

- 1695 Siliquastrum flore purpureo. Cast. Durant. 415.
Arbor Judæ. Dod. 786.
- 1696 Sifon foliis ternatis. Hort. Cliff. 99. Fl. Virg.
147.
Myrrhis Canadensis trilobata. Mor. Hist. p. 3.
301.
- 1697 Spartium alterum monospermum femine reni
simili. C. B. P. 396.
- 1698 Tetragonia foliis linearibus. Flor. Leyd.
Tetragonocarpus Africana fruticans, foliis
longis et angustis. Hort. Amst. 2. 205.
- 1699 Tetragonia foliis ovatis. Flor. Leyd.
Tetragonocarpus Africana radice magna, crassa
et carnosa. Hort. Amst. 203.
- 1700 Tithymalus Orientalis, falicis folio, caule pur-
pureo, flore magno. T. Cor. 2.

XCI. *Extract of a Letter from Dr. Vitaliano Donati, Professor of Botany at Turin, to Mr. Abraham Trembley, F. R. S. concerning the Earthquakes felt at Turin, December 9, 1755, and March 8, 1756. Translated from the Italian.*

S I R,

Turin, March 20, 1756.

Read April 29, 1756. **T**HE cause of Earthquakes is unknown to me. You know those mentioned by natural philosophers. It seems to me, that they are not sufficient for explaining all the phænomena. The antients have observed, that earthquakes were accompanied with some particular meteor,

meteor, and some remarkable alteration in the air. Such alterations have been observed at the time of the late earthquakes. Who knows, whether an electrical force be not capable of moving above a quarter of our globe? I have communicated this notion to father Beccaria, and I found him almost intirely convinced of it.

I did not feel the earthquake of the 1st of November last. I was then on the road going from Milan to Verceil. There was in the air something harsh, which incommoded me in a particular manner. The wind was south, and not strong. There was no cloud in the sky; but, from early in the morning to the evening, the air, especially to the south, was, as it were, charged with dust. About two hours before sun-set, I observed the clouds, which formed a band, which extended from the south to the west, and even farther. These clouds, at first, appeared not very thick, and a little raised above the Mountains. After sun-set they appeared very thick, white, and near the surface of the earth.

I was informed afterwards, that on the same day, about half an hour after eleven in the morning, there was felt at Milan an earthquake. The iron rods, upon which hung the chandeliers of the church of Dome, and those of other churches, received an oscillatory motion, which they kept for a long time. The waters of canals and lakes rose above their banks, like the water in vessels put into motion. No noise was heard in the houses, nor was any shock perceived.

This earthquake, of the 1st of November, was not felt at Turin. A thermometer of Monf. de Reaumur was, at seven in the morning, at 6 degrees

and a quarter above the freezing point, and at two in the afternoon at 7 degrees. The barometer was at seven in the morning at 27 deg. 7 min. and at two in the afternoon at 26 deg. 11 min. and a half. The wind was west, and it rained.

On the 9th of December, at half an hour after two in the afternoon, a shock of an earthquake was felt here at Turin; but not a considerable one, so that a great number of persons did not perceive it. For my own part I felt it very sensibly, being then in the University-pulpit raised very high. The chair, on which I sat, was thrown by the shock from one side of the pulpit to the other, in the direction of south to north. Upon feeling the motion of the earth, I immediately lifted up my feet, in order that I might the more easily be carried with the chair by the motion. This shock lasted between 4 and 6 seconds. Some minutes after came another shock, but it was extremely slight. Its direction was likewise from south to north. I judged so, because the chair, on which I was sitting, rubbed with some noise against the side of the pulpit, against which it had been carried by the preceding shock. This side of the pulpit was towards the north. The second shock lasted about two seconds. My employments did not permit me that day to observe the sky with attention. I observed, that the air was obscure. The wind was west. The barometer at two in the afternoon was at 27 deg. 7 min. and the thermometer at 3 degrees above the freezing point.

I have been informed from Milan, that about the same hour, and on the same day, a shock of an earthquake had been felt. The waters did not rise, and yet a
good

good deal of motion was taken notice of in those of the lakes. For three days the waters rose from underground in the lower apartments of the houses situated near the east gate. The springs, which water the lands in the country, became more copious.

On the 28th of December at six o'clock, according to the Italian way of reckoning, a slight earthquake was felt at Padua.

On the 8th of March, at half an hour after eleven in the morning, in the French way of reckoning, as I was reading at my table in an apartment situated in the third story very high, as you know, I felt two shocks directed from above downwards, but they were very slight.

Some time before I had taken the precaution to observe in a more sensible manner the earthquakes, which might happen.

I had fastened to an iron bar, fixed in a very thick wall, a brass wire disposed into a spiral line, at the extremity of which hung a leaden bullet of about a pound weight. I made use of a spiral wire in order that I might the more easily remark the least motion, which should happen from above downwards. It hangs near the table, on which I write. When the two shocks, which I have mentioned, happened on the 8th of March, I saw distinctly the leaden bullet at the end of the brass wire rise and fall at different times. There was six minutes after another slight shock, which gave the wire an oscillatory motion from south to north. The wind was then south. The thermometer was in the morning, at half an hour after seven, at 5 degrees and a half above the freezing point, and at two in the afternoon at 10 degrees.

The barometer was in the morning at 27 deg. 7 min. and in the afternoon at 27 and a half. The air was a little clouded and sharp. I was in the evening at Valentin *. I observed, that an hour before sun-set, there was a little above the mountains a great band of clouds, which contracted and lengthened themselves more and more. It began in the south, passed through the west, and extended almost to the north.

I have written to Padua, and Venice, and into Dalmatia and the East, to be informed what may have been observed there. If I shall receive any account, I shall take care to communicate it to you.

CII. *An Account of a continued Succession of Earthquakes at Brigue in Valais. Written by the Rector of the College of Jesuits at Brigue, and addressed to Monsr. Jalabert, Professor of Philosophy and Mathematics at Geneva, and F. R. S. and communicated by Mr. Abraham Trembley, F. R. S. Translated from the Latin.*

Read April 29, 1756. **V**ALAIS, and especially Brigue, have almost every ten years felt Earthquakes, but never any so considerable as in 1755. For in that year, on the 1st of November, which was so

* A palace of the king of Sardinia, without the walls of Turin, where the Botanical Garden is.