

## THE TECHNIQUE OF NATURE PHOTOGRAPHY

### Zoological Photography in Practice

A Contribution to the Technique and Art of Wild Animal Portraiture. By Dr. Hugh B. Cott. (Photo Practice Series.) Pp. 370 (68 plates). (London: Fountain Press, 1956.) 52s. 6d.

IN recent years, particularly since the Second World War, students of animal behaviour, as well as ecologists and others, seem to have increasingly felt the desirability of using photographs to record their observations and to illustrate their papers. In many cases this has of necessity involved them in the problems of producing the photographs for themselves, and many have found that to produce photographs of animals, their habitats, etc., that are satisfactory from a scientific point of view is not nearly as easy as it first appears to be.

In order to produce a photograph which illustrates satisfactorily a point which he wishes to make, a worker must not only know precisely what it is that he wishes to record, but also the technique that must be employed in order to do it. Presumably most workers realize the first necessity, although this is by no means always evident in published photographs, but many, particularly in Britain, do not appear to pay much attention to the second. This may well have been due to the fact that hitherto very little worth-while information has been available in any comprehensive form on the techniques involved in the very various aspects of nature photography.

In future such an excuse for poor quality work will no longer be as acceptable, as Dr. H. B. Cott has provided just the kind of book that is wanted. Dr. Cott is, of course, exceptionally well qualified to write on this subject, as he is very experienced both as a zoologist and naturalist, and also as an artist and photographer.

The central theme of this book is zoological photography in the field, and its author's aim, which he achieves remarkably well, is to provide useful information for all who are genuinely concerned with wild-life photography.

The first six chapters are devoted to the more technical aspects of photography in the field, such as: choice of camera; selection of the most satisfactory type of sensitive material for any particular job; the right use of filters; estimation of the most satisfactory exposure to obtain a desired rendering of the tones of the subject; processing of the sensitive material both in a well-equipped dark-room and also under difficult field conditions in the tropics; and printing and lantern-slide making. This is followed by two very interesting chapters, one on the artistic approach to zoological photography, and the other, a particularly valuable one, on the scientific approach. These are followed by a couple of chapters which give an excellent introduction to the photography of animals in such diverse surroundings as equatorial forest, savannah, sea-cliff and desert.

Finally, mention must be made of the excellent drawings, tables and graphs which are used extensively to illustrate various points; of the sixty-eight art plates, some of which are very fine and all of which are reproductions of the author's own photographs; of the bibliography of nearly a hundred references; and of the comprehensive index.

Naturally, as the author himself says, this work does not cover all aspects of zoological photography; for example, there is little mention of insect or fish photography, and a section dealing with the use of the high-speed electronic flash could usefully be added in a future edition; but it will, nevertheless, be of great value both to naturalists and zoologists, and also to those whose interests are primarily photographic. This is a book which one can whole-heartedly recommend and which should certainly find a place in all biological libraries. COLIN G. BUTLER

## SCIENCE IN RUSSIA

### The Soviet Academy of Sciences

By Alexander Vucinich. (Hoover Institute Studies. Series E: Institutions, No. 3.) Pp. vi+157. (Stanford, Calif.: Stanford University Press; London: Oxford University Press, 1956.) 16s. net.

THE Imperial Academy of Sciences was founded in 1725, following a decision of Peter the Great on January 29, 1724, calling for the creation of a high scientific forum to serve as a leading and unifying force for science in Russia. To-day, its successor, the Soviet Academy of Sciences, is the highest scientific body in the U.S.S.R. in all respects save the right to pass judgment on scientific validity and to explore freely the unknown and the unplanned. It deals with all branches of systematized knowledge on perhaps the largest scale in human history and receives immense financial support, and this study of the Academy by Prof. A. Vucinich should be of wide interest both to the scientist and to the technologist.

Prof. Vucinich examines in particular the organization of scientific inquiry in the Soviet Union and the social role of Soviet science and scientists. First, he summarizes the development of the Imperial Academy, which in 1917 had forty-five regular members and two hundred and twenty scientific and technical associates, until its transformation in 1929 to serve the purposes of the first Five-Year Plan of the U.S.S.R. saw the disappearance of its earlier internal organization and a vast extension of its scope, which is now governed by a statute of 1935 and various later amendments. Next, he describes the internal structure of the Academy, which is typically Soviet, in that there is a *de jure* structure conducted, at least on paper, by generally democratic processes, and a *de facto* structure tightly controlled by, and serving as an instrument of, the State. The Academy's eight departments cover physical and mathematical sciences; biological sciences; chemical sciences; geological and geographical sciences; technical sciences; history; economics, philosophy and law; and literature and language, and it is in these that research work is minutely organized and carried out. These departments are divided into well-defined research aggregates, of which the most important are the institutes; but there are also fifteen laboratories, four observatories, seven museums and five stations, supplementing the work of the institutes.

In a third chapter Prof. Vucinich reviews the contribution of the Academy to the advancement of both pure and applied science, pointing out the limitations under which the Soviet scientist works, and noting that in spite of a revived interest in theory on the part of the Academy's administrators, particularly in cosmogony and nuclear physics, advances are