

latest contribution is a volume of about two hundred pages entitled 'The Principal Species of Wood; Their Characteristic Properties,' by Professor Charles H. Snow, of the School of Applied Science of New York University, and published by John Wiley and Sons. In his preface the author says of the book that it is 'a brief, untechnical presentation of general features characterizing economically important species of wood.' This should be understood as implying that the presentation is untechnical from the botanical standpoint only, for it is emphatically a technical book, in so far as it is designed for the use of foresters, engineers, builders and dealers in wood (lumber) of all kinds. It is written for and appeals to men of these classes, and to that extent it is a technical book.

The book opens with an introductory chapter containing such explanations as will make the text more readily understood. Then follow thirty-six sections, each devoted to a group of similar woods, and here each section opens with an introductory statement in regard to the species discussed in it. The treatment of the particular species may be illustrated by that of the white oak, which covers the following topics: Nomenclature (including English and Latin names, as well as the more common synonyms); locality; features of the tree (height, diameter, shape, bark, acorns, leaves); color, grain and appearance of the wood; structure of the wood; representative uses of the wood; weight of seasoned wood (in pounds per cubic foot); modulus of elasticity; modulus of rupture; remarks (the latter general in nature). Each topic is given a paragraph, and each species of wood is given one page, and no more. The book is, therefore, a very handy one for reference, since all that is said about any particular wood is seen at a glance on one page. Thirty-nine excellent 'half-tone' plates add much to the usefulness of the volume. It is not too much to say that this book should find a place in every botanical library, and unless we are much mistaken, it will soon become an indispensable work in the hands of those to whom it appeals more directly, and for whom it was primarily designed.

#### ANOTHER MOUNTAIN LABORATORY.

FOR several years the University of Montana has maintained a biological station and laboratory at Flathead Lake, Montana. This year it offers its fifth annual session, and there will be opportunities for study in botany, zoology, entomology, nature study and photography. The work in botany includes field study and collecting, classification, type forms, structure, methods of preservation, etc. A general course in ecology and local plant geography is offered also. The region is one which offers opportunities for work on many botanical problems. The surface of the lake is over four thousand feet above sea level, and is surrounded by mountains reaching an altitude of ten thousand feet. It should attract many students of nature.

#### SPECIMENS OF FUNGI.

DR. E. S. SALMON, of Charlton House, Kew, England, the well-known student of the powdery mildews (*Erysiphaceæ*) desires American students of fungi to procure for him specimens of the fruiting stage of *Erysiphe graminis* occurring on *Poa* and other related grasses. The conidial stage is quite common, but the fruiting stage is less so, and it is the latter alone which Dr. Salmon desires. American collectors should see that he is supplied with an abundance of good material.

CHARLES E. BESSEY.

THE UNIVERSITY OF NEBRASKA.

#### SCIENTIFIC NOTES AND NEWS.

THE degree of LL.D. was conferred last week on a number of American men of science, as follows: Harvard University, Professor E. C. Pickering, director of the observatory; N. S. Shaler, professor of geology; William James, professor of philosophy. Yale University, William H. Brewer, professor emeritus in the Sheffield Scientific School. Dartmouth College, E. L. Nichols, who has resigned the chair of physics at Dartmouth to accept a similar position at Columbia University; Alfred Thayer Mahan, U.S.N. Amherst College, Frederick J. E. Woodbridge, professor of philosophy in Columbia University, who graduated from Am-

herst College in 1889. Williams College, Dr. Henry S. Pritchett, president of the Massachusetts Institute of Technology; Dr. E. A. Birge, professor of zoology in the University of Wisconsin, who graduated from Williams College in 1873. Wooster University, Dr. J. H. Hyslop, formerly professor of philosophy in Columbia University. The University of Illinois has conferred the degree of Doctor of Engineering on S. W. Stratton, chief of the Bureau of Standards, and on Professor Ira O. Baker, of the university; it has conferred the degree of Doctor of Agriculture on Professor T. F. Hunt, of the Ohio State University.

PRESIDENT IRA REMSEN, of the Johns Hopkins University, gave the commencement address at Mount Holyoke College on June 24.

PROFESSOR JAMES M. CRAFTS has resigned his position as one of the trustees of the Elizabeth Thompson Science Fund, and Professor Theodore W. Richards has been elected to fill the vacancy.

MR. W. W. STOCKBERGER, instructor in botany in Denison University, has resigned to accept a post as special research assistant in the Department of Agriculture, Washington, D. C.

R. S. LEA, who has been professor of civil engineering and lecturer in mathematics in the faculty of applied science at McGill University during the past eleven years, has resigned to devote himself to professional pursuits.

