

News and Views.

ON Aug. 28 occurs the bicentenary of the birth of Johann Heinrich Lambert, one of the most industrious and interesting mathematicians and natural philosophers of the eighteenth century. Born at Mühlhausen, Alsace, of French extraction, Lambert was in turn tailor's apprentice, clerk, bookkeeper, secretary, and tutor, and while engaged as the latter travelled and made the acquaintance of many learned men. From 1764 until his death on Sept. 25, 1772, he was a protégé of Frederick the Great and was one of that group of learned men who were attracted to Berlin and given a pension as a member of the Berlin Academy of Sciences. Lambert's industry was almost incredible. He made inquiries into and wrote upon many branches of physics, mathematics, and astronomy, and was much given to speculation. Of his "Cosmologische Breife" Miss Clerke said: "The conceptions of this remarkable man were grandiose, his intuitions bold, his views on some points a singular anticipation of subsequent discoveries. The sidereal world presented itself to him as a hierarchy of systems, starting from the planetary scheme, rising to throngs of suns within the circuit of the Milky Way—the 'ecliptic of the stars' as he phrased it—expanding to include groups of many Milky Ways; these again combining to form the unit of a higher order of assemblage, and so onwards and upwards until the mind reels and sinks before the immensity of the contemplated creations."

THE commemoration of the one hundred and fiftieth anniversary of the discovery of the Hawaiian or Sandwich Islands by Cook—whose own bicentenary is being celebrated in Yorkshire next month—was held on Aug. 16 and succeeding days in the Hawaiian Islands. The events included the unveiling of a monument to Cook on the small island of Waimea, off the island of Kauai, to mark the spot where Cook first landed on Jan. 7, 1778; a memorial service in Kealahakua Bay, in the Island of Hawaii, on the shore of which stands a monument marking the spot where Cook met his death on Feb. 14, 1779; and memorial exercises at Honolulu, the capital of the islands, which itself stands on the beautiful island of Oahu. During the celebrations the United States has been represented by the battleship *Pennsylvania*, and Great Britain, Australia, and New Zealand have been represented by the cruisers *Cornwall*, *Brisbane*, and *Dunedin*. Mr. Dwight F. Davis, the U.S. Secretary for War, was present, and addresses on Cook's career and service were delivered by Mr. Hofgaard, the president of the local historical society, and Mr. Houston, member of Congress for Hawaii, who referred to Cook as "one of those men of whom Great Britain is so prolific, carrying her flag through the world's waste places in advance of science and human welfare."

ON Sept. 1 and 2 last year the first ascent of Mont Blanc direct from the Brenva Glacier on the Italian side of the mountain was made by Mr. F. S. Smyth and Prof. T. Graham Brown. The name of Smyth

is not new in Alpine annals, and in particular as regards Mont Blanc, for in August 1855 the Rev. Christopher Smyth and the Rev. J. Grenville Smyth, with Messrs. Kennedy, Hudson, and Ainslie, but without guides, made the first ascent of Mont Blanc by the Dôme du Goûter route from St. Gervais; while a fortnight previously the two Smyths, with Messrs. Hudson, Birkbeck, and Stevenson and four guides, had made the first ascent of the highest peak of Monte Rosa, the Dufourspitze. Last year's feat, the attainment of Mont Blanc by the direct route from the glacier de Brenva—which appears wellnigh impossible to all who have stood on the Col du Géant and regarded that apparently upright wall of ice and rock, scored by couloirs scoured by avalanches of ice, snow, and stones for the greater part of the day and night—was well worthy of his great namesakes, and the account by Mr. Smyth in the May 1928 number of the *Alpine Journal* is one of the most fascinating in the brilliant and tragic annals of the great white mountain. Not content with last season's performance, however, Mr. Smyth and Prof. Graham Brown have now (Aug. 6–8) added to their achievement by ascending from their sleeping-place of last year—a reddish rock buttress which they had named "The Red Sentinel," where they again passed a night in sleeping-bags—to the summit of Mont Blanc de Courmayeur, the somewhat lower peak, 15,595 feet (Mont Blanc being 15,782 feet high above the sea), which one sees just below, to the south-east, as one stands on the summit of Europe.

