his accomplishments as for the revelations of his freshness of mind. He was a great amateur, and such are the salt of the earth. It is their followers who systematize and reduce to method. Years ago, as I was wandering through the Jefferson Physical Laboratory in search of some former fellow student with whom to exchange ideas, I came upon my old teacher, B. O. Peirce. Said he: "Colonel Wilson, we are all poor physicists here in the Jefferson." "How so?" I asked. "Why, we have to have $14,000 a year to get our uninteresting results when a real physicist would get new stuff with a ball of twine and a jackknife!" Exaggeration, of course; nobody begrudges the Jefferson its budget, it is well spent; it should be larger. The adult must have his means of livelihood. My question regards the young. Is it well too urgently to transform the natural freely imaginative organization of the child's hide-and-seek into the supervised play of the school and the massed phalanx of the stadium under the direction of the professional coach? It is metaphor; but does it not somewhat apply to our conduct of graduate instruction and of initiation into a life of scientific research? Should we not distrust all over-elaboration of method, whether of obtaining or of treating data, whether of apparatus or mathematics or statistics? Howsoever inevitable such development is, should we not be actively on guard lest it lead us and particularly our youth inward to mooning over artificialities instead of out to live with the stubborn facts of a real world. If I knew a young fellow who sought advice about love I should not send him to his room to study Balzac's "Physiologie du Mariage" or Bourget's more ponderous "Physiologie de l'Amour moderne," nor yet to a clinic to be "psyched" à la Freud; I should tell him to go see some girls.

EDWIN B. WILSON

SCHOOL OF PUBLIC HEALTH OF HARVARD UNIVERSITY

SIDNEY IRVING SMITH

PROFESSOR SIDNEY IRVING SMITH, Ph.B., Yale, 1867, was born February 18, 1843, in Norway, Maine, and died May 6, 1926, in New Haven, Conn. He had been in feeble health several years, due to various complications combined with his age. Immediate cause of his death was cancer of the throat. He had been partially blind since 1906, due to hereditary glaucoma. Although surgical operations were made on both eyes, he became totally blind several years ago. Professor Smith married in New Haven, June 29, 1882, Eugenia Pocahontas, daughter of Edward Brady Barber, a music-teacher from Canada. Mrs. Smith died March 14, 1916. There were no children. He is survived by a sister-in-law, Mrs. Clarence M. Smith, of Norway, Maine; his brother-in-law, Professor emeritus Addison E. Verrill (B.S. Harvard, 1862), M.A., Yale, 1867; Major George E. Verrill, '85 S. Yale, U. S. Engineer; A. Hyatt Verrill, *ex*-'91, Yale, Art, artist and author (nephews); Edith B., m. V. Akers; Lucy Lavinia, *ex.* Art, m. S. H. Howe, Jr. (nieces).

His preparatory training was received in the Norway Liberal Institute, and Bethel, Maine, Preparatory School. Professor Smith before coming to Yale had, under the instruction and encouragement of A. E. Verrill, collected and studied about all the flowering plants and ferns of Norway, Maine, and vicinity, discovering many rare species. He always retained his interest in botany and gardening. At the same time he made large collections of the local insects and found many undescribed species, some of them of great interest. His insects, obtained prior to 1864, were purchased by Professor Louis Agassiz for the Museum of Comparative Zoology. After that he collected insects for the Yale Museum. He joined Professor Verrill in various dredging expeditions in Long Island Sound and to the Bay of Fundy in 1864 to 1870, making collections for the Yale Museum, in which he had charge of the Crustacea for many years.

He was assistant in zoology at Yale, 1867–1874; instructor in comparative anatomy, 1874–75; professor of comparative anatomy, 1875–1906; and since then professor emeritus. He had charge of deep water dredging in Lake Superior for the United States Lake Survey in 1871, and for the United States Coast Survey about St. George's Banks in 1872; and was associated with the biological and deep-sea work of the United States Fish Commission, 1871–1887. Later, he gave his share of the deep-sea Crustacea to the Yale Museum.

He was state entomologist of Maine and Connecticut for a number of years and contributed to the annual reports of the Maine and Connecticut Boards of Agriculture. In 1890 he revised the definitions in comparative anatomy in Webster's International Dictionary. He organized and conducted one of the first, if not the first, biological course in this country of studies intended as a preparation for a medical school. He was an excellent teacher, using laboratory anatomical work extensively.

When the first Peabody Museum was planned, in 1875, he and Professor Verrill made all the plans and detailed drawings and specifications for the furniture and exhibition cases on the third floor, and part of those on the second floor of the museum. He was also one of the early promoters of the Biological Station at Woods Hole, Mass., and for several years one of its trustees. He had been a member of the National Academy of Sciences since 1884; and was also a member of various other scientific societies.

