

Obituary.

PROF. H. W. G. VON WALDEYER.

THE years of the war were disastrous to German anatomy, the deaths of men like Gaupp and Brodmann, Bütschli and Edinger, to mention only four, leaving gaps which have not been filled. But on January 23 of this year the Nestor of German anatomy, Geheimrath Heinrich Wilhelm Gottfried von Waldeyer-Hartz, died in the eighty-fifth year of his age, a month after Austria had lost one of her leading anatomists, Prof. Holl, of Gratz. Waldeyer was a man of genial and commanding personality, who, from the time he became professor of anatomy in Berlin in 1883, had been the recognised leader of German anatomists and biologists, and their spokesman at home and abroad. Even in his old age he was tireless in his attendance at congresses and scientific meetings, and undertook long journeys to all parts of Europe and poured forth fluent orations in sonorous and easy periods. But, apart from his gifts as an orator and congressman, Waldeyer had an exceptionally wide knowledge of anatomy, histology, embryology, pathological anatomy, and anthropology, in each of which he was regarded as an expert who could speak from a personal acquaintance with the facts.

Born on October 1, 1836, Waldeyer did not proceed to his doctorate until 1861, when he submitted to the Faculty in Berlin a dissertation "De claviculæ articulis et functione"; for when he entered the University of Göttingen he devoted himself to pure science, and then, from 1856 to 1858, to physiology and pathological anatomy. But during those years he came under the influence of the great Göttingen anatomist Henle, who was responsible for giving Waldeyer an aim in life and the inspiration to follow it. The next three years he spent as assistant to the anatomist Budge; then as an assistant for two years in the physiological institute at Königsberg, and for another year in a similar position under R. Heidenhain at Breslau, where in 1865 he was made extraordinary professor of pathological anatomy, and two years later an ordinary professor of the same subject. He held this position until 1872, and so great was the reputation he established as a pathologist that fifteen years after he had given up pathological for normal anatomy he was called to the bedside of the Emperor Frederick at San Remo as an impartial witness to settle the dispute which had arisen between the surgeons, British and German, as to the nature of the laryngeal growth from which the penultimate Kaiser was suffering. During the long tenure of his chair of pathology Waldeyer did not neglect his chief interest, normal anatomy and embryology; for during this period he wrote his famous work "Ueber Eierstock und Ei," illustrations from which have ever since been in every textbook of anatomy, histology, and embryology.

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In 1872 Waldeyer for the first time was given charge of a department of anatomy: it was a position of quite exceptional difficulty and delicacy in the new school which the Prussians built up in Strassburg after wresting it from the French. Here Waldeyer displayed his remarkable abilities as a tactful administrator and peace-maker. So successful was he in this formidable task that in 1883, when the Prussian Government had another difficult problem to solve, to find a successor to the senile Reichert in Berlin, Waldeyer was appointed, although Koelliker, Gegenbaur, and His were senior to him and had a greater prestige as anatomists. Waldeyer had a very difficult task to reduce to order the chaos bequeathed to him by Reichert; but he set to work to build up a great institute, not merely of gross anatomy, but also of histology and embryology. Five years later he was able to secure the establishment of a second professorship of anatomy, to which O. Hertwig was appointed, to relieve Waldeyer of part of the work in histology and the whole of embryology. Waldeyer relinquished his position only about three years ago. In Berlin he came to be regarded as the father of German anthropology after the death of Virchow. He succeeded Max Schultze as editor of the *Archiv für mikroskopische Anatomie*; after His's death he became editor of the anatomical part of the *Archiv für Anatomie und Physiologie*, and after Virchow's death editor of the *Jahresbericht für die gesamte Medizin*. He also succeeded Du Bois-Reymond as the secretary of the Berlin Academy of Sciences, and was made a member of the Prussian Herrenhaus.

In spite of this overwhelming programme of disturbing engagements, and his ubiquitous presence and active participation in congresses at home and abroad, Waldeyer continued his work of original investigation, and published an unbroken stream of memoirs ranging over the whole of anatomy, histology, embryology, and anthropology. Almost every domain of anatomy that he invaded, whether it was the structure of fibrous tissue or bone, the development of teeth, the morphology of the reproductive organs, the comparative anatomy of hair, or the interpretation of the central nervous system, he reduced to order, and left some clarifying conception, and as a rule some new term, to clear away difficulties of interpretation. His work is so voluminous and many-sided that it is impossible to review it concisely. But his well-known efforts to clear up confusion on the subject of karyokinesis, and his attempt in 1891 to dissipate the chaos of interpretation of nervous structure by inventing the term *neurone* (Greek *νεῦρον*—German *Neurōn*—*anglice* *neurone*), are typical of Waldeyer's *métier*. If he was not a brilliant genius, he was a man of calm judgment and exceptionally clear insight. It was these qualities that made him so great a power in the modern

history of anatomy and the author of so many clarifying expressions of what other people were trying in vain to set forth.

