

lating medical discovery seems to have originated in 1896 owing to an accident to one of Lord Iveagh's employees. A labourer upon his estate having been bitten by a rabid dog, he directed that everything possible was to be done for the unfortunate man, but was surprised to learn that the treatment for hydrophobia could only be secured by sending the patient to Paris. This was done, and no further ill results ensued; but the novelty of the treatment and the absence of facilities in England for the prosecution of researches such as had led to Pasteur's fruitful discovery made a deep impression on his mind. In 1898, Lord Iveagh visited the Pasteur Institute, and the project of endowing a similar institute in London began to take shape. Ascertaining that the Lister Institute (then the Jenner Institute) had been founded with the objects he had in view but was languishing for want of funds, he decided, after careful inquiry, to endow the Institute to the extent of £250,000, subject to certain alterations in its constitution and government.

Another institute for medical research, as well as the treatment of patients, which is largely indebted to Lord Iveagh's liberality, is the Radium Institute in Riding House Street, London. This was founded in 1909 to make researches upon the effect of radium on the human organism and to supply treatment to patients whose circumstances did not permit them to receive the benefit of radium treatment without financial help. The whole of the money required for the building, equipment, and endowment of the Radium Institute was provided by Lord Iveagh and the late Sir Ernest Cassel.

Lord Iveagh made large benefactions for various purposes to his old college, Trinity College, Dublin, and built for it new Institutes for physics and botany, and endowed the school of geology. The new National University of Ireland also is indebted to him for a valuable site at St. Stephen's Green.

Even a complete list of Lord Iveagh's known gifts for public purposes would fail to record many of the benefits he dispensed. Partly from a distaste

for notoriety, partly for self-protection, the hand of the donor was concealed. His philanthropic enterprises were carefully considered and evolved with patience and attention to details. He took a personal interest in all his schemes and often a large part in the direction of them.

In 1906, Lord Iveagh was elected a Fellow of the Royal Society under Statute 12 "as having rendered conspicuous service to the cause of science," and in 1908 he was unanimously elected chancellor of the University of Dublin.

WE regret to announce the following deaths:

Dr. Charles C. Godfrey, president of the American Association of Variable Star Observers, conducted in co-operation with the Harvard Observatory, on Aug. 31, aged seventy-one years.

Dr. B. Daydon Jackson, secretary of the Linnean Society of London for forty-seven years, editor of the "Index Kewensis," and author of other important botanical works, on Oct. 12, in his eighty-second year.

Dr. William Libbey, professor of physical geography and Director of the Museum of Geology, Princeton University, from 1883 until 1923, on Sept. 6, aged seventy-two years.

Prof. Alexander Mair, professor of philosophy in the University of Liverpool, president in 1925 of the Association of University Teachers, and author of "Philosophy and Reality" (1911), on Oct. 8, aged fifty-seven years.

Dr. J. W. Mollison, C.S.I., formerly Inspector-General of Agriculture in India, who was the first head of the Imperial Agricultural Research Institute at Pusa, on Oct. 4, aged seventy years.

Dr. Eugene Allen Smith, emeritus professor of mineralogy and geology in the University of Alabama and state geologist since 1873, who was vice-president (Section E) of the American Association for the Advancement of Science in 1904, on Sept. 7, aged eighty-five years.

Mr. H. M. Taylor, F.R.S., senior fellow and formerly mathematical lecturer of Trinity College, Cambridge, distinguished by his contributions to mathematical science and his translation of many scientific works into Braille for use by the blind, on Oct. 16, at eighty-five years of age.

### News and Views.

THE amount of change a story can undergo through repeated copying is a commonplace of experimental psychology; and every scientific worker in the habit of verifying original references has met with examples where the actual statements of an early investigator differ substantially from the versions of them to be found in more recent writings. But it is not often that one meets so extreme a case as that given by Mr. Gheury de Bray in a letter to NATURE of Sept. 17, and in an article in the present issue. Of eleven determinations of the velocity of light quoted in standard works, only one turned out to have been quoted correctly. Mr. de Bray's historical work should provide material for any one in need of examples for the precept 'Verify your references.'

