

a paper by Dr. J. W. Babcock, Superintendent of the State Hospital for the Insane at Columbia, S.C., on the medico-local relations of pellagra. Dr. E. Bates Block, of Atlanta, discussed the mental disturbances of this disease. Dr. G. M. Niles took an unusually optimistic stand in his discussion of prognosis. The main paper of the symposium was presented by Dr. W. J. Macneal, of the New York Post-graduate Medical School, for himself and his colleagues, Dr. J. S. Siler, Medical Corps, U.S.A., and Dr. P. E. Garrison, Medical Corps, U.S.N., and comprehended an announcement of the later studies of the Thompson-McFadden commission on the etiology of pellagra. During the summer of 1913 the commission has been actively at work at Spartanburg, S.C., and has accumulated and digested a mass of facts bearing upon the etiology which seem to discredit completely all questions of diet, either as to character or amount, and to place the responsibility for the disease upon unsanitary conditions as regards the disposal of excreta; in other words, upon food contamination. The remaining paper was entitled "The Entomological Aspects of the Pellagra Investigation of the Thompson-McFadden Commission," by Mr. A. H. Jennings, of the Bureau of Entomology, U.S. Department of Agriculture. Mr. Jennings having worked for two seasons with the commission at Spartanburg, practically absolved *Simulium* from any relation to the disease, and stated that if any insect is the vector of pellagra it is in all probability the stable fly (*Stomoxys calcitrans*).

Among the actions by the council were the acceptance of the Society of American Foresters as an affiliated society, the adoption of a resolution looking with favour upon the organisation of a Brazilian division of the association, the authorisation of the establishment of local branches of the association, the continuance of the associate secretary for the south, and the authorisation of the preparation of a directory of the funds available for research work.

A report of progress from the Committee on Expert Testimony was received. The movement to bring the force of the association, composing in its membership so many hundreds of scientific men constantly called upon to give expert testimony in the courts, towards a modification of the present system of employing experts by opposing parties in courts of law, was begun two years ago at Minneapolis. The committee in charge of the work consists of Prof. E. C. Pickering, of Harvard, chairman; Dr. E. B. Wilson, of Columbia; Dr. W. H. Welch, of Johns Hopkins; United States Senator Elihu Root; Dr. A. D. Little, formerly president of the American Chemical Society; and Dr. J. A. Holmes, of the U.S. Bureau of Mines. The committee reported a compilation of the laws of the different States of the union on this subject, and stated that a compilation of the laws of the different nations of the world is in hand. Positive recommendations are to be expected from this committee at the next meeting of the association, and, com-

prising as it does some of the most eminent scientific men in America, together with one of its most eminent lawyers, the report will carry great weight.

It was decided to hold the next meeting of the association during Convocation Week, 1914-15, at Philadelphia, with a summer meeting to follow in August, 1915, at San Francisco. The general committee recommended to the next general committee that Toronto, Canada, be chosen as the place of meeting for 1915-16, on invitation from the University of Toronto.

The officers elected for the coming year were as follows:—

President: Chas. W. Eliot, president emeritus of Harvard University. *Vice-Presidents (or Chairmen of Sections):* A. H. S. White, Vassar College; B. A. Zeleny, University of Minnesota; C (no election); D, A. Noble, New York; E, F. R. Lillie; G, G. B. Clinton, New Haven; H, C. Wissler, American Museum of Natural History; I (no election); K, R. M. Pearce, University of Pennsylvania; L, P. H. Hanus, Howard University; M, L. H. Bailey, Cornell University. *General Secretary:* W. A. Worsham, jun., Athens State College of Agriculture. *Secretary of Council:* Henry Skinner, Academy of Sciences. *Associate Secretary:* R. M. Ogden, University of Tennessee.

DR. S. C. CHANDLER.

DR. S. C. CHANDLER, whose death we recorded with regret last week, was not the least conspicuous in that earnest band of American astronomers whose energy and resource have done so much to advance astronomical science. He began his scientific career in the United States Coast Survey, a school that has trained many brilliant observers, who, in positions of greater independence, have rendered valuable service. Dr. Chandler's claim to a place among the most famous of these rests upon three notable achievements. First, the invention and use of the Almacantar, an instrument in which the small circle perpendicular to the meridian passing through the pole is adopted as a fundamental circle of reference, and gravitational action round an imaginary vertical axis is substituted for the motion of rotation round the pivots of the horizontal axis in the case of a vertical circle. Secondly, for his valuable catalogues of variable stars, in which he systematised the results collected by many observers, thereby encouraging and facilitating further observations. His work in this direction was by no means confined to simple compilation. He was both an indefatigable observer and the fortunate discoverer of many interesting objects of this class, ever directing attention to a branch of astronomy that has proved both suggestive and fructiferous.

