Correspondence

Dust-up in Nevada

SIR,—*Nature* states¹ that Emiliani *et al.*² did not prove a causal relationship between underground nuclear explosions and earthquakes. If a proof was not provided, it is not for the reasons advanced by *Nature* but for the much more fundamental reason that you cannot prove anything by statistics.

In the paper in question², it was stated that significant earthquake activity increase took place in annuli up to 860 km away from testpoint. Anderson *et al.*³ wrote that these results "would be important" if a significant earthquake activity increase could be shown between 400 and 860 km from testpoint. In their reply, Emiliani *et al.*⁴ showed just that. Therefore, the results obtained should be important, at least by CalTech standards. However, it is within the realm of statistical possibility that analysis of data across a much greater time interval (largely as yet not available) might lead to different or even opposite conclusions.

Nature is correct in claiming that the reaction of nine distinguished seismologists to our paper is more psychological than geophysical. The overreaction is explained by the fact that the authors of the paper are not seismologists and have never contributed to this field, thus making their contribution of (presumably) important results vastly annoying to some. As to priorities, the first published suggestion to use underground nuclear explosions to control earthquakes is due to Brune and Pomeroy⁶. This idea, however, appears to have been previously the object of informal discussion and speculation³ to which, alas, Emiliani *et al.* were not invited (personal communication).

Yours faithfully,

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¹ *Nature*, 225, 1099 (1970).

² Emiliani, C., Harrison, C. G. A., and Swanson, M., *Science*, 165, 1255 (1969).

³ Anderson, D. L., Archambeau, C. B., Brune, J. N., Richter, C. F., and Smith, S. W., *Science*, 167, 1012 (1970).

⁴ Emiliani, C., Harrison, C. G. A., and Swanson, M., *Science*, 167, 1013 (1970).

⁵ *Time*, p. 82 (October 17, 1969).

⁶ Brune, J. N., and Pomeroy, P. W., *J. Geophys. Res.*, 68, 5020 (1963).

Coping with Oil Slicks

SIR,—In his letter about oil slicks (*Nature*, 226, 573; 1970) Mr B. Pounder advocated taking away from the Board of Trade responsibility for dealing with oil pollution at sea because of the Board's alleged impotence in the face of the technical problems involved.

This responsibility was given to the Board of Trade last summer because it was the civil department in the best position to undertake it. The major work of planning that was required all round the coast is now well advanced and the Board is procuring special equipment to enable it to deal with serious spillages. The Board does not stand alone in this work, but can call upon the help of the Royal Navy and the Royal Air Force and on scientific and technical advice from Government laboratories, especially the Warren Spring Laboratory.

However, this does not mean that we shall be able to clear up every oil slick at sea. The obstacle to this is not technical but economic. The slicks reported round our coasts are numerous, and to attempt to investigate and

deal with each one would be disproportionately costly in money and resources. Our planning must therefore concentrate on serious spillages threatening the coast.

The real answer to the threat to seabirds from continual relatively minor oil pollution is to prevent the oil from getting on to the sea in the first place by bringing in a more readily enforceable set of restrictions on discharges from ships. This has to be an international matter, and the United Kingdom has taken the lead in securing agreement to amendments to the International Convention on Prevention of Pollution of the Sea by Oil 1954 for this very purpose. The Oil in Navigable Waters Bill that was introduced into Parliament on May 12 is intended to enable the government to accept these amendments formally.

Yours faithfully,

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Prowess of P's

SIR,—Dr Weale (*Nature*, 226, 195; 1970) suggests that there may be a marginal disadvantage in having a name beginning with a letter coming towards the end of the alphabet. A few years ago I noticed that the midpoint in the membership lists of the Biochemical and Nutrition Societies came among the Ls whereas in the Royal Society and National Academy of Sciences lists it was in the Ks. This suggested a slight forward drift in organizations recruited on the basis of apparent merit. It would be interesting if someone with more patience would conduct a more comprehensive survey.

Yours faithfully,

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Tektites tracked to Toba

SIR,—D. H. McColl and G. E. Williams are to be congratulated on their excellent observation¹ concerning the pattern of tektite infall in Australia. Making the assumptions that each line of infalling tektites was ejected from its own aperture of a cryptovolcanic structure, with velocities between 8 and 8.5 km/s, with azimuths of 135° and 150°, and with angles of elevation of approximately 75°, brings the intersection point of the infall lines to Lake Toba, Sumatra, after consideration of the effect of the Earth's rotation.

Lake Toba is considered a volcano-tectonic sink of the Pleistocene age², and is as unlikely a cryptovolcanic structure as one could hope to nominate. I should like, however, to suggest that its age be more accurately determined and that the area be investigated for the presence of coesite and shattercones.

Yours faithfully,

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2244 Sunset Crest Drive,
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¹ McColl, D. H., *Nature*, 226, 154 (1970).

² Rittman, A., *Volcanoes* (John Wiley and Sons, 1962).