URNING MOUNTAINS

AN ACCOUNT OF

Two great and Dreadful

VOLCANIC ERUPTIONS

VIZ,

THAT OF

IOUNT ÆTNA IN SICILY, 1669.

ch laid waste a great part of the beautiful City CATANIA and destroyed in its progress the roperty of near THIRTY THOUSAND PERSONS.

AND THE LATE

DREADFUL ERUPTION OF

Mount Vesuvius in Italy.

ich broke out on the 15th of June, 1794 and tinued in force about 10 days; the lava, of hich, overwhelmed, burnt, and destroyed the greatest part of the TOWN OF TORRE del GRECO, allowing the unfortunate inhabitants scarcely time to save their lives, and heating the waters to such a degree, where it fell into the sea; that a great many boiled fish were seen floating on its surface.

(Collected from Gregory's Economy of Nature.)

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AN ACCOUNT

OF TWO

GREAT AND DREADFUL

Volcanic Eruptions, &c.

Eruption of Mount Etna in Sicily, 1699.

MANY ſtriking remains of the great eruption in 1669 are ſtill to be ſeen, and will long ntinue as memorials of that dreadful event which erwhelmed Catania, and all the adjacent country. remendous earthquakes ſhook the iſland, and loud ɔterraneous bellowings were heard in the moun-n. During ſome weeks, the ſun ceaſed to appear, d the day ſeemed changed into night. Borelli, who s a witneſs to theſe terrible phenomena, ſays, that iength a rent, twelve miles in length, was opened the mountain, in ſome places of which, when y threw down ſtones, they could not hear them

reach the bottom. Burning rocks, ſixty palms i
length, were thrown to the diſtance of a mile, an
leſſer ſtones were carried three miles. After th
moſt violent ſtruggles, and a ſhaking of the whol
iſland, an immenſe torrent of lava guſhed from th
rent, and ſprung up into the air to the height o
ſixty palms, whence it poured down the mountain
and overwhelmed every object in its way in on
promiſcuous ruin.

This deſtructive torrent, which burſt from th
ſide of Ætna at a place called Ricini, ruſhed impe
tuouſly againſt the beautiful mountain of Montpe
lieri, and pierced into the ground to a conſiderab
depth; then dividing and ſurrounding the mou
tain; it united again on the ſouth ſide, and poure
deſolation upon the adjacent country. The pro
greſs of the torrent was at firſt at the rate of ſeve
miles a day, but it afterwards took four days t
travel ſixteen; wherever it directed its courſe, th
whole appearance of nature was changed, ſever
hills were formed in place which were former
valleys, and a large lake was ſo entirely filled u
by the melted maſs, as not to leave a veſtige remai
ing. In its courſe it deſcended upon a vineyard, b
longing to a convent of Jeſuits, which was forme
upon an ancient and probably a very thin layer o
lava, with a number of caverns and crevices und
it. The liquid maſs entering into theſe excavatio
ſoon filled them up, and by degrees bore up th
vineyard, which in a ſhort time, to the great aſt
niſhment of the ſpectators, began to move awa
and was carried by the torrent to a conſiderab
diſtance. In 1770 ſome remains of this vineyar
were ſtill to be ſeen, but the greater part of it w
entirely deſtroyed.

In vain did the terrified inhabitants of Catan
recur for protection to the miraculous veil, or e

ect defence from the lofty walls of their city. After destroying several convents, churches, and villages, this fiery current directed its course to Catania, where it poured impetuously over the ramparts, which are near sixty feet in height, and covered up five of its bastions, with the intervening curtains. After laying waste a great part of this beautiful city, and entirely destroying several valuable remains of antiquity, its further progress was stopped by the ocean, over whose banks it poured its destructive current. In its course from the rent in the mountain, till its arrival in the sea, it is said to have totally destroyed the property of near thirty thousand persons.

Eruption of Mount Vesuvius in Italy, 1794.

THE mountain had been remarkably quiet for seven months before the late eruption, nor did the usual smoke issue from its crater, but at times it emitted small clouds of smoke that floated in the air in the shape of little trees. It was remarked by the Father Antonio di Petrizzi, a capuchin friar (who printed an account of the late eruption) from his convent close to the unfortunate town of Torre del Greco, that for some days preceding this eruption, a thick vapour was seen to surround the mountain, about a quarter of a mile beneath its crater, and it was observed by him and others at the same time, that both the sun and the moon had often an unusual reddish cast.

