CORRESPONDENCE

Mercury in Lakes

SIR,—Recently, Aston *et al.*[1] reported that the mercury concentrations within a sediment core from an English lake were highest in the upper layers of sediment. Others[2,3] have reported similar findings. All have attributed this differential distribution in part to the possibility of increased inputs of mercury with time due to man's activities.

Although there has been some discussion as to the source of this input[4,5], a lingering problem involves demonstrating that mercury levels in organisms have become generally elevated. Several researchers[6-8] have compared mercury levels in old and recent biological samples and could not document a general increase of mercury content in life forms as time passed. It may be, then, that mercury levels have always been highest in upper sediment layers.

Aquatic organisms can concentrate mercury in their bodies. When they die, sink, and decompose, they would add significant amounts of mercury to the upper sediments. The life cycle of benthic insects offers a particularly striking pathway whereby mercury could be carried upward and ultimately deposited at the sediment-water interface. There is some evidence that tubificid worms could carry substances upward in sediments[9]. Some fish and algae are known to have high mercury loads. Death and decomposition of these organisms would increase the mercury content of upper sediments. In short, the activity and death of aquatic organisms would continually cycle mercury to the upper sediment layers.

As others have mentioned[1,2], several researchers have proposed a geochemical mechanism whereby mercury diffuses upward in sediments. This too may enhance the occurrence of elevated mercury levels in upper sediment layers.

Except in sediments from known mercury contamination areas, the phenomenon that mercury concentrations tend to be highest in upper sediment layers may be a natural condition and not attributable to recent inputs of mercury.

Yours faithfully,

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1 Aston, S. R., Bruty, D., Chester, R., and Padgham, R. C., *Nature*, **241**, 450 (1973).
2 Walters, L. J., Charles, E., Herdendorf, L., Charlesworth, jun., J., Anders, H. K., Jackson, W. P., Skoch, E. J., Webb, D. K., Kovacik, T. L., and Sikes, C. S., *Proceedings of the Fifteenth Conference on Great Lakes Research*, 306 (1972).
3 Kennedy, E. J., Ruch, R. R., and Shimp, N. F., *Illinois State Geologic Survey, Environmental Geology Note*, **44**, 18 (1971).
4 Joensuu, O. I., *Science*, **172**, 1027 (1971).
5 Billings, C. E., and Matson, W. R., *Science*, **176**, 1232 (1972).
6 Miller, G. E., Grant, P. M., Kishore, K., Steinkruger, P. J., Rowland, F. S., and Guinn, V. P., *Science*, **175**, 1121 (1972).
7 Barber, R. T., Vijayakumar, A., and Cross, F. A., *Science*, **178**, 636 (1972).
8 Kevorkian, J., Cento, D. P., Hyland, J. R., Bagozzi, W. M., and van Hollebeke, E., *J. Pub. Health*, **62**, 504 (1972).
9 Brinkhurst, R. O., *USEPA, Ecological Research Series, Project 16010 ECQ*, 68 (1972).

Solar Energy

SIR,—The International Solar Energy Society was formed in 1954 to serve as a centre for information on research and development in the utilization of solar energy. The Society headquarters are in Melbourne, Australia; in countries where sufficient interest exists, national sections of the Society have been established.

At present, there is no British section, although there are nearly enough individual members to allow the formation of one. If such a section were formed it would, by means of newsletters and meetings, bring together British scientists, engineers and environmentalists whose work involves the nature and use of solar energy.

I am assessing the possibility of forming a British section. I should be very grateful to receive any comments, or to send further details of the ISES to anyone who is interested.

Yours faithfully,

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Obituary

Dr Muriel Robertson

DR MURIEL ROBERTSON, FRS, who died on June 20 at the age of ninety, was educated at Glasgow University, where she graduated as an MA in 1905 and which subsequently awarded her a DSc and, in 1948, an LlD. She spent three years as a Carnegie Research Fellow in Ceylon, studying various parasitic Protozoa in the blood of reptiles and fishes. Thus she was introduced to the trypanosomes, a group on which much of her subsequent research was to be done. She discovered and named a trypanosome of a turtle and studied its complete life cycle in both vertebrate and invertebrate hosts (leeches). This was one of the first life histories of a member of this genus to be elucidated in detail.

Dr Robertson then returned to Britain in 1909 to work for a year as research assistant to Professor E. A. Minchin at the Lister Institute, and subsequently joined the Institute's staff. No doubt it was from Professor Minchin that she acquired much of the cytological expertise she was later so fruitfully to apply to her studies of trypanosomes and other protozoa. In 1911 her wanderlust reasserted itself, and she joined the Royal Society's Sleeping Sickness Commission in Uganda, under Dr H. L. Duke, as Protozoologist to the Uganda Protectorate. Travel to such relatively unknown regions as central Africa was not commonly undertaken by young ladies in the early years of this century, and Dr Robertson's achievements in this field testify to her adventurous and determined nature, exemplified also perhaps by her use of a bicycle as a means of transport through the forests of southern Uganda.

This period could perhaps be regarded as the acme of her scientific career, when she worked out in detail the entire, complicated developmental cycle undergone by *Trypanosoma gambiense*, the causative organism of human sleeping sick-