

Current Topics and Events.

In the leading article of our issue of September 27 we dealt with the question of University Staffs and University Finance. In the course of the discussion we endeavoured to make the point that where the functions and responsibilities of the staff varied continuously from the lowest to the highest of its members, a reasonable case could be brought forward for a similar continuous variation in remuneration. To illustrate the point, the case of the University of Edinburgh was quoted, where this question has recently been raised in an acute form. We stated that the "average salary of the members of the non-professorial staff (248) was about 260*l.* and that for the professorial staff (52) about 1100*l.*" Our authority for this statement was contained in a memorandum issued and signed by a staff committee of sixteen containing names of some eminence. Prof. Barger, of that University, writes querying the accuracy of these figures and suggesting that they are misleading, in that there must have been included "a large number of physicians and surgeons of the Royal Infirmary, professors in the College of the United Free Church, advocates, part-time demonstrators, etc."; that the full-time non-professorial staff is about 123 with an average salary of 433*l.* He does not tell us what would be the average salary of the professorial staff in these circumstances, nor does he quote his authority. We must leave the question to be decided at Edinburgh, but our main contention remains, of course, unaffected.

A CORRESPONDENT writes:—"Our Dutch colleagues have done well to keep green the memory of their distinguished countryman, Van't Hoff, by openly celebrating the jubilee of the conception upon which the modern doctrine of stereoisomerism is based, published independently by Le Bel in France and Van't Hoff in Amsterdam, in the latter part of 1874. Van't Hoff, it may be remembered, was brought up on a strange diet of Burton's Anatomy of Melancholy, Byron, Burns, and Buckle, yet his contribution was so made and so simple that it almost forthwith gave solidity to chemists' speculations as to the character of optically active compounds in particular, and it has prevailed up to the present day. A vast amount of solid work is traceable to the influence it has had. At the public meeting, held on October 25, in the University of Amsterdam, the foreign visitors were first welcomed by a representative of the Netherlands Chemical Society; addresses were then delivered by Profs. Cohen and Walden. Prof. Cohen's speech was an eloquent appreciation of the two men, the section devoted to Le Bel being particularly happy in its allusions. Prof. Walden appears to have prepared a complete account of the development of stereochemistry up to the present day, but could only summarise his conclusions. A reception preceded the meeting, and tea followed it. Unfortunately Le Bel could not be present. The French Chemical Society was represented by M. Delépine, the English Chemical Society by Profs. Armstrong and Lowry, whilst Mr. Woolcock repre-

sented the Society of Chemical Industry and the Association of British Chemical Manufacturers. An American wandering in Europe had been captured to appear on behalf of the American Chemical Society. Prof. Walden was the delegate of the German Chemical Society and also appeared for the Russian Society; it may be mentioned that he is now professor in Rostock; he was formerly in Riga. In the evening a banquet was given at the Hotel de l'Europe. The celebration on the whole was immensely successful. A friendly party of men, all understanding one another, united to give pious effect to the feeling of gratitude which all who can appreciate the great gift our science has received from the two men in whose honour we were assembled. Such exchanges of courtesy are of great value. These meetings, however, ever serve to remind us only too forcibly of our linguistic deficiencies."

IN his presidential address to the Institution of Automobile Engineers, delivered on October 14, Dr. W. R. Ormandy reviewed the fundamental work done by Ricardo, and by Tizard and Pye, on the phenomena and principles governing the efficiency of internal-combustion engines, and then dealt mainly with problems awaiting solution. The present method of taxing motor vehicles, by cylinder capacity, has led to the use of engines having very high compression-ratios, in order to obtain a high power with a given cylinder bore; but many engines fail in efficiency owing to pre-ignition of the fuel. Hence ability to withstand high compression is a very important attribute of a motor-fuel. The work of Midgeley and Boyd in America has opened up the possibility of using low-compression fuels in high-compression engines by adding to them traces of compounds of selenium, tellurium, or lead, but such substances are difficult to handle. For engines with more than one cylinder, the problem of distribution from the carburettor to the cylinder needs investigation with the view of finding distributing systems that will enable all types of fuel to be used freely in motor engines. "Cracked" fuels are rich in unsaturated hydrocarbons, and further research is needed on the relation between chemical constitution and performance in the engine. Another desideratum is a fuel which can be exploded in very weak admixture, as a means of improving the efficiency of engines working at light loads; hydrogen and, to a much smaller degree, methyl alcohol, and ether, satisfy this condition, but are ruled out owing to inconvenience or cost. Further progress in the discovery and investigation of new alloys, particularly those containing aluminium and magnesium, will have far-reaching effects on the future of the automobile industry. For these and other researches more money is required. In Great Britain money is fairly easily obtained for new processes that have advanced to a small commercial scale, but it is very difficult to procure for a discovery that needs investigation in the laboratory; in this respect Great Britain is behind Germany, where such work was not

