

tention it is always easy to discover that these clefts are in general perpendicular to the horizontal strata, particularly in quarries of marble, lime, stones, and all large chains of rocks.

Mountains internally are principally composed of stone and rocks in parallel beds: between the horizontal beds small strata of a softer matter than stone is found, and the perpendicular clefts are filled with sand, crystals, minerals, metals, &c. these last matters are of a more modern formation than the horizontal beds in which we find sea-shells. The rains have by degrees loosened the sand and the earth on the upper parts of mountains, and have left the stone and rocks entirely naked, in which we readily distinguish the horizontal strata and perpendicular clefts: in plains, on the contrary, the rain-water and flood having brought a considerable quantity of earth, sand, gravel, and other such matters, have formed a bed of tufa, soft and dissoluble stone, sand, gravel, and earth, mixed with vegetables. These beds contain no marine shells, or at least only fragments, which have been detached from mountains, with gravel and earth. We must carefully distinguish these new beds from the old, where almost always a great number of entire shells