

## NUMBER CXII.

	Page.
ART. XXXII.—Berthelot's Thermo-Chemistry; by J. P. COOKE, .....	261
XXXIII.—History of some Pre-Cambrian Rocks in America and Europe; by T. STERRY HUNT, .....	268
XXXIV.—Synopsis of the Cephalopoda of the Northeastern Coast of America; by A. E. VERRILL, .....	284
XXXV.—Notices of Recent American Earthquakes; by C. G. ROCKWOOD, JR., .....	295
XXXVI.—Observations on the Height of Land and Sea Breezes, taken at Coney Island; by O. T. SHERMAN, ...	300
XXXVII.—New Method of Spectrum Observation; by J. N. LOCKYER, .....	303
XXXVIII.—Presentation of Sonorous Vibrations by means of a Revolving Lantern; by HENRY CARMICHAEL, .....	312
XXXIX.—Chemical Composition of Childrenite; by S. L. PENFIELD, .....	315
XL.—Observations on the Planet Lilaea; by C. H. F. PETERS, .....	317
XLI.—Efficiency of Edison's Electric Light; H. A. ROWLAND and G. F. BARKER, .....	337

## SCIENTIFIC INTELLIGENCE.

- Physics.*—Photographs of Star Spectra, W. HUGGINS, 317.—Direct measure of the work of Electrical Induction, A. VON WALTENHOFEN, 318.—Mechanical Equivalent of Heat, ROWLAND: A Dispersion Photometer, PERRY and AYRTON, 319.
- Geology.*—The present state of the Evidence bearing upon the Question of the Antiquity of Man, T. McK. HUGHES, 319.—Age of the Brazilian Gneiss Series. Discovery of Beozoon, O. A. DERBY, 324.—Limestone from the Gneiss Formation of Brazil, J. W. DAWSON: Geological Survey of Alabama, E. A. SMITH, 326.—Conodonts from the Chazy and Cincinnati Group of the Cambro-Silurian, and from the Hamilton and Genesee-Shale Divisions of the Devonian, in Canada and the United States, G. J. HYDE: Report on the Paleontological Field-work for the season of 1877, C. A. WHITE: Cretaceous Fossils of the Western States and Territories, C. A. WHITE, 327.—Remarks on the Genus Proterocrinus, A. C. WETHERBY: Revision of the Palæocrinoidea, C. WACHSMUTH and F. SPRINGER: Descriptions of New Species of Crinoids from the Kaskaskia Group of the Subcarboniferous, A. C. WETHERBY, 328.
- Botany and Zoology.*—Soluble Matter of Soil retained by Vegetation: Seeds endure extreme Cold, C. DECANDOLLE and R. PICTET: The Genus Ginkgo, 328.—Floral Development of Helianthus annuus, W. H. GILBREST: Morphology of Vegetable Tissues, W. H. GILBREST: Aroideæ Maximilianæ, J. PEYRITSCH, 329.—Naturalized Weeds and other Plants of South Australia, R. SCHOMBURGK, 330.—Canadian Timber-trees, their Distribution and Preservation, A. T. DRUMMOND: Indian Corn, E. L. STURTEVANT: Death of General Munro, 331.—Crustacea of Mexico and Central America, A. M. EDWARDS, 332.—U. S. Commission of Fish and Fisheries: American Fisheries: a History of the Menhaden. G. B. GOODE: The Clinch Bug, C. THOMAS, 333.
- Miscellaneous Scientific Intelligence.*—Vesuvius: The Study of Earthquakes in Switzerland, 334.—The Figure of the Earth, A. R. CLARKE: Metallurgy, the art of extracting metals from their ores, J. PERCY, 335.—An historical sketch of Henry's contribution to the Electro-magnetic Telegraph, W. B. TAYLOR: Bulletins of the United States National Museum, 336.—*Obituary.*—WILLIAM T. REPPER, 340.