

Discodrilida (Branchiobdella), (4) Naidea, (5) Echytraeida, (6) Tubificida, (7) Lumbriculida, (8) Phreorzetida, (9) Criodrilida, (10) Lumbricida. M. V. Fric showed to the members a specimen of the body of a chimpanzee, four years old, which was prepared by the injection of Wickersheim's conserving fluid. He explained all methods hitherto known and used to preserve the bodies of animals, and he declared the method of Wickersheim to be the best of them.

In chemistry some interesting papers were read and an animated discussion took place on educational and scientific questions.

On the 17th the second general meeting took place, Prof. Albert, of the Innsbruck University, delivering an address "On Theory and Practice in University Education."

During the session of the Congress a journal was published containing the abstracts of the papers read before the Congress. The addresses of M. Krejci and Dr. Albert, however, were printed *in extenso*, and of the former afterwards also a German translation appeared in print.

SCIENTIFIC SERIALS

Archives des Sciences Physiques et Naturelles, July 15, No. 7.—Note on the equilibrium of solids of great dimensions, by M. Cellerier.—Geological description of the Canton of Geneva, by M. Favre.—Phytography, &c. (M. de Candolle), by M. Micheli.—A differential thermometer for demonstration, by M. Dufour.—On the casting of the beak of birds of the Mormonides family, by M. Bureau.

Reale Istituto Lombardo di Scienze e Lettere Rendiconti, vol. xiii. Fasc. xiii. June 17.—On some trigonometric series, by Prof. Beltrami.—Morphological studies on the human body, by Prof. De Giovanni.—On the part taken by the pneumogastric in death by hanging, by Prof. Tamassia.—Iconography of the Laplanders, by Prof. Mantegazza.—On reflex arthropathia of urethritis, by Prof. Scarenzio.—On a geological congress held at Rome, by Prof. Taramelli.

Fasc. xiv., July 1.—Ossiferous breccia and neolithic station in Corsica, by Dr. Major.—On the present geographical distribution of *Nyctinomus castonii*, Gavi., by Dr. Beltoni.—On a shower of falling stars observed at Milan on June 22, 1880, by S. Fornioni and Prof. Schiaparelli.—On univocal plane transformations and particularly on involutory, by Prof. Bertini.—Notes on the fishes, and in particular on the male eels, observed at the Berlin Exhibition, by Prof. Pavesi.

SOCIETIES AND ACADEMIES

PARIS

Academy of Sciences, August 9.—M. Wurtz in the chair.—The following papers were read:—Summary report of a zoological exploration in the Bay of Biscay in the Government ship *Le Travailleur*, by M. A. Milne-Edwards.—Experiments tending to prove that fowls vaccinated for cholera are refractory for *charbon*, by M. Pasteur.—Results of observations of solar spots and faculae during the first two quarters of 1880, by P. Tacchini. The numbers indicate rapid increase of solar activity. The days without spots form five groups separated by a mean interval of twenty-nine days, showing that in one hemisphere (which is that visible in the end of last December) the spots were formed with difficulty.—On a class of linear differential equations of the second order, by M. Brioschi.—Experiments on the discharge in rarefied gases, by M. Righi. *Inter alia*, the glass seems to become luminous at the point where it acts as positive electrode. During discharge the negative electrode is probably much more heated than the positive. The cause of mechanical action of the negative electrode is the same as in the radiometer.—On some properties of flames, by M. Meyreneuf. The gas which feeds a flame is subject to two opposing influences, one creating a draught outwards, the other (expansion through combustion) tending to drive the gas back. By diminishing the rate of outflow without modifying the combustion, one may regulate these movements so as to get vibrations of the nature of sound. Better sonorous effects are had by making a flame impinge on a round rod or on another flame.—Indices of refraction of aqueous solutions of acetic acid and of hyposulphite of soda, by M. Damien.—On an improvement of the Bunsen battery by M. Azapis, by M. Ducretet. For acidulated water is substituted

