News and Views.

THE list of honours conferred by the King on the occasion of his birthday on June 3 includes the following names of men of science and others associated with scientific work: *Order of Merit:* The Hon. Sir Charles Parsons, in recognition of his eminent services in scientific research and its application to industries. *G.B.E.* (*Civil Division*): Sir Frank Heath, until recently Secretary to the Department of Scientific and Industrial Research; and Sir Richard Threlfall. *K.B.E.* (*Civil Division*): Dr. C. E. Ashford, Headmaster of the Royal Naval College, Dartmouth. *Knights:* Mr. W. G. Lobjoit, until recently Controller of Horticulture, Ministry of Agriculture; and Prof. C. J. Martin, Director of the Lister Institute, London. *C.M.G.:* Prof. R. W. Chapman, professor of engineering in the University of Adelaide. *C.I.E.:* Mr. A. G. Edie, Chief Conservator of Forests, Bombay. *C.B.E.* (*Civil Division*): Mr. D. J. Davies, Government Analyst, Department of Public Works, Newfoundland. *O.B.E.* (*Civil Division*): Mr. G. W. Grabham, Government Geologist, Khartoum; Mr. T. F. Main, Deputy-Director of Agriculture, Bombay; and Mr. V. E. Pullin, Director of Radiological Research, War Office.

THE new Science School at Clifton College, an account of which is given on p. 871 of this issue, was formally opened on Thursday, June 2, by H.R.H. The Prince of Wales. The boys gave a rousing welcome to their distinguished visitor, who was received at the Memorial Gate by the president of the College (Field-Marshal Lord Haig) and the headmaster. After lunch in the School House, the Prince proceeded to a dais outside the new building, where he made a felicitous reply to short speeches given by the president and headmaster. Referring to his presidency of the British Association, he said that it had brought him into touch with what was more or less a new world to him—the world of science—and had given him many new interests and new contacts. In declaring the new building open, he expressed the hope that it might prove the cradle of many future men of science—of future Faradays, or Kelvins, or Tildens—who would win further laurels for British learning and confer on all humanity benefits equal to those conferred by these great men in the past. He also laid emphasis upon the value of some training in science even to those who in later life were not to embark upon a professional scientific career. A number of presentations were then made, including representatives of the donors, the architect (Mr. Alan E. Munby), the head of the department (Mr. E. J. Holmyard), and the head of the physics department (Mr. W. C. Badcock). Many distinguished representatives of science and other branches of learning were present, and they were much interested in the display of books in the fine library in the new building, where an exhibition had been arranged. Clifton is fortunate in possessing the copy of Dalton's "New System" formerly belonging to William Henry, to whom the book was dedicated; a copy of Tyndall's "Faraday as a Discoverer," presented to Mrs. Faraday by Tyndall himself; a copy of Cannizzaro's works presented to Victor Meyer by the author; a copy of Avogadro's "Fisica" with an inscription in the author's hand; and first editions of Newton, Boyle, and Galvani. It also has a large collection of books on alchemy and early chemistry, so that if Clifton does not rear a succession of historians of science it will not be through lack of early opportunity.

A SURVEY prepared by Science Service of the recent legislative season in the United States discloses what appears to be a temporary collapse of the great anti-evolution drive in the various State legislatures. During the past winter and spring no less than twelve State legislatures had anti-evolution bills brought before them and all twelve have adjourned without the passage of a single one of the measures. In six of the States—California, Delaware, Minnesota, New Hampshire, North Carolina, and North Dakota—the bills did not even reach the floor of their respective Houses, but were disposed of in committee by decisive or unanimous votes. In Missouri, declared to be a pivotal Fundamentalist State, the bill reached the House, but was there rejected by 82 votes to 62. In West Virginia and Oklahoma similar bills were defeated by House votes of 57 to 36 and 46 to 30 respectively. An aggressive campaign in Arkansas resulted in an anti-evolution bill passing the lower house by a very close margin, but it was rejected in the Senate by an overwhelming aye-and-nay vote. In two States, Alabama and South Carolina, anti-evolutionist bills have been temporarily shelved. In Florida, where the legislature meets later in the year than in other States, a bill is at present being hotly debated, predictions being that it will not pass. In Tennessee, one of the two States where an anti-evolution bill has become law, there prevails considerable doubt amongst legal authorities as to its interpretation; and in Mississippi the law has not yet been tested in the courts.

