

referred to in the volume. An interesting contrast is noted between the dreamy philosophical indifference of the Chinese to all questions of geography and natural science, their absolute and voluntary ignorance of other countries, and the quick intelligence of the Turki and Indian merchants who travel far, observe keenly, and hold surprisingly clear views on the difficult political questions which the convergence of the domains of the three dominating powers of Asia brings to a focus in Kashgar. At length Captain Younghusband was ordered back to India, making an exploring expedition through the Pamirs on the way, and it is almost amusing to notice how little he speaks of the sport of that famous region; indeed, the killing of *Ovis poli* seemed to interest him less than the observation of the wolves which weed the herds of the old rams when the weight of years and horns makes their removal a benefit to their species. On the Pamirs there were great political problems in course of development, and such information as the reader gleaned of Captain Younghusband's intercourse with Russian officers, only whets his desire for the full history of all that went on. At one time the officers of both nations were drinking the health of their sovereigns, and imparting useful hints as to dealing with exacting natives; the next day the Englishman was informed by his Russian friend that he must quit the Pamirs instantly for Turkestan, and sign an undertaking not to cross into India by any known pass. This was done; but instead of returning to the northern plain, Captain Younghusband set to work to discover an unknown pass, and so fulfilled his mission without breaking his word.

The remaining journeys were of less value as exploration, being carried out in the course of military and political duty in Hunza and Chitral, duty which gave to Captain Younghusband a unique knowledge of the intrepid mountaineers whose misguided rulers precipitated the recent war with the Indian Government. For the details of that war we are referred to the special book in which the author narrates his experience as correspondent of the *Times*.

Captain Younghusband gives in his preface one of the most powerful reasons for the inclusion of natural science in ordinary education. He says: "It has been a ceaseless cause of regret to me that I had never undergone a scientific training before undertaking my journeys. During the last year or two I have done what I can by myself to supply this deficiency; but amongst the Himalaya Mountains, in the desert of Gobi, and amid the forests of Manchuria, how much would I not have given to be able to exchange that smattering of Greek and Latin, which I had drilled into me at school, for a little knowledge of the great forces of nature which I saw at work around me."

With one more quotation we must close this notice. Captain Younghusband has been considering the universality of the law of evolution, and proceeds to apply it to the human species with somewhat remarkable results.

"The traveller," he says, "frequently associates with men who are little more than beasts of burden, and on his return he meets with statesmen, men of science, and men of letters of the first rank in the most civilised countries of the world. He sees every step of the ladder of human progress. And, so far as I have been able to make use of my opportunities of observation, I have not been impressed with any great mental superiority of the most highly-developed races of Europe over lower races with whom I have been brought in contact. In mere brain-power and intellectual capacity there seems no great difference between the civilised European and, say, the rough hill tribesmen of the Himalayas; and, in regard to the Chinaman, I should even say that the advantage lay on his side."

It is to the moral superiority of the European races that Captain Younghusband attributes their power over all

the races of the East. The illustrations are comparatively few but good and well-chosen, as the specimen on p. 131 shows, while the maps are sufficient as regards number and scale, and show the routes very clearly.

HUGH ROBERT MILL.

PROFESSOR DAUBRÉE.

ONE of the brightest lights in the geological department of French science has been extinguished by the death of Prof. Daubrée, who has passed away at the ripe old age of eight-two years. Born at Metz on June 25, 1814, he early devoted himself to minerals and rocks, and from the *École Polytechnique* passed in 1834 into the *Corps des Mines*. In these early years he paid visits to the mining districts of different parts of Europe, and communicated papers on his observations to the *Geological Society of France*, the *Annales des Mines*, and the *Comptes rendus* of the *Academy of Sciences*. He already began to display that breadth of view and width of sympathy which distinguished his career, for, while studying minutely the mineral districts of Scandinavia, he devoted much time and thought to the erratic formations then beginning to attract attention, and published his views regarding them. Gradually his attention was more and more directed to the experimental side of his favourite science. He studied the artificial production of various minerals, and entered upon a course of profound investigation in which he became the great leader, and did more than any other observer to advance that department of the science.