interrupted even during the most stressful periods of the War.

In his presidential address on "Bretonneau: His Life and Work," delivered at the Section of the History of Medicine of the Royal Society of Medicine on October 15, Dr. J. D. Rolleston said that Bretonneau (1778-1862), by his clinical perspicacity in conjunction with careful post-mortem examinations, did as much for the study of acute infections as Laennec did for chronic diseases. Bretonneau was a remarkable personality whose services to medicine can be summarised as follows:—(1) He established the specificity of diphtheria and typhoid fever; (2) by his doctrine of specificity he foreshadowed the germ theory of disease; (3) in opposition to the physiological school headed by Broussais, who had discarded the *materia medica* and reduced treatment to bleeding, leeching, and a starvation diet, Bretonneau made several contributions to therapeutics, including tracheotomy for laryngeal diphtheria, a new method of administration of quinine in malaria, the use of belladonna in constipation and enuresis, the resuscitation of purgatives in dysentery and of martial preparations in anæmia, and the introduction of cod-liver oil in the treatment of rickets; (4) his work, especially his researches on diphtheria, by which he showed that the Syriac ulcer, malignant angina and croup were the same disease, illustrated the practical value of the study of the history of medicine.

A SLIGHT earthquake was felt in Birmingham and the surrounding district on the afternoon of October 24. From the information at present received, the disturbed area is about 24 miles long, 16 or 17 miles wide, and contains about 300 square miles, the centre being a few miles to the west of Birmingham. The shock was registered at Mr. J. J. Shaw's observatory at West Bromwich at 4.49½ P.M., the maximum intensity being about four seconds, and the last tremors about four minutes later. This is the fourth undoubted earthquake that has occurred in the neighbourhood of Birmingham. About the first, on November 23, 1769, little is known. The second, on November 15, 1772, disturbed a small area about 8 miles long and 4 miles wide, including Birmingham, but lying principally to the east. Still farther to the east, and extending from Birmingham to Coventry, was the disturbed area of a slight shock on January 31, 1888. A much stronger shock on August 27, 1922, felt over an area of about 650 square miles, has been attributed to the bursting of a meteorite (NATURE, vol. 110, p. 393).

DR. P. CHALMERS MITCHELL delivered the third Benjamin Ward Richardson Memorial Lecture on "Hygiene in Animal Food: Evidence from Zoological Gardens," under the auspices of the Model Abattoir Society, on October 23. Dr. Chalmers Mitchell stated that examination of the intestines of mammals and birds shows that the more primitive types in most classes are adapted to an omnivorous diet, and that the purely carnivorous and the purely vegetarian habits are more specialised. Man, although the most highly specialised in brain, is more primitive in some other

organs, including the intestines. Until human beings change their habits, a meat supply will be required. At the Zoological Gardens, meat has to be provided for carnivorous and omnivorous mammals and birds, and the animals chiefly used are horses and goats. These are killed in a modern, hygienic abattoir. The rifle is used, and although on an average three horses are required in two days, in the last twenty years in only two cases has a second shot been required. Dr. Chalmers Mitchell is of opinion that there is little or nothing to choose between the rifle and the humane killer, the poleaxe or the knife, skilfully used under proper conditions, as the instruments of actual death. In his opinion and experience, animals have no presentiment of death, and even the fresh blood and warm offal of their fellows convey no message of fear to their consciousness. But they are readily thrown into panic by being driven into unfamiliar places. Every abattoir should therefore have attached to it proper stables or byres, and the animals should be tended and finally led out by men familiar with the handling of living animals. Particulars of the work of the Model Abattoir Society can be obtained from the hon. secretary, Model Abattoir Society, at the Royal Sanitary Institute, 90 Buckingham Palace Road, S.W.