The water of the great fountain at Torre del Greco began to decrease some days before the eruption, so that the wheels of a corn mill, worked by that water, moved very slowly; it was necessary in the other wells of the town and its neighbourhood to lengthen the ropes daily, in order to reach

the water; and some of the wells became quite dr
Although most of the inhabitants were sensible
this phenomenon, not one of them seems to hav
suspected the true cause of it. Eight days also b
fore the eruption, a man and two boys, being in
vineyard above Torre del Greco (and precisely o
the spot where one of the new mouths opened
whence the principal current of lava that destroye
the town issued) were much alarmed by a sudde
puff of smoke which issued from the earth close t
them, and was attended with a slight explosion.

Had this circumstance, with that of the subte
raneous noises heard at Resina for two days befo
the eruption (with the additional one of the d
crease of water in the wells) been communicated
the time, it would have required no great foresig
to have been certain than an eruption of the vol
no was near at hand, and that its force was dire
ted particularly towards that part of the mountai

On the 12th of June 1794, in the morning, the
was a violent fall of rain, and soon after the inh
bitants of Resina, situated directly over the ancie
town of Herculaneum, were sensible of a rumblin
subterraneous noise, which was not heard at N
ples.

From the month of January to the month
May, the atmosphere had been generally calm, a
there was continued dry weather. In the mon
of May there was a little rain, but the weather w
unusually sultry. For some days preceding the eru
tion, the Duke della Torre, a learned and inge
ous nobleman, who published two letters upon t
subject of the eruption, observed by his electrom
ters, that the atmosphere was charged in ex
with the electric fluid, and continued so for se
ral days during the eruption.

About eleven o'clock on the night of the 12

June, the inhabitants of Naples were all ſenſible a violent ſhock of an earthquake; the undulatory otion was evidently from eaſt to weſt, and appear- to have laſted near half a minute. The ſky, hich had been quite clear, was ſoon after covered th black clouds. The inhabitants of the towns d villages, which are very numerous at the foot Veſuvius, felt this earthquake ſtill more ſenſi- y, and ſay, that the ſhock at firſt was from the ttom upwards, after which followed the undulati- from eaſt to weſt. This earthquake extended over the Campagna Felice; and the royal palace at ſerta, which is fifteen miles from Naples, and one the moſt magnificent and ſolid buildings in Europe he walls being eighteen feet thick) was ſhaken in ch a manner as to cauſe great alarm, and all the amber bells rang. It was likewiſe much felt at neventum, about thirty miles from Naples; and Ariano in Puglia, which is at a much greater ſtance; both theſe towns, indeed, have been of- n afflicted with earthquakes.

On Sunday the 15th of June, ſoon after ten lock at night, another ſhock of an earthquake s felt at Naples, but did not appear to be quite violent as that of the 12th, nor did it laſt ſo ng; at the ſame moment a fountain of bright fire, ended with a very black ſmoke and a loud re- rt, was ſeen to iſſue, and riſe to a great height, om about the middle of the cone of Veſuvius; on after another of the ſame kind broke out at ne little diſtance lower down; then, as is ſuppoſ- by the blowing up of a covered channel full red hot lava, it had the appearance as if the lava d taken its courſe directly up the ſteep cone of the volcano Freſh fountains ſucceeded one a- ther haſtily, and all in a direct line tending, for out a mile and a half down, towards the towns of