He was the author of numerous zoological papers

dealing especially with marine Crustacea, published in various scientific magazines, among them the *American Naturalist, American Journal of Science, Canadian Naturalist,* and *Annals and Magazine of Natural History* (London). In connection with his work for the U. S. Government he had contributed largely to the annual reports of the U. S. Fish Commission, Coast Survey, and Lake Survey, and also to reports of Department of Marine and Fisheries of Canada, of Committee on Progress of the Geological Survey of Canada, and the bulletins and proceedings of United States National Museum and Museum of Comparative Zoology.

A. E. VERRILL

SCIENTIFIC EVENTS

THE CONVERSAZIONE OF THE ROYAL SOCIETY[1]

THE Royal Society usually holds two conversaziones annually. The first of these gatherings was cancelled owing to the general strike, and the second was held on June 16 last. Many of the exhibits arranged in the society's rooms have already been referred to in our columns. Limitations of space forbid more than passing notice of some of the remainder.

The Department of Entomology, British Museum (Natural History) (Mr. F. W. Edwards and Dr. P. A. Buxton), exhibited specimens of a submarine Chironomid. This is the first insect species known to spend its whole life in the sea, and was discovered by Dr. P. A. Buxton in Samoa, where it was found associated with other Chironomid flies having normal air-living adults. Mr. T. S. P. Strangeways and Dr. H. B. Fell showed microscope preparations of the development *in vitro* of the isolated eye of the embryonic fowl. Fowl embryos of 64–70 hours' incubation were used. An eye is dissected out and explanted into a medium composed of fowl plasma and embryonic tissue extract; here it grows and differentiates in a surprisingly normal way.

The soil physics department, Rothamsted Experimental Station (Dr. B. A. Keen and Dr. W. B. Haines), exhibited a new combination of apparatus for measuring soil resistance which has marked advantages over the usual type of dynamometer. It is light and portable, and gives a continuous record of the draught, and a time scale, on a celluloid strip, which has great advantages over paper for outdoor work under varied weather conditions.

Lieutenant-Colonel F. J. M. Stratton and Mr. C. R. Davidson showed a number of photographs of the solar eclipse of January 14 last, taken at the expedition sent to Benkulen, Sumatra. The expedition obtained good photographs of the corona, the spectrum of the chromosphere and also of the corona both with slit spectroscope and prismatic cameras, from a discussion of which it is hoped that fresh knowledge may be gathered as to the condition and constitution of the solar atmosphere. From the spectrograms of the corona it will be possible to obtain accurate wave-length measurements of the lines of the coronal spectrum of unknown origin.

Professor O. W. Richardson showed an apparatus for the investigation of soft X-rays which are produced by the electronic bombardment of solids. The tube is of transparent silica, and is exhausted to a pressure of about one ten-millionth of a millimeter of mercury. The presence of the X-radiation is demonstrated by the photoelectric emission which it produces from a copper-plate enclosed in the tube.

The National Physical Laboratory had two interesting exhibits. The vector colorimeter (Mr. Guild and Dr. Perfect) enables a color to be specified by *qualitative* measurements involving color matches only. Two color matches are made. In one the test color is matched by a mixture of spectrum red with monochromatic light of suitable wave-length; in the other by a mixture of spectrum blue with another suitable monochromatic constituent. These matches determine the two vectors, and their intersection determined the position of the color on the color chart. A modified manometer for the determination of the vapor tensions of molten cadmium and zinc was also shown (Mr. C. H. M. Jenkins). This is measured by the pressure of nitrogen required to level the two liquid surfaces of the metal of a specially shaped manometer. The closed end of the manometer can be flooded by rotation of the apparatus, and foreign gases can also be removed by a similar rotation accompanied by a reduction of pressure.

Mr. W. M. Mordey showed some experiments demonstrating the possibility of getting a powerful rotation, in multiphase alternate current fields, of magnetic materials which are either non-conducting in themselves or are made so by being reduced to fine powder and then made up into solid discs or cylinders with some binding material, such as glue or shellac, which insulates the particles from one another. Such discs or cylinders, which form miniature induction rotors without windings and with non-conducting cores, can be made up of powdered magnetic materials such as hard cast-iron dust, hard steel grit, nickel, cobalt and of the magnetic minerals magnetite and pyrrhotite; in such bodies no appreciable eddy currents are produced, the rotation being due entirely to hysteresis. An interesting item in the exhibit was a small alternate-current electric fan, the rotor of which consisted simply of a piece of pyrrhotite rock

[1] From *Nature.*