THE Education Association of the Southern Methodist Episcopal Church in the United States has condemned the anti-evolution legislative programme. The resolution was introduced by the president of Duke University, one of the largest and most influential of southern educational institutions, and only two delegates voted against it. Prominent southern Baptist churchmen have also declared themselves as opposed to legislative restrictions on teaching. All the other churches have fought this wave of obscurantism virtually from the start; but the southern Methodists and southern Baptists are by far the most numerous bodies in the American south, and their attitude is highly significant. On the whole, in spite of a new movement recently set on foot to organise local opinion against the appointment of 'evolutionist' teachers, or to try to secure their dismissal, the situation seems not unsatisfactory. The future seems to depend upon the ability of the teaching

profession in America to resist what may be called the dictatorship of the illiterate.

A RECENT article published in NATURE (April 2, p. 481) on the subject of the scientific slaughtering of animals has elicited an interesting letter from Mr. Herbert Kidd, 331 Franklin Street, San Francisco, contrasting the British and American methods of slaughtering. From this letter it would appear that the subject has hitherto attracted far less attention in America than in some European countries, and that the modern method of the captive bolt pistol is very little used there. Mr. Kidd states that cattle are stunned with a sledge-hammer, the Argentine practice of afterwards pithing with the stem or handle having been abandoned because it involves the loss of about ½ lb. of meat per beast through bruising. Sheep are killed on the floor at the high over-all rate of 6 sheep per man per hour, and the spinal cord is not severed. Mr. Kidd's letter brings out a point which gives a good deal of trouble to those who are concerned about this backward aspect of civilisation, namely, the great variations in local practice which make generalisations on the subject precarious: a standard practice throughout the world of the method which has been found statistically to be the most humane is much to be desired. It would be interesting to know the position as regards small private slaughterhouses in a country where large-scale operations are so common as in America: in England (as contrasted with Scotland) local authorities which have built public abattoirs are unable to work them at a profit because they have no power to close the competing private slaughterhouses, either with or without compensation.

A SMALL booklet has been issued by Mr. Ernest A. Chapman, 69 Hayter Road, London, S.W.2, with the view of further elucidation of four small pearl shells which are not only very peculiar and highly interesting in themselves, but also seem to have had a curious history. The pamphlet is very carefully illustrated with excellent photographs, and any one interested should be able to gain a fairly complete idea of the problem from it. The four shells are really four similar valves, none of them having its partner. Each valve contains a pearl attached to the shell by nacre deposition. It is stated that experts in four continents have been consulted without success, and that eminent conchologists in Great Britain are of opinion that the shells belong to an extinct or unknown species. They have been heirlooms in the possession of a family in the south of Ireland for many generations, but no knowledge is forthcoming of how they reached that family. The names of several well-known experts are mentioned in the pamphlet, and the reader is left with the statement that they regard these little shells as a unique set, the only specimens of the type seen or reported.

PROF. W. J. DAKIN, Derby professor of zoology in the University of Liverpool, has been kind enough to examine the shells on our behalf, and he states that he is not prepared to accept the views put forward in the pamphlet. "It seems rather singular," he says, "that the four shells should be so like in appearance, and each with a blister of the same large size in the same place. There is also no doubt that the margins of the 'shells' and the hinge lines have been trimmed and polished. It seems probable that the 'shells' are not real in the natural history sense at all, but have been carved from the nacreous part of a larger pearl shell. I do not agree with the statement that the shells are too deep for this: such is decidedly not the case. Neither can it be admitted that artificial work would be more easily detected. It is not fair to compare what an amateur might do with what can be done by an accomplished Oriental worker. There remains to be granted an extraordinary resemblance (indicated by Prof. Morley Davies) to an extinct Miocene species which is depicted in the pamphlet. It is not, however, altogether convincing. Shell collectors and others who have been interested in cameos and curios carved out of mollusc shells might take a hand in solving this tantalising little puzzle."

