

detail, to carry out the scientific investigations connected with the Observatory, which properly fall within the province of the Astronomer Royal. Thus, during the past year, I have had repeatedly to lay aside the important subject of the measurement of the plates of the astrographic chart in order to deal with details of cash accounts and other similar matters, which properly pertain to the functions of a clerk. In this connection I may mention that some years ago I proposed a photographic corrector, which, at a comparatively small cost, would render an ordinary astronomical refracting telescope available for photography; but, though a trial instrument has been made, and though I have partly worked out the details of a more complete form, I have never been able to command sufficient leisure, tolerably free from interruptions, to enable me to complete the rather troublesome optical calculations. Such a corrector could be usefully applied to the new 28-inch telescope as well as to other large instruments; but under present conditions I fear that there is little prospect of my being in a position to work out the idea."

"The growth of the Observatory buildings, involving the introduction of large masses of iron, raises the question of the possible disturbing effect on the magnets in their present position. Though the masses of iron would be at such a distance that they could not sensibly affect the registers of magnetic changes, which are purely differential, it is possible that the aggregate effect on the absolute determinations of the magnetic elements might become appreciable. Under these circumstances it is desirable that an auxiliary magnetic station for determination of absolute values of the magnetic elements should be established in the immediate neighbourhood of the Observatory, at such a distance that there would be no suspicion of disturbance from the iron in the buildings."

W. J. S. L.

REV. CHARLES PRITCHARD, D.D., F.R.S.

ANOTHER and a familiar figure has passed from among us, diminishing the strength of the tie that links the present generation to the science of the past. Almost a contemporary of Airy and of Herschel at Cambridge, Prof. Pritchard has seen the school, which they may be said to have inaugurated, lose its members one after another, to be himself among the last. But in no sense can it be said that he outlived his reputation, or that he was not a worthy disciple and an admirable exponent of that school. Nor was he content to remain simply a disciple. His ambition was to stand in the front rank, and to contribute his quota to the further progress of science. And this is the more remarkable and the more praiseworthy when it is remembered that he was considerably advanced in life before he devoted himself to any special science.

For Prof. Pritchard's early life had been spent, and worthily spent, in an endeavour to exhibit an improved method of education in the then upper middle-class schools. Of the success that attended his efforts, one of his old pupils, the present Dean of Westminster, has recently given an appreciative account. Dean Bradley has contrasted the dull methods that prevailed generally some sixty years since, even in schools of repute, with the vigour and enthusiasm which characterised the newer teaching, whose importance Prof. Pritchard early recognised and enforced. For thirty years he led the life of an active schoolmaster, and that he was successful in his vocation is fully established by the long list of the names of his pupils, famous in every walk of life. For private and personal reasons he retired from this career, and then his ambition was to take active clerical duty in some country parish. But in this he was disappointed, for as he has told the writer of this notice

more than once, that though he was a divine in mind and heart, he was made an astronomer by Providence. But his loyal attachment to the Church of England and his scientific training placed him frequently in a position to render services to both science and religion. This is shown by the thoughtful and eloquent sermons that he has frequently preached on the occasions of the meeting of the British Association, as well as by his Hulsean Lectures at Cambridge, or in the capacity of Select Preacher at Oxford.

In 1870 the Savilian Professorship of Astronomy in Oxford fell vacant through the decease of Prof. Donkin. At the urgent recommendation of Sir John Herschel, Lord Hatherley, who was at the time Lord Chancellor, was induced to exercise his influence among the trustees of the Savilian estates, and Prof. Pritchard was elected to the vacant chair. How worthily he filled this office is known to the readers of this journal. It is sufficient to recal that he induced the University, shortly after his appointment, to supply an astronomical observatory, for at this date there was no observatory under academical control, and not only was research impossible, but very inadequate provision was made for the teaching of his class. The modest establishment originally contemplated by the University was materially increased by the munificence of the late Dr. De la Rue, in a way which admirably supplemented the judicious expenditure of the University. In later time a lecture-room and library had to be provided, and Prof. Pritchard probably felt that in the possession of a small, but tolerably complete, observatory, he gained rather than lost, from the fact that it was called into existence in quite modern times. Here it was his good fortune early to recognise the important part that photography was destined to play in the new astronomy, and before the gelatine plate had thoroughly revolutionised the art, he was at work on bright objects like the moon, to which photographic methods could then be applied. His success justified his foresight, and though in his subsequent career he frequently turned aside to pursue other lines of inquiry, he always returned to his original plan of investigation by means of photography.

