

States, 360 institutions of a collegiate grade; these colleges and universities receive their charters from the Legislature of their several States, these charters giving them the unlimited right to confer degrees. The president of the college near Cincinnati told one of the speakers, with a face shining with pride, that his college gave seventeen different degrees. One of these was M.P., which in interpretation meant, not Member of Parliament, but Master of Penmanship. It would seem, moreover, that even the degree of S.D. (equivalent, we believe, to our D.Sc.) has actually been granted by some of these American institutions *honoris causâ*. We trust that the action of the American Association will have some influence with the peccant colleges; it will, at any rate, put people on their guard against American Ph.D.'s and S.D.'s, as well as D.D.'s.

IN the *Revue Scientifique* of September 3, Mr. G. Delaunay has a paper on the "Equality and Inequality of the Two Sexes," in which he endeavours to show that except in some of the lowest forms of animal life, and in the lowest stages of human society, the inferiority of the female sex to the male is unmistakable in all respects—that physically, mentally, and morally, woman is the inferior of man.

A HUGE mass of rock and earth fell the other day from a mountain side at Somnix in the Grisons, blocked up the course of the Jobel, an affluent of the Rhine, and converted the valley into a lake. The village of Surrheim, hard by, is in great danger.

THE additions to the Zoological Society's Gardens during the past week include two Malbrouck Monkeys (*Cercopithecus cynosurus*) from West Africa, presented by Mr. H. P. Sherlock; a Central American Agouti (*Dasyprocta isthmica*) from Central America, presented by Mr. J. E. Sharp; two Spotted Cayvs (*Calogenys paca*) from South America, presented by Dr. Portella; a Macaque Monkey (*Macacus cynomolgus*) from India, presented by Mr. James W. Duncan; two Domestic Pigeons (*Columba anas*, var.) from Arabia, presented by Mr. Reginald Zohrab; three Common Chamæleons (*Chamæleon vulgaris*) from North Africa, presented by Mr. Alfred R. Rogers; two Greater Sulphur-crested Cockatoos (*Cacatua galerita*) from Australia, deposited; and a Black-headed Caique (*Caique melanocephala*) from Demerara, purchased. The additions to the Insectarium for the past week include *Attacus permyi*, second brood of larvæ hatched; also *Attacus Cynthia*, imago second brood, and the Death's-Head Moth (*Acherontia atropos*) larva, presented by Master Kingchurch; second brood of Ant Lions (*Myrmeleons*), and a brood of the Edible Snail (*Helix pomatia*) from specimens presented by Lord A. Russell, F.Z.S., in April last.

SOCIETIES AND ACADEMIES

PARIS

Academy of Sciences, August 29.—M. Decaisne in the chair.—M. Faye presented the first volume of his "Cours d'Astronomie de l'École Polytechnique," treating of the diurnal motion, the theory of instruments and errors, organisation of great observatories, mathematics and geodesy. The second volume will be devoted to the solar system.—Dioptric studies, by M. Zenger. He constructs tables which give, in algebraic form, the relation between the radii of curvature and refractive indices of two media forming the objective of a microscope or telescope. Any one may make his own telescope or microscope, without calculation, taking a lens of quartz or crown glass, and a mixture of aromatic substances giving it a dispersion twice as great, or equal for all spectral rays. The lens being corrected, it is combined with one or two other symmetrical lenses, according to the well-known process for getting an aplanetic and achromatic doublet or triplet.—MM. Tresca and Breguet were requested to represent the Academy at the inauguration of the monument to Frederic Sauvage in Boulogne on the 12th inst.—On a very old application of the screw as an organ of propulsion, by M. Govi. This was by Leonardo da Vinci,

