

time to come. We learn, however, that he is making satisfactory progress towards recovery. The Provost of King's College, late Vice-Chancellor, is acting for him.

DR. A. WEISMANN has been granted the degree of Doctor *honoris causâ* by the University of Utrecht.

Science states that at the annual meeting of the Chicago Alumni of Mount Holyoke College, on October 24, Dr. D. K. Pearson offered to give £30,000 to the College, provided the alumni would raise an additional £10,000.

A MEMORIAL from the London School of Medicine for Women was considered at a meeting of the Council of the Royal College of Surgeons of England, last week, and it was resolved that—"The Council of the Royal College of Surgeons of England, although in favour of granting the petition of the officers and teachers of the London School of Medicine for Women, do not see their way to admit women to the Conjoint Examination in face of the adverse vote of the meeting of the Fellows and Members of this College and the expressed opinion of the Royal College of Physicians."

At a meeting of the Council of University College, Dundee, on Monday, the question of the relations of the college to St. Andrews University was considered. It was decided to address a letter to her Majesty's Commissioners expressing the willingness of the Council to consider carefully any suggestion from the Commissioners with a view to removing the difficulties in which, by recent events, the University and the college had been placed, and in particular to meet the Commissioners and the University Court to discuss anew any proposals which might form the basis of a new agreement between the two institutions and secure to each the advantages provided for in the Universities Bill of 1889.

THE following are among recent appointments:—Prof. S. L. Barton to be professor of mathematics in the University of the South, Seewanee, Tennessee; Dr. A. Macfarland to be lecturer in physics in Lehigh University; Dr. G. B. van Vleck to be associat. professor of mathematics in Wesleyan University; Prof. C. A. Waldo to be professor of mathematics at Purdue University; Prof. K. Zickler to be professor of technical electricity in the Technische Hochschule at Brünn; Dr. R. Dzieszewski to be professor of the same subject at Lemberg Technische Hochschule; Dr. F. Mehres, extraordinary professor of physiology in the Bohemian University at Prague, to be professor; Dr. F. R. von Höhnelt to be professor of botany and technical microscopy in the Technische Hochschule at Vienna; Dr. H. Klinger to be professor of chemistry at Königsberg; Dr. E. Waelsch to be extraordinary professor of mathematics in the German Technische Hochschule at Brünn.

A CONFERENCE of the leading teaching and examining bodies of the kingdom and of representative County Councils which are in a position, under the County Councils Act, to contribute funds for the purpose of technical instruction, was held last week, under the auspices of the London Chamber of Commerce, at Drapers' Hall, Sir Albert K. Rollit (President of the Chamber) presiding. The conference agreed to a resolution approving the principle of the co-ordination and simplification of the present system of examinations in commercial subjects, and the matter was referred to the Commercial Education Committee of the London Chamber of Commerce to consider details and formulate a scheme to carry this resolution with effect, it being understood that the Chamber would enlarge its Committee for this purpose by the addition of some members of the conference. Perhaps now that the Chamber of Commerce has taken steps to organise commercial education, it may go on, and, in the course of time, do something for instruction in science.

FROM statistics in the *Deutscher Universitäts Kalender* it appears that the number of persons attending lectures in German universities during the winter semester of 1894-95 was 33,021, of whom 8755 were in attendance at Berlin, 1587 at Bonn, 1350 at Breslau, 1168 at Erlangen, 1216 at Freiburg, 556 at Giessen, 843 at Göttingen, 775 at Greifswald, 1643 at Halle, 1230 at Heidelberg, 667 at Jena, 532 at Kiel, 737 at Königsberg, 3112 at Leipzig, 852 at Marburg, 3561 at Munich, 421 at Münster, 420 at Rostock, 980 at Strassburg, 1184 at Tübingen, and 1492 at Würzburg. At Berlin, however, the matriculated students numbered only 5631, the remaining 3724 being persons who had received permission to attend lectures without being enrolled as

civis academici; at Leipzig there were 127 of such students, and at Munich only 86. In the law department (including camera-istics and forestry) there were at Berlin 1667, at Leipzig 985, and at Munich 1230 students; in the medical department (including surgery and pharmacy) at Berlin 1220, at Leipzig 752, and at Munich 1168; in the philosophical department (including philology, mathematics, &c.) at Berlin 1660, at Leipzig 856, and at Munich 700.