DR. WILFRED NEWSOME STULL has been appointed Carnegie research assistant to Professor Theodore W. Richards, at Harvard University.

THE Stevens' Triennial Prize of Columbia University for original research has been awarded to Drs. L. Pierce Clark and Thomas P. Prout, of New York, for their 'Status Epilepticus: A Clinical and Pathological Study of Epilepsy.'

MME. SKŁODOWSKA CURIE has received the degree of Doctor of Science from the University of Paris, her thesis being based on

her well-known researches on radio-active substances.

A PRESS despatch from Tacoma reports that the expedition which recently started north on the Fish Commission steamer *Albatross*, under the leadership of Dr. David Starr Jordan, president of Stanford University, has been forced to return after the vessel had reached Fort Rupert on her way to Arctic waters, where conditions of fish and seal life were to have been investigated. The return was due to the discovery of smallpox aboard, the disease afflicting one of the crew. The vessel will be cleaned and fumigated and the party held for observation for nine days.

PROFESSOR CHARLES E. BESSEY, of the University of Nebraska, was given a short leave of absence by the regents of the university at a recent meeting. He intends to sail for Europe early in July, going directly to Germany, where he is to be joined by his son Ernst A. Bessey, and together they are to proceed to southeastern Russia, in the Caucasus region. Here they are to investigate the vegetation on both sides of the mountain range, returning by way of the Black Sea, on whose northern coast they intend to work for some time. Professor Bessey intends to return to America late in the autumn.

W. D. HALLIBURTON, M.D., F.R.S., professor of physiology, King's College, London, has accepted an invitation extended by the faculty of the University and Bellevue Hospital Medical College to deliver a course of twelve lectures on pathological chemistry, beginning on Monday, January 4, and continuing daily until January 16, 1904. The funds are provided from an endowment given by the retiring professor of pathological chemistry, Dr. Christian A. Herter. Dr. Herter has also endowed a research fellowship in pathological chemistry. Mr. Louis C. Tiffany has furnished a fund for a research fellow in physiology for the ensuing year.

CHANGES in the stations and duties of officers of the Signal Service have been ordered as follows: Colonel H. H. C. Dunwoody, relieved from duty at headquarters, Department of the East, and ordered to duty at Fort

Myer, Virginia; Lieutenant-Colonel James Allen, on completion of present duty, will take station in this city as signal officer of the Department of the East; Lieutenant-Colonel Richard E. Thomson is relieved from duty at Fort Myer, and ordered to Vancouver Barracks, Washington, for duty in the Department of the Columbia, in addition to which he will assume charge of the military system in Alaska; Captain George C. Burnell, at Juneau, Alaska, has been ordered to Seattle, Wash., where he will assume charge of the cable system between Puget Sound and Alaska.

PROFESSOR WILLIAM ELDER, of the department of chemistry at Colby University, died on June 25. He was born in Nova Scotia about sixty years ago. He graduated at the Provincial Normal School in 1860 and at Acadia College in 1868. The next year he studied at Harvard under Professors Agassiz, Cooke and Shaler. From 1869 to 1873 he was professor of physical sciences at Acadia College. In 1873 he was called to the professorship of chemistry and natural history at Colby University and remained at the head of that double department till 1885, when he became Merrill professor of chemistry.

THE United States Civil Service Commission announces that, owing to the small number of applications filed for the examination scheduled for June 29-30 for the position of teacher in the Philippine Service, the examination will be postponed to July 22-23. The salary at first is from \$900 to \$1,200 with opportunity for advancement. There are now about 850 American teachers in the Philippine service. The subjects of the examination include the ordinary branches taught in normal schools, and optional subjects may be taken, including the sciences. It seems unfortunate, and may perhaps account for the small number of applications, that the result should be based almost exclusively on an elementary written examination, eighteen points being given for this, and only two points for experience, training and fitness.

THE International Institute of Sociology holds its fifth congress this year in the Sorbonne, at Paris, from July 6 to 9, under the presidency of Dr. Lester F. Ward, of Washington. The leading subject for discussion will be the relation of Sociology to Psychology. The Institute was founded in 1894 with Sir John Lubbock (Lord Avebury) as its first president. It is thoroughly international and each of the presidents annually chosen represents a different country. Dr. Ward is its first American president. It has published nine volumes of *Annals*, in which a great variety of subjects relating to the social sciences are discussed from a strictly scientific point of view.