In one of these excursions into more varied inquiries he was tempted to investigate the magnitude of the brighter stars on a plan which had occurred to him while at Clapham, and was, I believe, the practical outcome of a suggestion of the Rev. W. R. Dawes. This was the process of extinction by means of a wedge of neutral-tinted glass, used differentially. The method was carried out practically with great success, and the results of his work, embodied in a *Uranometria Nova Oxoniensis* received the reward of the medal of the Royal Astronomical Society, and procured for him, what he valued quite as highly, an honorary fellowship from his old college of Saint John's, at Cambridge. To secure the necessary completeness in this inquiry, Prof. Pritchard undertook to visit Egypt to determine the amount of atmospheric absorption. It was a source of great gratification to him to know that the more protracted inquiry of Dr. Müller led to practically the same result, and confirmed his investigation in every material particular.

Another of his researches, but one which he always held to be incomplete, was an effort to determine the relative co-ordinates of the stars of the Pleiades with a view to ascertaining the mutual proper motions. This group of stars had for him a great fascination, and to within a few days of his death he was at work endeavouring to supplement this inquiry by photographic methods. His favourite motto was—

spem nos vetat inchoare longam
aetas,

but certainly he never acted by the implied caution. To undertake some fresh work as soon as, or before the last

was finished was his constant aim, and his zeal was generally equalled by his success. He undertook very little from which he did not get some positive result, for his method was to work tentatively, and to relinquish the inquiry if it did not appear promising. In this way he took up what he regarded as the greatest work of his life, the determination of the parallax of stars of the second magnitude. In this investigation he showed the keenest interest, and much of the work was performed not only under his directions, but actually by himself, and the Royal Society, recognising the importance of this work, and also Prof. Pritchard's earnest and protracted devotion to astronomy, awarded him the Royal Medal last year.

W. E. P.

NOTES.

THE annual meeting of the Royal Society for the election of Fellows was held in their apartments at Burlington House on Thursday last, when the following gentlemen were elected into the Society:—Prof. William Burnside, Prof. Wyndham R. Dunstan, William Ellis, Prof. J. Cossar Ewart, Prof. William Tennant Gairdner, Ernest William Hobson, Sir Henry Hoyle Howorth, Edwin Tulley Newton, Charles Scott Sherrington, Edward C. Stirling, John Isaac Thornycroft, Prof. James William H. Trail, Alfred Russel Wallace, Prof. Arthur Mason Worthington, Prof. Sydney Young.

AMONG Fellows of the Royal Society whose names appear in the list of birthday honours are Dr. B. W. Richardson, F.R.S., Capt. A. Noble, C.B., F.R.S., and Mr. Charles Todd, C.M.G., F.R.S. Dr. Richardson, who has been knighted, is well-known as a writer on hygienic and medical subjects, and Capt. Noble, who is created a Knight Commander of the Bath, is an authority on explosives. Mr. Todd has been promoted to Knight Commander of the Order of St. Michael and St. George. In the announcement of the honour that has been conferred upon him, he is described as Postmaster-General and Superintendent of Telegraphs of the colony of South Australia. It should be pointed out, however, that Mr. Todd is also the Government Astronomer at Adelaide and that he has published numerous contributions to meteorology and astronomy. It almost appears as if Mr. Todd's standing as an astronomer and man of science has been willfully avoided, for we can hardly think that the Colonial Office is in blissful ignorance of his scientific work. The only scientific man in Government employ whose services have been recognised is Mr. David Morris, the assistant director of the Botanic Gardens at Kew, who has been made a Companion of the Order of St. Michael and St. George.

THE ladies' *conversazione* of the Royal Society was held last night in the Society's apartments at Burlington House.