As a lucid exponent and as a teacher he was pre-eminent. Many young anatomists have had occa-

sion to appreciate his fairness and his weighty help in defending themselves from attacks even from his own countrymen. With his death there passes away perhaps the most influential anatomist of modern times.
G. ELLIOT SMITH.

Notes.

THE large group of sun-spots which became visible a few days ago has been accompanied by disturbances of the magnetic and electrical conditions of the earth, manifested by magnetic storms, interruptions of the telephone and telegraph services over the greater part of the world, and brilliant auroral displays. Large sun-spots often appear without producing any such terrestrial effects, and magnetic storms sometimes occur in the absence of sun-spots, so that the relationship between the two phenomena is obviously exceptionable. There is evidence that solar prominences are more closely related to the production of magnetic disturbances on the earth than are sun-spots, which are only visible effects of solar disturbances the exact nature of which remains to be discovered.

THAT wireless telephony is fast emerging from the experimental stage into that of practical utility is evidenced by the interesting demonstrations, in which the *Times* participated last week, between stations equipped by the Marconi Co. at Southwold, in Suffolk, and Zaandvoort, in Holland. There is no technical reason why these stations should not be linked up with the ordinary telephone systems of Great Britain and Holland, so that it would be possible to communicate freely between any point in either country to any point in the other. It is interesting to note that the stations work on the short wave-length of 100 metres, which makes them free from interference from the 600-metre wave commonly used for marine communication and from the higher wave-lengths of the long-distance stations, as well as less likely to be influenced by stray disturbances than if a longer wave-length were employed. Other methods of protection against interference are being experimented with, and also of securing a greater degree of directive effect instead of broadcast emission, which, when such stations multiply, should contribute very materially to freedom from mutual interference. It is not generally known that wireless telephony is already employed by the Stock Exchange in Amsterdam for communicating prices to points all over Holland, and that these messages can be picked up in this country without difficulty. Dr. J. A. Fleming, the pioneer in the applications of the thermionic tube, upon which so much of the advance in wireless telephony is due, points out, in an interview in the *Times*, the great possibilities as well as the great achievements of wireless telephony, and emphasises its advantages over line-working in that no distortion of the wave is produced; as, in the case of wireless, all the harmonics are attenuated in the same proportion as the fundamental, because they are all propagated at the same rate.

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THE annual visitation of the Royal Observatory, Greenwich, will be held on Saturday, June 4. The observatory will be open at 3.30 for inspection by invited guests.

PROF. JOHN MERLE COULTER, of Chicago, Dr. Samuel Garman, Prof. Giovanni Battista Grassi, of Rome, Prof. Louis Alexandre Mangin, of Paris, and Prof. Jean Massart, of Brussels, have been elected foreign members of the Linnean Society of London.

At the anniversary dinner of the Royal Geographical Society, to be held at the Connaught Rooms at 7.30 p.m. on Tuesday, May 31, the guests will include the French Ambassador, General Bourgeois, Earl Beatty, Earl Buxton, Viscount Chelmsford, the High Commissioner for Canada, and Bishop Gore.

In connection with the Royal Microscopical Society a Paper Industries Section is in course of formation. It will deal with researches relating to timber, wood-pulp, paper, etc. All interested in the subject and willing to assist are invited to communicate with Mr. J. Strachan, 74 Blenheim Place, Queen's Cross, Aberdeen.

THE CROWN PRINCE OF JAPAN, accompanied by Prince Kan-in and a large party, which included Admiral Ogouri and seven senior naval officers, visited Greenwich Observatory on Monday, May 16. The party was received by the Astronomer Royal, Sir Frank Dyson, and the two chief assistants, Mr. H. Spencer Jones and Mr. J. Jackson, and examined with interest the chief instruments in the observatory.

At the meeting of the Franklin Institute, Pennsylvania, held on May 18, the Franklin medal and certificate of honorary membership were presented to M. Jusserand, French Ambassador to the United States, for Prof. Charles Fabry, of the University of Paris, for his studies in the field of light radiation. The Franklin medal and certificate of honorary membership were also presented to Mr. Frank J. Sprague, New York City.

THE Wild Birds Advisory Committees appointed for England and Scotland by the Home Secretary and the Secretary for Scotland to advise regarding the protection of wild birds held their first meetings on May 12, and a joint meeting on May 13, when general questions of wild bird protection in Britain were discussed. The chairmen of the committees are Viscount Grey of Fallodon, K.G., and Mr. H. S. Gladstone, and the secretary of the Scottish committee is Dr. James Ritchie, Keeper of the Natural History Department, Royal Scottish Museum, Edinburgh.