THE seventh annual report of the British Non-ferrous Metals Research Association shows rapid growth. The total expenditure on research during 1926 was £22,000, and that figure will be increased during the present year. The period of full Government grant has now expired and that source of income diminishes progressively, but sufficient support is being received from the industry to continue the research work on the same scale. It is remarkable, however, that even now prominent firms sometimes fail to take advantage of the scientific results of the investigations and withdraw the support which they have previously given. A study of the report will show that manufacturers have everything to gain by becoming members of such an organisation. Among the investigations which are making good progress and are of general interest are those concerned with the wastage of locomotive firebox stays, in which all railway companies are interested, and the deterioration of lead cable sheathing, which is of importance to the telegraph and telephone industries. Much is expected of the investigations in hand on materials capable of resisting high temperatures, and valuable results have already been obtained in this direction. Researches on electro-deposition and on methods of casting and jointing have engaged the attention of many workers, and the combined researches on die-casting are doing much for an industry which is of growing importance. Among other activities the Association has made a survey of annealing furnace practice, and has been able to advise as to improvements in annealing practice. The report contains much that is of interest to metallurgists in general.

RADIO communication is proving of great value to isolated communities on various parts of the earth's surface. For example, the lonely Farsan Islands in the Red Sea, which are about 400 miles north of Aden and the same distance south-east of Port Sudan, are being examined for oil by the Red Sea Petroleum Company. The prospectors are equipped with an ordinary Marconi ship's transmitter. Through the

neighbouring ports, or through any of the large number of ships within radio range passing up and down the Red Sea, they can easily link up with main telegraph circuits, and also secure, if necessary, medical advice and other assistance.

THE new short wave beam stations enable news to be transmitted to the Dominions much more rapidly than by ordinary radio services. Last year it took sixty seconds to transmit the name of the winner of the Derby to the Melbourne central telegraph office. This year the name of the winner was transmitted in three seconds, and in fourteen seconds after the finish of the race the full result was known in all the principal newspaper offices in Australia. This result was equalled on Budget day this year, only a few days after the beam stations had been handed over to the General Post Office. A thirteen-word 'empiradio' message, giving the first news of the Budget, was transmitted to Australia in thirty seconds.

ON Tuesday, May 24, Mr. J. L. Baird gave a successful demonstration of television between Motograph House, London, W.C.2, and the Central Hotel, Glasgow. Two ordinary Post Office telephone lines were used, one being for conversation and the other for the television transmission. The inventor has simplified the method of synchronising the two machines employed by means of a new arrangement of filter circuits. The telephone lines connecting the two stations were 438 miles long. Possibly owing to induction effects with neighbouring circuits the images were sometimes unsteady, but in most of the experiments they were steady and clear. Instructions given through the telephone to the operator at London were shown by the image to be immediately obeyed. Arrangements are being made to demonstrate television between London and New York.

A NEW observatory on Kilauea—the Uwekahuna Observatory and Exhibition Room of the Hawaiian Volcano Research Association—was opened on April 19 (*Volcano Letter*, April 21). It is intended for the use of visitors, to explain to them in an appropriate setting the mechanism of volcanoes. Built on the highest rim of the Kilauea crater, the view from it includes Mauna Kea and Mauna Loa, the cones of the Kau Desert, and the Halemaumau pit, the latter a great chasm less than a mile away, as well as all the details of the Kilauea crater.

ON June 6, Mr. Clarence Chamberlin and Mr. Levine landed at Eisleben after a non-stop flight from New York of about forty-three hours. Thus Capt. Lindbergh's record for distance and time in the air without landing, set up so recently as May 22 last (NATURE, May 28, p. 792), has been broken. Mr. Chamberlin, with Mr. Levine as passenger, started on June 4 at 6·5 A.M. in a Bellanca monoplane, the *Columbia*, and was forced to land at 5·35 A.M. on June 6 by the exhaustion of his petrol supply, after covering a distance estimated at 4400-4700 miles. The machine was fitted with a 200 h.p. Wright "Whirlwind" radial engine and was in other respects similar in type to that used by Capt. Lindbergh.

AN expedition under the leadership of Mr. G. P. Putnam to Baffin Island is announced in a recent issue of *Science* (No. 1689). The expedition will leave New York this month in the schooner *Morrissey*, and will be under the auspices of the American Geographical Society, the Museum of the American Indian, and the American Museum of Natural History. The course is to be through Hudson Strait to Fox Basin, which is one of the least explored parts of Arctic Canada. Most of its eastern coast is still uncharted. Expeditions into the interior of Baffin Island will be attempted. The main aims of the party are the collection of zoological and anthropological specimens.