THIS year's climb, however, is of still greater difficulty than that of last season, and involves at the start from the Red Sentinel the passage of a great couloir 200 feet wide at its narrowest point and flanked by perpendicular walls of black ice (the climber's technical term for clear ice, which of course is bluish green in colour), which are constantly sending down cataracts of ice fragments as soon as the sun is up. Then came firm but very steep granite rocks, and two ice ridges, one like a blue blade in its upper reaches, where the sun shone through its transparent interior. The step-cutting up these ridges was rendered most unpleasant by a bitterly cold north wind, which blew the stinging ice spicules like so many needles into the climbers' faces and every exposed part, and froze their clothes to their bodies. Then came another stiff rock climb, a steep ice slope of clear black ice, requiring handholds as well as steps to be cut; then an ice chimney, and afterwards a careful traversing of ice-sheeted rocks. These led suddenly to an immense wall of ice 700 feet high, castellated with gendarmes and sentinels ever ready to fall, but fortunately showing a gap only 30 feet high through which the climbers were able to cut their way, and finally arrive by easier slopes of snow, of which so little had been met with this year of black ice, at the familiar snow summit of Mont Blanc de Courmayeur. It was then 7.45 p.m. on Aug. 7, and after watching the shadow of Mont Blanc creep

over the plains of Italy, the two intrepid mountaineers walked up to the summit of Mont Blanc itself, and then hastened down to the Vallot Refuge at the 14,312 feet level, on the Rocher des Bosses on the Chamonix side.

A WIRELESS message received in Ottawa from the Canadian Government police post at Chesterfield Inlet, sets at rest the two years old mystery of the fate of Mr. John Hornby, who had spent many years in the exploration of the wilds of northern Canada. His body and those of his companions, his cousin, Mr. Edgar Christian, and Mr. Harold Adlard, were found in a lonely cabin at the junction of the Hanbury and Thelon Rivers, 300 miles west of Chesterfield Inlet, where they had starved to death. Hornby, who was fifty-one years of age and was educated at Harrow, was a well-known explorer, prospector, and trapper. During his twenty years in the Canadian wilds he had collected animals and skins for the Canadian Government; he was an authority on the habits of the caribou, and had a scheme for herding them as the Lapps herd their domestic reindeer; and he was familiar with the habits of the Eskimo, with whom he had frequently lived. On his last journey he had planned a two-years exploration of the land beyond the Great Slave Lake with the intention eventually of reaching the coast. The latest news of the wanderings of the party is conveyed in a letter from Mr. Adlard to his parents, in which he stated that he and Christian, leaving Edmonton in May 1926, had paddled their canoe most of the 600 miles to Fort Resolution, where they had joined Hornby. They proposed to travel during the summer months, and in winter to build a hut and live by trapping, hunting, and fishing. No news was expected of the party after it had passed Fort Smith, but for more than a year a look out for it had been kept by the Canadian Mounted Police.

CONSIDERABLE anxiety has been caused in Kashmir and the Punjab by the ice-dam which has formed across the valley of the Shyok, an upper tributary of the Indus, which drains from the Remo glacier. In an article in the *Times* it is explained that this dam is caused by the Little Khumdan glacier, which in 1926 began to push its snout across the Shyok valley. The dam is said to be about four hundred feet high, and to have caused a lake above it twelve miles long and 200 feet deep. If the glacier snout gives way suddenly, serious floods must result, entailing the destruction of the numerous alluvial flats along the valley, and possibly the bridge which carries the road to the town of Gilgit. There is a possibility of further danger when the flood waters flowing along the Indus valley burst out into the plains of the Punjab in the neighbourhood of Attock. The bursting of the dam was expected to occur about Aug. 21, but eight days earlier a false alarm was given that the flood was on its way. Elaborate precautions have been taken by the Government of India to warn the inhabitants of the valley. It is possible that the leakage may be gradual, and disaster be thus escaped; in any case the sooner the dam bursts the better, for

the Indus is now low, but will probably soon rise to its normal level. A flood due to the same cause occurred in 1841, but in that year the lake formed by the ice-dam was 40 miles long and 1000 feet deep.