With a deep admiration for Sir James Hall, the true founder of experimental research in geological inquiry, he threw himself with especial ardour into the investigation of the influence of water-vapour on minerals and rocks when exposed to high temperatures and under great pressure. The difficult problems of metamorphism had a peculiar fascination for him, and he devoted himself with admirable patience to the task of trying to solve some of them by actual experiment. Every geologist who has studied these questions will feel that by the death of Daubrée, the great pioneer who first lighted up for us some of the darkest pathways of the subject has passed away. The various researches collected in his "*Études Synthétiques de Géologie Expérimentale*" have taken their place among the classics of modern science.

Nor were his investigations confined to the earth. He took special interest in meteorites, and besides diligently gathering specimens, studied their composition and structure, and carried on a series of experiments in order to reproduce their characters artificially, and thus to throw light on the chemistry of extra-terrestrial space. His last important volumes discussed in ample detail the phenomena of underground water, and traced the various solutions and changes which water is now producing and has formerly effected within the crust of the earth.

M. Daubrée spent the greater part of his scientific life in Paris, where he occupied official posts in the *École des Mines* and *Muséum d'Histoire Naturelle*. He retired from office two or three years ago, but continued to interest himself actively in scientific research. He was an indefatigable worker, and, like most busy men, found time for more than his own professional duties. He was one of the most regular attendants of the *Académie des Sciences*, and one of the most influential members of that distinguished body, serving on many of its Committees, and taking an active part in all its concerns. At its meeting last week, the *Academy*, after some eulogistic words from the President, at once rose in token of its respect. Daubrée was likewise a member of the *Council of the Legion of Honour* until the whole body resigned some time ago.

The death of his wife last year was a blow to him, from which he never seemed quite to recover. Yet at the Centenary of the Institute of France, last October, he took his part in the various functions, save those that required evening attendance. He accompanied the excursionists to Chantilly, and was welcomed there by the Duc d'Aumale as an old colleague and personal friend. He began to be somewhat ailing before Easter, and though for a time he appeared to rally, and hopes were entertained that his life might still be prolonged, he died peacefully on May 29, at his house in the Boulevard St. Germain.

A courteous and polished gentleman of the old school, M. Daubrée was everywhere a favourite. There was a certain gentle timidity of manner which gave him a peculiar charm. To those privileged with his friendship he was a warm-hearted kindly benefactor who never spared himself trouble to do a kind act, and to give proofs of the depth of his affectionate nature.

A. G.

NOTES.

AT the annual meeting of the Royal Society for the election of Fellows, held on Thursday last, in the Society's rooms in Burlington House, the following gentlemen were elected into the Society:—Lieut.-Colonel Sir George Sydenham Clarke, R.E., Dr. J. Norman Collie, Dr. Arthur Matthew Weld Downing, Dr. Francis Elgar, Prof. Andrew Gray, Dr. George Jennings Hinde, Prof. Henry Alexander Miers, Dr. Frederick Walker Mott, Dr. John Murray, Prof. Karl Pearson, Rev. Thomas Roscoe Rede Stebbing, Prof. Charles Stewart, Mr. William E. Wilson, Mr. Horace Bolingbroke Woodward, and Dr. William Palmer Wynne. The investigations made by each of the new Fellows are set forth in the certificates printed in our issue of May 7.