In a paper in the *Astronomische Nachrichten* (No. 5520), Mr. de Bray has used what appear to be the best of the determinations, after due criticism, and

has shown that they point to a decrease in the velocity of light of about 200 km./sec. in the last fifty years. As he says, however, the earlier determinations are not good enough individually to determine such a change, and his argument rests on the fact that they all agree in suggesting a change in the same direction. Of the seven determinations retained, one differs from 299,800 km./sec. by 2.2 times its probable error, one by 2.0 times, and the rest by smaller multiples. In a random set of observations 1 in 5 would deviate from the true value by more than twice the probable error. The velocity of light being so fundamental a constant, physicists may prefer to attribute any change in its measure, if established, to a change in the unit of velocity and not to one in the velocity of light itself. The variation of the second is shown by E. W. Brown's recent work to be within a few parts in 10<sup>7</sup>. The possibility of measurement of wave-lengths within a few thousandths of an

Ångström unit indicates that the unit of length is equally constant. We can, therefore, scarcely admit such a change in the unit of velocity as would be needed to account for a change in the measured velocity of light of the order of one in a thousand. An absolute change in the velocity of light, on the other hand, could scarcely obtain acceptance unless supported by much more decisive observational material.

AN international conference on the Protection of Migratory Wild Fowl was opened under the presidency of Lord Ullswater, at the Foreign Office on Oct. 12. The conference is the successor of two preliminary meetings, held in 1924 in Sweden and in 1926 in Copenhagen, at which the need of action for the protection of wild ducks, geese, swans, and similar migrants was strongly urged by the representatives of northern European countries. The Governments of the countries concerned were favourably disposed towards the views expressed at the earlier meetings and the invitation of the British Government was accepted by the following Governments, which are officially represented: Germany, Belgium, Holland, Denmark, Sweden, and Finland, as well as Great Britain, with Dr. P. R. Lowe and Mr. H. S. Gladstone as delegates. The discussions of the early sessions of the conference centred round the altered status of migratory wild fowl in recent years. Delegate after delegate reported that migratory wild fowl were on the decrease, and this view so impressed the conference that it passed a resolution stating that in its opinion there had been a general diminution in the number of migratory wild fowl, and that "in the interests of agriculture, science, sport, the maintenance of the food supply, and the desirability of retaining natural species of beauty and interest, it is imperative that steps should be taken to arrest such diminution." Various suggestions were made as to means best suited for reaching this end, the extension of the close season, the prohibition of the slaughter of migratory wild fowl on the northward migration to the breeding grounds in spring, the prohibition of mechanically-propelled boats, of clap nets, standing nets, sunk nets, and so on; and the conference blessed them all, and added a resolution recommending the most effective protective instrument of all, that the sale of migratory wild fowl should be forbidden during the close season except under rigid conditions. It will be interesting to see what international legislative action follows upon the unanimous recommendations of the ornithologists.

At the recent International Optical Congress held at Oxford, considerable discussion was devoted to the question of the importance of good vision for all persons licensed as motor drivers. In this matter, keenness of visual acuity is not the only or even the prime consideration, since, when outdoors, one is looking at relatively large objects. The really important things are limitations in the extent of the visual fields, and the further question of binocular vision and latent imbalance of the muscles controlling the eye movements. Limitations in the visual fields do provide a dangerous disability for the driver of any

fast moving vehicle, since whilst his attention is directed straight ahead, he should still be capable and keen to detect the slightest movement (even if associated with some vagueness of form) of any other moving person or vehicle issuing from side streets or lanes into his main sphere of attention, that is, into his central field of vision. With regard to faults in the co-ordinated balance of the two eyes—which would interfere with binocular vision—it is well known that perception of depth and judgment of distance are both almost entirely attained by perfect stereoscopic or binocular vision. Any person, therefore, who is deprived of this faculty, is liable to misjudge distances, and there is no doubt many accidents are caused by drivers suffering from such a visual deficiency which led him to believe that he might just clear some imminent obstacle, when in reality the actual distance away from that obstacle was much less than it appeared to be. Such defects are much more dangerous to the rest of the public than the commoner visual defects of long-sightedness or even low degrees of myopia.