This habit of industrious examination and critical scrutiny, acquired in discussing many series of observations, proved of remarkable assistance in the successful inquiry with which his name will ever be associated, the detection of the variation of latitude, due to the want of exact coincidence between the axes of the earth's figure and of rotation. This work was exceedingly laborious,

necessitating the reduction and collation of many series of observations of zenith distance, and that it was pursued with unswerving determination is the more meritorious as previous computers, misled by Euler's investigation of the behaviour of an absolutely rigid earth, had decided that no term of a periodic character could be detected. Undismayed by this negative result, Chandler, putting aside all suggestive hypotheses, based his inquiry solely on the observations themselves, and accepted the results these offered. He was thus driven to the inevitable conclusion, first, that the latitude variation had a period of 428 days, a decision that was subsequently modified by showing that the complicated motion could be best explained by the superposition of two variations, one in fourteen, and the other in twelve months.

These valuable investigations merit in the highest degree the attention not only of those who are especially devoted to astronomical and mathematical researches, but also of that large and ever-increasing class which is anxious for general knowledge with regard to the physical phenomena of our globe. This work merited and obtained the recognition of the Royal Astronomical Society, which awarded Dr. Chandler the gold medal. It was his greatest achievement, but there are other grounds on which he merits the gratitude of astronomers, who will regret the loss of one who equally adorned the threefold divisions of computational, observational, and instrumental astronomy.

W. E. P.

NOTES.

WE announce with profound regret the death on Saturday, January 24, in his seventy-first year, of Sir David Gill, K.C.B., F.R.S., formerly H.M. Astronomer at the Cape of Good Hope.

BEFORE Lord Strathcona was carried to his grave in Highgate Cemetery on Monday, there was an impressive memorial service at Westminster Abbey, at which the King and Queen and Queen Alexandra were represented. The ten pall-bearers, selected on account of their special connection with Canada, or personal relationship with Lord Strathcona, were:—Lord Aberdeen, Lord Lansdowne, Lord Lichfield, the Very Rev. George Adam Smith (Principal of Aberdeen University), Mr. W. L. Griffith (secretary of the Canadian High Commissioner's Office), the Duke of Argyll, the Lord Mayor, Mr. Harcourt (Colonial Secretary), Sir William Osler (regius professor of medicine, Oxford), and Sir Thomas Skinner (deputy-governor of the Hudson's Bay Company). A large number of distinguished people were present at the Abbey service, including representatives of many scientific societies and similar bodies. Among these were Sir William Crookes and Sir Archibald Geikie (Royal Society), the President of Magdalen (the University of Oxford), the Master of Downing (the University of Cambridge), Mr. J. G. Colmer (Canada Club), Sir William Ramsay, Sir Boverton Redwood, and Lady Lockyer

NO. 2309, VOL. 92]

(British Science Guild), Sir Frederick Macmillan (National Hospital for Paralysis and Epilepsy, of which Lord Strathcona was president), Sir Francis Champneys, Sir Henry Morris, and Mr. J. Y. W. MacAlister (Royal Society of Medicine), Colonel Sir T. H. Holdich (Royal Geographical Society), Dr. I. H. Tudsbery (Institution of Civil Engineers), and Sir Charles Lyall and Prof. Ernest Gardner (League of the Empire). Lord Strathcona was one of the trustees of the British Science Guild, and took a practical interest in developments of scientific and educational work. His benefactions to McGill University, Montreal, exceeded a quarter of a million; he gave 25,000*l.* to Marischal College, Aberdeen, and endowed a chair of agriculture in Aberdeen University. He also established and endowed the Royal Victoria College for Women at Montreal, and made many other generous gifts to higher education. The Toronto correspondent of *The Times* reports that at a memorial service held on Monday at McGill University in honour of Lord Strathcona, Principal Peterson said:—"The late Chancellor's contribution to education constituted no mere stereotyped or conventional form of benevolence. In scientific, medical, and higher education for women he was a pioneer with a marked power of initiative which had been felt all over Canada."

THE wife of Dr. Weir Mitchell survived him only a few days. She became ill shortly after his funeral, and died of pneumonia on January 15. Mrs. Mitchell was in her seventy-ninth year.

PROF. D. H. TENNENT, of Bryn Mawr, has completed a biological investigation he has been conducting in Thursday Island in connection with the Carnegie research fund.

PROF. W. M. DAVIS, the Harvard geologist, is about to carry out an exploration of some of the coral islands in the Pacific. He is so arranging his tour as to be able to attend the meetings of the British Association in Australia.

DR. E. C. SPITZKA, a former editor of *The American Journal of Neurology*, has died in New York in his sixty-second year. From 1885 to 1887 he was professor of medical jurisprudence and neurology at the New York Post-Graduate Medical College.

THE death is reported, in his sixty-ninth year, of Dr. G. W. Peckham, a former president of the Wisconsin Academy of Sciences, Arts, and Letters, and librarian of the Milwaukee public library. He was distinguished by his studies in entomology, and had collaborated with his wife in writing numerous works on that subject.

THE death is reported, in his sixtieth year, of Dr. B. O. Peirce, who had held the Hollis chair of mathematics and natural philosophy at Harvard since 1838. He was the author of "Experiments in Magnetism," "Theory of the Newtonian Potential Function," and "Table of Integrals," besides numerous papers on mathematics and physics.

ON Thursday next, February 5, Sir Thomas H. Holland will begin a course of two lectures at the