

The Persilicates are arranged in like manner in five groups, the received ratios of silica and the fixed bases being given, as before, in a column to the left. The adamantoid persilicates include dumortierite, andalusite, fibrolite, topaz, cyanite, bucholite; the zircons and anthosiderite. The phylloids include pholerite, kaolinite and pyrophyllite; and the argilloids, the various amorphous hydrous silicates of alumina from the highly basic schrötterite, through halloysite, to the more silicious cimolite and smectite.

The relations of fluorine in silicates like topaz and chondrodite, of chlorine in pyrosmalite, sodalite and scapolites, and of sulphur in helvite, lapis-lazuli and danalite are considered at length by the author. Table showing the values of P and V, together with the simplest atomic formulas deduced from chemical analysis are given for most well-known silicates. The discussion of the equivalent weights of these species, and of their definite place in a chemical classification of polysilicates is noticed, but is left for future consideration.

If we regard the silicates as constituting a natural order, the three groups already noticed may be called sub-orders; A. Protosilicates; B. Protopersilicates; C. Persilicates. The divisions of these will constitute tribes, and the tribal characters being repeated in the sub-orders, we distinguish the spathoids, adamantoids and phylloids, by prefixing the distinctive syllables of the sub-orders; as protospathoid, peradamantoid and protoperphylloid. The sub-divisions of these tribes into families, genera and species cannot here be discussed. The genus feldspar, including anorthite, albite and perhaps iolite, with other genera, some of which are represented respectively by orthoclase, by leucite, and by sodalite, will constitute the family of the feldspathides. The families of the micas and the pyroxenides in like manner will each include several genera, having different values for V.

The application of the principles above defined to carbonates, and the reference of the various carbon-spars to different polycarbonates, were long ago shown by the author in his papers already noticed. The extension of like views to all liquid and solid inorganic species, both natural and artificial, is but a matter of detail and labor, and when fully carried out will be the basis of a new chemistry.