

Faraday rotation of the plane of polarization by a magnetized medium.

At the end of the conference, Prof. Bates expressed very happily the gratitude which all the participants, particularly those from other countries, felt towards Prof. Néel and all who helped to organise the conference for the admirable arrangements and the very pleasant atmosphere which prevailed throughout both the formal sessions and the less formal intervals.

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STATISTICAL METHODS IN BIOLOGICAL AND CHEMICAL EXPERIMENTS

IN January 1949, the New York Academy of Sciences held a conference on "The Place of Statistical Methods in Biological and Chemical Experimentation"; the fifteen papers there presented are now published* "as a guide to those workers in the fields of biology and chemistry who wish to learn more about the place of statistics in research". The volume naturally does not give a connected account of the methods of statistical science, but it does provide exceedingly interesting illustrations of the many ways in which the statistician can help a research programme. It should be of value to the sceptic requiring to be weaned from his belief that "I don't need statistics in my work", to the teacher in search of examples, and also to the specialist who can appreciate the intrinsic merits of those contributions lying close to his own branch of study.

The first two papers, by G. W. Snedecor and G. M. Cox, are general accounts of the function of statistical analysis and experimental design. Next come several papers descriptive of special statistical techniques, in subjects as diverse as analytical chemistry, nutrition and immunology. Four papers on biological assay and three on studies of human populations complete the collection. All the authors have something worth saying, and all present their topics with admirable clarity; one or two need special mention.

Many readers will be interested to see F. W. Wilcoxon's survey of the approximate methods of analysis that he has done so much to develop. C. V.

* *Annals of the New York Academy of Sciences*. Vol. 52, Art. 6: The Place of Statistical Methods in Biological and Chemical Experimentation. By Edwin J. de Beer, Lloyd C. Miller and 14 other Authors. Pp. 739-942. (New York: New York Academy of Sciences, 1950.) 2.25 dollars.

Winder contributes a valuable account of certain applications of statistics in pharmacology, in the course of which he discusses the choice of a meta-meter for analysis. L. C. Miller compares different techniques for the analysis of assays using quantal responses, making useful comment on the validity and utility of each. D. Mainland and D. D. Reid describe some of the statistical problems of research in clinical medicine, with special reference to recent progress in this important and difficult field.

D. J. FINNEY

THE TSETSE FLY IN EAST AFRICA

THE report of the East African Tsetse and Trypanosomiasis Organisation for 1949* shows that an integrated attack is being made upon this many-sided problem—research and reclamation are being closely co-ordinated, the medical, veterinary and agricultural aspects are being treated as different facets of a single problem, and progress in East Africa is being correlated at each step with advances made in other parts of the continent.

As the director, Dr. H. M. O. Lester, points out, the broad aim of the Organisation is the assistance of development in East Africa; and the reorganisation of research which is in progress and, in particular, the closer liaison between tsetse research and trypanosomiasis research, are clearly having a stimulating effect. Detailed work with improved technique is in progress to define exactly the habitats of the different species of tsetse fly so as to make possible the eradication of the tsetse with the minimum interference with vegetation.

There are many questions in tsetse biology which must be answered before land-utilization policies can be formulated. It is already clear that the eradication of tsetse fly from any area has little value unless the land that has been freed from this pest is required for some specific purpose. Until more effective methods of applying insecticides and cheaper methods of clearance are developed, eradication and resettlement will only be economic where there is sufficient pressure of population for the organisation of large-scale undertakings. The effect of 'fire exclusion' in exterminating *Glossina swynnertoni* has been confirmed. As in Southern Rhodesia, it has been proved in an experimental fenced area of 560 square miles that the destruction of game animals leads to a very great reduction in the numbers of *G. morsitans* and the virtual collapse of *G. swynnertoni*.

On the veterinary side, extensive trials have been carried out on the prophylactic and curative value of the drug 'Antrycide'. A cautious attitude was adopted from the outset by the research organisation, and this attitude appears to have been justified. The drug has remarkable curative properties against veterinary trypanosomiasis, although severe toxic reactions have occurred and will require further study before its use on a large scale can be recommended. As a prophylactic the drug has proved disappointing. It is liable to cause prolonged incubation of the disease and so to mask infection; and acquired resistance is so readily developed by *T. congolense* and *T. vivax* that it appears difficult, if not impossible, to use the drug for large-scale prophylaxis in East Africa.

* East African High Commission: East African Tsetse and Trypanosomiasis Research and Reclamation Organisation. Annual Report, 1949. By Dr. H. M. O. Lester. Pp. 26. (Nairobi: East African High Commission, 1950.)