

BOOK RECEIVED

K. Petruszewicz & A. Macfadyen: Productivity of Terrestrial Animals — Principles and Methods (IBP Handbook No. 13). Blackwell Sci. Publ., Oxford and Edinburgh, 1970, XII + 190 pp, figs. 28, price 50 s.

The growing series of IBP Handbooks has already reached almost 20 volumes, which are constantly used by ecologists all over the world. Although the handbook written by Petruszewicz and Macfadyen has an odd (and usually regarded unlucky) number 13, its content is very fortunate for terrestrial ecologists, and especially for mammalogists. This book presents modern ideas and methods for studying productivity of populations of the terrestrial animals.

The handbook is a much expected child of the IBP meeting which was held in Jabłonna (Poland) in 1966, and which was attended by ecologists and physiologists from 14 countries. The complete materials of the meeting (54 papers) were published earlier in the 2 volume book »Secondary Productivity of Terrestrial Ecosystems« (1967). The senior author of the handbook was the organiser of the meeting and editor of the proceedings. However, it was a very hard job to »digest« all contributions to the meeting and construct own and original lecture which would be sufficiently concise and clear for the practical use in productivity studies. The more so that the handbook is a deliberate synthesis rather than a report.

The authors expressed their principles and methods in seven chapters. Starting from the essential dosis of terminology they developed lucid definitions of concepts and units for productivity studies. The ecological background contains an excellent review of different methods for estimating animal numbers, their survival and reproduction, weight and biomass, as well as caloric values. All these population parameters represent only necessary introduction to the measurements of production, which are described with a great subtlety. The bioenergetic chapters are dealing with assimilation which can be approached by both feeding and metabolic studies. They may serve as a general guide among the methods concerning nutrition respirometry, telemetry, radioisotopes etc., regarded as essential for every ecologist. All this leads, however, to the estimation of energy flow through animal populations and understanding their role in ecosystem functioning.

Many examples and methods concern mammals, particularly small rodents. The handbook is a Polish-British co-product, the Polish senior author being personally engaged in the studies with small mammals, whereas the British author works mostly with invertebrates. For this reason so many recent findings of Polish ecologists working on the productivity of small mammals in connection with IBP may be found in the handbook. This working group includes more than 20 scientists from Białowieża, Cracow, Turew and Warsaw, and their original papers were published in »Acta Theriologica«, particularly in the volumes 11, 13, 14 and 15 (1966—70).

W. Grodziński