Reſina and Torre del Greco. Sir William Ham
ton could count fifteen of them, but believes the
were others obſcured by the ſmoke. It ſeems p
bable, that all theſe fountains of fire, from th
being in ſuch an exact line, proceeded from o
and the ſame long fiſſure down the flanks of t
mountain, and that the lava and other volcan
matter forced its way out of the wideſt parts of t
crack, and formed there the little mountains a
craters that will be deſcribed in their proper pla
It is impoſſible that any deſcription can give an id
of the blazing ſcene, or of the horrid noiſes th
attended this great operation of nature. It wa
mixture of the loudeſt thunder, with inceſſant r
ports, like thoſe from a numerous heavy artille
accompanied by a continued hollow murmer, li
that of the roaring of the ocean during a viole
ſtorm; and, added to theſe was another blowi
noiſe, like that of the aſcending of a large flig
of ſky-rockets, or that which is produced by the a
tion of the enormous bellows on the furnace of t
Carron iron foundery in Scotland. The freque
falling of the huge ſtones and ſcoriæ, which we
thrown up to an incredible height from ſome of t
new mouths, one of which having been ſince me
ſured by the Abbe Tata was ten feet high, an
thirty five in circumference, contributed undoub
edly to the concuſſion of the earth and air, whi
kept all the houſes at Naples for ſeveral hours in
conſtant tremor, every door and window ſhaki
and rattling inceſſantly, and the bells ringin
This was an awful moment! The ſky, from a brig
full moon and ſtarlight, began to be obſcured; t
moon had preſently the appearance of being in
eclipſe, and ſoon after was totally loſt in obſcuri
The murmer of the prayers and lamentations of
numerous populace forming various proceſſion

parading in the ſtreets, added to the horror
the lava did not appear to have yet a ſufficient
t, and it was now evident that the earthquakes
eady felt had been occaſioned by the air and
y matter confined within the bowels of the
untain, and probably at no ſmall depth (conſi-
ing the extent of thoſe earthquakes) Sir Wil-
n recommended ſo the company that was with
n, who began to be much alarmed, rather to go
view the mountain at ſome greater diſtance, and
he open air, than to remain in the houſe, which
s on the ſea ſide, and in the part of Naples that
nearèſt and moſt expoſed to Veſuvius. They ac-
dingly proceeded to Poſilipo, and viewed the con-
gration, now become ſtill more conſiderable,
m the ſea ſide under that mountain; but whether
m the eruption having increaſed, or from the
d reports of the volcanic exploſions being re-
ted by the mountain behind them, the noiſe was
ch louder, and more alarming than that they
heard in their firſt poſition, at leaſt a mile near-
o Veſuvius After ſome time, and which was
ut two o'clock in the morning of the 16th, hav-
obſerved that the lavas ran in abundance,
ly, and with great velocity, having made a con-
rable progreſs towards Reſina, the town which
irſt threatened, and that the fiery vapours which
been confined had now free vent through many
ts of a crack of more than a mile and a half in
gth, as was evident from the quantity of inflam-
matter and black smoke, which continued to
e from the new mouths above mentioned, with-
any interruption, our author concluded that at
ples all danger from earthquakes, which had
n his greateſt apprehenſion, was totally removed,
d he returned to his former ſtation at St. Lucia
Naples.

All this time there was not the smallest appearanc of fire or smoke from the crater on the summit o Vesuvius; but the black smoke and ashes issuin continually from so many new mouths, or craters formed an enormous and dense body of clouds ov the whole mountain, and which began to give sign of being replete with the electric fluid, by exhibit ing flashes of that sort of zig zag lightning, whic in the volcanic language of the country is calle *ferilli*, and which is the constant attendant on th most violent eruptions.

Sir William Hamilton proceeds to remark, tha during thirty years that he had resided at Naples and in which space of time he had been witness t many eruptions of Vesuvius, of one sort or other he never saw the cloud of smoke replete with th electric fire, except in the two great eruptions o 1767, that of 1779, and during this more formi dable one. The electric fire, in the year 1779 that played constantly within the enormous black cloud over the crater of Vesuvius, and seldom quit ted it, was exactly similar to that which is produc ed, on a very small scale, by the conductor of an electrical machine communicating with an insulte plate of glass, thinly spread over with metallic fil ings, &c. when the electric matter continues to play over it in zig zag lines without quitting it. He was not sensible of any noise attending that operation in 1779; whereas the discharge of the electrica matter from the volcanic clouds during this erupti on, and particularly the second and third days, caused explosions like those of the loudest thunder; and indeed the storms raised evidently by the sole power of the volcano, resembled in every respect all other thunder-storms; the lightning falling and destroying every thing in its course. The house of the Marquis of Berio at St. Jorio, situated at the

