

in the principles of 'agriculture in their several schools.' Prof. Henry Tanner, M.R.A.C., examiner for the section under the Government Department of Science will, on August 7 next, begin a course of twenty lectures, to be continued from day to day, at the College in Aberystwith.

THE UNIVERSITIES' BILL was read a third time in the House of Commons and passed on Monday, and a first time in the Upper House on Tuesday.

ADELAIDE.—We have received a copy of the *Calendar of Adelaide University for 1877*. This University has at present only four professors, who represent very fairly the main branches of literature and science. There is only one professor for Mathematics and Natural Philosophy, and the professor of Natural Science gives instruction in Chemistry, Geology, and Botany. We hope the University will soon be able to carry the principle of sub-division of labour into these two professorships, and thus promote efficient teaching, and at the same time relieve these two professors of a burden they ought not to be made to bear in this advanced age. There are some points in which our home universities might advantageously imitate that of Adelaide. Judging from the programme of the B.A. examination, the Adelaide graduates must be possessed of a more varied amount of knowledge than the ordinary graduates of our universities. Some knowledge of physical science (physics and chemistry), must be possessed by every graduate, and a choice of subjects is given in the second and third stages, whereby a candidate can take his degree either through literature or science. The University possesses a few valuable scholarships, one, of the value of 200*l.* per annum for three years, being awarded after examination in mathematics and natural science, the holder being required to proceed to England, take a degree in science at the London University, and undergo a training in engineering. We cannot but admire the lines on which education is conducted at Adelaide, and we trust the University may soon be able to extend its staff of teaching.

BERLIN.—The report of the Berlin University for the present year shows an attendance of 2,237 students, a decrease of 253 on the past year. The lectures are also attended by 2,080 other persons not connected with the University. The students are divided among the faculties as follows:—Theology, 135; law, 792; medicine, 297; philosophy (philology, history, &c.), 644; mathematics and natural sciences, 369. 194 students are from foreign countries, including nine English and thirty-nine Americans. The professors and privat-docenten number 200—fourteen in the theological, eighteen in the legal, seventy-four in the medical, and ninety-four in the philosophical faculties. The University library contains but 60,000 volumes, the royal library of 700,000 volumes being chiefly used.

UPSALA.—The *Abo Underrättelser* states that the Imperial Academy of Sciences of St. Petersburg will be represented by MM. Gadoline and Grote at the celebration of the 400th anniversary of the foundation of the University of Upsala.

SCIENTIFIC SERIALS

American Journal of Science and Arts, June.—An account of the discoveries in Vermont geology of the Rev. Augustus Wing (continued), by James D. Dana.—On barite crystals from the Last Chance Mines, Morgan County, Missouri, and on Götthite from Adair County, Missouri, by G. C. Broadhead.—Estimation of chromium and aluminium in steel and iron, by Andrew A. Blair.—On the chemical composition of triphylite from Grafton, New Hampshire, by S. L. Penfield.—On a new mode of manipulating hydric sulphide, by Josiah P. Cooke, jun.—On a base derived from a waste product in the aniline manufacture, by C. Loving Jackson.—On an association of gold with Scheelite in Idaho, by B. Silliman.

Verhandlungen der k. k. zoologisch-botanischen Gesellschaft in Wien, vol. xxvi. (Parts I. and II.), 1876.—The following are the principal papers in this volume:—Synopsis Cecidomydarum, by J. v. Bergenstamm and P. Löw.—On the structure and habits of lichens, by Dr. Arthur Minks.—On the ornithological fauna of the Austro-Hungarian Empire, by A. Pelzeln (fourth paper).—Biology and characteristics of Psyllodæ, with description of two new species of the genus *Psylla*, by Dr. F. Löw.—On the flora of fungi in Hungary, by Fr. Haslinsky.—On the butterfly fauna of Surinam, by H. B. Möschler.—Mycological researches, by Schulzer von Müggenburg.—On the lichen-flora of New Zealand, by Dr. A. von Krempelhuber.

Reale Istituto Lombardo di Scienze e Lettere, Rendiconti, vol. x.,

fasc. viii.—On the encystment of the Proteus of Quanzati (*Amphileptus moniliger*, Ehr.), by M. Maggi.—Theory of reticular woodwork combined with an articulated system in modern American suspension bridges, by M. Clericetti.—The silk of the *Bombyx mylitta*, by M. Gabba.

