

## Book Review

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### *Radioecology and Energy Resources*

Edited by C. L. Cushing, John Wiley, London and New York, 1976, 401 pp, \$ 30.00

This is *Special Publication No. 1* of the Ecological Society of America and consists of the 52 papers presented at the Fourth National Symposium on Radioecology held in May 1975 at Oregon State University. The first point that must be made about this book is that if, as seems to be the case, "Radioecology" is defined as the effect that radioactive isotopes and radiation have on an ecological system and also includes the study of such a system by means of radioactive tracer techniques, a far more accurate title must be limited to "radioecology". Energy resources are not discussed in any of the 52 papers presented.

The first session of 13 papers presents studies of the effects of waste products from nuclear power stations and research stations such as Los Alamos on single species and isolated ecosystems. The results, as presented, constitute useful sets of data that can be used in subsequent investigations into the spread of these waste products. However, there was no discussion in the papers of the potential harmful effects, if any, of the concentrations found. It is impossible therefore for the layman to assess the significance of the findings in terms of the risk to man and his environment. In addition, since the values in a graph showing the concentration in water of  $^{137}\text{Cs}$  and  $^{60}\text{Co}$  in the opening paper are up to an order of magnitude below the lowest detectable level quoted elsewhere in the same paper, there must be doubts about the reliability of the data.

The only paper that seemed to carry any significance for readers interested in Energy resources was by J. E. Till in which the radiological hazards of using  $^{233}\text{U}$  in the high temperature gas cooled reactor and  $^{239}\text{Pu}$  in the liquid metal fast breeder reactor were compared and shown not to differ significantly.

Subsequent sessions covered modelling and methodological contributions in environmental studies, cycling of radionuclides in aquatic and terrestrial ecosystems and radiation effects on terrestrial and aquatic organisms and communities.

If some of the discussions had been included these proceedings may have been more useful to readers with interests outside radioecology with the emphasis firmly on ecology. As it is I must conclude that it is unlikely to be of more than passing interest to readers of this journal. However, it is a publication of an ecological society but even so one would like to see the significance of the data discussed in terms of its broader implications.

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