ct of Vesuvius, during one of these volcanic storms as struck with lightning, which having shattered any doors and windows, and damaged the furniture, left for some time a strong smell of sulphur in e rooms it passed through. Out of these gigantic d volcanic clouds, besides the lightning, both during this eruption and that of 1779, the author ds, he had, with many others, seen balls of fire ue, and some of a considerable magnitude, which rsting in the air, produced nearly the same effect that from the air-baloons in fire-works, the electic fire that came out having the appearance of the rpents with which those fire-work baloons are often filled. The day on which Naples was in the eatest danger from the volcanic clouds, two small lls of fire, joined together by a small link like a ain-shot, fell close to his Casino at Posilipo; they parted, and one fell in the vineyard above the use, and the other in the sea, so close to it that heard the splash in the water. The Abbe ata, in his printed account of this eruption, mens an enormous ball of this kind which flew out the crater of Vesuvius while he was standing on e edge of it, and which burst in the air at some stance form the mountain, soon after which he ard a noise like the fall of stones, or of a heavy ower of hail. During the eruption of the 15th night, few of the inhabitants of Naples, from e dread of earthquakes, ventured to go to their eds. The common people were either employed devout processions in the streets, or were sleeping on the quays and open places; the nobility and entry, having caused their horses to be taken from eir carriages, slept in them in the squares and en places, or on the high roads just out of the wn. For several days, while the volcanic storms thunder and lightning lasted, the inhabitants at

the foot of the volcano, both on the sea side and th
Somma side, were often sensible of a tremor in th
earth, as well as of the concussions in the air, bu
at Naples only the earthquakes of the 12th an
15th of June were distinctly and universally felt
this fair city could not certainly have resisted, ha
not those earthquakes been fortunately of a shor
duration. Thoughout this eruption, which conti
nued in force about ten days, the fever of th
mountain, as has been remarked in former erupti
ons, showed itself to be in some measure periodical
and generally was most violent at the break of day
at noon, and at midnight.

About four o'clock in the morning of the 16th
the crater of Vesuvius began to shew signs of being
open, by some black smoke issuing out of it; and
at day-break another smoke, tinged with red, issu
ing from an opening near the crater, but on the
other side of the mountain, and facing the town
of Ottaiano, shewed that a new mouth had opened
there from which a considerable stream of lava issu
ed, and ran with great velocity through a wood,
which it burnt; and having run about three miles
in a few hours it stopped before it had arrived at the
vineyards and cultivated lands. The crater, and all
the conical part of Vesuvius, was soon involved in
clouds and darkness, and so it remained for several
days; but above these clouds, although of a great
height, fresh columns of smoke were seen from the
crater, rising furiously still higher, until the whole
mass remained in the usual form of a pine-tree;
and in that gigantic mass of heavy clouds the ferilli,
or volcanic lightning, was frequently visible, even
in the day time. About five o'clock in the mor-
ning of the 16th, the lava which had first broken
out from the several new mouths on the south side
of the mountain, had reached the sea, and was

ning into it, having overwhelmed, burnt, and de-
oyed the greateſt part of Torre del Greco, the prin-
al ſtream of lava having taken its coarſe through
very-center of the town. They obſerved from
ples, that when the lava was in the vineyards in
way to the town, there iſſued often, and in dif-
ent parts of it, a bright pale flame, and very
ferent from the deep red of the lava; this was
aſioned by the burning of the trees that ſup-
ted the vines. Soon after the beginning of this
ption, aſhes fell thick at the foot of the moun-
, all the way from Portici to the Torre del Gre-
and what is remarkable, although there were
at that time any clouds in the air, except thoſe
ſmoke from the mountain, the aſhes were wet,
accompanied with large drops of water, which
e to the taſte very ſalt; the road, which is pav-
was as wet as it there had been a heavy ſhower
ain. Thoſe aſhes were black and coarſe, like
ſand of the ſea-ſhore, whereas thoſe that fell
re, and at Naples ſome days after, were of a
t-grey colour, and as fine as Spaniſh ſnuff, or
der bark. They contained many ſaline particles;
ſe aſhes that lay on the ground, expoſed to the
ning ſun, had a coat of the whiteſt powder on their
ace, which to the taſte was extremely ſalt and
gent. In the printed account of the eruption
Emanuel Scotti, doctor of phyſic and profeſſor
philoſophy in the univerſity of Naples; he ſup-
s (which appears to be highly probable) that
water which accompanied the fall of the aſhes
he beginning of the eruption, was produced by
mixture of the inflammable and dephlogiſticat-
ir.