ANOTHER question of public interest to which considerable attention was given at the recent International Optical Congress was that of visual efficiency in industry. This is undoubtedly a problem of some complexity, since in British industrial circles there is still some prejudice against the worker wearing spectacles. In a great many workshops there is yet the old shibboleth prevailing that the wearing of glasses is a sign of the oncoming of old age, and definitely marks another prospective victim for the human scrap-heap. There is no reason why such a prejudice should still prevail, since it is obvious that the worker will produce better and finer work—with greater accuracy, fewer flaws, and less wastage, if steps are taken to ensure that he is visually efficient. It was reported that in some large manufactories, schemes had already been brought into operation whereby the eyes of all the workers were examined and any defect was corrected. Statistics prove that in all cases such provision had resulted in a large increase of efficiency in production and increased good health and pleasure on the part of the operative.

A FURTHER point of importance which is regularly overlooked in various trades lies in the fact that many operations are carried out at an abnormally short working distance, and in such cases—even if the operative's sight is perfect for ordinary purposes—there should be some assistance provided in the form of spectacles in order to prevent undue fatigue, headache, and the possible cultivation of more permanent defects. Such a condition of affairs is well illustrated in the process known as 'linking' in the hosiery trade, which was the subject of a special pamphlet recently issued by the government Department of Scientific and Industrial Research. Compared with the United States, there is comparatively little attention devoted to this subject by British employers. The fact that it has been proved by individual firms in such trades as printing, and in such industries as the textile in many of its branches, that

both financial advantage and increase of output is a consequence of giving attention to the vision of the worker, it is to be hoped that more general attention will be paid to the question in the immediate future.

WE have already referred to the movement to establish in the Central Reference Library of Southwark a Faraday Memorial Collection, consisting of the biographies, portraits, and published works of Faraday, and the best and latest books on the sciences and their applications, particularly electricity, with which Faraday's name is so closely identified. The Mayor of Southwark invites contributions to the Faraday Memorial Fund being raised for this purpose. The annual income will be expended year by year under the direction of a special Committee exclusively for the object in view. The use of the Faraday Memorial Collection will not be limited to local residents but, like the benefits of Faraday's discoveries, will be available for all who desire to consult it. The memorial is to be inaugurated by Sir Oliver Lodge on Oct. 28. It is hoped that generous support will be forthcoming to the fund being raised. Contributions should be sent to the Mayor, Southwark Town Hall, Walworth Road, London S.E. 17. Contributors to the memorial, without regard to the amount subscribed, will be enrolled as foundation donors.

A COMMITTEE to inquire into the organisation, development, and recruitment of the Colonial Veterinary Services has been appointed by the Secretary of State for the Colonies. The committee is asked to frame proposals for obtaining the highest degree of efficiency in regard to veterinary research and administration in the non-self-governing Dependencies that financial considerations permit. The questions to be considered will embrace the recruitment and training of veterinary officers, their conditions of service, the organisation of research and intelligence, the setting up and support of any institutions required, and methods by which the financial expenditure involved can best be met. In framing its recommendations the committee has to bear in mind that the principle of the ultimate creation of a Colonial Scientific and Research Service has been approved by the Colonial Office Conference, and that specific proposals for the formation of an Agricultural Scientific and Research Service for the non-self-governing Dependencies, with which the veterinary service must necessarily maintain close liaison, are now being framed. The committee consists of: Lord Lovat (Chairman), the Right Hon. W. Ormsby-Gore, Sir Arnold Theiler, Prof. J. B. Buxton, Prof. R. T. Leiper, Dr. W. H. Andrews, Dr. J. B. Orr, Mr. W. C. Bottomley, and Major R. D. Furse, with the addition of an officer with experience in the Colonial Service. Major G. S. M. Hutchinson, Colonial Office, is secretary to the committee.