THE jubilee celebrations of the London (Royal Free Hospital) School of Medicine for Women were held last week-end. On Friday, October 24, a dinner was held at the Guildhall, which had been specially lent for this purpose by the Corporation of the City of London. Mrs. Scharlieb presided, and the toast of "Women's Work" was given by Dean Inge, Dean of St. Paul's. The toast of "The School" was proposed by Prof. E. A. Gardner, Vice-Chancellor of the University of London, and replied to by Miss Aldrich-Blake, Dean of the School; Mrs. Fawcett, Lady Barrett, and Prof. Winifred Cullis also spoke. More than 3000 women, representing all professions and callings in which women are engaged, gathered in St. Paul's Cathedral on Saturday afternoon to give thanks for "the opportunities for training, work, and service opened to women in the past fifty years." Of special interest, in view of the Jubilee Endowment Fund which is being raised to endow three chairs in memory of the three women pioneers in medicine, was the presence of the three nieces of Sophia Jex-Blake, founder of the School; and of Dr. Louisa Garrett Anderson, daughter of Mrs. Garrett Anderson, who was Dean of the School for 20 years. On Saturday, October 25, a party was held at the School, when past and present students and friends of the School were entertained. In this connexion there were some interesting scientific exhibits. Mr. Gardner, lecturer in organic chemistry, gave demonstrations with liquid air. An exhibit of crystals and crystal formation included some beautiful specimens lent by the Gas Light and Coke Co., Messrs. Burroughs and Wellcome, and the British Drug Houses, Ltd., as well as specimens made in the School laboratories. The physiology exhibits included optical illusions, tests for colour-blindness, the Sanborn apparatus for investigating respiratory exchange, measurement of

blood pressure, and microscopic specimens of various normal tissues. The Endowment Fund, headed by a donation from the Queen, has now reached a total of more than 26,000*l.*, including a reversionary gift of 10,000*l.* from a woman doctor in Harley Street.

THE Ramsay Laboratory of Chemical Engineering at University College, London, will be opened by Prince Arthur of Connaught on Wednesday, November 12, at 5 P.M. After the opening ceremony, the new building will be open for inspection.

THE Thomas Vicary lecture of the Royal College of Surgeons of England for the present year will be given at the College by Sir Arthur Keith on Wednesday, November 12, at 5 o'clock. The subject will be "Sir Richard Owen as Conservator."

APPLICATIONS are invited by the Zoological Society of London for their newly instituted Aquarium Research Fellowship, particulars of which were given in NATURE of August 30, p. 324. Applications for the fellowship must reach the Secretary of the Society, Regent's Park, N.W.8, by November 18 at latest.

APPLICATIONS are invited from members of the Royal College of Veterinary Surgeons with, if possible, experience in research work, for an assistantship in the Animal Disease Research Division of the Ministry of Agriculture of the Government of Northern Ireland. The latest date for the receipt of applications by the Secretary of the Ministry, Belfast, is November 8.

PROF. C. F. MARVIN, professor of meteorology since 1891 and chief of the United States Weather Bureau, has been appointed acting-secretary of agriculture for the United States, the secretaryship having fallen vacant through the death on October 25 of Mr. Henry Wallace, of Iowa.

THE Royal Airship Works, Cardington, require a skilled calculator, of either sex, with a university degree in science or engineering, who has taken higher mathematics in the degree examination. Experience in stressing of complicated braced structures is essential, preferably in connexion with the design of aircraft. Candidates with a knowledge of aerodynamics will be given preference. Applications should be sent to the Secretary, Royal Airship Works, Cardington, Beds.

THE Report on the Hunterian Collections of the University of Glasgow for the year 1922-23 is noteworthy for the large number of type-specimens included among the fossils presented to the geological department. These comprise plants from the Mepale Oil Shale of South Burma; Daunichthys, a new genus of fishes, with other fossils from the Dawna Hills, South Burma; corals, stromatoporoids, and brachiopods from Yunnan. Prof. J. W. Gregory also records the donation of a fine series of lead ores, calcite crystals, and other minerals from Wanlockhead and Leadhills mines by Mr. G. B. Findlay.