y the time that the lava had reached the ſea,
ween five and ſix o'clock in the morning of the
, Veſuvius was ſo completely involved in

darkneſs, that the violent operation of nature t
was going on there could no longer be diſcern
and ſo it remained for ſeveral days; but the dre
ful noiſe, and the red tinge on the clouds over t
top of the mountain, were evident ſigns of the ac
vity of the fire underneath. The lava ran
ſlowly at Torre del Greco after it had reached t
ſea; and on the 17th of June in the morning,
courſe was ſtopped, excepting that at times a lit
rivulet of liquid fire iſſed from under the ſmoki
ſcoriæ into the ſea, and cauſed a hiſſing noiſe, a
a white ſmoke; at other times, a quantity of lar
ſcoriæ were puſhed off the ſurface of the body
the lava into the ſea, diſcovering that it was red
under that ſurface; and even to the latter end
Auguſt the center of the thickeſt part of the la
that covered the town retained its red heat. T
breadth of the lava that ran into the ſea, a
formed a new promontory there, after having d
ſtroyed the greateſt part of the town of Torre d
Greco, having been exactly meaſured by the du
della Torre, is of Engliſh feet 1204. Its height abo
the ſea is twelve feet, and as many feet under w
ter; ſo that its whole height is twenty-four feet;
extends into the ſea 626 feet. The ſea water
boiling as in a cauldron, where it waſhed the fo
of this new formed promontory: and although
author was at leaſt a hundred yards from it, obſer
ing that the ſea ſmoaked near his boat, he put h
hand into the water, which was literally ſcalde
and by this time his boatmen obſerved that t
pitch from the bottom of the boat was melting fa
and floating on the ſurface of the ſea, and that t
boat began to leak; he therefore retired haſ
from this ſpot, and landed at ſome diſtance from t
hot lava. The town of Torre del Greco contain
about 18,000 inhabitants, all of whom (except

t 15, who from either age or infirmity could not moved, and were overwhelmed by the lava in r houſes) eſcaped either to Caſtel-a-mare, ch was the ancient Stabiae, or to Naples; but rapid progreſs of the lava was ſuch, after it had red its courſe from Reſina; which town it firſt eatened, and had joined a freſh lava that iſſued n one of the new mouths in a vineyard, about ile from the town, that it ran like a torrent over town of Torre del Greco, allowing the unfor- ate inhabitants ſcarcely time to ſave their lives; r goods and effects were totally abandoned, and eed ſeveral of the inhabitants, whoſe houſes had n ſurounded with lava while they remained in n, eſcaped from them, and ſaved their lives the owing day, by coming out of the tops of their ſes, and walking over the ſcoriae on the ſurface he redhot lava. Five or ſix old nuns were ta- out of a convent in this manner, on the 16th une, and carried over the hot lava; their ſtupi- was ſuch, as not to have been the leaſt alarm- or ſenſible of their danger: one of upwards of ty years of age was found actually warming her- at a point of redhot lava, which touched the dow of her cell, and which ſhe ſaid was very fortable; and though now appr zed of their ger, they were ſtill very unwilling to leave the vent, in which the had been ſhut up almoſt their infancy, their ideas being as limited as ſpace they inhabited. Having been deſired to up whatever they had that was moſt valuable, all loaded themſelves with biſcuits and ſweet- s, and it was but by accident it was diſcovered they had left a ſum of money behind them, h was recovered for them.

he lava paſſed over the center and beſt part of own; no part of the cathedral remained above

it, except the upper part of a square brick tow
in which were the bells; and it is a curious circu
ſtance, that thoſe bells, although they were neith
cracked nor melted, were deprived of their tone
much as if they had been cracked. When the la
firſt entered the ſea it threw up the water to a pr
digious height; and particularly when two points
lava met and incloſed a pool of water, that wat
was thrown up with great violence, and a loud r
port: at this time, as well as the day after alſo,
great many boiled fiſh were ſeen floating on t
ſurface of the ſea.

The lava over the cathedral, and in other par
of the town, is ſaid to be upwards of forty feet
thickneſs; the general height of the lava durin
its whole courſe was about twelve feet, and in ſo
parts not leſs than a mile in breadth.

