train" broke up and "was resolved into two parts."

Ephorus may have been right despite the caloric statement of Seneca; for, in our own times, we have witnessed the disruption of Biela's comet and have assurance of the disintegration of scores of others.

One is not surprised to read of nature's abhorrence of a vacuum; but even an ardent admirer of Seneca would hardly expect to find a reference to the doctrine of the conservation of matter (p. 121) or to the effect of forest denudation on the amount of rain-fall and on the character of floods (p. 122).

Though the rotation of the earth upon its axis and its revolution around the sun had been advanced by several Greek astronomers to explain the phenomena of day and night Seneca seems to cling to the old belief of a stationary earth and a revolving starry dome.

The "Quæstiones Naturales" was written in the last year or so of a life that was busy intellectually and troublous politically; for if Nero was a docile student, he showed himself afterward an ungrateful pupil as well as a ruthless tyrant. One may well wonder how Seneca found the time and tranquility needed to add the present scientific treatise to his numerous writings dramatic, philosophical and moralistic.

Throughout these pages, Seneca shows a keen appreciation of the value of observation for the extension of our knowledge of the world around us, and also of the importance of common sense in the interpretation of our observations.

To this translation in fine literary English, Professor Clarke has prefixed a life (54 pages) of the Roman sage, and Sir Archibald Geike, President of the Royal Society, has appended a valuable analysis (23 pages) of each of the seven books. This critical analysis from a master pen gives by itself a good idea of what was known in physical science in the time of the Emperor Nero.

Brother Potamian

Manhattan College

Allen's Commercial Organic Analysis. Vol. II., Fixed Oils, Fats, Waxes, etc. Fourth edition, entirely rewritten. Edited by Henry Leffmann and W. A. Davis. Philadelphia, P. Blakiston's Son and Co. 1910. Pp. x + 520. Price $5.00 Vol. III., Hydrocarbons, Asphalt, Phenols, Aromatic Acids, Modern Explosives. Pp. x + 635. Price $5.00.

As with the first volume, which was reviewed in Science a few months ago, these volumes have been so entirely rewritten as to form practically new books. As with that the different chapters have been written by experts in the different fields. In Volume II. the authors are: Fixed Oils, Fats and Waxes, C. Ainsworth Mitchell; Special Characters and Methods (Olive Oil Group, Beeswax, etc.), Leonard Aschbutt; Butter Fat, Cecil Reeves and E. R. Bolton; Lard, C. Ainsworth Mitchell; Linseed Oil, C. A. Klein; Higher Fatty Acids, W. Robertson; Soap, Henry Leffmann; Glycerol, W. A. Davis; Cholesterols, John Addyman Gardner; Wool Fat, Cloth Oils, Augustus H. Gill. In Volume III., Hydrocarbons, F. C. Garrett; Bitumens, S. S. Sadtler; Naphthalene and its Derivatives, W. A. Davis; Anthracene and its Associates, S. S. Sadtler; Phenols, S. S. Sadtler; Aromatic Acids, Edward Horton; Gallic Acid and its Derivatives, W. P. Dreaper; Phthalic Acid and the Phthaleins, W. A. Davis; Modern Explosives, A. Marshall; Table of Comparison for Centigrade and Fahrenheit Degrees.

The methods of analysis for complex mixtures of organic compounds are almost unlimited in their variety and make use of all kinds of physical and chemical properties. A book which brings together the best of these methods and which is filled with copious references to the literature of the subjects considered is indispensable in every laboratory where such products are examined. This revision of Allen's well-known book under the editorship of Leffmann and Davis and with the collaboration of well-selected experts meets this need excellently.

