurred, and a wall fell down, which buried him and those with him. Tartars who have arrived at Constantinople from Damascus, report that they saw the whole population of Aleppo encamped in the environs. They state that several other towns in the Pachalat of Aleppo and Tripoli, particularly Antioch and Lacedicea, have been destroyed by this earthquake. The captain of a French ship also has reported that two rocks, at the time of the earthquake, had risen from the sea in the neighbourhood of Cyprus, which is at most of the same latitude as Aleppo.

As soon as the Arabs and the Bedouins of the Syrian desert obtained information of the calamity which had befallen Aleppo, they hastened in hordes to exercise the trade of plunder in that immense grave. The Pacha, however, drove them back, and also executed several Janissaries, who had committed depredations among the dead bodies and ruins. The great number of unburied bodies, in this extremely hot period of the year, has produced pestiferial effluvia, and obliged the unfortunate inhabitants to seek for refuge in some remote district.

Naturalists have remarked that the earthquake at Aleppo was preceded and followed nearly at the same time by other earthquakes at immense distances. In addition to those of Carlstadt, in Sweden; and Danbury, in England; an earthquake happened on the 1st of August, in Siberia. A private letter from Irkutsk, in Siberia, dated the 28th of July, (9th of August, new style) gives the following detail:—"At seven minutes past ten at night, a violent earthquake was felt in our city. The shock was so violent that I could not write, but hurried out of my chamber. The house shook, and we heard a terrible noise. The direction of the shock was from north to south. It lasted nearly sixty seconds. The weather was calm and serene."

The city of Latakia (the Laodicea of Holy Writ,) which is about seventy-five miles distant from Aleppo, has, like the latter city, been visited with an earthquake, in the night of the 13th of August, which has done great damage. A shock had been felt on the 12th, and it was imagined that all was over, when, on the 13th, about twenty minutes past nine in the evening, a slight trembling was the harbinger of most violent shocks that immediately followed. They began from north to south, and then took a direction from east to west. The shock continued for forty seconds. The quarter in which the houses of the

Consuls are situated has suffered the most. A
part of the city lies in ruins. Several villages in
environs are wholly destroyed. Of the little town
Gibelette three-fourths are destroyed. Its har-
is clogged up by the ruins of the houses that
fallen into it. Three hundred persons have lost
lives on this occasion.

EARTHQUAKE AT COMRIE,

1822.

Extract of a letter, dated Comrie, 15th April
About half past nine on Saturday (the 13th inst)
while at breakfast, we were visited with the smart
shock of an earthquake that has been felt in
neighbourhood for the last fifteen or twenty y
It was accompanied by two very loud reports
apparently above our heads, and the other, v
followed immediately afterwards, under our
The noise of these, which was more terrific
thunder, lasted, I should think, fully thirty sec
It set our kitchen utensils a-ringing, and bro
down some of the covers of the pots and pan
have felt much severer shocks in the West In
but not accompanied with such a noise. The s
tion it created in me was exactly like that I hav
on the deck of a vessel on her guns being dischar

22.—This morning, between nine and ten o
a smart shock of an earthquake was felt at Dur
accompanied by a rumbling noise resembling
falling of a building.—It was felt and heard
Strathtay.

FINIS.