

The fissile structure of gneiss is owing to the small plates of mica being arranged parallel to each other, and when these are in large proportion, the rock has more and more of a slaty structure, and in proportion as the felspar and quartz lessen in quantity, it approaches in character to mica slate. It is sometimes, in fact, not an easy matter to determine which of the two rocks a specimen belongs to, as they seem to pass into each other.

On the other hand we have localities in which hornblende replaces, to a greater or less extent, the quartz and mica, and the rock appears to pass into hornblende slate.

## 2.—MICA SLATE.

This rock is essentially composed of grains of quartz and mica, and has always a more or less distinct slaty structure. When the proportion of mica is small, it sometimes forms a hard, durable stone. Varieties containing a very large proportion of mica are often called micashiste, which readily crumbles down.

Some of its beds which contain hornblende and felspar, pass into gneiss.

As we approach the northwestern borders of this formation, in Maryland, (see the map,) the quartz lessens in quantity and the spangles become extremely small. The rock, in fact, passes by insensible shades of difference into talcose slates.

## 3.—HORNBLLENDE SLATE,

Appears to be made up of flattened crystals of hornblende, with felspar and frequently quartz. It varies in color from nearly black to dull green, and has always a distinct foliated structure. Its geological position is among the mica slates and gneiss.

## 4.—TALCOSE SLATE.

I am not willing, at present, to propose a new name for this rock, although there are good reasons to be dissatisfied with that above used, and which has been long in use.

The name seems generally applied to a formation, intermediate between mica slate and argillite, and is the highest or nearest in the series of what are called metamorphic rocks, unless we place argillites in that division.

Talcose Slate appears to have been an argillite which has been altered by heat or other means, so as to assume a more or less glistening appearance. In some cases it has what is called a satin lustre, owing to the presence of scales of mica,