

electric current generated through the condensation produced by friction. Prof. Kiessling of Hamburg made some remarks on the diffraction colours in artificially-produced fog and their connection with the recent crepuscular phenomena. In the same department papers were submitted by Dr. Münster of Herford, on the cause of winds, and by Dr. Köppen of Hamburg, on barometric disturbances during storms.

In the Chemical Section the chief speakers were: Dr. Frank of Charlottenburg, on the past technical development of the alkali works at Stassfurt, where, in July 1882, 20,000,000 cwts. of carnallite were consumed in the preparation of chloride of potassium; Prof. Poleck and Dr. T. Schiff of Breslau, on the essential oil of *Sassafras officinalis*, Neer; Prof. Poleck, on talapin; Dr. Arrhenius, on the conductive force of the electrolyte; Prof. C. Willrödt of Friburg (Baden), a contribution to the study of acetonebromoforn and acetonechloroform; Prof. E. Lippmann, on a new method of representing oxygenous compounds; Dr. Leuckart of Göttingen, on a synthesis of aromatic monocarbon acids, dealing with the reciprocal action of aromatic carburets of hydrogen and cyanates in the presence of chloride of aluminium.

In the Geological and Mineralogical Section papers were read by Prof. Lossen of Berlin on the peculiar features of the geology of the Hartz Mountains; by Prof. von Fritsch of Halle on the Cretaceous floras of the Hartz; by Prof. Nehring on the diluvial fauna of the province of Sachsen and conterminous districts; by Dr. Wahnschaffe of Berlin on the Quaternary formations in the neighbourhood of Magdeburg; by Engineer Petsch of Aschersleben on the subsidence of underground waters during the process of freezing.

In the Botanical Section Prof. E. C. Hansen of Copenhagen described some new researches on certain fungi of vinous fermentation found in cow-dung and on sweet succulent fruits; A. Zimmermann, on the action of the optical elastic ellipsoid of vegetable tissues in the process of expansion: from a study of the tissues of *Nitella flexilis* and some other plants, the author concluded against Noegeli that in optical respects no fundamental contrast exists between organic and inorganic substances; W. Detmer on the formation of muriatic acid in plants; Prof. Soraner on the action of artificial freezing, describing the conduct of various vegetable tissues under the freezing process; Dr. Kaiser on the results of the determination of fossil leafy plants.

In the Section for Zoology and Comparative Anatomy, Prof. Landois of Münster-spoke on the development of the shell of certain birds' eggs; Dr. H. F. Kessler of Cassel, on the evolution and life-history of the blood parasite, *Schizoneura lanigera*, Hausm.; Prof. Nehring of Berlin, on the skull and skeleton of the Peruvian dogs from the Necropolis of Ancon, with remarks on their origin; on the ground of his comparative studies, the author inferred that these dogs must have sprung from some variety of the North American wolf (*Lupus occidentalis*); Dr. Müllendorf of Berlin, on the importance of the formic acid found in honey: when closing the cells of the honeycomb, the bees mix the honey with formic acid in order to give it greater consistency; Prof. Leuckart of Leipzig, on a new species of Nemaode found in the body of *Hylobius pici*, 3 mm. long, 1 mm. thick, and named *All-niema mirabile*; Prof. W. Blasius, on some fresh data in connection with the remains of *Alea imperans*, Linn.

The excursions with which the proceedings were diversified included visits to the model Meteorological Observatory of the Magdeburg Zeitung, to the neighbouring chemical works of Stassfurt, to the University of Halle, and to the Hartz Mountains.

It was announced that the Association would hold its next annual meeting at Strasburg.

SCIENTIFIC SERIALS

Journal of the Franklin Institute, No. 3, September 1884.—Synchronous-multiplex telegraphy in actual practice, by Prof. Edwin J. Houston (illustrated).—An extraordinary experiment in synchronous-multiplex telegraphy, by Prof. Edwin J. Houston.—On the application of electricity as an illuminating agent in astronomical observatories, by W. S. Franks.—A metastatic heat regulator, by N. A. Randolph, M.D. (one figure).—The drying of gunpowder magazines, by Prof. C. E. Munroe, U.S.N.A.—On an explanation of Hall's phenomenon, by Sheldford Bidwell, M.A., LL.B. (table).—Instruction in mechanical

engineering, by Prof. R. H. Thurston.—Report on the trial of the "City of Fall River," by J. E. Sague, M.E., and J. B. Adger, M.E. (concluded from p. 115) (tables and diagrams).—Report of the Board of Experts on Street-paving (tables).—Surveys for the future water-supply of Philadelphia, by Rupert Hering, C.E. (tables).—Methods in physical astronomy.—Solar motor and solar temperature.—Hirn's actinometer.—Soap-roots.—Aluminium and aluminium-bronze.—Palmieri's atmospheric electricity.—New electro-magnet.—Tanning by electricity.—Gases in steel.—The volcanic ashes of Krakatoa.—Papal Observatory.—Origin of volcanic activity.—Balloon photography.

