desirable has been adopted. But, curiously enough, the uniformity is intra-verbal and not inter-verbal; for whilst the physiologics and physiologicals of the first edition appear as physiologics in the second, and whilst the same course has been followed with the adjectival forms of morphology and palæontology, the empirics and empiricals of the first edition appear as empiricals in the second. We condemn the manner in which this uniformity has been introduced. We are perfectly aware that morphologic is correct, and that morphological is hybrid and redundant, containing as it does a Greek and a Latin adjectival termination, but we hold that the former is ugly and that the latter is not. If the customary termination is allowed in the case of empirical, on what grounds is it refused in that of physiological? If in our choice of the forms of terms we have to choose between those with the meaning and sound of which we have become familiar, be they never so hybrid, and those forms of them that we are told are strictly log*ic*, let us by all means choose the former.

There is no need to commend the book. It is indispensable, inasmuch as it is the only available account of Prof. de Vries's work in English, so far.

A. D. D.

Time and Clocks: a Description of Ancient and Modern Methods of Measuring Time. By H. H. Cunynghame, C.B. Pp. 200. (London: Archibald Constable and Co., Ltd., 1906.) Price 6*s.* net.

IN this volume the author has gone much further than the title and subtitle would lead one to expect. Not only are the "ancient and modern methods of measuring time" discussed, but an attempt has been made to lead the non-scientific reader to a knowledge of the many principles involved in a series of logical steps. Mass, gravity, space, harmonic motion, &c., &c., are all discussed at length, whilst excursions into the ancient concepts of various phenomena are by no means infrequent.

We rather fear that the reader who has not gone through a course of dynamics will find it hard to grasp the significance of the various discussions, despite the clear reasoning and simple examples, whilst to the science student a greater part of the matter is unnecessary.

Still, in the hands of a youth trained in the ideal fashion suggested by the author at the end of the book (p. 186), the volume, carefully digested, should prove of service and tend "to keep the young rascal from worrying his sisters and stoning the cat."

W. E. R.

Conduction of Electricity through Gases. By Prof. J. J. Thomson, F.R.S. Second edition. Cambridge Physical Series. Pp. vi+678. (Cambridge: University Press, 1906.) Price 16*s.*

THIS book, the first edition of which was fully noticed in NATURE (vol. lxix., p. 74), will be welcomed by all those who are striving to keep up with the rapidly growing literature of an increasingly important subject. It was the author's researches in this field which first paved the way for the rapid extension of our knowledge which has taken place in the last few years. Much still remains to be done before the innumerable phenomena encountered in the study of the electrical behaviour of gases can be considered fully elucidated, and to the thoughtful worker these still unoccupied regions will probably be the most attractive. While this book has been waiting notice on the reviewer's table, frequent reference has been made to it for work that has appeared since the issue of the first edition, and in no case in vain. It maintains in an enhanced degree its good qualities as a work of reference none engaged in the subject can be without, and as an authoritative exposition of a field of work the author has made his own it has its own place among a wide circle of readers.

The New Physics and Chemistry: a Series of Popular Essays on Physical and Chemical Subjects. By W. A. Shenstone, F.R.S. Pp. vii+360. (London: Smith, Elder and Co., 1906.) Price 7*s.* 6*d.* net.

WHEN a collection of essays upon the chief problems in physical science engaging the attention of investigators at the present time is published without an index, its value to students of scientific progress is greatly diminished. Mr. Shenstone evidently does not intend the book to be used for reference, otherwise he would have provided a key to its contents. His essays, which originally appeared in the *Cornhill Magazine*, represent popular science at its best, and rehearse the outstanding features of the new physics and chemistry in a style easy of comprehension. The book should serve a useful purpose in revealing to readers familiar with the concepts of physical science the richness of fact and theory relating to the properties and constitution of matter and the ether.

The Manufacture of Light. By Prof. Silvanus P. Thompson, F.R.S. Pp. vi+67. (London: Macmillan and Co., Ltd., 1906.) Price 1*s.* net.

PROF. THOMPSON'S evening lecture delivered at the York meeting of the British Association in August last is here presented in an attractive form. Twenty-eight clearly reproduced illustrations assist greatly in a thorough comprehension of the discourse. After a brief description of primitive sources of light and a reference to the inventions of gas and electric lighting, the general question of incandescence is discussed. This is followed by an account of photometry and an explanation of the inequality in different directions of the light from various sources. After dealing with the sensitiveness of the eye to radiations of particular wave-lengths, the measurement of emission, and the temperature and quality of radiation, Prof. Thompson describes various incandescent gas-lights, new kinds of glow-lamps and arc-lamps, and concludes with a consideration of the cost of the manufacture of light. The little book should have a wide popularity.

Lichtstrahlung und Beleuchtung. By Paul Högner. Pp. ix+66; illustrated. No. 8 of Dr. G. Benischke's "Elektrotechnik in Einzel-Darstellungen." (Brunswick: Vieweg and Son, 1906.) Price 3 marks.

THIS book gives a clear exposition of illumination by means of electric arc lamps. The theory of the subject is well set forth, and starts from a sufficiently elementary foundation to be easily followed by the average student. The chief feature of the work is a number of tables giving data concerning illumination under different conditions, and these might be profitably consulted by those wishing to arrive at the best results in a given case. The book is well printed and the diagrams are good.

A Synonymic Catalogue of Orthoptera. Vol. ii., Orthoptera Saltatoria, Part i. (Achetidæ et Phasgonuridæ). By W. F. Kirby. (London: Printed by Order of the Trustees of the British Museum, 1906.) Price 15*s.*

THIS volume is the continuation of Mr. Kirby's synonymic catalogue the first part of which was published in November, 1904. The present work includes the Achetidæ, or crickets, and the Phasgonuridæ, or long-horned grasshoppers, often improperly called Locustidæ. The true Locustidæ, or short-horned grasshoppers—often called Acridiidæ—will form the third and concluding volume of this work.