CORRESPONDENCE

THE CAMPTONITE-MONCHIQUITE SUITE OF LOCH EIL [1]

SIRS,—In a recent paper (*Geol. Mag.*, lxxxviii, 1951, p. 60) G. P. Leedal has discussed the distribution of the camptonite-monchiquite dyke suite in the Loch Arkaig-Loch Eil district and the relationship of individual dykes to the N.E.–S.W. fault lines.

During the continuation of routine Geological Survey work in part of this region we have, in the past two field seasons, been remapping this dyke suite (cf. J. S. Grant Wilson, in *Summary of Progress Geol. Survey*; for 1897, p. 67; for 1898, p. 152; for 1899, p. 146). Some of our recent observations and inferences seem to be worth recording along with those of Mr. Leedal.

(1) For about 1 mile north-west of the northern limit of the shatter zone of the Great Glen the country rock is considerably disturbed, and numerous minor crush lines have been found, the trend of these features being between N.E.–S.W. and E.N.E.–W.S.W. Within this zone of disturbance many of the dykes of the camptonite-monchiquite suite trend in these directions. West of the disturbed zone, the dykes have a remarkably consistent E.–W. trend.

As we have not found faulted or crushed dykes within the disturbed zone, we infer that there the emplacement of the swarm was influenced by pre-existing minor crush lines and other features connected with, and often sub-parallel to, the Great Glen Fault. Further evidence that the main Great Glen movements were earlier than the intrusion of the camptonite-monchiquite dyke suite is provided by rock exposures (visible only at times of very low water) in the River Lochy, near Tor Castle, north of Banavie. Here the country rock, originally a schist, but now highly sheared and "mashed" by the main Great Glen movements, is cut by three uncrushed camptonitic dykes that trend approximately N.E.–S.W. The dykes are thus clearly later than the main fault movements, but they have an irregular joint or fracture system that may be connected with subsequent minor movements along the Great Glen fracture.

These observations appear to be quite compatible with those of Mr. Leedal.

(2) North-east of the volcanic vent shown on Mr. Leedal's map (op. cit., text-figure 1, p. 62) one of us has mapped 43 dykes of the camptonite-monchiquite suite in one mile of stream section at right angles to the swarm; this concentration agrees well with the information given diagramatically upon Mr. Leedal's map.

South and west of the vent, however, the dykes are locally much more numerous than Mr. Leedal has indicated. On the north side of Loch Eil, in the lower portions of stream sections at right angles to the trend of the dyke swarm, the concentration of dykes is as follows: 16 to 26 per mile near Annat at the east end of the Loch, and 3 to 6 per mile near Fassfearn, about half-way along the Loch. Further west in Glen Fionnligh at the head of the Loch, no dyke of this suite has been observed in the lower part of the Glen.

It would thus appear that along Loch Eil side, part of the swarm dies out in a westerly direction.

(3) Some of the dykes we have mapped are between 7 and 9 feet in width; most of the members of the swarm have a breadth of between 1 and 5 feet.

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