When Sir William Hamilton viſited it on th
17th of June, the tops of the houſes were juſt vi
ble here and there in ſome parts, and the timbe
within ſtill burning cauſed a bright flame to iſſu
out of the ſurface; in other parts, the ſulphur an
ſalts exhaled in a white ſmoke from the lava, form
ing a white or yellow cruſt on the ſcoria round th
ſpots where it iſſued with the greateſt force. H
often heard little exploſions, and ſaw that the
blew up, like little mines, fragments of the ſcori
and aſhes into the air; theſe he ſuppoſes to hav
been occaſioned either by rarefied air in confine
cellars, or, perhaps, by ſmall portions of gunpow
der taking fire, as few in that country are without
gun and ſome little portion of gunpowder in the
houſes. At the church feaſts there are uſually a
tended with fireworks and crackers, a firewor
maker of the town had a very great quantity of fir
works ready made for an approaching feaſt, an
ſome gunpowder, all of which had been ſhut up

house by the lava a part of which had even entered one of the rooms; yet he actually saved all his fireworks and gunpowder some days after, by carrying them safely over the scoriae of the lava, while it was red hot underneath. The heat in the streets of the town, at this time, was so great as to rise the thermometer to very near one hundred degrees, and close to the hot lava it rose much higher. Sir William remarked in his way home, that there was much greater quantity of the petroleum floating on the surface of the sea, and diffusing a very strong and offensive smell, than was usual; for at all times of calms, patches of this bituminous oil are to be seen floating on the surface of the sea between Portici and Naples, and particularly opposite a village called Pietra Bianca. The minute ashes continued falling at Naples; and the mountain, totally obscured by them, continued to alarm the inhabitants with repeated loud explosions.

On Wednesday June 18, the wind having for a short space of time cleared away the thick cloud from the top of Vesuvius, it was now discovered that a great part of its crater, particularly on the east side opposite Naples, had fallen in, which it probably did about four o'clock in the morning of that day, as a violent shock of an earthquake was felt at that moment at Resina, and other parts situated at the foot of the volcano. The clouds of smoke, mixed with the ashes, were of such a density as to appear to have the greatest difficulty in forcing their passage out of the now widly extended mouth of Vesuvius, which, since the top fell in, is described as not much short of two miles in circumference. One cloud heaped on another, and succeeding one another incessantly; formed in a few hours such a gigantic and elevated column of the darkest hue over the mountain, as seemed to threa-

ten Naples with immediate deſtruction, hav
at one time been bent over the city, and appear
to be much too maſive and ponderous to rem
long ſuſpended in the air; it was, beſides, rep
with the ferilli, or volcanic lightning, which
ſtronger than common lightning.

Veſuvius was at this time completely covered,
were all the old black lavas, with a thick coat
thoſe fine light-grey aſhes already fallen, which g
it a cold and horrid appearance; and in compari
of the abovementioned enormous maſs of clou
which certainly, however it may contradict our i
of the extenſion of our atmoſphere, roſe many m
above the mountain, it appeared like a moleh
although the perpendicular height of Veſuvi
from the level of the ſea, is more than three tho
ſand ſix hundered feet. The abbe Braccini, as a
pears in his printed account of the eruption
Mount Veſuvius in 1631, meaſured with a quadra
the elevation of a maſs of clouds of the ſame natu
which was formed over Veſuvius during that gre
eruption, and found it to exceed thirty miles
height. Dr Scotti, in his printed account of th
eruption, ſays, that the height of this threa
ning cloud of ſmoke and aſhes, meaſured fro
Naples, was found to be of an elevation of thir
degrees.

The ſtorms of thunder and lightning, attend
at times with heavy falls of rain and aſhes, cauſi
the moſt deſtructive torrents of water and glutino
mud, mixed with huge ſtones, and trees torn up
the roots, continued more or leſs to afflict the inh
bitants on both ſides of the volcano until the 7th
July, when the laſt torrent deſtroyed many ne
of the vines of cultivated land, between the to
Torre del Greco and Torre dell' Annunziata. Se
terrible torrents, both on the ſea ſide and the ba

de of the mountain, came down with a horrid ng noise; and some of them, after having d their way through the narrow gullies of the ntain, rose to the height of more than twenty and were near half a mile in extent. The , of which the torrents were composed, being nd of natural mortar, completely cased up and ed some thousand acres of rich vineyards; for on becomes so hard, that nothing less than a axe can break it up.

