

CORRESPONDENCE

ORIGIN OF ALBITE PORPHYROBLASTS

SIR,—In his letter on this subject in the May–June number of this *Magazine*, Dr. A. F. Trendall is in error in supposing that Dr. K. A. Jones (*Geol. Mag.*, 98, p. 43) has confused his (Trendall's) view with that of Reynolds in the sentence "The origin of the porphyroblasts was considered by Trendall to be due to a soda metasomatism, possibly from a trondhjemitic magmatic source". In my 1942 paper on albite-schists to which Dr. Jones referred, the petrochemical evidence I recorded led me to conclude that "If the process of introduction of Na and Si, reinforced by Ca . . . concomitant with driving out of K, Fe, Mg, and Al had continued, the albite-schists would eventually have attained the composition of trondhjemite". On the basis of previously recorded experiences, both of my own and of other investigators, I suggested that trondhjemite evolved in this way might become rheomorphic. I have never, in fact, considered trondhjemite magma to be the source of the soda.

For nearly thirty years I have vigorously combated the view that granitic magma is the *cause* of feldspathization. During this time, all the evidence I have observed and recorded, as well as the evidence I have read about, has led me to think that magma of granitic composition is formed from older rocks as an *end-stage* of metasomatic change when accompanied by rising temperature.

Dr. Jones' misrepresentation of Dr. Trendall's conclusions, and Dr. Trendall's misrepresentation of my conclusions are, unfortunately, but a minor symptom of a widespread malaise of geological writings of the present time. It therefore behoves us all to keep in mind Josh Billings' conclusion that "the trouble with most folks is not so much their ignorance as their knowing so many things which ain't so". In our enthusiasm, however, do not let us forget that it was neither Reynolds (1942), nor Trendall (1953) nor Jones (1961) who first recognized that the albite-schists under discussion result from a large-scale impregnation of sodium, and that the growth of the albite porphyroblasts was commonly post-tectonic. The honours go to Clough (1897).

REFERENCES

- CLOUGH, C. T., 1897. In *The Geology of Cowal. Mem. geol. Surv. U.K.*
- JONES, K. A., 1961. Origin of albite porphyroblasts in rocks of the Ben More—Am-Binnein area, Western Perthshire, Scotland. *Geol. Mag.*, 98, 41–54.
- REYNOLDS, D. L., 1942. The albite-schists of Antrim and their petrogenetic relationship to Caledonian orogenesis. *Proc. R. Irish Acad.*, 48, B, 43–66.
- TRENDALL, A. F., 1953. The origin of albite gneiss. *Ph.D. Thesis, University of Liverpool.*
- GRANT INSTITUTE OF GEOLOGY
WEST MAINS ROAD,
EDINBURGH, 9.
3rd July, 1961.
- DORIS L. REYNOLDS.

AN OLIVINE-BEARING HORNFELS FROM SOUTH-EASTERN QUEENSLAND—A CORRECTION

SIR,—Since publication in 1959 of my paper "An Olivine-bearing Hornfels from South-Eastern Queensland" (*Geol. Mag.*, 96, 377–384) new evidence has made possible a more satisfactory interpretation of some puzzling features of the petrogenesis. An important problem raised in the paper was the origin and nature of the rock which was contact metamorphosed to give an olivine-bearing hornfels. At that time, from microscopic work, I could see no alternative to calling it a "basic argillite". Apart from the difficulties arising from the fine grain-size of the rock, this idea developed by taking the rather oversimplified view that the Neranleigh-Fernvale Group consisted mainly of shales and greywackes coupled with the generally accepted view that basic volcanic rocks are absent from this Group except in the Brookfield area, some