W. A. Noyes

Scientific Journals and Articles

Terrestrial Magnetism and Atmospheric Electricity for September contains the follow-

ing articles: "Farewell Visit Aboard the *Carnegie,* at Greenport, Long Island, June 27, 1910," frontispiece; "The Circumnavigation Cruise of the *Carnegie* for 1910–13 and the Perfection of Her Magnetic Work as Shown by Recent Tests," by L. A. Bauer; "Magnetic Chart Corrections Found on First Cruise of the *Carnegie,*" by L. A. Bauer and W. J. Peters; "Glossary of Atmospheric Electricity Terms," by W. W. Strong; "Observations of Earth-currents in Stockholm on May 19, 1910, during Passage of Halley's Comet," by D. Stenqvist and E. Petri; "Magnetische Beobachtungen in Seddin Während des Kometendurchangs, 19. Mai, 1910," by A. Nippoldt; "Magnetic Observations at Cheltenham, Maryland, May 15–20, 1910," by R. L. Faris; "The Magnetic Character of the Year 1909," by G. van Dyk; "Cooperation in British Antarctic Expedition, 1910," by J. Larmor; "Principal Magnetic Storms Recorded at the Cheltenham Magnetic Observatory, April–June, 1910," by O. H. Tittmann; "Die Werte der Erdmagnetischen Elemente in Apia, 1905–08," by F. Linke und G. Angenheister.

NOTES ON ENTOMOLOGY

RECENT parts of the "Genera Insectorum" include a continuation of W. Horn's Cicindelidæ, fascicle 82 b, pp. 105–208, plates 6 to 15, mostly colored; a most excellent review of the tiger beetles. Fascicle 100 is on the Pterophoridæ, or plume-moths, by E. Meyrick, 22 pp., 1 plate, colored, and is also a useful review. Fascicle 101 is on the large exotic cockroaches of the subfamily Epilamprinæ, by R. Shelford, 21 pp., 2 colored plates. Fascicle 102 on the ants of subfamily Dorylinæ, by C. Emery, 34 pp., 1 plate. Fascicles 103 and 104 are by L. B. Prout on the geometrid moths of the subfamilies Brephinæ, 16 pp., 1 plate, and Œnochrominæ, 120 pp., 2 plates. The latter group is almost wholly from the old world. Fascicle 105 is on the wasps of family Thynnidæ, by R. E. Turner, 62 pp., 4 plates (2 colored). He makes many new genera, mostly from Australia or South America. Fascicle 106 is on the ortalid flies of the group Ulidini, by F. Hendel, 76 pp., 4 colored plates of these beautiful insects. He describes two new species from the United States, *Euxesta tenuissima* (p. 28) from Georgia, and *Acrosticta rufiventris* (p. 52) from Texas. Fascicle 107 is on the minute hymenopterous parasites of the family Belytidæ, by J. J. Kieffer, 47 pp., 3 plates.

MAJOR THOS. L. CASEY has issued No. 1 of a "Memoirs on the Coleoptera," 205 pp., 1910. This number contains two articles, New Species of the Staphylinid Tribe Myrmedoniini and Synonymic and Descriptive Notes on the Pæderini and Pinophilini. He has described 365 new species, only a very few being identified with known forms. Most of the species are in the genera *Atheta* (which he divides into many subgenera)—*Sableta, Datomicra, Colpodota* and *Strigota.* Many of the species are from the eastern states.

MR. H. B. STOUGH is the author of a detailed study of the external morphology of one of the jumping plant lice.[1] Besides the structure of the body he takes up the wing-venation and color-pattern. He finds that the media and cubitus in nymphal wings are distinctly separate. From the structure of mouth and genitalia he concludes that the Psyllidæ are more closely related to the Aleurodidæ than to any other family of insects.

DR. G. ALESSANDRINI has made some experiments with the larvæ of *Piophila casei,* known as the cheese-skipper.[2] These larvæ can pass through the digestive tract of man or dog without greatly delaying development. In a dog the larvæ produced lesions of the intestine which facilitated the entrance of pathogenic germs. The larvæ can resist the action of many chemical agents, but the ultra-violet rays retard development. The life-cycle occupies about fifty days.

E. WASMANN continues his observations on

[1] "The hackberry Psylla, *Pachypsylla celtidismammæ* Riley, A Study in Comparative Insect Morphology," *Kans. Univ. Sci. Bull.,* V., No. 9, pp. 121–165, 10 pls., 1910.

[2] "Studi ed Esperienze sulle larve della *Piophila casei,*" *Arch. Parasitol.,* XIII., pp. 337–382, 33 figs.