IN a recent address delivered at the fifty-eighth annual breakfast of the National Temperance League with the British Medical Association at Cardiff, Dr. J. D. Rolleston maintained that much more could be done by the medical profession in the campaign against alcohol than at present. He claimed that increased importance might be attached to the subject in the teaching on public health. Whereas Edmund Alexander Parkes, the founder of the science of modern hygiene, had devoted many pages to alcohol in his "Manual of Hygiene" published sixty years ago, in most modern text-books it receives scant attention. While acknowledging the work done by churches of all denominations in the campaign against alcohol, Dr. Rolleston declared that the odour of sanctity connected with the idea of temperance has a repellent effect. He suggested that those engaged in the various branches of the public health service, such as medical officers of health, medical superintendents of fever hospitals and doctors to welfare centres, might take an active part in the campaign against alcoholism. The medical superintendents of fever hospitals who have to give instruction in acute infectious diseases to students have an excellent opportunity of informing their hearers of the low therapeutic value of alcohol and the likelihood of its giving rise to the drink habit by its ill-advised administration, as well as by giving them glimpses of the ramifications of alcoholism into the various departments of medicine and its sociological importance. The July number of the *Bulletin of Hygiene* contains a review by Dr. Rolleston of recent literature on alcoholism, in which historical aspects, prevalence, etiology, experimental work, diagnosis, prophylaxis, treatment, and legislation are considered.

It is reported that the Australian Government will accept the offer recently made by the Empire Marketing Board for entomological research in Australia. Dr. R. J. Tillyard, the chief Commonwealth entomologist, is now on his way to Canberra, where the Central Research Station is to be built. The investigations undertaken will be mainly along the lines of biological control, and some of the first problems to receive attention will be the control of Sheep Blow-Fly, Buffalo Fly, Codlin Moth, and St. John's Wort; the last named, which is a familiar weed in England, has spread at an amazing rate in Australia and rendered useless many thousands of acres of valuable pasture land. Close co-operation will be maintained with the Parasite Laboratory of the Imperial Bureau of Entomology at Farnham Royal, where work has already commenced on the Blow-Fly, Codlin Moth, and St. John's Wort problems.

AN interesting demonstration of the Kodacolor Process for amateur cinematography in colours was recently given in London by Messrs. Kodak Ltd., of Kingsway; the process will not, however, be available commercially for some months. The two films shown

gave a good indication of the scope of this process. Flower studies, goldfish swimming in a pool, seaside scenes, and a group of children at play in a garden were shown, quite good range and rendering of the colours being observed. The film is coated on the back with a panchromatic emulsion, whilst its front surface consists of a series of very small lens elements formed by stamping the film with a suitable die, the lens of the ciné camera being fitted with a filter with red, green, and blue segments. On exposure, a large number of small images of the triple colour diaphragm are formed on the film. The film is developed and reversed to give a positive, which, on being passed through a projector fitted with a similar tricolour filter to that used in the camera, renders the original scene in its natural colours on the screen.

AN important report of an inquiry by Dr. Allan C. Parsons into the after-histories of persons attacked by encephalitis lethargica ('sleepy sickness') has been issued by the Ministry of Health (*Reps. on Pub. Health and Med. Subjects*, No. 49. Price 4s. 6d.). The report is based on an analysis of the data concerning some 3500 patients—about one-fifth of the total number of cases notified from January 1919 to December 1926. The analysis shows that if 100 cases are investigated three years after the primary illness, the average findings will be that 35 patients have died, 25 patients have survived without serious consequences, and 40 patients have become more or less disabled in mind or body, or both. Changes in conduct and disposition are among the most striking and troublesome of the sequels of the disease, particularly in children and young adolescents. These moral changes occur in some 25 per cent of the patients, the most common being lying, thieving, bullying, outbursts of temper and violence, and sexual offences.

"THE Campaign against Rats" is the title of an article by Dr. Louis Bahr in *The World's Health* for July (vol. 9, p. 226). He surveys the part played by rats in the dissemination of disease and the economic damage caused by them, which in Great Britain is estimated to amount to fifteen million pounds annually. For extermination Dr. Bahr recommends the method adopted in Denmark, which consists in the use of a bacterial culture or virus, known as 'ratin,' followed 3-4 weeks later by a squill-containing poison, 'ratinin.' Dr. Bahr claims that if this method be systematically used seasonally, only a very small number of rats manage to survive.

WE much regret to announce the death on Aug. 19, at the age of seventy-two years, of Viscount Haldane of Cloan, K.T., O.M., F.R.S., Chancellor of the Universities of Bristol and St. Andrews, the distinguished statesman and philosopher who has twice been Lord Chancellor of Great Britain.