The *Fahrbuch der k. k. geologischen Reichsanstalt* (1876, vol. xxvi., Oct.-Dec.) contains the following papers:—On the ore deposits of the southern Bukowina, by B. Walter.—On the soda and Szek-soil in the Hungarian Lowlands, by E. von Kvassay.—On some green slate of the Saxon Erzgebirge, by Dr. E. Geinitz.—On the petrographical condition of the tuft-stones occurring in the Devonian formation at Graz, by Joh. Terglav.—On some rocks from the neighbourhood of Rosignano and Castellina Maritima to the south of Pisa, by Dr. Friedrich Berwerth.

SOCIETIES AND ACADEMIES

LONDON

Royal Society, June 14.—“On the Minute Structure and Relationships of the Lymphatics of the Mammalian Skin, and on the Ultimate Distribution of Nerves to the Epidermis and Subepidermic Lymphatics,” by George Hoggan, M.B., and Frances Elizabeth Hoggan, M.D. Communicated by Dr. William Farr, F.R.S.

“Refractive Indices of Glass,” by J. Hopkinson, D.Sc., M.A. Communicated by Prof. G. G. Stokes, Sec. R.S.

“Electrostatic Capacity of Glass,” by J. Hopkinson, D.Sc., M.A. Communicated by Prof. Sir William Thomson, F.R.S.

“On the Difference of Potential produced by the Contact of different Substances,” by Prof. R. B. Clifton, F.R.S.

Linnean Society, June 7.—Prof. Allman, F.R.S., president, in the chair.—Dr. Maxwell Masters read an interesting paper on the “Morphology of Primroses.” Hitherto much discussion has arisen with reference to the superposition of the stamens to the petals, the free central placenta, and the nature of the ovules in the Primulaceæ. From a lengthened study and comparison of the development of the flower, minute structures, and phenomena of monstrosities, the author arrives at conclusions differing somewhat from those hitherto held. Cultivation is not the reason of the frequent structural variation, for deformed Primulaceæ in the wild state are far from uncommon; indeed the wild primrose itself is very much subject to such changes. Certain genera and species are more frequently found deformed than are others; for instance, the cowslip is less subject to change than is the primrose. Entering into all the more important variations observed by the author and recorded by others, in various parts of the flower, he sums up: (1) That the petals of most Primulaceæ are late outgrowths from the receptacular tube. (2) That the placenta is a direct prolongation of the receptacle or axis, and without apex or side connection with the carpels. (3) The placenta occasionally in monstrous flowers arises from the margin or centre of carpel, but sometimes is detached, the detached placenta cohering like a solid column. (4) Staminal and carpellary leaves may occasionally be divided or lobed. (5) The ovular coat is essentially foliar, representing blade or undivided leaf, and is not a direct production from the axis. (6) Processes of carpellary leaf may be infolded, thus forming secondary carpels.—The Rev. G. Henslow followed by a “Note on the causes of numerical increase of parts of plants.” In this he classified the various methods and causes of the increase of parts of leaves and floral whorls, more especially with the view of limiting each of the various kinds to its proper cause respectively.—The secretary briefly indicated the contents of a paper by Mr. Marcus Hartog, “On the floral development and symmetry in the order Sapotaceæ.” From the extracts read of this communication it appears the author, from observation of growing plants in Ceylon has independently arrived at and here brought forward further evidence tending to the same results propounded by the two foregoing home botanists.—“On the nymph stage of the Embidæ, with notes on the habits of the family, &c.” was next read by the author, Mr. R. McLachlan. He stated that in 1837 Prof. Westwood (in *Trans. Linn. Soc.*) instituted the characters of *Embia*, a genus of insects allied to the white ant. Lately (therefore forty years after) Mr. Michael, of Highgate, discovered some orchids partially destroyed by an insect found to belong to the Embidæ, and subsequently the nymph form obtained fills a gap in the insect's history. Mr. McLachlan, in allusion to the habits, recorded by Mr. Lucas and others, mentioned its being carnivorous and spinning a silken web like that of a spider, which, however, Mr. McLachlan believes to be for