SEVERAL noteworthy points are referred to in the Report of the City and Guilds Technical College, Finsbury, for the session 1894-95, in addition to the usual statistics and statements as to the number and quality of the students and the work of the different departments. During the session a number of students entered the College with scholarships from various County Councils and other bodies. A few of these were able to obtain the full benefit from the instruction given, but some of them had gained their scholarships when too childish to benefit properly by the College system. Others suffered from imperfect preliminary training, having been crammed to pass examinations rather than trained how to learn. And the result of it all is that the Principal points out that care must be exercised in future, and influence brought to bear upon the educational advisers of the various County Councils as to their selection of scholarship holders. As a step towards the better selection of qualified candidates, it is proposed to introduce a slight modification into the entrance examination of the College. As with other Colleges on the same status, it appears that amongst the newly-admitted students every year there are a number who have never been taught to take notes, to write original descriptions, or even to use indices or books of reference. The presence of these students has been found greatly to retard the general course of teaching, and causes much waste of time. The time of lecturers and demonstrators is taken away from their proper work to teach the new students things which they ought to have learned at school. As a step toward remedying this matter, it is proposed in future to lay more stress upon the English subjects in the entrance examination, by giving them greater prominence, and by assigning higher marks for such as *precis writing* and composition. In concluding his report, Prof. Thompson has something to say about the future of the College. The large Technical Institutes which have sprung up during the past few years, in various parts of London, have affected the trade-classes at the College to a certain extent, and have also diminished the numbers of students attending the elementary classes. But these Institutes have only affected the elementary part of the work, and the indications are that the more advanced students from the elementary work of the Institutes should pass to the Technical College to carry it on. No institution in London is attempting to give in its evening classes instruction of so thoroughly scientific a character as is given at that College; the instruction is, indeed, admirably suited to supplement the work of the various Polytechnics. It is therefore proposed to develop the courses of special lectures given at Finsbury, and to raise the scientific standard of the evening class work, so as to make the College a focus for the higher branches of study, and for more specialised classes than those of the Technical Institutes.

SCIENTIFIC SERIALS.

Bulletin of the American Mathematical Society, vol. ii. No. 1, October 1895.—The number opens with accounts of the proceedings at the second summer meeting of the American Mathematical Society, held at Springfield, Mass., on August 27 and 28, and of the proceedings at the meeting of Section A of the American Association, held at the same place, from August 29 to September 4. The papers at each meeting are given in abstract, and two of them are printed in full, viz. on the differential equations of certain systems of conics, by R. A. Roberts, and asymptotic lines on a circular ring, by Prof. Maschke. The results in the former paper are principally deduced by means of elliptic integrals and the first class of hyper-elliptic integrals, and from these are derived theorems concerning doubly infinite porisms of curvilinear polygons. The latter paper contains an application of elliptic functions to curves drawn on the surface of a circular ring.—Prof. F. Morley communicates a short note on a generalisation of Weierstrass's equation with three terms.—The notes contain various items of interest, and the list of publications is unusually full.

