

DR. SAMUEL P. HAYES, professor of psychology, will be in England until next fall.

MR. C. SHEARER, of Clare College, Cambridge, has been nominated to a newly established lectureship in experimental morphology at Cambridge.

#### DISCUSSION AND CORRESPONDENCE

##### THE WORD GENOTYPE

PROFESSOR JENNINGS (*SCIENCE*, December 15, p. 847) refers to the fact that the word genotype has two meanings, but does not make it quite clear that both are current at the present time. The use of the word, with a definition, by Schuchert antedates that of Johannsen, as has been several times pointed out. Taxonomists can hardly be expected to abandon their prior and useful term, so it becomes a question whether it is convenient to continue the Johannsenian usage, trusting to the context to indicate in every case what is intended.

Some months ago, in conversation, my colleague, Dr. George Norlin, suggested "amictotype" as a possible substitute for genotype in the sense of Jennings.

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##### GENOTYPE AND "GENOTYPE"

"In calling attention to the frequent misuse of the word 'genotype'" (quotation from George H. Shull in *SCIENCE*, February 2, 1912, p. 182), the students of heredity will please take notice that this term has been in biology since 1897 and that Shull, Johannsen and others persistently misuse the term. The original definition is as follows:

"*Genotype* (*genos* = race, and *typos* = type).—Genotype applies to any *typical material of the type species of a genus*. The material, however, should be, if possible, from the original locality of the species, or a genotype should also be a topotype or a metatype. Therefore there may be as many genotypes of *Lingula* as there are museums having characteristic specimens of *Lingula anatina*."<sup>1</sup>

CHARLES SCHUCHERT

<sup>1</sup> *SCIENCE*, April 23, 1897, p. 639.

#### SCIENTIFIC BOOKS

*Lectures on Fundamental Concepts of Algebra and Geometry*. By JOHN WESLEY YOUNG, Professor of Mathematics in the University of Kansas. Prepared for publication with the cooperation of WILLIAM WELLS DENTON, Assistant in Mathematics in the University of Illinois. With a Note on the Growth of Algebraic Symbolism by ULYSSES GRANT MITCHELL, Assistant Professor of Mathematics in the University of Kansas. New York, The Macmillan Company. 1911. Pp. vi + 247.

*Descriptive Geometry: A Treatise from a Mathematical Standpoint*. By VICTOR T. WILSON, M.E., Professor of Drawing and Design in the Michigan Agricultural College. New York, John Wiley & Sons. 1909. Pp. viii + 237.

*Elements of Descriptive Geometry with Applications to Spherical and Isometric Projections, Shades and Shadows, and Perspective*. By ALBERT E. CHURCH, LL.D., late Professor of Mathematics in the United States Military Academy, and GEORGE M. BARTLETT, M.A., Instructor in Descriptive Geometry and Mechanism, University of Michigan. New York, American Book Company. 1911. Pp. 286.

Professor Young's "Lectures" presuppose in the reader intellectual acumen and a certain logical bent but little mathematical knowledge beyond the elements of algebra and geometry. Dealing with such topics as Euclid's Elements, A Non-Euclidean World, Consistency, Independence and Categoricalness of a Set of Assumptions, with the notions of class, correspondence and group, the assumptions of Hilbert and Pieri, dimensionality and hyperspace, variable, function and limit, and dealing with them in a way that is at once philosophic, romantic, scientific and well-nigh literary, the lectures ought to appeal to a wide and diversified class of readers, philosophers, logicians, both expert and inexperienced mathematicians, and thinkers in general. The book is far more than its title indicates, for the concepts treated are presented as being fundamental to mathematics in general, to