CORRESPONDENCE

ON SOME TURKISH ROCKS

SIR,—I have read with interest the letter by Ager (1) referring to what I may call boulder-beds, block-beds, and breccias of different types. The reader of that letter may well get the impression that our views on the origins of these rocks are confused like the rocks themselves. Let me refer to the Turkish examples first.

(*a*) Your readers will readily appreciate that many of the rocks mentioned in the first paragraph were described by Bailey and myself (2) in some detail. Although no reference was made to this work we are probably included in the group of " nappe-minded geologists ". However, the point here is that a *tectonic* origin was ascribed to the Ankara mélange.

(*b*) Although Turkish geologists have considered the Şile occurrences of mixed Cretaceous and Tertiary rocks as of tectonic origin also, I have suggested on a number of occasions in conversation with them that a *sedimentary* origin would better explain the phenomena. A summary of my views has been published (3).

(*c*) Reference was made to the joint paper by Tokay and myself on the Cretaceous deposits of the Zonguldak region. There we emphasized the *sedimentary-slump* nature of the rocks and pointed to the frequency of graded bedding and other features of turbidity currents. It is true that, at the time I read the paper, Migliorini compared the phenomena to those of the *Argille scagliose*. Since then other Italian geologists have, in conversation, compared the Ankara Mélange to the *Argille scagliose*. Accordingly the *Argille scagliose* is compared by the Italian School to both a tectonic mélange and to a sedimentary mixture. Recently Bailey and I have examined many sections of *Argille scagliose* in Tuscany and Liguria and we continue to be " nappe-minded ".

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(3) MCCALLIEN, W. J., 1955. La structure de la côte occidentale du Bosphore et de la côte voisine de la Mer Noire. *C.R. Somm. Soc. Géol. France, Nos.* 5–6, 102.

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ANTIDUNES AND FLAME STRUCTURES

SIR,—It was with great interest that I read Lamont's further exposition of his views on the origin of " flame-structures", but I cannot agree with his explanation. It seems that Lamont envisages the development of an eddy of sand and water of sufficient violence to be able to support an overhanging thin film of clay. I cannot believe that such a structure could have more than a momentary existence; it would surely collapse once the eddy ceased. Even if such structures could be preserved, it would be wrong to attribute them to the action of antidunes. Gilbert (1914, p. 32) in his original description of antidunes, emphasizes that in them sand grains flow parallel with the bed in the troughs and up and down in the crests; he observes no reversed movement