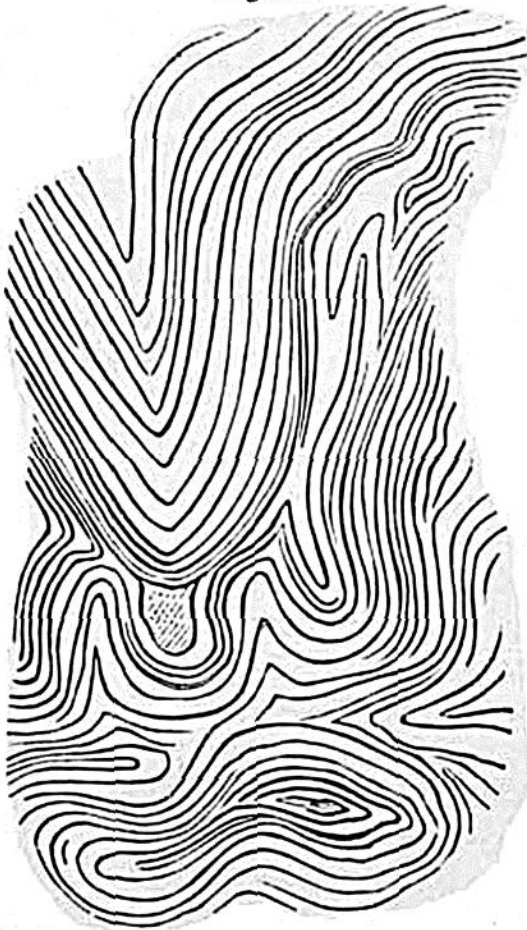


These strata dip to the N. W., and rest on a mass of columnar lava (see fig. 660), in which the tops of the pillars are weathered, and so rounded as to be often hemispherical. In some places in the adjoining and largest islet of the group, which lies to the north-eastward of that represented in the drawing (fig. 660), the overlying clay has been greatly altered, and hardened by the igneous rock, and occasionally contorted in the most extraordinary manner; yet the lamination has not been obliterated, but, on the contrary, rendered much more conspicuous, by the indurating process.

In the annexed woodcut (fig. 661) I have represented a portion of the altered rock, a few feet square, where the alternating thin laminae

Fig. 661.



Contortions of strata in the largest of the Cycloplan Islands.

of sand and clay have put on the appearance which we often observe in some of the most contorted of the metamorphic schists.

A great fissure, running from east to west, nearly divides this larger island into two parts, and lays open its internal structure. In the section thus exhibited, a dike of lava is seen, first cutting through an older mass of lava, and then penetrating the superincumbent tertiary strata. In one place the lava ramifies and terminates in thin veins, from a few feet to a few inches in thickness. (See fig. 662.)

The arenaceous laminae are much hardened at the point of contact, and the clays are converted into siliceous schist. In this island the altered rocks assume a honeycombed structure on their weathered surface, singularly contrasted with the smooth and even outline which the same

beds present in their usual soft and yielding state.

The pores of the lava are sometimes coated, or entirely filled with carbonate of lime, and with a zeolite resembling analcime, which has been called cyclopite. The latter mineral has also been found in small fissures traversing the altered marl, showing that the same cause which introduced the minerals into the cavities of the lava, whether we suppose sublimation or aqueous infiltration, conveyed it also into the open rents of the contiguous sedimentary strata.

*Post-Pliocene formations near Naples.*—I have traced in the "Principles of Geology" the history of the changes which the volcanic region