AT the recent annual meeting of the U.S. National Academy of Sciences, Prof. T. H. Morgan, of Columbia University, distinguished for his work on hereditary processes and evolution in animals, was elected president. Dr. F. E. Wright, of the Carnegie Institution of Washington, was elected vice-president of the Academy, and Dr. David E. White, of the U.S. Geological Survey, was re-elected home secretary. Three new members of council were appointed: Prof. George E. Hale, Mount Wilson Astronomical Observatory; Dr. John C. Merriam, president of the Carnegie Institution of Washington; and Dr. J. McKeen Cattell, editor of *Science* and other scientific publications.

THE following were elected members of the U.S. National Academy of Sciences at the recent annual meeting: Eric Temple Bell, professor of mathematics, California Institute of Technology, Pasadena, California; Charles Peter Berkey, professor of geology, Columbia University, who has recently made investigations of the ancient rock layers of Asia; William Bowie, chief of the Division of Geodesy, U.S. Coast and Geodetic Survey, Washington, an authority on isostasy; Arthur Holly Compton, professor of physics, University of Chicago, known for his work on the Compton effect; Benjamin Minge Duggar, botanist of the Missouri Botanical Gardens, St. Louis, known for his work on plant diseases and plant physiology; Thomas Alva Edison, the distinguished inventor; Rollins Adams Emerson, professor of plant breeding, Cornell University; Herbert McLean, professor of anatomy, the University of California, the discoverer of vitamin E; William King Gregory, curator of palæontology in the American Museum of Natural History; Edwin Powell Hubble, of the Mount Wilson Observatory, California, known for his work on distant nebulæ; Claude Silbert Hudson, chemist at the U.S. Bureau of Standards; Alfred Newton Richards, professor of pharmacology at the University of Pennsylvania; Francis Peyton Rous, physiologist of the Rockefeller Institute for Medical Research, New York City, who has done fundamental work on the nature of cancer; Albert Sauveur, professor of metallurgy at Harvard University; Henry Van Peters Wilson, professor of zoology at the University of North California, an authority on sponges and the lower vertebrates. The following foreign associates have been elected: Paul Sabatier, professor of chemistry,

University of Toulouse, known for his work on metallic catalysts; Godfrey Harold Hardy, Savilian professor of geometry at the University of Oxford, and Carl Stumpf, emeritus professor of philosophy at the University of Berlin, originator of a new theory of sound and music.

SIR RICHARD GLAZEBROOK has been appointed, by Order of Council dated May 26, to be a member of the Advisory Council to the Committee of the Privy Council for Scientific and Industrial Research.

SIR DANIEL HALL retired on June 4 from the post of Director-General of the Intelligence Department of the Ministry of Agriculture, which he has held since 1920. Sir Daniel will continue to act as Chief Scientific Adviser and chairman of the Research Council of the Ministry.

MR. H. C. SAMPSON, who was recently appointed economic botanist at the Royal Botanic Gardens, Kew, is leaving on June 11 for British Guiana at the invitation of the Governor and under the auspices of the Colonial Office and Empire Marketing Board, to study and report on various agricultural matters in the colony. He will also visit Trinidad and the Imperial College of Tropical Agriculture, and Barbados.

THERE have already been published, through De Gruyter of Berlin, two volumes of the *Vorgeschichtliches Jahrbuch*, dealing with the literature for 1924–1925. Owing to the sudden death of the collaborator for Great Britain and Ireland, the report on the literature of prehistoric archæology issued in those countries during 1926 has been undertaken by Dr. A. Mahr, Naturhistorisches Museum, Burgring 7, Wien 1, Austria, and to him all relevant publications should be sent, either as a gift or on loan, at the earliest date possible.

AT the anniversary meeting of the Linnean Society of London, held at Burlington House on May 24, the following were elected officers of the Society for 1927-28: *President*, Sir Sidney F. Harmer; *Treasurer*, Mr. H. W. Monckton; *Zoological Secretary*, Dr. W. T. Calman; *Botanical Secretary*, Mr. J. Ramsbottom. The Linnean Gold Medal was presented to Dr. Otto Stapf in recognition of his contributions to the advancement of botanical science. The Crisp Award and Medal were given to Dr. H. Graham Cannon, professor of zoology at the University of Sheffield, for his paper "On the Post-Embryonic Development of the Fairy Shrimp," published in the Society's journal.

