

from six to eight toises thick. These veins contain not fragments, but balls or spheres of granular diabasis,* formed of concentric layers. These balls are composed of lamellar feldspar and hornblende closely commingled. The feldspar approximates sometimes to vitreous feldspar when disseminated in very thin laminae in a mass of granular diabasis, decomposed, and emitting a strong argillaceous smell. The diameter of the spheres is very unequal, sometimes four or eight inches, sometimes three or four feet; their nucleus, which is more dense, is without concentric layers, and of a very dark green hue, inclining to black. I could not perceive any mica in them; but, what is very remarkable, I found great quantities of disseminated garnets. These garnets are of a very fine red, and are found in the grünstein only. They are neither in the gneiss, which serves as a cement to the balls, nor in the mica-slate, which the veins traverse. The gneiss, the constituent parts of which are in a state of considerable disintegration, contains large crystals of feldspar; and, though it forms the body of the vein in the mica-slate, it is itself traversed by threads of quartz two inches thick, and of very recent formation. The aspect of this phenomenon is very curious: it appears as if cannon-balls were embedded in a wall of rock. I also thought I recognized in these same regions, in the Montaña de Avila, and at Cabo Blanco, east of La Guayra, a granular diabasis, mixed with a small quantity of quartz and pyrites, and destitute of garnets, not in veins, but in subordinate strata in the mica-slate. This position is unquestionably to be found in Europe in primitive mountains; but in general the granular diabasis is more frequently connected with the system of transition rocks, especially with a schist (übergangs-thonschiefer) abounding in beds of Lydian stone strongly carbonated, of schistose jasper,† ampelites,‡ and black limestone.

Near Antimano all the orchards were full of peach-trees loaded with blossom. This village, the Valle, and the banks of the Macarao, furnish great abundance of peaches, quinces,

* Ur-grünstein. I remember having seen similar balls filling a vein in transition-slate, near the castle of Schauenstein in the margravate of Bayreuth. I sent several balls from Antimano to the collection of the king of Spain at Madrid.

† Kieselschiefer.

‡ Alaunschiefer.