

theories which hold the presence of albite as proof of aqueous origin must fall to the ground.¹

It has been sufficiently dwelt upon above that all the minerals of the pegmatite veins (even all the albite) have not necessarily been formed by crystallization from a magma.

2. In their geological occurrence the pegmatite veins are similar to other eruptive veins; they traverse all sorts of rocks, contain fragments of the same, etc. Examples of the first statement have already been cited, the presence of foreign fragments in pegmatite veins is so common that it is quite unnecessary to cite special cases. It can hardly be superfluous, however, to state explicitly that both in acid granite pegmatite veins (several of the veins in the neighborhood of Arendal) and in nepheline syenite pegmatite veins (southern point of Stokö) I have observed foreign fragments of the wall-rock exhibiting an arrangement relative to one another such as is possible only in the case of a rock formed from an eruptive magma.

The extremely intimate relations of pegmatite veins to veins formed in a different manner but of corresponding composition and of undoubted eruptive origin are also of weight in this connection; the gradual passage of the nepheline syenitic pegmatite veins of the boundary zone on the Langesundfjord into the normal-grained nepheline syenite veinstones of the same locality has been amply described above; in the case of ordinary acid granitic pegmatite veins this phenomenon is well known, and has been frequently and deservedly referred to by prominent petrographers.² The same thing is also true of granite types

¹ See further: Alfred Gerhard, "Beitrag zur Kenntniss d. sogen. Soda-granite," *Neues Jahrb. f. Min.* 1857, 2, 267-275; he found as principal component of the vein-form granite of Ulfserud, Sweden, an almost pure albite, with microcline, quartz, biotite and muscovite, zircon, apatite. Significantly this granite rich in albite was a vein granite!

² Michel-Lévy (*Struct. et class. d. roches érupt.* p. 15) remarks, for instance, "notre structure pegmatoïde (pegmatite graphique à grands éléments) dont nous affirmons la liaison intime tant avec les granulites massives qu'avec les granulites en filons (aplités)," &c. See also the excellent and instructive remarks of J. Lehmann, *l. c.* p. 26: "It is not admissible to separate the half pegmatitic, half granular vein formations and the smaller veins of purely granular structure from