

the adjoining map gives a correct view of the true area of the volcanic action.

*Geological structure of the district.*—The eruptions have burst entirely through fossiliferous rocks, composed in great part of gray and greenish sandstone and conglomerate, with some thick beds of nummulitic limestone. The conglomerate contains pebbles of quartz, limestone, and Lydian stone. This system of rocks is very extensively spread throughout Catalonia; one of its members being a red sandstone, to which the celebrated salt-rock of Cardona, usually considered as of the cretaceous era, is subordinate.

Near Amer, in the Valley of the Ter, on the southern borders of the region delineated in the map, primary rocks are seen, consisting of gneiss, mica-schist, and clay-slate. They run in a line nearly parallel to the Pyrenees, and throw off the fossiliferous strata from their flanks, causing them to dip to the north and northwest. This dip, which is towards the Pyrenees, is connected with a distinct axis of elevation, and prevails through the whole area described in the map, the inclination of the beds being sometimes at an angle of between 40 and 50 degrees.

It is evident that the physical geography of the country has undergone no material change since the commencement of the era of the volcanic eruptions, except such as has resulted from the introduction of new hills of scoriæ, and currents of lava upon the surface. If the lavas could be remelted and poured out again from their respective craters, they would descend the same valleys in which they are now seen, and re-occupy the spaces which they at present fill. The only difference in the external configuration of the fresh lavas would consist in this, that they would nowhere be intersected by ravines, or exhibit marks of erosion by running water.

Fig. 667.



View of the Volcanos around Olot in Catalonia.