A DISTINGUISHED philosopher, a wonderful orator, and a mind that was always on the side of advancement in science, art and literature, has been lost to France by the death of M. Jules Simon. He was a great educational reformer, and his voice and pen were always ready to support those things which make for the peace and progress of the world. At the celebration of the Centenary of the Institute of France, last October, he delivered a remarkable discourse, which was printed in full in these columns. His concluding words reflect the broadness of his mind so well, that they may be appropriately repeated now. "Associés et correspondants de l'Institut de France, vous n'emporterez pas seulement d'ici le souvenir des chaleureuses sympathies qui vous ont accueillis. Nous emporterons tous, de cette réunion fraternelle, un redoublement d'amour pour la paix, pour les sciences qui la fécondent et pour les arts qui l'embellissent; et nous travaillerons, chacun dans notre coin préféré de l'atelier universel, à la prospérité de la maison, c'est-à-dire au bonheur de l'humanité." The French Chamber has shown its appreciation of Jules Simon's services in the interests of humanity by voting ten thousand francs for a public funeral, and this has been unanimously agreed to by the Senate.

DR. ROUX has been elected an associate of the Academy of Medicine, in the room of the late M. Pasteur.

SIR GEORGE STOKES and Dr. Carl L. Griesbach, Director of the Geological Survey of India, have been elected honorary members of the Austrian Academy of Sciences.

THE annual conversazione of the Institution of Electrical Engineers will be held in the Galleries of the Royal Institute of

Painters in Water Colours, Piccadilly, on the evening of Thursday, June 25.

AN agricultural bacteriological laboratory will shortly be opened at St. Petersburg, under the Ministry of Agriculture and State's Domains. Its chief purpose will be the study of the micro-organisms which are harmful to agriculture, and the pursuit of scientific studies in bacteriology. The laboratory is endowed with a yearly grant of 10,000 roubles (£1000) from the Treasury of the State.

THE members of M. Andrée's balloon expedition to the North Pole left Gothenburg on Sunday, June 7, on board the steamer *Virgo*, bound for Spitzbergen.

OWING to some difficulty in connection with the preparations for his new expedition to Greenland, Lieutenant Peary will be unable to come to England as he intended. The meeting of the Royal Geographical Society on Tuesday, June 16, at which he was to read a paper, will, therefore, not be held.

THE steam yacht *Windward* left St. Katharine's Docks on Tuesday with a very large supply of provisions, a number of sledges, and two additional members for the Franz-Josef Land party of the Jackson-Harmsworth Expedition. It is hoped that she will communicate with the explorers at Cape Flora, Franz-Josef Land, on or about July 20. As soon as the *Windward* has discharged her cargo, she will leave Franz-Josef Land with news of the doings of the explorers, and she may be expected in England by the end of September. About this time next year, if all has gone well, the ship will leave London again to bring the explorers home.

WE regret to record the death of Sir George Johnson, F.R.S., at the age of seventy-eight. He obtained his medical education in King's College Medical School, with which institution his life's work is intimately associated; for at different times he there filled the posts of medical tutor, professor of materia medica and therapeutics, professor of the principles and practice of medicine, and professor of clinical medicine. He was the author of numerous works and papers on medical subjects, the best-remembered of which will probably be those on cholera, epidemic diarrhoea, and Bright's disease. A melancholy interest is attached to the fact that his last work, on "The Pathology of the Contracted Granular Kidney," was published the day before his death. He was elected a Fellow of the University of London in 1862, and was admitted into the Royal Society ten years later.

TOWARDS the end of a long and highly appreciative notice of the life and works of the late Sir J. Russell Reynolds, whose death we briefly recorded last week, the *British Medical Journal* thus refers to the scholarly address which he delivered as president of the successful meeting of the British Medical Association held in 1895:—"His presidential address, as the last important public utterance of a distinguished man, has now a double interest. As we re-peruse it we seem to read the departing words of a veteran to whom the sunset of life had already given mystical lore, and whose admonitions to those who shortly will reign in his room have assumed oracular force. At the end of a span of years greater than is usually allotted to men of our calling, he looks with calm survey over a period the most pregnant with scientific progress the world has ever yet known. In a series of terse, closely reasoned passages he points out the vast changes that have occurred in the entire theory and method of physic since he first set foot in a hospital ward, rejoicing in the advances made, warning his successors against the errors and defects that those very advances may beget. Science is great, wisdom is greater; the ampler the armament