IN Great Britain, while there are evident the most divergent attitudes towards the problem of birth control, there is an organised attempt to make discussion or propaganda illegal. It is not widely known that in other countries such attempts are being made,

and that in certain countries they have been successful. It may, therefore, be of some interest to give a brief résumé of the position stated in a detailed communication received from Dr. Marie Stopes. The American Comstock Law was originally designed to prevent the sending by post of indecent pictorial postcards and similar matter. During its progress into law obscene matter was defined so as to include any directions, drugs, or articles for the prevention of conception, and it is now an offence punishable by a 5000 dollar fine, or five years imprisonment or both, to send birth control information by post. The French Law of 1920 is more comprehensive. It punishes by one to six months' imprisonment, and a fine of from 100 to 5000 francs, any one who explains or offers to explain birth control methods, or devotes himself to contraceptive propaganda, or propaganda against childbirth. Similar steps have been taken in other countries. The present position, however, is not easy to ascertain, because the measures often assume the form of extending by administrative order the definition of obscene publications, with the result that in certain countries, Belgium and Canada, for example, publications having reference to contraception are seized by post office or custom house officials, or both. A Committee appointed by the Minister of Justice of the Irish Free State recently reported in favour of an amendment of the Indecent Advertisements Act so as to make illegal the sale of literature concerning contraception.

ATTENTION was directed in NATURE of July 9 last to the popularly written leaflets on astronomical matters issued by the Astronomical Society of the Pacific. The further leaflets belonging to the series have now come to hand, bearing the titles "Exploring the Depths of Space" and "The Pons-Winnecke Comet," and others are in course of preparation. In addition, the Society (the address of which is 803 Merchants Exchange Building, San Francisco, California) has, for the last two or three years, arranged series of illustrated popular lectures in San Francisco on various aspects of astronomical research and discovery, delivered by astronomers of repute, to which the public are admitted free of charge. Leaflets containing syllabuses of the lectures have been issued, at the backs of which are collected useful astronomical data and, in some instances, diagrams of the night sky at various times during the year. During the present session, for example, a series of four lectures will be given by Dr. Wm. F. Meyer, assistant professor of astronomy in the University of California, on the general subject, "From Atom to Island Universe," the titles of the individual lectures being "The Atomic World," "The Interior of a Star," "Island Universes," and "The Night Sky of Winter." An annual visit to the Lick Observatory is conducted by the Society, in connexion with which pamphlets are issued containing information relating to the most interesting objects visible at the time. We hope that a large measure of success will attend these praiseworthy efforts for the popularisation of astronomical knowledge. It is perhaps not generally understood that membership of the Society, including the receipt

of all publications and privileges, is open to all, irrespective of nationality or astronomical qualifications.

THE Council of the Iron and Steel Institute has awarded the Carnegie Gold Medal for the year 1925 to Mr. A. L. Curtis, Westmoor Laboratory, Chatteris, in recognition of his research work on steel moulding sand, etc.

THE Thomas Hawksley lecture of the Institution of Mechanical Engineers, on "Application of X-rays to the Study of the Crystalline Structure of Materials," will be delivered by Sir William Bragg, on Friday, Nov. 4, at 6 o'clock P.M.

SIR WILLIAM LARKE, Director of the National Federation of Iron and Steel Manufacturers, has been appointed by Order of Council dated Oct. 5, 1927, to be a member of the Advisory Council to the Committee of the Privy Council for Scientific and Industrial Research.