WE have received the fourth number of *Brighter Biochemistry*, the illustrated journal of the Biochemical Laboratory, Sir William Dunn Institute, Cambridge. It fully maintains the reputation of its predecessors in dealing with the lighter, but not always apparently the brighter, sides of this science. Opportunity is taken to publish a First Depression from the Sir William Dunn Academy, in which a now famous portrait is but faintly disguised. New features are Researchers' Fables and an account of a visit to the twelfth International Congress of Physiology at Stockholm. For the rest, poems—or had we better say rhymes—and short 'scientific' articles amuse the reader, and can be enjoyed by any one for the moderate price of half a crown, payable to the editors at the Sir William Dunn Institute.

THE Swiss Society of Natural Sciences is holding its annual meeting this year on Sept. 1-4 at Basel. This will be the hundred and eighth session of the Society and the seventh occasion on which it has met in Basel. The general programme includes the opening address by the president, Dr. Fritz Sarasin, on Sept. 1, followed by a lecture by Prof. A. Brachet (Brussels) on the causes and factors of morphogenesis; other lectures will be given by Prof. L. Courvoisier (Berlin) on recent work and views in astronomy, by Prof. L. Duparc (Geneva) on the Urals from the point of view of geophysics, geology, and mining, and by Prof. H. E. Sigerist (Leipzig) on Paracelsus in relation to modern thought. The general work of the meeting will be divided among fourteen sections covering various aspects of science, communications for which should be received before June 30. All correspondence regarding the meeting should be addressed to Dr. Fritz Sarasin, 22 Spitalstrasse, Bâle.

THE series of postcards issued by the British Museum (Natural History) has received an interesting and attractive addition in the form of reproductions in colour of illustrations of medieval natural history from "Hortus Sanitatis," printed by Jacob Meydenbach at Mainz in 1491. Of particular interest are the drawings of mythological animals, such as the tyras, draconopede, sea horse, maricomorion, onocenthaurus and orasius, where the artist has had to rely on his own imagination, aided by the writings of classical mythology. The illustrations of animals such as the hippopotamus, chameleon, cameloleopard and the great ant, which the artist had never seen but had drawn from some traveller's description, are extraordinarily fascinating in their quaintness. The whole series is one of remarkable interest, and it is to be hoped that further additions will speedily follow. The illustrations are very clearly and pleasingly reproduced, and well maintain the excellent standard of the coloured postcards already issued by the Museum.

THE first number of *The Countryman*, a new illustrated quarterly review and miscellany of rural life, edited and published by J. W. Robertson Scott at Idbury, Kingham, Oxford, appeared in April last. It is a periodical concerned with the welfare of the men and women who live on the land and *their* cultivation, and has as its object the provision of brisk, timely, and authoritative articles, together with skilful and appetising digests of that practical information in every department of rural welfare which is at present scattered in books, journals, and papers. It is non-party in character and is intended to be of equal interest to men and women, and to help stimulate their efforts in the improvement of rural conditions, whether their activities are concerned with the problems of education, housing, village clubs or women's institutes,

etc. Amongst the varied articles in the first number are the following: "Countryman Conversations," "The Trees we might have," "Is the Farmer Dead Beat?" "Aerials for Arable," "The Genteel Cottage," and "New Rural Tales," while authors include Sir Daniel Hall, Sir Francis Acland, Mr. Noel Buxton, and Sir Charles Bright. A special treatment of country books is promised for the second number.

THE third issue of the *Journal of the Royal Technical College*, Glasgow, bearing the date December 1926, is a handsome production, and affords evidence of the activity of members of the College in research. The contents range over the fields of chemistry, physics, engineering, metallurgy, and bacteriology. An important paper by A. D. Third deals with compression losses in nozzles, the method used being that of photographing through the parallel glass sides of a diverging nozzle, the faces of which have been coated with a layer of a very viscous oil, which is thinned or swept away by the jet of air. A. S. Clark describes experiments to determine the relation between rapid tensile tests of metals at high temperatures and their creep limits, whilst O. Sneeden has determined the efficiency of arrangements for preheating air for furnace combustion. J. H. Andrew suggests an explanation of the fact that overheated mild steel usually appears on microscopical examination to contain more than its actual amount of carbon, and R. Hay and R. Higgins make a further contribution to the vexed question of the relations between austenite and martensite in hardened steels. The chemical papers deal with double salt formation, the induline dyestuffs, and the activity theory of solution, as well as with the preparation of a number of organic compounds. A curious photo-electric phenomenon observed by J. B. Somerville on steel surfaces suggests further investigation. There are other contributions of considerable scientific interest.

