

lastic materials and best didactic methods adopted with success by the most cultivated and civilised nations. This museum is styled the Pedagogic Museum, and will have its seat in the Royal University. Its aim is to collect, with a view to their recognition and adoption, all objects and publications connected with the mode of instruction in elementary schools, and in general all the new means and appliances which are being successively invented to insure greater efficiency and progress in the arts of instruction and education. All that has till now been collected by the Professor of Pedagogy in the present Museum of Palermo will henceforth belong to the new institution, which is dependent on the Minister of Public Instruction.

SCIENTIFIC SERIALS

The Journal of Anatomy and Physiology, Normal and Pathological, vol. xv. part I, October, contains:—Dr. C. Creighton, on an infective form of tuberculosis in man, identical with bovine tuberculosis, plates 1 to 6.—Dr. W. Allen, on a third occipital condyle in the human subject, plate 7.—Dr. J. Dreschfeld, some points in the histology of cirrhosis of the liver, plate 8.—Dr. S. Mortiz, a contribution to the pathological anatomy of lead paralysis, plate 9.—Dr. G. S. Middleton, vascular lesions in hydrophobia and in other diseases characterised by cerebral excitement, plate 10.—Dr. D. Macphail, an ether percolator, for use in physiological or pathological laboratories, plate 11.—Dr. D. Newman, the comparative value of chloroform and ethidene dichloride as anaesthetic agents.—Dr. R. Pinkerton, observations on the temperature of the healthy human body in various climates.—Dr. George Hoggan and Dr. F. Elizabeth Hoggan, the lymphatics of cartilage and of the perichondrium.—Dr. R. J. Anderson, a palatine branch from the middle meningeal artery.—J. F. Knott, muscular anomalies.

Journal of the Royal Microscopical Society, vol. iii. No. 5, October.—W. H. Gilbert, on the structure and function of the scale-leaves of *Lathrea squamaria*.—Dr. H. E. Fripp (the late), on daylight illumination with the plane mirror, an appendix to Part I. of the "Theory of Illuminating Apparatus"—W. Webb, on an improved finder.—W. A. Rogers on Tolles' interior illuminator for opaque objects, with a note by R. B. Tolles.—The record of current researches relating to invertebrates, cryptogamia, microscopy, &c.

The American Naturalist, November.—F. M. Endlich, the Island of Dominica.—J. D. Caton, the Sand-hill Crane.—W. K. Higley, on the microscopical crystals contained in plants (concluded).—J. M. Stillman, on the origin of lac (regards it as a secretion of *Coccus lacca*).—Edward L. Greene, botanising on the Colorado desert.—The Editor's table: on the obligations of educational and charitable institutions.

Zeitschrift für wissenschaftliche Zoologie, Band 34, Heft 4, September, contains:—a very elaborate memoir by Dr. Ferdinand Sommer of Greifswald, on the anatomy of the liver-fluke, *Distomum hepaticum*, L., pp. 540-640, with six plates; also by Dr. H. Michels, an account of the nervous system of *Oryctes nasicornis* as it appears in the larval, pupal, and imago conditions of this beetle, pp. 641, 700, with four plates.

Revue Internationale des Sciences biologiques, October 15, contains:—M. Vulpian, a physiological study of poisons; fifth lecture, on curare.—M. Hanstein, protoplasm considered as the basis of animal and vegetable life; introduction.—M. Borodin, on the physiological characteristics of asparagine.—M. L. Portes, on the asparagine of the Amygdaleæ.—G. Thoulet, contributions to the study of the physical and chemical properties of microscopic minerals.

THE Transactions of the Yorkshire Naturalists' Union.—Three parts of the above have been issued to the subscribers. These contain reports on the birds of the district, pp. 1-48. On the land and freshwater mollusca, pp. 1-16. On the lepidoptera, pp. 1-80. Botany, pp. 1-51. These reports seem well and exhaustively worked out, and deserve every support from the naturalists of the Yorkshire district and others.

SOCIETIES AND ACADEMIES

LONDON

Mathematical Society, December 9.—Mr. Samuel Roberts, F.R.S., president, in the chair.—Mr. William Ralph Roberts and Mr. Ralph Augustus Roberts were elected Members.—The

following communications were made:—Note sur l'Ila Dérivation des Déterminants, Prof. Teixeira (Coimbra, Portugal).—Solution of the equation $x^p - 1 = 0$; quinuisection, Prof. Cayley, F.R.S.—A general theorem in kinematics, Prof. Minchin.—On the solution of the inverse logical problem, Mr. W. B. Grove.—Motion of a viscous fluid, Mr. T. Craig.—On the electrical capacity of a conductor bounded by two spherical surfaces cutting at any angle, Mr. W. D. Niven.