MR. F. J. BLIGHT, who since 1894 has been associated with the well-known firm of scientific and technical publishers, Messrs. Charles Griffin and Co., Ltd., and has been head of that house since 1899, is retiring from that position. Many authors of scientific and technical works published by Messrs. Griffin appreciate the valuable services rendered by Mr. Blight to the production of specialised works on important aspects of modern science and industry, and trust that there are still before him further years of useful life and influence even in his retirement.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—A lecturer in building trades and a lecturer in furniture trades in the Technical College, East London, South Africa—The Secretary, Office of the High Commissioner for the Union of South Africa, Trafalgar Square, W.C.2 (Oct. 31). A research chemist for work on plasters and other materials used for impressions and models in dentistry—The Secretary, Department of Scientific and Industrial Research, 16 Old Queen Street, S.W.1 (Nov. 7). An engineer for the Sanitary Department, Buildings and Roads Branch, Government of the Punjab—The Secretary to the High Commissioner for India, General Department, 42 Grosvenor Gardens, S.W.1 (Nov. 10). A demonstrator in physiology at St. Bartholomew's Medical College—The Dean, Medical College, St. Bartholomew's Hospital, E.C.1 (Nov. 16). A chief lecturer in chemistry at the Woolwich Polytechnic—The Principal, Woolwich Polytechnic, S.E. 18. A naval architect for the Marine department of the Government of Nigeria—The Crown Agents for the Colonies, 4 Millbank, S.W.1 (quoting M/6). A junior technical officer in an Admiralty experimental establishment, mainly for experiment and design in connexion with wireless and other electrical apparatus—The Secretary of the Admiralty (C.E. Branch), Whitehall, S.W.1. A principal of the Massey Agricultural College, New Zealand—The High Commissioner for New Zealand, 415 Strand, W.C.2.

Our Astronomical Column.

MAGNETIC 'STORM' AND SUNSPOTS.—On Oct. 12, at 10<sup>h</sup>, a considerable magnetic disturbance commenced and lasted until 2<sup>h</sup> on the following morning. The chief characteristics as shown by the declination magnetograph records at Greenwich were, first, the sudden commencement; and secondly, the occurrence between 18<sup>h</sup> and 21<sup>h</sup> of three distinct waves of magnitude about 30', 25', and 40' respectively. The total range in declination throughout the disturbance was about 1°. A lesser disturbance, of interest on account of its sharp commencement, also took place between Oct. 9, 20<sup>h</sup> and Oct. 10, 23<sup>h</sup>.

At the time of the phenomena there were three groups of sunspots within a short distance of the sun's central meridian, as follows:

	Central Meridian Passage.	Latitude.	Area on Oct. 9.	
1.	Oct. 9.4	19° N	300	} Millionths of sun's hemisphere.
2.	Oct. 10.6	12 S	500	
3.	Oct. 11.6	19 S	250	

Both (2) and (3) were returns of large groups, conspicuous in the previous rotation, to which attention was directed in NATURE of Sept. 24, p. 456. A large area of bright faculae surrounded these two groups of which (2) showed marked changes after Oct. 7, when new spots appeared. A connexion may reasonably be attributed between this group of spots and the magnetic 'storm' of Oct. 12.

METEOR SHOWER OF GIACOBINI'S COMET.—Mr. W. F. Denning writes that "two observers watched the sky from Bristol on Oct. 8, 9, and 10 from about 6.30 P.M. to 9.30 P.M., though the moon was near the full and some fog prevailed. The object was to

observe a few meteors from Giacobini's comet, the orbit of which lies near the earth's path on Oct. 9-10. It may be remembered that last year a definite shower was witnessed on Oct. 9 with a radiant agreeing with that computed for the comet named. Owing to the unfavourable conditions, few meteors were noticed this year, but on Oct. 8 about eight were seen and ten on Oct. 9. A fine flashing meteor was seen on Oct. 8 at 7.56 P.M. in the south-west, but it could have had no association with Giacobini's comet. On Oct. 9 seven meteors were recorded, which showed diffuse radiation from 260° + 53°, and there is little doubt that this shower represented a return of the display of 1926, as the date agrees and the position of radiation, in the head of Draco, nearly coincides. No doubt the display would have been more abundant and the individual objects more brilliant but for the fog and moonlight which made the circumstances extremely unfavourable."

PHOTOMETRY OF THE MOON'S SURFACE.—*Astr. Nach.* No. 552 contains observations of the albedo of various regions of the moon, made by A. Markov at Pulkovo. The observations were photographic on Agfa plates. Photographs of stars and of a standard lamp were taken for comparison. Aristarchus is the region of highest albedo, the value being 0.37, Tycho and Proclus coming next. It will be noticed that the value is far below that for snow, which some had suggested as possibly present on the brighter regions. The darkest regions are Schickard and Grimaldi with values 0.09 and 0.07. The mean albedo of the disc is about 0.16, in good agreement with former determinations.