A TELEGRAM has been received at the Harvard College Observatory from Professor Kreutz, at Kiel, stating that a comet was discovered by Borely at Marseilles, June 21, 469, G. M. T. in R. A.  $21^{\text{h}} 52^{\text{m}} 52^{\text{s}}$  and Dec.  $-8^{\circ} 10'$ . The comet had a daily motion of  $-7'$  in R. A. and  $+44'$  in Dec. Nucleus and tail were observed.

WE learn from the report in the *London Times* that there was a very large audience at the Royal Institution on June 19 to hear Professor Pierre Curie, of the Sorbonne, Paris, lecture on radium. Sir William Crookes was in the chair, and among those present were Mme. Curie, Lord Kelvin, Lord Rayleigh, Lord Avebury, Sir Frederick Bramwell, Sir Oliver Lodge, Professor Dewar, Professor Ray Lankester, Professor Ayrton, Professor S. P. Thompson and Professor Armstrong. Professor Curie, who spoke in French, began with some experiments to illustrate the properties of radium. He showed that it was capable of spontaneously and continuously disengaging heat, that it had the power of rapidly affecting photographic plates even through opaque bodies, and that it could provoke luminous phenomena in phosphorescent substances such as platinoeyanide of barium, not losing its power even when cooled to the temperature of liquid air. He next proved its ability to render air a conductor of electricity, by showing that a charged electroscope was at once discharged when a frag-

ment of radium was brought into its vicinity, and in another experiment showed that it facilitated the passage of the electric spark. He went on to describe the different radiations given off by the substance and to distinguish them according to their power of penetration, absorptibility, behavior in a magnetic field, etc. He then explained that, in addition to these radiations, radium also gave off emanations which had the same properties as the substance itself—properties which were included in the term radioactivity. The salts of radium in solution gave off this radioactivity, and were able to render other objects of all sorts radioactive. In this emanation, for example, a charged electroscope was discharged, and a phosphorescent substance became luminous. The emanation behaved in many ways like a gas. It could be aspirated through a tube, it could be condensed by liquid air, and after being frozen out of a vessel would diffuse throughout it again when the temperature was allowed to rise. These phenomena were illustrated by a very pretty experiment, in which a vessel containing a weak solution of radium chloride was connected by a tube to another vessel containing some sulphide of zinc. So long as the stop-cock on the tube connecting the two vessels was closed the sulphide of zinc did not phosphoresce, but as soon as it was opened the luminous effect appeared. Returning to the heat disengaged by radium, the lecturer proved the reality of the phenomenon by the aid of what he said was in fact a liquid air calorimeter. A small piece of glass was lowered into a carefully isolated vacuum-flask containing liquid air, and the amount of gas that boiled off in a given time was measured. The experiment was then repeated, but instead of the plain piece of glass a small vessel, identical in size, containing radium was substituted, with the result that in the same time the quantity of gas given off was seen to be more than doubled. Professor Curie concluded with a slight reference to some other properties of radium, its chemical effects, its place in the periodic table of the elements, its power of producing sores

on the skin and even of inducing paralysis, and the character of its spectrum. He also gave a brief account of the studies which led Mme. Curie and himself to the recognition of it and other radioactive bodies, and touched on the speculations suggested by the phenomena it presented as to the evolution of matter and the gradual transformation of the elements.

---

#### UNIVERSITY AND EDUCATIONAL NEWS.

THE state appropriations for the University of Illinois this year reached the wholly unprecedented sum of \$1,260,000. The sum of \$150,000 was given for enlarging the engineering equipment. The College of Agriculture received \$100,000 for equipment and instructional work, and the experiment station associated with the college received \$170,000 for research work. The ordinary operating fund of the university was increased about \$100,000 per year which will make this fund about \$350,000 per year. The library fund was doubled, being made \$20,000 per year. The sum of \$80,000 was voted for a Woman's Building. The sum of \$14,400 was given for the maintenance of the department of commerce. The smaller appropriations included \$10,000 for cabinets, collections, apparatus, etc., and \$10,000 for equipping the chemical laboratory.

At the eighty-sixth commencement of Hamilton College, President Stryker announced a gift of \$100,000 in U. S. Steel Corporation bonds from Mr. Andrew Carnegie, in recognition of the public service of Secretary Root, a graduate of Hamilton. Mr. Carnegie has also given \$50,000 to Beloit College for a library building.

COLBY COLLEGE has received gifts amounting to \$46,000, including \$20,000 from the estate of S. S. Smith, D.D., the author of the hymn 'America,' and formerly trustee and professor of the college.

The board of regents have completed arrangements for creating a school of applied science in the State University of Iowa. A professorship in electrical and mechanical engineering was created. Professor C. S.