THE President of the Society of Antiquaries has issued invitations for a *conversazione* at Burlington House, on the 14th instant.

It is expected that, at the meeting of the Royal Astronomical Society to-morrow evening, Prof. Thorpe and Mr. Alfred Taylor will give an account of the expeditions to observe the recent total solar eclipse. Prof. E. E. Barnard, of the Lick Observatory, will also be present, and will address the meeting.

THE annual *conversazione* of the Society of Arts will take place at the Imperial Institute, South Kensington, on Friday, June 30, from 9 to 12 p.m.

ON June 26, 1793, died Gilbert White of Selborne, a man who has done perhaps more than any other of his countrymen to awaken a taste for natural history and encourage its pursuit. A writer in the June number of *The Zoologist* gives a sketch of the life of this naturalist, and points out that now is the time to erect some kind of monument to his memory. The sole

memorial which at present exists is a marble tablet on the chancel wall of the church in which he officiated. This is not as it should be. A marble bust was erected to Richard Jefferies, in Winchester Cathedral, a few months after his death, while Gilbert White, also a Hampshire man, has remained unhonoured for a century. As to the claim of the author of the "Natural History of Selborne," to a memorial there can be no doubt, and it is to be hoped that a committee will be formed to take the matter in hand, and carry it to a successful termination. Unfortunately no portrait of Gilbert White is in existence, so there is a difficulty in designing a monument with a statue unless it be decided to allow the sculptor to carve the features from his imagination. Under these circumstances, the preferable plan would be to erect a monument emblematical of the avocation of a naturalist, such, for example, as the monument to the naturalist, John James Audubon, which was unveiled at New York on April 26 last. Whether the monument should be erected at the little village of Selborne, or in the borough-town of Petersfield, ought soon to be decided. We trust that when an appeal for funds is made, there will be a hearty response to it.

WE regret to have to record the death of Dr. Carl Semper, Professor of Zoology and Comparative Anatomy in the University of Würzburg, on May 29.

It has been resolved by the Government of India that in the future two-thirds of the officers of the Geological Survey shall be primarily engaged in the explorations necessary for the completion of the geological map, and the remaining third on the investigation of mineral fields. According to the *Times*, the exploration in the latter case will be confined to such preliminary examination as may be necessary to supply general information regarding their character and extent to capitalists and promoters, upon whom will rest the responsibility for more detailed prospecting.

AN International Electrical Congress will be held in connection with the Columbian Exposition, at Chicago, in August. There will be three sections, one dealing with pure theory, another with theory and practice, and a third with practice only. Papers are solicited upon electrical subjects, and should be sent to Prof. T. C. Mendenhall, Washington, D.C., not later than August 1. Electrical standards and units will be considered by a body consisting of those specially designated as representative delegates from the various Governments.

THE second meeting of the International Maritime Congress is to be held in the rooms of the Institution of Civil Engineers next month. The chief object of the congress is the reading and discussion of papers on matters relating to the promotion and security of maritime traffic and commerce. After the meeting it is proposed to visit the docks along the Thames, and some of the provincial seaports.

THE annual general meeting of the Institution of Civil Engineers was held on May 30. Before proceeding to the ordinary business, H.R.H. the Duke of York was elected an honorary member. The ballot for Council resulted in the election of Mr. Alfred Giles as President; of Sir Robert Rawlinson, Sir B. Baker, Sir Jas. N. Douglass, and Mr. J. W. Barry, as Vice-Presidents; and of Dr. W. Anderson, Mr. A. R. Binnie, Sir Douglas Fox, Sir Chas. A. Hartley, Messrs. J. C. Hawkshaw, C. Hawksley, Alex. B. W. Kennedy, Sir Bradford Leslie, Mr. J. Mansergh, Sir Guilford Molesworth, Mr. W. H. Preece, Sir E. J. Reed, Messrs. W. Shelford, F. W. Webb, and W. H. White as other Members of Council.

THE weather during the latter part of last week continued particularly dry over the greater part of these islands, owing to an anticyclone which lay over the Atlantic embracing most part