The Mathematical Gazette, No. 6, October 1895.—The conics of Apollonius, by the Rev. J. J. Milne, is the paper read by that gentleman at the annual meeting in January last. It contains a full and careful analysis of Apollonius' treatise, putting in evidence what the great geometer says on the subject, and also stating what properties he does not touch upon. The result arrived at is that the ground covered by Apollonius "is very extensive, and many parts of the subject are very thoroughly treated which are passed over in silence in modern text-books."—Proof of Horner's method of approximation to a numerical root of an equation by the properties of algebraical quotients and remainders, by Mr. M. Jenkins, is supplementary to papers read before the Association by Messrs. Langley and Hayward.—Dr. J. S. Mackay gives a further short note on Greek geometers before Euclid. Amongst the geometers slightly noticed are (Enopides of Chios, Anaxagoras, Democritus of Abdera, Hippocrates of Chios and Antiphon.—The notes contain some suggestions in mathematical terminology, by R. F. Muirhead; some trigonometrical identities, by the editor and J. H. Hooker; on Simpson's rule, by Prof. A. Lodge; and on division into classes and homogeneous products, by P. J. Harding.—A few questions and reviews complete a number which is quite up to the previous high standard of the *Gazette*. If this journal were better known, we feel sure it would be more heartily supported than it is by mathematical teachers.

Bulletin de l'Académie Royale de Belgique, No. 8.—On a hydrate of arsenic trisulphide and its decomposition by pressure, by W. Spring. If the specific volume of a compound is greater than the sum of those of its constituents, it should be decomposed by pressure. This has already been verified with cupric calcic acetate. It is also shown by the hexahydrate of arsenic trisulphide, which decomposes on compression in water or orpiment, and does not require very great pressure. This phenomenon is the converse of the combination of bodies by pressure when the resulting specific volume is smaller.—On a spot recently observed on the surface of Venus, and on the period of rotation of this planet, by M. Schiaparelli. This spot is near the south pole of the planet, and had at the time of writing remained the same for four weeks, so that the period of about twenty-three hours is out of the question.—On the attraction sphere in the fixed cells of the conjunctive tissue, by C. de Bruyne. The author investigates the attraction sphere in the conjunctive cellulose fixed in position in the interstitial of the liver and the genital glands of *Paludina vivipara*. He describes its constitution, its shape, its continuity with the cytoplasmic filaments, the character of the medullary zone and that of the centrosomes, which vary in number, dimensions and shape. He then describes the situation of the sphere and its relations to the nucleus, and the constitution of the radial fibres. He concludes, against the views of O. Hertwig and others, that the centrosomes rest in the cytoplasm during the stage of repose of the cell. The drawings reproduced are a conclusive proof of their presence in the conjunctive cellulose at rest.

The papers in the *Bullettino della Società Botanica Italiana* for July belong exclusively to the departments of descriptive and geographical botany, most of them having special reference to the Flora of Italy.

SOCIETIES AND ACADEMIES.

LONDON.

Entomological Society, November 6.—The Right Hon. Lord Walsingham, F.R.S., Vice-President, in the chair.—Lord Walsingham announced the death of M. E. L. Ragonot, President of the Entomological Society of France, and, since 1887, a Foreign Fellow of the Entomological Society of London. He remarked that M. Ragonot was especially distinguished by his knowledge of the *Phycidae*, a monograph on which group he had brought out in Russia, and for his amiable personal qualities and the readiness he showed to assist other workers in the identification of species. He said that the loss of M. Ragonot would be greatly felt not only by the Entomological Society of France, but by entomologists all over the world, and that the Council had that evening passed a resolution to the effect that the Secretary should write a letter of condolence to the French Entomological Society on the death of their distinguished President. Colonel Swinhoe also spoke as to the great loss sustained by the death of M. Ragonot, and of the kindness and

