

most common forms of this change is where the silky unctuous *sericite* has been developed from orthoclase (sericitization). The formation of mica is one of the most common results of the mechanical deformation of rocks, and is most conspicuous where the pressure or stretching has been most intense. Massive orthoclase rocks, such as granite, quartz-porphry or felsite, when most severely crushed, pass into sericite schist; felspathic grits and slates may be similarly changed.<sup>49</sup>

*Uralitization*—the conversion of pyroxene into compact or fibrous hornblende. This change may not be a mere case of paramorphism or molecular rearrangement, but seems generally to involve a certain amount of chemical rearrangement, such as the surrender of part of the lime of the pyroxene toward the formation of such combinations as epidote,<sup>50</sup> and the higher oxidation of the iron.<sup>51</sup> It has taken place on the most extensive scale among the crystalline schists. Rocks which can be shown to have been originally eruptive, such as diabases, have been converted into epidiorite, and where the deformation has advanced further, into hornblende-schist or actinolite-schist.

*Epidotization*—the production of epidote in a rock from reactions between two or more minerals, especially between pyroxene or hornblende and plagioclase. In some cases diabases have been converted into epidiorites or aggregates of epidote and quartz or calcite.<sup>52</sup>

*Saussuritization*—the alteration of plagioclase into an aggregate of needles, prisms, or grains (chiefly zoisite), imbedded in a glass-like matrix (albite), by an exchange of silica and alkali for lime, iron, and water. This change has largely affected the felspar of coarse gabbros or euphotides, especially in districts of regional metamorphism.<sup>53</sup>

*Albitization*—a process in which, while the lime of the plagioclase is removed or crystallizes as calcite, instead of forming a lime-silicate like epidote or zoisite, the rest of the original mineral recrystallizes as a finely granular aggregate or mosaic of clear grains of albite. Examples of this change

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<sup>49</sup> See especially Lehmann's "Untersuchungen über die Entstehung der alkrySTALLINschen Schiefergesteine," where the development of sericite as a result of mechanical deformation is well enforced.

<sup>50</sup> Rosenbusch, "Mikrosk. Phys." 2d edition, 1887, p. 185.

<sup>51</sup> J. J. H. Teall, Quart. Journ. Geol. Soc. xli. 1885, p. 137.

<sup>52</sup> A. Schenck, "Die Diabase der oberen Ruhrthals," 1884.

<sup>53</sup> Hagge, "Mikroskopische Untersuchungen über Gabbro," etc. Kiel, 1871, p. 51.