Verhandlungen des naturhistorischen Vereins der Rheinlande und Westfalens, January-June.—Report on the proceedings of the Society during the year 1883.—On the recent chalk and diluvium formations of the Mülheim district, by Dr. Deicke.—On the disposition of the stratified rocks and lias in the neighbourhood of Herford, by H. Monke.—Report on the fossils of the greensand rocks in the district of Aix-la-Chapelle, by J. Böhm.—On the fishes, crustaceans, and flora of the Upper Chalk system in Westphalia, by Dr. Marck.—On the digestive organs of the spider, by Prof. Bertkau.—On the human skull found associated with the mammoth, rhinoceros, and reindeer in the loess of Podbaba near Prague, by Prof. Schaffhausen.—On some fossil remains from the Devonian rocks of Eifel, by Prof. Schlüter.—A contribution to the physiology and anatomy of *Dasyptoda hirtipes* (two plates), by Dr. Hermann Müller.—On the diorite of the Upper Ruhr Valley and its association with the argillaceous schist of the same district, by Dr. A. Schenck.—On the causes of the great oscillations and disturbances in the crust of the earth, by F. F. von Dücker.—On the occurrence of fossil wood in the region of the Westphalian Coal-Measures, by W. Wedekind.—On the mutual relations of the Middle Eocene formations of Monte Postale, Ronca, and San Giovanni Ilarione, by Dr. H. Rauff.

Rendiconti del R. Istituto Lombardo, July 31.—Some reflections on the proposed laws for regulating the administration of public and private lunatic asylums in Italy, by Dr. C. Zucchi.—Various researches on the Bacillus of tuberculosis, by Prof. Giuseppe Sormani.—Description of a continuous registrar of electric energy transmitted at any given point of a circuit, by Prof. R. Ferrini.—On the geometrical surface of the third order, by Prof. E. Bertini.—Remarks on the Turin Gloss on the Institutions and Paraphrase of Pseudotheophilus, by Prof. C. Ferrini.—Meteorological observations made at the Brera Observatory, Milan, during the month of July 1884.

Rivista Scientifico-Industriale, August 15.—Results of experiments on the variations of electric resistance of argentan wire subject to tension, by Dr. Sebastiano L. Angelini.—Experiments on the compressibility of fluids, and especially of water, by Prof. Pagliani and Dr. S. Vicentini.—Observations on the struggle for existence between *Staphylinus olens* and *Lumbricus agricola*, by Silvio Calloni.

August 30.—Description of a universal anemometerograph (wind-gauge) recently invented by Prof. Michele Cagnassi.—Remarks on an elementary demonstration relating to the theory of the potential, by Giuseppe Vanni.—Remarks on the variations in the electric resistance of solid and pure metal wires under changes of temperature, by Prof. Angelo Emo.

Bulletin de la Société des Naturalistes de Moscou, 1883, No. 4.—On the seeming anomalies in the structure of the great comet of 1744, by Th. Bredichin (in French), with plates. It appears from calculations, illustrated by a plate, that the strips observed on this comet correspond to the "synchronal" curves of the author deduced in the hypothesis of repulsive force.—Some remarks on comets, by the same. The initial speed of their appendages towards the sun is approximately deduced at 2000 m. per second.—On the tail of the first type of the comet 1858 V., by A. Sokoloff (in French), being a calculation of "synchronal" curves according to Bredichin's method.—On *Casosina pinitortquum*, A. Br., by Ed. Kern (in German), with 4 plates.—Remarks on the geological map of the Vetluga region, by H. Trautschold.—A new Pleurotopa (*Renardii*) from the Miocene of Italy, by De Gregorio.—A new demonstration of the theorem of Lambert, by N. Joukovsky (in French); it is based on the formula of variation of action.—Materials for the geology of the Crimea, by W. Sokoloff (in Russian), being notes on the Jurassic and Neocomian deposits in the neighbourhood of Simferopol.—On the recent work of the United States geologists, by H. Trautschold.—Letter from Dr. Regel, from Tashkend.