

# CORRESPONDENCE

## Misidentification or Misunderstanding?

SIR,—The article 'Misidentified Dyke' (*Nature*, 244, 485; 1973) by your geomagnetism correspondent contains the following inaccuracies. (1) The trend of the Wackerfield Dyke is ENE not WNW (Fig. 1). It is important because dyke trends in Northern England have long been recognised as reliable indications of age, WNW for Tertiary and ENE for late Carboniferous (called Carboniferous-Permian before the advent of radiometric age determination). (2) It is not therefore "fairly obvious from field relations that it forms part of the Cleveland-Armathwaite Dyke"; their outcrops are near but their trends are different. The original statement by Tarling *et al.*<sup>1</sup> that "its field relations suggest that it could be part of

the Cleveland-Armathwaite Dyke" is only slightly less misleading. (3) Tarling *et al.* do not claim that the dyke has "always been regarded as part of the Tertiary activity", nor do I know of a publication which does. On the contrary it is unequivocally grouped with the dykes associated with the Upper Carboniferous Whin Sill and equally unequivocally differentiated from the Tertiary Cleveland Dyke in the standard petrographic studies of Holmes and Smith<sup>2</sup> and Holmes and Harwood<sup>3</sup>—both quoted by Tarling *et al.* It is also clearly shown as of 'Carboniferous-Permian' age on the Geological Survey one-inch map (Sheet 32: Barnard Castle) published in 1969.

The work of Tarling *et al.* thus con-

firms "long cherished beliefs" rather than requires that they should be discarded. In case it is overlooked, it may be as well to emphasise the real contribution made by Tarling *et al.*—namely the relevance of palaeomagnetic studies in establishing the age of emplacement and subsequent history of intrusions like the Wackerfield Dyke.

Yours faithfully,

D. A. C. MILLS

*Institute of Geological Sciences,  
Ring Road, Halton,  
Leeds LS15 8TQ*

<sup>1</sup> Tarling, D. H., and Mitchell, J. G., *Earth planet. Sci. Lett.*, **18**, 427 (1973).

<sup>2</sup> Holmes, A., and Smith, S., *Geol. Mag.*, **58**, 440 (1921).

<sup>3</sup> Holmes, A., and Harwood, H. F., *Mineralog. Mag.*, **21**, 493 (1928).

*Our Geomagnetism Correspondent writes:*

Dr Mills is quite right; I have misunderstood. I measured the trend of the Wackerfield Dyke from the Tarling *et al.* map which, because of its small scale, led to the ambiguity now resolved by Dr Mills' larger scale version. Once this point is cleared up, and accepting the points made by Dr Mills in (3) above, it becomes difficult to understand why Tarling *et al.* should say that "its (the Wackerfield Dyke's) field relationships suggest it could be related to the Eocene Mull Dyke Swarm"—a misleading statement which, compounded by my error in the trend, I am guilty of accepting rather too uncritically.

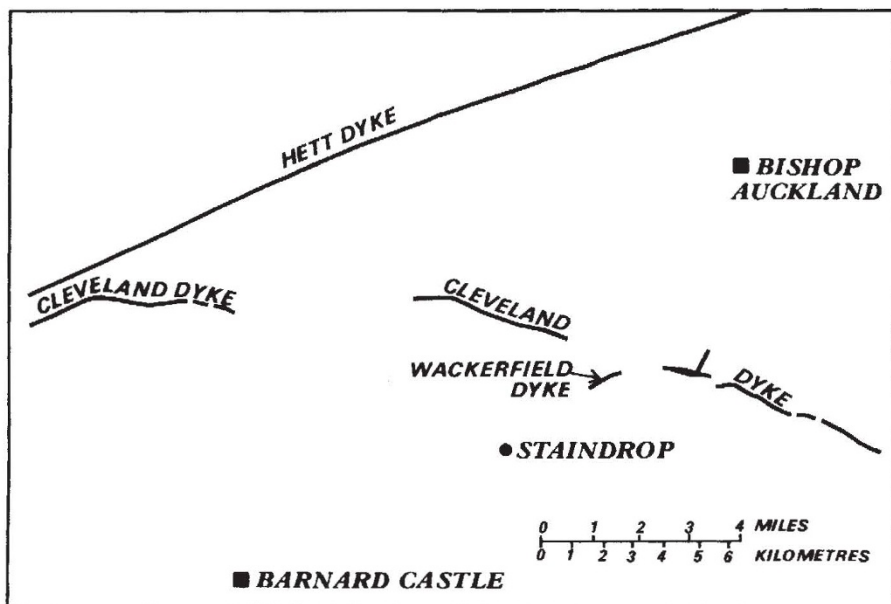


Fig. 1 Map of southern part of Co. Durham showing outcrops of the Hett, Wackerfield and Cleveland Dykes.

## Obituary

### Professor Jean Hanson

Professor Emmeline Jean Hanson, FRS, Director of the Medical Research Council's Muscle Biophysics Unit at King's College London, died on August 10 of an acute meningococcal infection, at the age of 53.

An only child, she was born in Derbyshire, and was educated at the High School for Girls, Burton-on-Trent, and

at Bedford College in the University of London. After taking her BSc in Zoology, she was engaged in cancer research for two years at the Strangeways Research Laboratory, Cambridge, producing two papers on the histogenesis and differentiation of the mammalian epidermis. She then returned to Bedford College in 1944 with a teaching appointment in the Zoology Department, making a number of histological

and other investigations on several aspects of structure and function in annelids.

The decisive step in her scientific career was her appointment in 1948 to the Biophysics Research Unit, established by the Medical Research Council in the previous year under Sir John Randall, then Wheatstone Professor of Physics at King's College London. She and Randall were put in touch by