

Chalk was proved at a number of points. At 49° 47' N.–3° 06' W. in 41 fathoms a core of brick-red marl with a few tea-green streaks was obtained. The age of this deposit has not yet been determined but its appearance is similar to some of the New Red Sandstone deposits in the Eddystone neighbourhood.

W. B. R. KING.

SEDGWICK MUSEUM,  
CAMBRIDGE.  
20th August, 1950.

#### DIORITES AND APPINITES

SIR,—I was interested in the article entitled “The diorites and associated rocks of the Glen Tilt Complex, Perthshire—II. Diorites and appinites”, by W. A. Deer, in your issue for May–June of this year. In Southern Rhodesia typical appinites are fairly common and their field relations support the author’s conclusion that they are essentially hybrids. They are found in areas of migmatites and composite gneisses in the marginal zones of many of our “schist belts” and also as lenticular masses enveloped in the granitic rocks of the batholiths, often some miles from the nearest schist belt. There seems every indication that they are the result of a “soaking” of basic members of the Basement Complex (epidiorites and hornblende-schists) by granitic material, and the common occurrence of diopside in the finer-grained portions between the hornblende phenocrysts (which themselves sometimes have pyroxenic cores) suggests plutonic metamorphism at very great depths. Oligoclase, microcline, and quartz are usually associated with the pyroxene in the groundmass, while apatite is normally an abundant accessory mineral. At one locality a variety of striking appearance shows ovoids of sodic plagioclase up to an inch or more across, frequently with a kernel of black hornblende. As in the case of the Glen Tilt occurrences, the rocks are heterogeneous and there are no sharp contacts with adjacent granite or hornblending gneisses. They provide some of the most handsome rock types in this country.

R. TYNDALE-BISCOE.

GEOLOGICAL SURVEY OFFICE,  
P.O. BOX 39, CAUSEWAY,  
SALISBURY,  
SOUTHERN RHODESIA.  
10th July, 1950.