

## NUMBER LXXXVII.

	Page
ART. XXI.—Coggia's Comet, its Physical Condition and Structure; Physical Theory of Comets; by W. A. NORTON, . . .	161
XXII.—Transmission of Earth Waves; by H. L. ABBOT, . . .	178
XXIII.—Systems of Chemical Notation; by BERTHELOT and MARIGNAC, . . . . .	184
XXIV.—Reactions of Silver Chloride and Bromide; by M. C. LEA, . . . . .	189
XXV.—Journal Friction at Low Speeds; by A. S. KIMBALL, . . . . .	192
XXVI.—Brightness of the Satellites of Uranus, . . . . .	195
XXVII.—Decomposition of Chromic Iron; by E. F. SMITH, . . . . .	198
XXVIII.—New genera of Pycnogonida; by E. B. WILSON, . . . . .	200
XXIX.—Tantalite from Coosa Co., Alabama; by J. L. SMITH, . . . . .	203
XXX.—Amylidenamine Silver Nitrate; by W. G. MIXTER, . . . . .	205
XXXI.—Crystallization of Variscite; by A. H. CHESTER, . . . . .	207
XXXII.—A New Planet; by C. H. F. PETERS, . . . . .	208
XXXIII.—New Dinosaurian Reptiles; by O. C. MARSH, . . . . .	241

## SCIENTIFIC INTELLIGENCE.

- Chemistry and Physics.*—New mode of determining Vapor Densities, NAUMANN, 208.—New Oxide of Sulphur, Persulphuric oxide, BERTHELOT, 209.—Formation of Ammonium Nitrite in Combustion, ZÖLLER and GRETE: Fluoranthrene, a hydrocarbon from Coal tar, FITTIG and GEBHARD, 210.—Simple synthesis of Formic acid, MERZ and TIBURCA: Constitution of Nicotine, LAIBLIN: Chemical Philosophy, 211.—Laws governing the Formation of Ethers, MENSCHUTKIN, 213.—Solid Hydrogen, Density of Liquid Oxygen, PICTET, 214.—Effect of Light and Heat upon the electrical resistance of Selenium, SIEMENS: Influence of Light upon the electrical resistance of Metals, HAUSEMANN: Electromagnetic and Calometric absolute measurements, WEBER, 215.—Notes from the Chemical Laboratory of the Johns Hopkins University, 216.
- Geology and Mineralogy.*—Wisconsin Geological Survey: Geological Survey of New Jersey, 216.—United States Geological and Geographical Survey, 217.—Geographical and Geological Survey of the Rocky Mountain Region: Variations of the Decorticated Leaf-scars of certain Sigillariæ: Elements of Geology, 218.—Fossil Flora of the Western Territories: The rocks of the "Chloritic formation" on the western border of the New Haven Region, G. W. HAWES: Elevated Quaternary beds of Grinnell Land and North Greenland, 219.—A Seal from the Leda Clay (Champlain beds) of the Ottawa valley: Mineralogy and Petrography of Boston and vicinity, M. E. WADSWORTH: Samarskite from Mitchell Co., North Carolina, C. F. RAMMELSBURG, 220.
- Botany and Zoology.*—Supplementary Note to the Review of Darwin's "Forms of Flowers," 221.—Historia Filicum, 222.—Ferns of North America: List of Fungi found in the vicinity of Boston, 223.—Journal of the Liunean Society: Guide du Botaniste in Belgique: Insect-fertilization in Trichostema, 224.—Botanical Necrology of 1877: Desmidiæ et Edogoniæ, 225.—A new Species of Chimæra from American waters, T. GILL: Dr. W. M. Gabb on Dr. Warring's paper on the growth-rings of exogenous plants a proof of alternating seasons, 226.
- Astronomy.*—Age of the Sun, J. CROLL, 226.—Photographs at the Cordoba Observatory, B. A. GOULD, 230.—Moon's Zodiacal Light, E. S. HOLDEN, 231.
- Miscellaneous Scientific Intelligence.*—Address of the President of the Royal Society, 231.—Hermetically-sealed Flasks opened on the Alps, 235.—Effect of Lig upon Bacteria and other Organisms, A. DOWNES and T. P. BLUNT, 236.—Experiments for Universities in Germany, 237.—Earthquake of Nov. 15, 1877, 238.—Geological Survey of India, Palæontologia Indica: Volunteer Weather Service. Beiblätter zu den Annalen der Physik und Chemie, 239.
- Obituary.*—Antoine César Becquerel, 239.—Henri Victor Regnault, 240.