THE annual report for 1925–26 of the Department of Terrestrial Magnetism of the Carnegie Institution of Washington has recently been published. The non-magnetic ship *Carnegie* was out of commission during the year, and such ocean work as was done was due to Amundsen's ship *Maud*, which is associated with the Department in its magnetic work. Land survey work was also mainly in abeyance, though two survey parties were at work in Africa and America. The Department now maintains two magnetic observatories, in Western Australia and in Peru, and co-operates in the electric work of the Samoa Observatory. Vol. 5 of the Researches of the Department, dealing with the ocean work of the *Carnegie* from 1915 until 1921, was published during the year, and progress was made in the reduction of other observations made in various regions, to be published in vols. 6 and 7. The Department co-operated with the Geophysical Laboratory of the Institution in an important research upon the effect of high pressures on the magnetisability of nickel, meteoric and other kinds of iron; the high pressures are found to reduce the critical temperature, and the research seems to preclude the possibility that the earth's magnetism is due to permanent magnetisation of the interior. The Department has co-operated in radio investigation of the high-level conducting layer of the atmosphere, and members of its staff have also made researches on problems of atomic physics.

THREE catalogues of second-hand books, maps, etc., numbered respectively 495, 496, and 497, have recently reached us from Mr. F. Edwards, 83A High Street, Marylebone, W.1. They deal with publications concerning "The West Indies," "London and its Environs," and "The Indian Empire." Copies can be had free from the publisher upon application.

MR. JAMES THIN, 54 South Bridge, Edinburgh, has just issued a very full list (No. 215) of books dealing with natural history subjects. Upwards of 2700 works are catalogued under the headings of agriculture and husbandry, bees and bee-keeping, botany, entomology, ferns, forestry, fruit culture, fungi, gardening, geology and palæontology, grasses, marine and freshwater zoology, mosses, natural history (local and general), and ornithology. The catalogue is obtainable free upon request.

THE course of lectures on "The Mind" which was delivered this year at King's College, London, by various authors, is to be published by Messrs. Longmans and Co., Ltd. The subjects and contributors are as follow: Biology, Prof. J. S. Huxley; Physiology, Prof. R. J. S. McDowall; Psychology, Dr. F. A. P. Aveling; Psychotherapy, Dr. J. A. Hadfield; Physics, Prof. F. A. Lindemann; Philosophy, Dr. W. R. Matthews; Education, Prof. J. D. Wilson; Æsthetics, R. G. Collingwood; Anthropology, Prof. C. G. Seligman; and Sociology, Prof. L. T. Hobhouse.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—A lecturer in engineering and a lecturer in chemistry and physics at Stockport College for Further Education—The Principal (June 17). A vice-principal of the Somerset Farm Institute, Cannington—The Principal, Somerset Farm Institute, Cannington, near Bridgwater (June 20). An assistant pathological chemist at St. Mary's Hospital, Paddington—The Secretary, St. Mary's Hospital, W.2 (June 20). A part-time demonstrator in geology at Bedford College for Women—The Secretary, Bedford College for Women, Regent's Park, N.W.1 (June 24). A full-time lecturer in mathematics and science in the School of Science and Art, Newark—The Principal, School of Science and Art, London Road, Newark-on-Trent (June 25). A vice-principal of the Royal Agricultural College, Cirencester—Dr. J. A. Hanley, The University, Bristol (June 25). A professor of technological chemistry in the Manchester Municipal College of Technology—The Registrar, Municipal College of Technology, Manchester (June 28). An assistant professor of metallurgy at University College of Swansea—The Registrar, University College, Swansea (July 2). A biochemist and a bacteriologist at the National Institute for Research in Dairying—The Secretary, National Institute for Research in Dairying, Shinfield, near Reading.