he laudable curiosity of our author induced him o upon Mount Vesuvius, as soon as it was con- t with any degree of prudence, which was not the 30th of June, and even then it was at- ed with some risk. The crater of Vesuvius, pt at short intervals, had been continually ob- ed by the volcanic clouds from the 16th, and so on that day, with frequent flashes of light- playing in those clouds, and attended as usual a noise like thunder; and the fine ashes were falling on Vesuvius, but still more on the ntain of Somma. Sir William went up the l way by Resina, and observed, in his way ugh that village, that many of the stones of the ment had been loosened, and were deranged he earthquakes, particularly by that of the , which attended the falling in of the crater of olcano, and which had been so violent as to w many people down, and obliged all the in- tants of Resina to quit their houses hastily, to ch they did not dare return for two days. The es of all the vines were burnt by the ashes that fallen on them, and many of the vines them- s were buried under the ashes, and great ches of the trees that supported them had been off by their weight. In short, nothing but and desolation was to be seen. The ashes at

the foot of the mountain were about ten or t
inches thick on the surface of the earth, ba
proportion as he ascended, their thickness inc
ed to several feet, no less than nine or ten in
parts; so that the surface of the old rugged l
that before was almost impracticable, was now
come a perfect plain, over which he walked
the greatest ease. The ashes were of a light
colour, and exceedingly fine, so that by the
steps being marked on them as on snow, he le
that three small parties had been up before him.
saw likewise the track of a fox, which appeare
have been quite bewildered, to judge from the
ny turns he had made. Even the traces of liz
and other little animals, and of insects, were vi
on these fine ashes. Sir William and his comp
on ascended to the spot whence the lava of the
first issued, and followed the course of it, which
still very hot (although covered with such a th
coat of ashes) quite down to the sea at Torre
Greco, which is more than five miles. It was
possible to get up to the great crater of Vesuv
nor had any one yet attempted it. The ho
chasms that existed from the spot were the
eruption first took place, in a strait line for
two miles towards the sea, cannot be imagi
They formed vallies more than two hundred
deep, and from half a mile to a mile wide;
where the fountains of fiery matter existed
ring the eruption, were little mountains wi h d
craters. Ten thousand men, in as many ye
could not make such an alteration on the face
Vesuvius. Except the exhalations of sulphur
and vitriolic vapours, which broke out from di
ent spots of the line abovementioned, and tin
the surface of the ashes and scoriae in those p
with either a deep or pale-yellow, with a red

colour, or a bright white, and in ſome parts
a deep green and azure blue (ſo that the whole
ter had the effect of an iris) all had the ap-
nce of a ſandy deſert. Our adventurers then
on the top of ſeven of the moſt conſiderable of
ew formed mountains, and looked into their
s, which on ſome of them appeared to be lit-
ort of half a mile in circumference; and al-
h the exterior perpendicular heigh of any
em did not exceed two hundred feet, the
of their inverted cone within was three times
at. It would not have been poſſible to have
ed on theſe new mountains near their craters,
y had not taken the precaution of tying a
e handkerchief over their mouths and noſtrils;
even with that precaution they could not re-
ng, the fumes of the vitriolic acid were ſo ex-
gly penetrating, and of ſuch a ſuffocating
y. They found in one a double crater, like
nnels joined together; and in all there was
little ſmoke and depoſitions of ſalts and ſul-
, of the various colours abovementioned, juſt
mmonly ſeen adhering to the inner walls of
incipal crater of Veſuvius.

o or three days after they had been there, one
e new mouths, into which they had looked,
nly made a great exploſion of ſtones, ſmoke,
ſhes, which would certainly have proved fatal
one who might unfortunately have been
at the time of the exploſon. We read of a
r accident having proved fatal to more than
y people, who had the curioſity to look into
rater of the Monte Nuovo, near Puzzuoli, a
ays after its formation, in the year 1538. The
of Auguſt, Sir William ſaw a ſudden exploſi-
ſmoke and aſhes thrown to an extreme height
the great crater of Veſuvius, that muſt have

