

CORRESPONDENCE

POTASSIUM-ARGON AGE STUDIES IN SCOTLAND

Sir,—We refer to the letter by Dr. T. E. Smith criticizing our paper “K-Ar age studies in Scotland”. When Dr. Smith was kind enough to forward the samples from localities 17 and 18, Table 2 (*a*), they were referred to, by him, as “Central Highland Granulite (Moine-Monadleath)”. Dr. Smith states that one of these specimens was affected by migmatization and comments on the importance of this with respect to dating migmatization in the Moine and Dalradian areas. We thank Dr. Smith for his correction of the nomenclature but we do not believe that the interpretation of the age pattern is significantly affected by the specimens being either Moine or Dalradian. This is because in the Central Highland area both the Moine and Dalradian rocks have been affected by events which post-date the main post- F_2 metamorphism and migmatization, and this is demonstrable on both radiometric and geological evidence. The ages of 432 and 427 million years on specimens 17 and 18 respectively, do not reflect the main (or post- F_2) metamorphism but these later events (P. E. Brown, J. A. Miller, N. J. Soper, and D. York, 1965. *Proc. Yorks., Geol. Soc.*, 35, 103–138).

With regard to the granitic rocks from the Strath Spey Complex (Table 2*d*, p. 117) our opinion on the position of these rocks was stated on page 120. We did not regard these rocks as being of metamorphic *origin* but considered that they were associated (in time) with the third phase (F_3) metamorphism. To distinguish these granitic rocks with ages some 20 million years greater than typical Newer Granites (400 million years) we placed them in a separate table (2*d*) headed “Older” Granitic Rocks from the Loch Laggan Area. Association with the Dalradian migmatites of MP2 age was not stated or intended, but in view of the evident possibility of confusion introduced by using the term “Older” we agree that the heading of the table was perhaps unfortunate. There now seems to be a group of granite intrusions, in which the Strath Spey Complex may possibly be included, previously classed as New Granites, but which yield significantly greater ages (P. E. Brown, J. A. Miller, R. L. Grasty, and W. E. Fraser, 1965, *Nature*, 207, 1287–8).

The Dalchully granite with an age of 393 million years (Table 4, locality 72) must be separated on radiometric grounds from those granites with ages of 420 million years or greater, as must also the Allt Crom Granite with an age of 404 million years (Table 4, locality 71).

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THE GRAPTOLITIC MUDSTONES OF THE HOWGILL FELS

SIR,—Dr. Llewellyn's comments (*Geol. Mag.*, 102, pp. 277–8) on my paper are welcome, and I look forward to the detail of his published results. I agree that the Wenlock strata of the Lake District proper may be precisely described as “graptolitic, argillaceous siltstones”: but the generally finer-grained rocks of the Howgill Fells may, with equal precision, be described as graptolitic mudstones.