about the end of the fifteenth century. In one of his works is a sketch of a device for rising in the air, consisting of a helix formed of wire and cloth to be rotated about a vertical axis. He seems to have made small paper models actuated by thin slips of steel, twisted, then left to themselves. Another sketch shows that Leonardo da Vinci conceived the idea of the parachute.—On some new cases of equipotential figures, realised electro-chemically, by M. Guébard.—On the absorption of ultra-violet rays by some media, by M. de Chardonnet. Two methods are described. The liquids which circulate in plants or impregnate roots and fruits show a great avidity for chemical rays. Fluorescence does not appear to be in direct ratio to the intensity of actinic absorption; thus, e.g. the decoction of radish is a less powerful absorbent than that of potatoes; yet the former is fluorescent, the latter not. White wine is weakly fluorescent, red wine lacks the property. The few animal substances studied gave very varied results. While blood, even very dilute, is a strong absorbent, the (fresh) aqueous humour of a calf's eye and the albumen of hen's eggs have no action on the chemical rays (at least up to 20 mm. thickness). Distilled water, alcohol, sulphuric ether, normal colloidion, and solution of cane-sugar are also without action. Gelatine appropriates readily all the actinic rays. An object-glass of Dallmeyer projected an invisible spectrum 25 to 40 per cent. longer than one of Darlot, of Paris, of equal focus.—Figures produced by fall of a drop of water holding minium in suspension, by M. Decharme. Minium, in fine powder, is mixed with water and spread uniformly on a horizontal glass plate; then a drop of the mixture is let fall on this layer. Figures resembling those of the three systems Caladni observed on vibrating plates are produced; the three types usually coexist, but one or other may be made to predominate at will.—On the composition of buck-wheat, by M. Lechartier. Marked differences appear between the crops of 1879 and of 1880. Thus the ashes of the straw in 1880 had twice as much potash as in 1879, and phosphoric acid was still more increased; and there was also more chlorine. The composition of the grain is little modified. The straw may contain more of mineral matter than the grain. Buck-wheat removes more of the fertilising principles from the soil than corn.—On hydrosulphurous acid; reply to M. Schutzenberger's note, by M. Bernthsen.—On the dissolution of silver in presence of alkaline iodides, by M. Ditte.—On the constitution of glyceric ether, and on the transformation of epichlorhydrine into normal propylic alcohol, by M. Silva.—On pyruvic alcohol and its derivatives, by M. Henry.—Action of triethylamine on epichlorhydrine; compounds of oxallytriethylammonium, by M. Reboul.—Biological evolution of the pucerons of the alder tree, by M. Lichtenstein.—Observations on a new enunciation of the second law of Gay-Lussac concerning combinations of gas, by M. Garcia de la Cruz. He indicates some of the numerous exceptions to M. Verschaffel's proposition: "The space occupied by a gaseous compound is always double the space occupied by that one of the components which enters with less volume into the combination." This law he regards as less general than the laws of contraction long accepted.

CONTENTS

	PAGE
THE STUDENT'S DARWIN. BY GEORGE J. ROMANES, F.R.S.	429
LETTERS TO THE EDITOR:—	
Tebbutt's Comet—Origination of its Proper Light.—Prof. PIAZZI SMYTH	430
Schäberle's Comet.—J. RAND CAPRON (<i>With Diagrams</i>)	430
Comet <i>b</i> 1881.—J. RAND CAPRON; GEORGE M. SEABROKE	431
A Pink Rainbow.—A. M.	431
The Glacial Period.—Dr. A. WOEIKOF	432
THE BRITISH ASSOCIATION	432
Section A—Mathematical and Physical—Opening Address by Sir William Thomson, F.R.S., Professor of Natural Philosophy in the University of Glasgow, President of the Section	433
Section D—Biology—Department of Anthropology—Opening Address by Prof. W. H. Flower, LL.D., F.R.S., Pres. Z.S., V.P. Anthropol. Inst., &c., Chairman of the Department	436
Department of Anatomy and Physiology—Opening Address by J. Burdon-Sanderson, M.D., LL.D., F.R.S., Professor of Physiology in University College, London, Vice-President of the Section	439
Section F—Geography—Opening Address by Sir Joseph D. Hooker, C.B., K.C.S.I., F.R.S., &c., President of the Section	443
Section G—Mechanical Science—Opening Address by Sir W. Armstrong, C.B., D.C.L., LL.D., F.R.S., President of the Section	448
THE RISE AND PROGRESS OF PALEONTOLOGY. By Prof. T. H. HUXLEY, Sec. R.S.	452
NOTES	455
SOCIETIES AND ACADEMIES	456