

other property of the elements which itself is a periodic function of their atomic weights.

We may mention that Mr. Humphreys has employed in this investigation several hundred photographs of almost every known metallic element at various pressures, and has carefully measured a large number of the lines of each.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

THE number of matriculated students attending German universities during the summer semester of this year is indicated by the first figures, the whole number of hearers by the second figures, and the number of women among the hearers by the third figures in the following list, which we reprint from the *New York Nation*: Berlin, 4705, 344, 114; Bonn, 1889, 103, 13; Breslau, 1541, 83, 22; Erlangen, 1140, 13; Freiburg, 1449, 95; Giessen, 663, 29; Göttingen, 1123, 72, 34; Greifswald, 834, 19; Halle, 1534, 101, 6; Heidelberg, 1230, 92; Jena, 704, 50; Kiel, 727, 37; Königsberg, 695, 31, 11; Leipzig, 3664, 157; Marburg, 1042, 48, 7; Munich, 3871, 160, 2; Academy of Münster, 487, 10; Rostock, 499, 10; Strassburg, 1016, 31; Tübingen, 1289, 12; Würzburg, 1430, 13. The whole number of matriculated students was 30,982, and hearers 1519, of whom 207 were women; students of theology 4326, of law 8368, medicine 8232, and philosophy 10,006. There was a marked decrease of students of theology and medicine, and an increase of students in the philosophical department, especially in philology and natural science.

THE current number (August 21) of the *Lancet* is devoted entirely to information of value to students who are about to commence the study of medicine. The numerous medical schools in the British Isles are described; and short articles are given upon the great continental schools which offer opportunities for post-graduate study. The regulations of the medical examining bodies in the United Kingdom, and some notes on the openings for medical men, show the students what they have to face before the goal of qualification is reached, and what prospects exist beyond. The advantages which a practical knowledge of photography afford practitioners is now generally recognised, and the *Lancet* is wise in advising medical students to become practical photographers. The student is enjoined to practise photography "because it tends to sharpen his powers of observation, to lead him to make faithful records, and to cultivate in him the artistic method. . . . At most medical schools now dark rooms are provided and other facilities afforded for taking photographs, since a knowledge of practical photography is found to be extremely useful in the dissecting room, in the post-mortem room, in the ward, and in the operating theatre, while the capacity to take a micro-photograph is essential to the practical study of bacteriology and physiology."

SCIENTIFIC SERIALS.

Symons's Monthly Meteorological Magazine, August.—Frommondus and his notes on the weather. A recent number of *Ciel et Terre* gave extracts from these observations, made in 1614 and 1625, and the author (Prof. Monchamp) regarded the record as "the earliest kept in Belgium, if not in the world." Mr. Symons refers to the earlier records of Tycho Brahe, for 1582-97, and to Merle's observations, 1337-44, of which a facsimile copy was published in 1891.—Recent storm rains. Some remarkable rainfall records during thunderstorms in July last are quoted: On the 20th, at Oxford, 1.30 inch fell in an hour and a quarter; at Tottiford, in Devonshire, 2.75 inches fell in seventy minutes. On the 21st, 2 inches fell at Crouch End, between 2.0 and 5.0 p.m.; at Ipswich, 4.20 inches fell in one hour, and 5.02 inches in 2½ hours. On the 26th, at Southgate, Herts, 2.50 inches fell in less than an hour and a half.—Some old storms. These are accounts of remarkable thunderstorms in Suffolk, in 1557, and in Yorkshire, in 1741 and 1745.—Whirlwinds on June 30 and July 16. On the first date there was a storm of considerable fury in Birmingham, during which a shower of frogs fell in the suburb of Moseley, having evidently been absorbed in a small waterspout that passed over Birmingham during the passage of the storm.

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SOCIETIES AND ACADEMIES.

LONDON.

Royal Society, June 17.—"Studies in the Morphology of Spore-producing Members. Part III. Marattiaceae." By F. O. Bower, Sc.D., F.R.S., Regius Professor of Botany in the University of Glasgow.

PARIS.

Academy of Sciences, August 16.—M. A. Chatin in the chair.—Observations of the periodic comet of D'Arrest made at the observatory of Toulouse, by M. F. Rossard.—Researches on simple cathode rays, by M. H. Deslandres. A continuation of the author's work on the cathode spectrum and cathode rays obtained by the use of the apparatus previously described.—Action of Röntgen tubes behind screens opaque to the X-rays, by M. Abel Buguet. Certain phenomena are described, and attributed to the diffusion of the X-rays in the air or other media, or possibly to the fluorescence produced therein.—The last stages of the development of the *Pedipalpi*, by Mlle. Sophie Pereyaslawzewa.—On the Pleistocene and recent deposits of the coast of Lower Normandy, by M. A. Bigot.

BOOKS, PAMPHLETS, and SERIALS RECEIVED.

BOOKS.—A Bibliography of Science: W. S. Sonnenschein (Sonnenschein).—The A.B.C. of the X-Rays: W. H. Meadowcroft (Simpkin).—British Rainfall, 1866: G. J. Symons and H. S. Wallis (Stanford).—The "Opus Majus" of Roger Bacon: J. H. Bridges, 2 Vols. (Clarendon Press).—Volcanoes of North America: Prof. I. C. Russell (Macmillan).—Elements of the Comparative Anatomy of Vertebrates: Prof. R. Wiedersheim, adapted by Prof. W. N. Parker (Macmillan).—Citizen Bird: Scenes from Bird-Life in Plain English for Beginners: M. O. Wright and E. Cones (Macmillan).—The Principles of Fruit-growing: L. H. Bailey (Macmillan).—The Vivarium: Rev. G. C. Bateman (L. U. Gill).—Leçons sur l'Électricité: E. Gerard, cinquième édition, 2 Vols. (Paris, Gauthier-Villars).—Agricultural Statistics of British India for the Years 1891-92 to 1895-96 (Calcutta).—Fourteenth Annual Report of the Bureau of Ethnology, Parts 1 and 2 (Washington).

PAMPHLETS.—Microsismografi dell'Istituto di Fisica della R. Università di Padova: G. Pacher (Venezia, Ferrari).—Programm und Forschungsmethoden der Entwicklungsmechanik der Organismen: Prof. W. Roux (Leipzig, Engelmann).—Bromide Enlargements, and how to make them: J. Pike (Lund).—Bourne's Handy Assurance Manual, 1897 (E. Wilson).

SERIALS.—Quarterly Journal of Microscopical Science, August (Churchill).—American Journal of Psychology, Vol. viii. No. 4 (Worcester, Mass.).—Atlas der Himmelskunde: A. T. v. Schweiger-Lerchenfeld, Liefer. 1 to 8 (Wien, Hartleben).—Journal of the Asiatic Society of Bengal, Vol. lxxv. Part 3, 1896; Ditto, Vol. lxxvi. Part 2, No. 1, 1897 (Calcutta).—Proceedings of the Bath Natural History and Antiquarian Field Club, Vol. viii. No. 4 (Bath).—Bulletin of the American Mathematical Society, July (New York, Macmillan).—Proceedings of the Indiana Academy of Science, 1894-95 (Indianapolis).—Schriften der Naturforschenden Gesellschaft in Danzig, Neunter Band, Zweites Heft (Danzig).—Annals of the Astronomical Observatory of Harvard College, Vol. xxvi. Part 2 (Cambridge, Mass.).

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