a 15 per cent. solution of cyanide of potassium, caustic potash, marine salt, or ordinary sal ammoniac. The zincs need not be amalgamated. They are less consumed than in the Bunsen; the intensity of the current is no less, and its constancy is remarkable.—On the spectra of ytterbium and erbium, by M. Thalén.—On thulium, by M. Clève.—Researches on the heats of combustion of some substances of the fat-series, by M. Louguinine.—Secondary reaction between sulphuretted hydrogen and hyposulphite of soda, by M. Bel'amy.—On the acid obtained by M. Boutroux in the fermentation of glucose, by M. Maumené.—On a new process for producing malleable nickel of different degrees of hardness, by M. Garnier. This consists in incorporating phosphorus with the nickel (to take up oxygen); e.g., adding to the bath of nickel a phosphide of nickel containing about 6 per cent. phosphorus. Very thin sheets of the material can be produced.—On propylnerve, by Mr. Morley.—Influence of light on transpiration of plants, by M. Comes. Plants transpire more in light than in darkness, and more the intenser the light. The more intense the colour of the organ, the greater the transpiration. The luminous rays absorbed alone favour the transpiration.—On the source of muscular work and on supposed respiratory combustions, by M. Sanson. The liberation of energy is due greatly, if not wholly, to phenomena of dissociation similar to those in fermentations; in presence of anatomical elements (blood-corpuscles specially) the immediate principles of the plasma are dissociated, give carbonic acid and doubtless other compounds which borrow oxygen from the hæmoglobin for their formation, and yield their energy to the muscular elements, which then manifest it by doing work in contracting, or to the blood for maintenance of animal heat.—On the use of nitrite of ethyl for rendering contaminated places healthy, by M. Peyrussou. It acts like ozone, but more powerfully.—Complement of the biological evolution of pucerons of galls of poplar (*Pemphigus bursarius*, Lin.), by M. Lichtenstein.—On the affinities of the genus *Polygordius* with annelides of the family of *Opheliida*, by M. Giard.—Discovery of new mammalia in the phosphate of lime deposits of Quercy (Upper Eocene), by M. Filhol.—On the structure and functions of the embryonal suspensor in some leguminous plants, by M. Guignard.—On deforming pilosism in some plants, by M. Heckel.—On a new instrument for pointing guns, by M. Arnoux.

CONTENTS

PAGE

COLOURS IN ART	357
A VISIT TO ETNA. By G. F. RODWELL	359
OUR BOOK SHELF:—	
Petersen's "Methods and Theories for the Solution of Problems of Geometrical Construction, applied to 410 Problems," and "Text-book of Elementary Plane Geometry"	360
Tilden's "Practical Chemistry"	360
LETTERS TO THE EDITOR:—	
A Rotatory Polarisation Spectroscope of Great Dispersion.—Prof. P. G. TAIT (<i>With Diagram</i>)	360
Dimorphism in NATURE on June 17.—Prof. E. RAY LANKESTER, F.R.S.	361
Magnetic and Earth-Current Disturbance.—WILLIAM ELLIS	361
Aurora Borealis and Magnetic Storms.—Rev. S. J. PERRY, F.R.S.; J. A. B. OLIVER; F. T. MOTT; B. W. S.	361
Height of the Aurora.—JOHN I. PLUMMER	362
Fire Ball.—Rev. S. J. PERRY, F.R.S.	362
Atmospheric Phenomenon.—B. W. S.	362
Intellect in Brutes.—Dr. HENRY MACCORMAC	363
Radiation—A Query.—F. G. S.	363
"On a Mode of Explaining the Transverse Vibrations of Light"—The Expression "Radiant Matter."—S. TOLVER PRESTON	363
Earthquake in Smyrna.—HYDE CLARKE	363
New Biological Term.—D. SHARP	364
Depraved Taste in Animals.—F. R. GREENWOOD	364
Firing a Tallow Candle through a Deal Board.—C. J. WOODWARD	364
THUNDERSTORMS. II. By Prof. TAIT	364
HUMAN HYBERNATION	366
PHYSICS WITHOUT APPARATUS, III. (<i>With Illustrations</i>)	366
ON THE ABSORPTION BANDS IN CERTAIN COLOURLESS LIQUIDS. By Dr. WILLIAM J. RUSSELL, F.R.S., and WILLIAM LAPRAIK (<i>With Diagram</i>)	368
CELLULOID	370
L. F. DE POWRTALES. By Prof. ALEXANDER AGASSIZ	371
NOTES	372
OUR ASTRONOMICAL COLUMN:—	
The August Meteors	374
Cape Observations of Comet 1880 (H)	374
PHYSICAL NOTES	375
GEOGRAPHICAL NOTES	376
THE ALGÆ OF THE SIBERIAN POLAR SEA. By Dr. F. R. KJELLMAN	376
ON THE COMPRESSIBILITY OF GLASS. By J. Y. BUCHANAN	377
THE CONGRESS OF BOHEMIAN PHYSICIANS AND NATURALISTS	379
SCIENTIFIC SERIALS	380
SOCIETIES AND ACADEMIES	380