

Mercury and the moon are concluded to suffer from great extremes of climate, while the high albedo of Venus indicates that much light and heat is reflected without reaching the surface, so that the temperature of the latter may be moderate. A. C. D. C.

*Handbuch der biologischen Arbeitsmethoden.* Herausgegeben von Prof. Dr. E. Abderhalden. Lieferung 94. Abt. IX: Methoden zur Erforschung der Leistung des tierischen Organismus. Teil 1, Heft 3: Methoden der zoologischen Forschung. Pp. 439-584. (Berlin und Wien: Urban und Schwarzenberg, 1923.) 6.3 Schw. francs.

THE present number of this extensive work is devoted to methods of zoological investigation. The first article, by L. Neumayer, deals with the fixation of tissues for histological purposes, and provides a useful, well-arranged account of the various fixatives, with notes on the different tissues to which they are applicable. There are also abundant references to the literature of the subject. The second article deals with entomological technique, and is contributed by Albert Koch. In this account are included descriptions of all the various entomological methods of collecting and mounting specimens, rearing larvæ, and the preparation of material for histological study. The third article, by W. A. Collier, deals with the determination of age in fishes by means of growth phenomena afforded by the otoliths, opercular bones, and scales.

The last article is by Th. Mollison, and treats of serum diagnosis as a test of affinities as applied to zoology and anthropology. Previous parts of this work have already received notice in our columns, and the present contribution is no exception to the general standard of excellence that characterises this encyclopædic treatise.

*La Lampe à trois électrodes.* Par Prof. C. Gutton. (Recueil des Conférences-Rapports de Documentation sur la Physique. Vol. 5, 1<sup>re</sup> Série, Conférences 11, 12, 13. Édité par la Société *Journal de Physique.*) Pp. 181. (Paris: Les Presses universitaires de France, 1923.) 15 francs.

RADIO engineers will welcome this book by Prof. Gutton. He starts by giving a complete account of the physical phenomena utilised in the three terminal thermionic valve. Full use is made of characteristic curves, and formulæ given by Richardson, Langmuir, and Clerk Maxwell are quoted. In the second chapter several good types of apparatus suitable for amplifying are described and approximate formulæ are obtained for them. In the next chapter oscillating circuits are given, the theory being well and clearly explained. The theory of the methods of using filters to eliminate harmonics is also given. Next comes the theory of detectors and detecting circuits. Finally the arrangement to get "negative resistance" is shown and the methods of obtaining high frequency currents by utilising suitable valves are described and their useful applications in making electric measurements are explained. The author defines the resistance of a circuit as "negative" when an infinitesimal reduction of the terminal voltage produces an infinitesimal increase in the current.

*Biologie der Tiere Deutschlands.* Bearbeitet unter Mitwirkung zahlreicher Fachleute und herausgegeben von Dr. Paul Schulze. Lieferung 1. Teil 2: Spongioria. Von P. Schulze. Teil 3: Cnidaria. Von P. Schulze. (Berlin: Gebrüder Borntraeger, 1922.)

THIS is the first of a series of booklets giving an account of the general biology, physiology, life history, and ecology of the animals comprising the German fauna. Marine forms are omitted from considerations of space. No systematic treatment is attempted, and only so much of the anatomy, histology, and embryology of the animals is included as is necessary for a proper understanding of their biology. It is essentially a book of Nature study, wholly excellent in conception, popular in intention and strictly scientific in treatment. It will be issued in a series of pocket volumes, on the lines of Brauer's "Süsswasserfauna," and when completed will form a companion work to Brohmer's "Fauna von Deutschland," in which the systematics of the groups are dealt with. The work is intended for use in the field by students, teachers, and field naturalists generally, and should be of the greatest value in stimulating the study of Nature on a scientific basis. There is room for a similar work on the British land and freshwater fauna; but until such appears this book will, at any rate partially, fill the need.

*The Common Birds of India.* Described by Douglas Dewar and illustrated by G. A. Levett-Yeats. Vol. 1. The Sportsman's Birds, Wild Fowl, Game Birds, and Pigeons. Part I. Pp. viii+44. (Calcutta and Simla: Thacker, Spink and Co., 1923.) Rs. 2.8.

MR. DEWAR contemplates a series of volumes (five in all, of about 140 pages each) dealing with the birds of India as a whole and forming a profusely illustrated work of a popular nature designed for the guidance of sportsmen and the non-scientific resident. The first part deals with the ducks, swans, and geese, and though the style is too journalistic, the matter is excellent as a good account of the salient features of these birds and of their general natural history. A list of vernacular names and an easily used key for ready identification are two features of special value which we hope will be continued in later volumes. Mr. Levett-Yeats's illustrations add considerably to the usefulness of the work and are worth the expenditure of a little more care in reproduction. There is room for this book, and we hope that Mr. Dewar will receive sufficient support to justify him in carrying the project to completion.

*La Vie des atomes.* Par Prof. A. Boutaric. (Bibliothèque de Philosophie scientifique.) Pp. 248+4 planches. (Paris: E. Flammarion, 1923.) 7.50 francs net.

PROF. BOUTARIC deals in an interesting way with the recent advances in physics which led to the present view of the structure of the atom. The last part of the subject is treated only very briefly, but the fundamental experiments are clearly reviewed. The treatment is non-mathematical, and the book will be read with interest by those who wish to obtain some conception of the radical changes in outlook which have resulted from recent work. There is no index.