generosity of the deceased, which he had personally experienced.—Mr. Goss read a letter from Mr. Waterhouse, calling attention to the prospectus of a monograph by Mr. Ernest Green on the *Coccidae* of Ceylon. A copy of the prospectus and specimen plates were shown, and Lord Walsingham and Mr. McLachlan commented on the importance of the proposed work and the beauty of the plates.—Mr. Stevens exhibited two larvæ, supposed to be those of a species of *Anobium*, which had been damaging oil paintings in his possession; also two specimens of a luminous species of *Pyrophorus*, which he had received alive from the West Indies.—Mr. Adkin exhibited a portion of a collection of Lepidoptera made in Hoy, Orkney, in 1895, including the following species, viz. *Agrotis vestigialis*, *A. tritici*, and *A. cursoria*, not previously recorded from Orkney; *Nemeophila plantaginis*, having the usual yellow ground-colour of the hindwings replaced by red in many of the females; *Hepialus humuli*, males of the ordinary white form, bearing no resemblance to the Unst (Shetland) form; *Triphana comes*, all very dark, the forewings almost black, the yellow of the hindwings of many of the specimens much obscured by blackish scales; *Noctua festiva*, showing forms of variation ranging between the pale southern and the dark *conflua* forms; *Epanda lutulenta*, some almost uniformly black, others pale grey with dark markings; *Hadena adusta*, one almost black, others much variegated; *Thera juniperata*, many having the central fascia and apical streak very dark brown; and *Hysipetes sordidata*, varying from blackish-brown to pale green.—Mr. Tutt exhibited a series of *Emydia cribrum*, var. *candida*, which he had bred from eggs obtained from a specimen caught by Mr. Merrifield in May 1895, in Northern Italy. He stated that being unable to obtain *Calluna vulgaris*, the ordinary food-plant, he had tried them with Knot Grass (*Polygonum aviculare*), and had no difficulty in rearing them.—The Rev. Canon Fowler exhibited, on behalf of Prof. Poulton, F.R.S., living *Diapheromera femorata* bred from eggs received from Prof. E. B. Titchener, of New York. He stated that the young larvæ had emerged from the eggs in July and August last, and fed on lime. Several pairs had arrived at maturity, and were feeding in cases in the Oxford Museum.—The Rev. J. H. Hocking exhibited a specimen of *Xylina zinckenii*, taken by him at sugar on the trunk of an oak tree, at Copdock, near Ipswich, on September 30 last. It was in beautiful condition, and had apparently only recently emerged from the chrysalis. He also exhibited two specimens of *Xanthia ocellaris* taken at the same time. Mr. Barrett referred to the few recorded chapters of *X. zinckenii* in this country.—Mr. R. W. Lloyd exhibited male and female specimens of *Amara alpina* from Garvell, Perthshire.—Colonel Swinhoe stated that he had, during the past summer, captured four specimens of *Pieris daphidice* at Deal. They were worn, and had probably been blown over from France. Mr. Tutt remarked that he had collected at Deal for many years, but had never met with *Pieris daphidice*.—Mr. Tutt read a paper by Prof. A. Radcliffe Grote, entitled "Notes on the genus *Cidaria*."—Dr. T. A. Chapman read a paper entitled "Notes on Pupæ; *Orneodes*, *Epermenia*, *Chrysocorys*, and *Pterophorus*." Lord Walsingham, Mr. Blandford, and Mr. Tutt took part in the discussion which ensued.

Geological Society, November 6.—Dr. Henry Woodward, F.R.S., President in the chair.—The Serpentine, Gneissoid and Hornblende Rocks of the Lizard District, by Prof. T. G. Bonney, F.R.S. The author states that in company with the Rev. E. Hill, and in consequence of their work in Sark, he had again investigated the question of the genesis of the hornblende-schists at the Lizard, and was able to overcome the difficulties which formerly withheld him from attributing an igneous origin to the schists themselves, and their banded structure to fluxional movements during consolidation. There also, as in Sark, he found some evidence of this banding being the result, at any rate in places, of a mixture of a less and a more basic material. Additional evidence was given as to the genesis of the granulitic group and its relations to the hornblende-schist. The author maintained that the relations of the serpentine to the granulitic and the hornblende groups are inexplicable on the hypothesis of an igneous complex, so far as he understood the meaning of that term, or of a folding in a solid condition or any other form of dynamometamorphism, and he maintained his original opinion that the serpentine (*i.e.* the original peridotite) was intrusive in the other rocks. The paper also dealt with some minor points in the geology of the Lizard. In the discussion that followed, Mr. Teall, speaking as to the origin of hornblende-schists, reaffirmed his belief in the theory that both gabbros and basic