

atomic number corresponds to the net positive charge on the nucleus; (c) the mass number (atomic weight) is equal to the number of protons in the nucleus; (d) the difference between the mass number and the atomic number is attributed to neutrons in the nucleus; (e) neutrons are particles with a mass nearly that of a proton; (f) the neutrons, being of negligible mass, may be disregarded. The table (p. 253) which gives the atomic structure of a number of selected elements does not mention the neutron, which, considering

its (apparently) uncertain properties, is perhaps just as well.

'Partington' and 'Durrant' are widely contrasting books, complementary rather than competitive. Partington is historical, somewhat discursive, and (at least once) reminiscent (p. 433). Durrant is non-historical, logical, modern, and provides much tabulated information, of which Partington (p. vii) disapproves. The teacher may choose according to his tastes. J. N. SUGDEN.

BIOGEOGRAPHY IN THE U.S.S.R.

(1) Zoogeography

By I. I. Puzanov. Pp. 360 + 32. (Moscow: State Publication Office of the Commissariat for Education, 1938.) 7·80 roubles.

(2) Zoogeography of the Ukrainian Socialist Soviet Republic

By M. Sharleman. Pp. 234 + 1. (Kiev: Ukrainian Academy of Sciences, 1937.) 6·60 roubles.

(3) Vegetation of the World

(Plant Geography, vol. 3.) By A. P. Il'inskij. Pp. 458. (Botanical Institute of the Academy of Sciences, Moscow-Leningrad, 1937.) 10 roubles.

ALTHOUGH the three books referred to above by no means exhaust the most important biogeographical publications that have appeared in the Soviet Union during the last few years, they deserve special notice for various reasons.

(1) Prof. Puzanov's book on zoogeography is of interest as an attempt to produce a text-book in this subject, which is still taught in too few universities, one of the reasons being the lack of suitable books for students. A brief introduction dealing with the aims and methods of zoogeography and giving a concise history of the science is followed by two general parts. The first presents a lucid discussion of the ecological principles of zoogeography; the second deals with dynamics of faunas from a geological aspect. This difficult problem is dealt with in a very clear manner, without superfluous detail, while avoiding undue simplification. The third, and the main, part of the book is devoted to regional zoogeography, that is, to descriptions of the faunas of various regions. These descriptions are based mostly on vertebrate animals, but whenever possible some data on insects, etc., are also given. A feature of the book is the abundance of very well-executed (but poorly reproduced) original illustrations of numerous animals mentioned in the text. There are

even three plates in colour, but their standard is low.

On the whole, the book undoubtedly represents a very successful approach to a university text-book of zoogeography, which is as yet lacking in any language, in spite of a seriously felt need for one.

(2) Sharleman's book on the zoogeography of the Ukraine is an original treatise on the regional distribution of vertebrates of that country in connexion with their ecology and geological history. The book is written in the Ukrainian language, but Russian and English summaries are appended, while a complete list of species showing their distribution by districts, and a very full bibliography should make it very valuable for workers on the Palæarctic fauna.

(3) The book on the vegetation of the world by Il'inskij is published as the third (and concluding, but first published) volume of a series, the other two of which deal with plant geography and plant ecology respectively. The general part of the book is very brief—because the two other volumes just referred to should supply the introductory knowledge to the present one, which contains descriptions of types of vegetation by continents and natural regions. Most of the descriptions are clear, concise, based on up-to-date information and illustrated by well-reproduced photographs. All this goes to make a good text-book that should be very useful, particularly to geography students.

Indeed, it can be said that geography departments in Soviet universities are particularly fortunate in having modern text-books in both branches of biogeography, by Puzanov on animals and by Il'inskij on vegetation. The appearance of similar text-books in English would go a long way towards introducing biogeography into British and American universities, where this science is suffering from undeserved neglect. B. P. UVAROV.