more curved. Condylobasal length of skull about 160 mm.

Affinities.—Last and largest known representative of a line of robust paramyines represented by *Pseudotomus* in the middle Eocene and *Ischyrotomus* in the later Eocene. Relationship to *Paramys, sensu stricto,* less close and probably through an early Eocene common ancestry as yet undefined. Related in a broader way to the ischyromyids in general, but not close to any other known Oligocene genus.

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THE VELOCITY OF LIGHT

THE note concerning "The Speed of Light," printed in *Science News* in the issue of SCIENCE for April 4 on page 10, calls attention to recent work by Dr. Wilmer C. Anderson.

The "group velocity" correction factor of Dr. Anderson, at its quoted value of 6.92 km, is only about 0.00231 of one per cent. of the speed which he finds (299,776 km/sec). The drop from the Michelson value of 1926 is 20 km, or about 0.00667 of one per cent.

Moreover, the table of values given in SCIENCE for 1927, September 30, shows a continuous fall in values from 1849 to date, except for the 1855 value. The total fall in values from the 1849 value to that of Dr. Anderson is *4.32 per cent.* Why always downward? Is it possible that all the errors of measurement were on the same side of the true value? This seems improbable.

Though I like to believe that the speed of light is constant, further measurements will be followed with much interest.

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SCIENTIFIC BOOKS

BIOLOGICAL OXIDATIONS

Mechanisms of Biological Oxidations. By DAVID E. GREEN. 181 pages, bound. Cambridge University Press. 1940. $2.75.

THE announcement of a monograph on "Biological Oxidations" by D. E. Green evoked high hopes and expectations. These were in part founded on the belief that the author, by virtue of his American upbringing and training and his subsequent extensive scientific activity in England, was predestined to achieve a well-balanced synthesis of the subject-matter, drawing equally on the contributions made on both sides of the Atlantic. His competence to do this job well was assured not only by his own creditable experimental contributions but even more so by his previously demonstrated gift to present difficult problems in a lucid manner. Furthermore, a book suited for the beginner and dealing with the present status of the field in a moderate space was in definite demand, since it was to fill the gap between such excellent but necessarily limited review articles as that by E. S. G. Barron (*Physiological Review,* 19: 184, 1939) and the more comprehensive and greatly detailed treatments, as that in Oppenheimer's Supplement to his hand-book on "Enzymes."

A careful study of the book leads to the conclusion that it is definitely useful; useful in the sense that it may be recommended to students and teachers alike as a guide into the labyrinth of tricks by which nature contrives to make the rather inert and sluggish oxygen gas "combust," at body temperature and in a neutral medium, substances like succinic acid which the chemist must overwhelm by boiling them with chromic acid. It is an achievement to cram 178 pages full with experimental facts and detailed information and to end up with a thoroughly readable treatise which avoids successfully overtaxing the average reader's capacity for assimilating the material and which keeps his interest alive to the last page. The comments which follow are offered in a spirit of constructive criticism and are not meant to detract from the intrinsic value of the book.

To begin with the title of the book, it might perhaps read more appropriately, "On the preparation and properties of oxidative enzymes; with an appendix on organized systems." Of a total of 178 pages text, 163 are taken up by introductory remarks on general properties of oxidative enzymes and by subsequent, well-organized chapters on iron porphyrin protein, pyridinoprotein, flavoprotein, copper (and zinc) protein and thiaminoprotein enzymes, cytochrome-reducing dehydrogenases and unclassified oxidative enzymes. It is doubtful whether the inclusion of preparative details in a monograph of this size is beneficial, since a worker interested in the isolation of a given enzyme will probably want to consult the original publication anyway. Space thus saved might have been devoted profitably to an expansion of the last chapter dealing with reactions in organized and integrated systems. This does not necessarily mean that cellular respiration and intermediary metabolism are regarded as integral parts of the topic of biological oxidation. These subjects are, perhaps, more within the realm of physiology and physiological chemistry in general. But phenomena like those observed in reconstructed systems