

iv. A fresh fracture shows the rock to have a foliated structure.

The foliated rocks are for the most part easily recognizable by the prominence of their component minerals (p. 303). Where the minerals are so intimately mingled as not to be separable by the use of the lens, the following hints may be of service:

*a.* The rock has an unctuous feel, and is easily scratched. It may be talc-schist (p. 315), chlorite-schist (p. 315), sericitic mica-schist (p. 319), or foliated serpentine (p. 316).

*β.* The rock emits an earthy smell when breathed on, is harder than those included in *a*, is fine-grained, dark-gray in color, splits with a slaty fracture and contains perhaps scattered crystals of iron-pyrites or some other mineral. It is some argillaceous-schist or clay-slate, the varieties of which are named from the predominant inclosed mineral, as chialstolite-slate, andalusite-schist, ottrelite-schist, etc. (p. 309); if it has a silky lustre it may be phyllite.

*γ.* The rock is composed of a mass of ray-like or fibrous crystals matted together. If the fibres are exceedingly fine, silky, and easily separable, it is probably asbestos; if they are coarser, greenish to white, glassy, and hard, it is probably an actinolite-schist (p. 314). Many serpentines are seamed with veins of the fine silky fibrous variety termed chrysotile, which is easily scratched.

*δ.* The rock has a hardness of nearly 7, and splits with some difficulty along micaceous folia. It is probably a quartzose variety of mica-schist, quartz-schist, or gneiss (pp. 309, 317-319).

*ε.* The rock shows on its weathered surface small particles of quartz and folia of mica in a fine decomposing base. It is probably a fine-grained variety of mica-schist or gneiss.

v. A fresh fracture shows the rock to have a fragmental (clastic) structure.

Where the component fragments are large enough to be seen by the naked eye or with a lens, there is usually little difficulty in determining the true nature and proper name of the rock. Two characters require to be specially considered—the component fragments and the cementing paste.

1. *The Fragments.*—According to the shape, size, and composition of the fragments, different names are assigned to clastic rocks.