SINCE the death of Prof. C. Diener the chairs of palæontology and palæobiology in the University of Vienna have been united, and the combined professorship is now held by Prof. Othenio Abel. He has three assistants.

THE following elections have been made by the Vienna Academy of Sciences: *Honorary Foreign Members*: Sir Ernest Rutherford (Cambridge) and Prof. R. von Hertwig (Munich); *Corresponding Foreign Members*: Prof. Erwin Schrödinger (Berlin), Sir Jagadis C. Bose (Calcutta), Prof. Victor Goldschmit (Göttingen), Prof. T. H. Morgan (New York), and Prof. I. A. Hammar (Upsala).

BARKHAM MANOR, Piltown, where the skull of *Eoanthropus dawsoni* was found in 1912, has been sold to a new owner, Mr. David Kerr, who is now digging the Piltown gravel for use on the roads of the estate. It is at present well exposed over a large area, and the numerous curiously weathered flints are especially interesting. By the courtesy of Mr. Kerr, Sir Arthur Smith Woodward is watching the excavations, but he has not hitherto found any fossils. Several burnt flints and, for the first time, some fragments of charcoal have been noticed.

MESSRS. Adam Hilger, Ltd., 24 Rochester Place, Camden Road, London, N.W.1, inform us that statements are being made that they have expressed opinions concerning the therapeutic value of materials sent for spectroscopic test. All that Messrs. Hilger undertake to do in such cases is to make spectroscopic observations concerning the materials, and any statements to the effect that they have given opinions concerning their value in radiation therapy are incorrect.

THE council of the Royal Agricultural Society has just announced the renewal of its long-standing offer of a silver medal, together with books to the value of £10, for a "monograph or essay giving evidence of original research on any agricultural subject, or on any of the cognate agricultural sciences, or on agricultural economics." The offer is not materially alluring, but it is only fair to this distinguished Society to admit that the 'medal' has an honourable record behind it. The distinction which it conveys has stimulated some excellent work in the past, and although the winners have not contributed much in the way of scientific research strictly so called, their labours have reached a high level of industry and originality.

Two catalogues of second-hand books, of interest to the naturalist, whether he be of the professional or of the sporting stamp, have been issued by R. S. Frampton, 37 Fonthill Road, Finsbury Park, London, N.4. The more unusual comprises a collection of books on angling, made during the last forty years by a practical angler and collector of sporting books, and a few of the latter unassociated with angling are added. The angling books number 625, and range from the subject proper to Huxley's "Crayfish," but they include many items not mentioned in Westwood and Satchell's "Bibliotheca Piscatoria" and its Supplement of 1901. The second catalogue contains the names of 1709 works bearing on general natural history and the associated sciences. The titles are classified in groups ranging from agriculture, anthropology, and astronomy, to ichthyology, microscope, and ornithology. The majority of its

items belong to the second half of the nineteenth century. In both the angling and the natural history catalogues, the prices are generally lower than the usual quotations.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—A pharmacist for the Royal Naval Hospitals—The Medical Director-General of the Navy, Queen Anne's Chambers, Tothill Street, S.W.1 (Aug. 30). Three assistant surveyors in the department of the Civil Engineer-in-Chief, Admiralty, and H.M. Naval Establishments at Home and Abroad—The Civil Engineer-in-Chief, Admiralty, S.W.1 (Aug. 31). A lecturer in the mechanical and civil engineering department of the Sunderland Technical College—The Chief Education Officer, Education Offices, 15 John Street, Sunderland (Sept. 3). An assistant lecturer and demonstrator in mechanical engineering in the Faculty of Engineering, the University of Bristol—The Registrar, Merchant Venturers' Technical College, Bristol (Sept. 5). An assistant lecturer and demonstrator in the British School of Malting and Brewing and department of the biochemistry of fermentation of the University of Birmingham—The Secretary, The University, Birmingham (Sept. 7). A half-time assistant in the department of mathematics of the University College of Swansea—The Registrar, University College, Singleton Park, Swansea (Sept. 8). A temporary assistant lecturer in mathematics in the University