deſtroyed any one within half a mile of it; and on the 19th of July a party not only had viſited the crater, but had deſcended 170 feet within it. While they were on the mountain, two whirlwinds, exactly like thoſe that form water-ſpouts at ſea, met their appearance; and one of them, which was near, made a ſtrange ruſhing noiſe, and having taken up a great quantity of the fine aſhes, formed them into an elevated ſpiral column, which, with whirling motion and great rapidity, was carried towards the mountain of Somma, where it broke and was diſperſed. One of our author's ſervants employed in collecting of ſulphur, or ſal ammoniac, which cryſtalizes near the fumaroli, as they are called (and which are the ſpots whence the hot vapour iſſues out of the freſh lava) found to his great ſurprize, an exceeding cold wind iſſue from a fiſſure very near the hot fumaroli upon his leg. In a vineyard not in the ſame line with the new-formed mountains juſt deſcribed, but in a right line between them, at the diſtance of little more than a mile from Torre del Greco, they found three or more of theſe new-formed mountains with craters, out of which the lava flowed, and by uniting with the ſtreams that came from the higher mouths, and adding to their heat and fluidity, enabled the whole current to make ſo rapid a progreſs over the unfortunate town, as ſcarcely to allow its inhabitants ſufficient time to eſcape with their lives. The vineyards belonging to the Torre del Greco, from which produced the wine called Lacrima Chriſti, that were buried and totally deſtroyed by this lava, conſiſted of more than three thouſand acres; but the deſtruction of the vineyards by the torrent of mud and water, at the foot of the mountain of Somma, was much more extenſive.

In that part of the country, the firſt ſigns

t that our author met with, was near the vil-
f the Madonna dell' Arco, and he paſſed ſeveral
s between that and the town of Ottaiano; one
Trochia, and two near the town of Somma,
the moſt conſiderable, and not leſs than a
er of a mile in breadth; and, according to the
ony of eye witneſſes, when they poured down
from the mountain of Somma, they were from
y to thirty feet high; the matter of theſe tor-
was a liquid glutinous mud, compoſed of ſco-
aſhes, ſtones (ſome of an enormous ſize) mix-
ith trees that had been torn up by the roots.
torrents, as it may well be imagined, were ir-
ible, and carried off every thing before them;
s, walls, trees, and not leſs than four thou-
ſheep and other cattle. At Somma, a team
ht oxen, which were drawing a large timber
were at once carried off, and never were heard
re.

e appearance of theſe torrents was like that
other torrents in mountainous countries, ex-
hat what had been mud was become a perfect
nt, on which nothing leſs than a pickaxe could
any impreſſion. The vineyards and cultivated
were here much more ruined; and the limbs
e trees much more torn by the weight of the
, than thoſe which have been already deſcrib-
n the ſea ſide of the volcano.

e abbe Tata, in his printed account of this
ion, has given a good idea of the abundance,
reat weight, and glutinous quality of theſe aſh-
hen he ſays, that having taken a branch from
tree ſtill ſtanding near the town of Somma, on
n were only ſix leaves, and two little unripe figs,
aving weighed it with the aſhes attached to it,
nd it to be thirty-one ounces; when having

washed off the volcanic matter, it scarcely weig
three.

In the town of Somma, our author found
churches and about seventy houses without roofs,
full of ashes. The great damage on that side of
mountain, by the fall of the ashes and the torre
happened on the 18th, 19th, and 20th of J
and on the 22d of July. The 19th, the ashes
so thick at Somma, that unless a person kept in
tion, he was soon fixed to the ground by th
This fall of ashes was accompanied also with
reports, and frequent flashes of the volcanic f
ning, so that, surrounded by so many horrors, it
impossible for the inhabitants to remain in the to
and they all fled; the darkness was such, althou
was mid-day, that even with the help of torch
was scarcely possible to keep in the high road.
the 16th of July, signor Giuseppe Sacco went u
the crater, and, according to his account, which
been printed at Naples, the crater is of an irreg
oval form, and as he supposes (not having been
to measure it) of about a mile and a half in circ
ference; the inside, as usual, in the shape of a
verted cone, the inner walls of which on the ea
side are perpendicular; but on the western sid
the crater, which is much lower, the descent was
ticable, and Sacco with some of his companions
tually went down one hundred and seventy-six pa
from which spot, having lowered a cord with a
tied to it, they found the whole depth of the c
to be about five hundred palms. But such obs
tions on the crater of Vesuvius are of little c
quence, as both its form and apparent depth
subject to great alterations from day to day.

Greg. Econ. of Nature,
Vol. 2nd page 331.—
335.—