

insisted on the secondary origin of those deposits in which the spoils of animals, or fragments of older rocks were inclosed. He distinguished between marine formations and those of a fluviatile character, the last containing reeds, grasses, or the trunks and branches of trees. He argued in favour of the original horizontality of sedimentary deposits, attributing their present inclined and vertical position sometimes to the escape of subterranean vapours heaving the crust of the earth from below upwards, and sometimes to the falling in of masses overlying subterranean cavities.

He declared that he had obtained proof that Tuscany must successively have acquired six distinct configurations, having been twice covered by water, twice laid dry with a level, and twice with an irregular and uneven surface.* He displayed great anxiety to reconcile his new views with Scripture, for which purpose he pointed to certain rocks as having been formed before the existence of animals and plants: selecting unfortunately as examples certain formations of limestone and sandstone in his own country, now known to contain, though sparingly, the remains of animals and plants,—strata which do not even rank as the oldest part of our secondary series. Steno suggested that Moses, when speaking of the loftiest mountains as having been covered by the deluge, meant merely the loftiest of the hills then existing, which may not have been very high. The diluvian waters, he supposed, may have issued from the interior of the earth into which they had retired, when in the beginning the land was separated from the sea. These, and other hypotheses on the same subject, are not calculated to enhance the value of the treatise, and could scarcely fail to detract from the authority of those opinions which were sound and legitimate deductions from fact and observation. They have served, nevertheless, as the germs of many popular theories of later times, and in an expanded form have been put forth as original inventions by some of our contemporaries.

Scilla, 1670.—Scilla, a Sicilian painter, published, in 1670, a treatise, in Latin, on the fossils of Calabria, illustrated by good engravings. This work proves the continued ascendancy of dogmas often refuted; for we find the wit and eloquence of the author chiefly directed against the obstinate incredulity of naturalists as to the organic nature of fossil shells.† Like many eminent naturalists of his day, Scilla gave way to the popular persuasion, that all fossil shells were the effects and proofs of the Mosaic deluge. It may be doubted whether he was perfectly sincere, and some of his contemporaries who took the same course were certainly not so. But so eager were they to root out what they justly considered an absurd prejudice respecting the nature of organized fossils, that they seem to

* Sex itaque distinctas Etruriæ facies agnoscimus, dum bis fluida, bis plana, et sicca, bis aspera fuerit, &c.

† Scilla quotes the remark of Cicero on the story that a stone in Chios had been cleft open, and presented the head

of Paniscus in relief:—"I believe," said the orator, "that the figure bore some resemblance to Paniscus, but not such that you would have deemed it sculptured by Scopas; for chance never perfectly imitates the truth."