of Manchester—The Registrar, The University, Manchester (Sept. 10). An assistant lecturer in zoology in the University of Manchester—The Registrar, The University, Manchester (Sept. 10). A warden of the Moulton Farm Institute and assistant county agricultural organiser—The Secretary for Education, County Education Offices, Northampton (Sept. 14). A professor of forensic medicine in the Faculty of Medicine, Egyptian University, Cairo, and a professor of clinical surgery in the Faculty of Medicine, Egyptian University, and surgeon to Kasr-el-Ainy Hospital and Director of the Surgical Unit—The Dean of the Faculty of Medicine, Kasr-el-Ainy, Cairo, Egypt (Sept. 26). A reader in physics in the University of Dacca, East Bengal—The Registrar, University of Dacca, East Bengal, India (Sept. 30). A professor of physics at Agra College, Agra—The Officiating Principal, Agra College, Agra, U.P., India (Oct. 14). A vice-principal and a resident secretary of the Chadacre Agricultural Institute—Earl of Iveagh, 11 St. James's Square, S.W.1. An inspector of surveys under the Sudan Government, Survey Department—Advisory Engineer, Sudan Government, London Office, Wellington House, Buckingham Gate, S.W.1. A secretary of the City of London College—The Secretary, City of London College, White Street, E.C.2. A director of the Endemic Diseases Section, Public Health Department, Egyptian Government—The Under Secretary of State, Public Health Department, Cairo.

Our Astronomical Column.

AUGUST METEORS OF 1928.—Mr. W. F. Denning writes: "The August meteors returned this year with tolerable activity, but in point of numbers they were not very abundant so far as the data enabled a fair judgment to be formed. On the night (Aug. 11), when the maximum is usually attained, the sky was cloudy in the hours following midnight and observation could not be made, so that the time and strength of the shower at its best were not ascertainable. However, the display did not fail in bringing some bright and beautiful objects, with the same swiftness of motion and phosphorescent trails as we have been accustomed to witness. The radiant, too, exhibited the usual displacement to eastwards night to night.

"At Bristol before 23^h G.M.T., Aug. 11, 28 meteors were noticed. On Aug. 12, 165 meteors were counted in 5½ hours by two observers between 21^h G.M.T. and 3^h G.M.T. Aug. 13. In the early morning of Aug. 14, between 2^h and 4^h G.M.T., meteors were falling at the rate of about 27 per hour for one observer. The most conspicuous object observed was a fireball on Aug. 14, 2.17 A.M. It passed down the sky in the south-east region of Aquila near the west-south-west horizon, and at the end of its flight gave a great outburst of light which lit up the sky like a lightning flash. It must have passed from north-east to south-west over Cornwall during its combustion, but duplicate observations have not yet been received to enable the exact place to be fixed."

BETELGEUSE AND ANTARES.—These two stars are the brightest stars of type *M*, and have attracted much attention in recent years from their enormous diameters as revealed by the Mt. Wilson interferometer. It had previously been ascertained that both stars had variable radial velocities, and that Betelgeuse showed variation in light, but for a long

time no correlation was detected between the two variations, and no period assigned to the light-variation.

Dr. Spencer Jones discusses the problem in *Mon. Not. Roy. Astr. Soc.* for June, using some spectroscopic observations made at Lick Observatory and the Cape during the last thirty years. He treats it in the manner usually adopted for spectroscopic binaries. He obtains for Betelgeuse: period 5.78 years, eccentricity 0.21, amplitude of velocity variation 2.1 km./sec. The corresponding quantities for Antares are 7.35 years, 0.49, 2.1 km./sec. In each star there is evidence of smaller irregular disturbances with periods of a few months. The period 5.78 years probably coincides with that of the light-variation of Betelgeuse; the maximum velocity of recession comes about half a year after light minimum, that of approach one year after light maximum. This is analogous to the conditions in the Cepheid variables, and it is concluded that the variable radial velocity arises from pulsation of the star's surface, not from duplicity; the latter would probably be detected with the interferometer if it existed. The amount of pulsation in the case of Betelgeuse would be well over one-third of the radius of the star, a larger amount than that noted in the Cepheids. Dr. Jones suggests that this may arise from the very low density of the outer layers of the star. The interferometer indicated that the star's radius was variable; on the whole, the variations accord with the above theory, though those in the year 1923 were discordant.

Observations of the diameter with the new 50-foot interferometer over a number of years should afford a trustworthy test of the pulsation hypothesis; it is also suggested that observers should note whether the colour of the stars changes; theory demands that they should be redder at maximum expansion, and whiter at maximum contraction.