Chemical Society, December 2.—Dr. Gilbert, vice-president, in the chair.—The following papers were read:—On the volumes of sodium and bromine at their boiling-points, by W. Ramsay.—On the volume of phosphorus at its boiling-point, by D. O. Masson and W. Ramsay. The authors have determined the atomic volume (the atomic volume = the specific volume \times atomic weight) of the following elements in the free state. Bromine 27·135, sulphur 21·60, phosphorus 20·91, sodium 31·00. The authors discuss the formula of oxy-trichloride of phosphorus, and conclude that in that substance phosphorus is a pentad, and that the constitution of that substance is $O=P\equiv Cl_3$. The atomic volume of phosphorus in this compound is therefore 21·1.—On the specific volume of chloral, by Laura Maude Passavant. Great care was taken in purifying the chloral; the specific volume, determined according to the method of Thorpe, was found to be 107·37.—Note on the formation of carbon tetrabromide in the manufacture of bromine, by J.C. Hamilton. A quantity of a white crystalline substance was obtained as a residue, after distilling a quantity of commercial bromine, it melted at 9°, and contained 97 per cent. of bromine.—Researches on the relation between the molecular structure of carbon compounds and their absorption-spectra, by W. N. Hartley. Part i.—General conclusions as to the nature of actinic absorption exerted by various carbon compounds. Part ii.—Experiments which prove the diactinic character of substances constructed on an open chain of carbon compounds. Part iii.—The actinic absorption exerted by various closed chains of carbon atoms. Part iv.—The absorption-spectra of condensed benzene-nuclei. Part v.—The cause of absorption-bands in the spectra transmitted by benzene and its derivatives.

Geological Society, December 1.—Robert Etheridge, F.R.S., president, in the chair.—Wm. Heward Bell, Wm. Jackson, Peregrine Property Lewes, William Libbey, jun., D.Sc., New Jersey, U.S.A.; David Morgan Llewellyn, John Marshall, Cyril Parkinson, Cornelius McLeod Percy, Thos. John Robinson, Rev. Alfred Rose, Beeby Thompson, and Stuart Crawford Wardell were elected Fellows of the Society.—The following communications were read:—On remains of a small lizard from the Neocomian rocks of the Island of Lesina, Dalmatia, preserved in the Geological Museum of the University of Vienna, by Prof. H. G. Seeley, F.R.S. The author proposed to name this lizard *Adriosaurus suessii*.—On the beds at Headon Hill and Colwell Bay in the Isle of Wight, by Messrs. H. Keeping and E. B. Tawney, M.A. The authors criticised the views put forward by Prof. Judd in his paper published in the *Q. J. G. S.* xxxvi. p. 13, and supported those established by the late E. Forbes and the publications of the Geological Survey. The authors reject Prof. Judd's term Brockenhurst series, and revert to the classification and nomenclature of the Geological Survey.

Zoological Society, November 30.—Dr. Edward Hamilton, vice-president, in the chair.—Mr. Alfred E. Craven, F.Z.S., read a paper on a collection of land and fresh-water shells from the Transvaal and Orange Free State in South Africa, with descriptions of nine new species.—A second paper by Mr. Alfred E. Craven contained the descriptions of three new species of land shells from Cape Colony and Natal.—Surgeon Francis Day, F.Z.S., communicated a paper by Prof. A. A. W. Hubrecht, which gave an account of a collection of reptiles and amphibians made by Dr. C. Duke in Beloochistan.—A communication was read from Mr. J. H. Gurney, F.Z.S., containing a description of the immature plumage of *Dryotriorchis spectabilis* (Schleg.), a very scarce raptorial bird from Gaboon, now living in the Society's collection.—A communication was read from Mr. Roland Trimen, F.Z.S., on an undescribed *Laniarius* obtained by Dr. B. F. Bradshaw on the Upper Limpopo, or Crocodile River, in Southern Africa, which he proposed to name *Laniarius atro-croceus*.—A communication was read from Dr. G. Hartlaub, F.M.Z.S., containing descriptions of five new birds that had been collected by Dr. Emin Bey in Central Africa. These were proposed to be called *Tricholaemus flavorufa*, *Cisticola hypoxantha*, *Eminia lepida*, *Drymocichla incana*, and *Muscicapa*.