The result may appear, to the student who is familiar with current nomenclature, in some cases strange, if not even startling, but the evidence submitted for the entire correctness of adopting the changes from current usage is, in the judgment of the present writer, cogent, and in almost every case entirely convincing. So far as the nomenclatorial adjustments touch familiar North American species, it may be worth while to point them out.

The species named *cingulata* by Drury is referred with its congeners to the genus *Herse* Oken. The genus *Protoparce* Burmeister receives into its embrace our species *sexta* = *carolina* Linnæus, *quinquemaculatus* = *celeus* Hübner, *occulta, rustica* and *brontes*. For the species named *hageni* Grote the genus *Isogramma* is erected; for *cupressi* Boisduval the genus *Isoparce* is proposed and described; and for *elsa* Strecker the genus *Dictyosoma* is set up. For *Sphinx plebeja* Fabricius the authors propose and describe the new genus *Atreus*. Inasmuch as *Atreus* is preoccupied in the Arachnida by Koch, the present writer proposes to substitute for it the generic name *Atreides* and this name will be given to the genus in 'The Moth Book,' which is now going through the press. To the genus *Hyloicus* are referred the species hitherto generally assigned to the genus *Sphinx* in American lists. Our species *modesta* Harris, which has recently quite erroneously been referred to the genus *Marumba* Moore, is put into the genus *Pachysphinx,* which is erected for its reception. Inasmuch as the type of the genus *Sphinx* Linnæus is undoubtedly *ocellata* Linnæus (see 'Systema Naturæ,' Ed. X., p. 489), the American congeners of this species are placed in that genus, and the name *Smerinthus* Latreille, hitherto almost universally applied to them, is dropped as a synonym. As the type of the genus *Sesia,* erected by Fabricius, is undoubtedly the species named *tantalus* by Linnæus, this generic name is retained for that species and its congeners. This will no doubt provoke protest from recent authors, but the step is logical, consistent, and in fact the only one which can be taken unless the 'law of priority' is to be set aside and disregarded. The generic name *Hæmorrhagia* is applied to *thysbe* Fabricius and its allies, while the genus *Macroglossum* Scopoli, of which the European *stellatarum* is the type, is placed in the Philampelinæ, at a wide remove from *Hæmorrhagia* (*Hemaris* auctorum), with which it has hitherto commonly been associated. Our common Morning Sphinx falls under the arrangement adopted into the genus *Celerio* and appears as *Celerio lineata.*

The work deserves the most careful study, and will remain a monument to the learning and the liberality of the distinguished nobleman and his erudite colleague, who have prepared it.

W. J. Holland.

Carnegie Museum,
June 12, 1903.

Variation in Animals and Plants. By H. M. Vernon, M.A., M.D., Fellow of Magdalen College, Oxford. New York, Henry Holt & Co. 1903. Pp. 415.

Since Darwin's 'Variation of Animals and Plants under Domestication' we have had no general résumé of the principles of variation. Yet this period has witnessed the rise (and fall) of many speculations on the subject, and for the past decade has yielded the solid fruits of biometric and experimental investigation.

This important gap is now filled by the well-arranged collection of data to be found in Vernon's book. These data are considered under three main headings as follows: 'The Facts of Variation'; 'The Causes of Variation'; and 'Variation in its Relation to Evolution.' In the first part some of the results of biometry are given without going into the more abstruse mathematical methods. In connection with the discussion of discontinuous variation De Vries's theory is considered in some detail. The causes of variation are classified as blastogenic and environmental, and several chapters are devoted to the latter class. In the third part the author discusses the action of natural selection on variations, and gives some of the evidence for the inheritance of acquired characters, based on the cumulative effects of the conditions of life

(where we miss the results of Standfuss and Fischer), and finally discusses adaptive variation. The author admits the importance of self-adaptations, which are, however, in his opinion, of little effect without natural selection. 'Degeneration' is a difficulty that the author does not attempt to compass, while admitting the unsatisfactory nature of Weismann's explanation. He should remember that the theory that phylogenetic 'degeneration' is due to disuse has inadequate support, and that animals with 'degenerate' organs, however produced, can still be adapted if they get into situations where such organs are of no use.

The book will be a welcome one to those who desire quickly to get at the recent literature on variation. The data are given in an impartial, sometimes even colorless way. The book lacks the vigor of the special plea and the enthusiasm of the book of one idea. It will be found very useful; but it will not found a school. C. B. DAVENPORT.

SOCIETIES AND ACADEMIES.

NEW YORK ACADEMY OF SCIENCES.
SECTION OF GEOLOGY AND MINERALOGY.

A REGULAR meeting of the Section of Geology and Mineralogy was held at the rooms of the American Museum of Natural History on the evening of April 20, with Professor Kemp in the chair. Dr. A. A. Julien presented the results of his work on the hornblende schist which occurs at the extreme northern end of Manhattan Island near Spuyten Duyvil Creek. He was able, in the first place, to prove the undoubted igneous origin of this rock by the unaltered crystals pointing to an original gabbro which it still preserves. The speaker then presented his views in favor of the igneous origin of all the hornblende schists of Manhattan Island.

The second paper was by Mr. D. W. Johnson, on 'The Geology of the Cerrillos Hills, New Mexico.' The Cerrillos Hills form the most northerly group of a series of four laccolithic mountain masses in north-central New Mexico. The relation of these hills to the associated Cretaceous beds and the age of the intrusion were discussed. A brief petrographical description of the several igneous rocks was given and the subdivision and correlation of the sedimentaries on paleontological grounds considered. The origin of the anthracite coal of the Madrid area and the origin of the famous turquoise deposits of the hills were then treated. The speaker closed with a résumé of the geologic history of the region. Professor Kemp led in the discussion which followed. Dr. H. S. Washington was asked by the chairman to calculate an analysis of the type of andesite which is found in the Cerrillos Hills.

GEORGE I. FINLAY,
Secretary pro tem.

ON May 18 the first paper was by Dr. George I. Finlay, of Columbia University, and was upon 'The Geology of the Nephelite Syenite Area at San José, Tamaulipas, Mexico.'

In this paper Dr. Finlay said in part: The town of San José in the state of Tamaulipas, Mexico, lies in a hollow surrounded on all sides by mountains, and is about seventy miles from the coast of the Gulf of Mexico. The range of peaks immediately to the south of it, and extending for fifteen miles in that direction, is of nephelite syenite. The range is known as the San Carlos Mountains. San José itself is on the site of an eroded laccolith of andesite (locally known as 'porphyry'), intruded into limestone. Some limestone masses stand on end within the areas of the laccolith, and are thought to have floated or worked their way down to their present position during the intrusion of the igneous rock. There are two or three hundred of these isolated limestone masses, and it is in connection with these that the copper ores are found. Contact metamorphism has not been developed to any great extent in the limestone surrounding the laccolith, but has been greatly induced in the included masses, marble, grossularite, vesuvianite and several other minerals being the products. Aside from the occurrence of the nephelite-syenite in the area south of the laccolith, the region is interesting on account of the dyke rocks which are found cutting the andesite of the laccolith. Among these are analcite-