THE most recent annual Report of the Castle Museum, Norwich, records the gift by Mr. Gerard

H. Gurney of the collection of British birds formed by his father, the late John Henry Gurney. The collection comprises 1500 bird skins and 49 glazed cases of mounted birds, and is of particular value for its examples of different stages of plumage. The report also tells of successful co-operation with the Norwich Education Committee. That body has appointed a museum demonstrator, who gives four demonstrations daily to a class of 25 senior boys or girls in their fourteenth year. The scheme allows of 500 scholars attending a full course of twelve consecutive demonstrations in natural science. A good feature is that the children have the opportunity of handling duplicate specimens.

WE have received the tenth annual Report for 1923 of the International Health Board, Rockefeller Foundation, reviewing the activities of the Board in all parts of the world. Its work includes propaganda, money grants in aid of public health education and for travelling and research fellowships, and campaigns against hookworm, malaria, yellow fever, and other diseases. The total expenditure of the Board for 1923 amounted to 2,452,728 dollars. The Report is characterised not only by the lucid and interesting text, but also by the number of excellent illustrations, charts, and maps. Short papers on the spleen index in malaria, the use of fish for malaria control, and the eradication and diagnosis of hookworm disease are included in an appendix.

WE learn from the *Lancet* that after the delivery on St. Luke's Day, October 18, of the Harveian Oration before the Royal College of Physicians of London, the president, Sir Humphry Rolleston, presented the Weber-Parkes Prize and Medal to Prof. A. Calmette, formerly of Lille, now sub-director of the Pasteur Institute, for his researches on tuberculosis. The president referred to him as the foremost authority on this subject, at the same time alluding to his researches into other aspects of bacteriology. He then presented the Moxon Gold Medal to Sir Leonard Rogers for his distinguished researches in clinical medicine. In doing so, he remarked that there were few tropical diseases in regard to which Sir Leonard Rogers had not laid the medical profession under debt by his investigations. He mentioned especially dysentery, kala-azar, cholera, and leprosy, and wished him success in his present researches into the treatment of tuberculosis.

THE New York correspondent of the *Times* states that the late Mr. Henry R. Towne, a manufacturer and engineer, has bequeathed the bulk of his estate, amounting to several million dollars, to establish museums in New York which shall be a "permanent exposition of American achievement in the peaceful arts." In case the trustees deem it inexpedient to establish such museums, the fund is to be divided equally between the Metropolitan Museum of Art and the American Museum of Natural History. A sum of 50,000 dollars (10,000*l.*) has been left for an educational campaign to bring before the American

public the essential facts in regard to the great industrial museums of Europe.

PLASTER casts of the Deinosaur eggs found by the Mongolian Expedition of the American Museum of Natural History (see H. F. Osborn, NATURE, October 4, p. 504) have been presented to the Trustees of the British Museum and are now on view, with elucidatory labels, in a special table-case at the entrance to the Geological Department. Beside them have been placed for comparison certain fossil eggs of reptiles, some of which have been in the Department since 1864. In this table-case it is proposed to show the more interesting recent acquisitions, changing them from time to time. There are also exhibited in it some remarkable fossil frogs and a salamander, in bituminous shale, of Oligocene (?) age, from mines at Libros, in the province of Teruel, Spain, the gift of Dom Longinos Navás, S.J., who recently described a new fauna from that locality, including also birds, beetles, spiders, and molluscs.

MESSRS. Wheldon and Wesley, Ltd., 2 Arthur Street, W.C.2, have just circulated another of their special scientific catalogues, namely, New Series, No. 14, which is devoted to "Zoology, Part 1—Vertebrata." Upwards of 1500 works are classified under the headings: Bibliography, Biography and History, General Systems and Iconography, Evolution, Heredity, Biology, Anthropology and Ethnology,

Mammalia, Aves, Reptilia and Batrachia, Pisces, Domestic Animals and Poultry, Game Animals and Sport, Palæozoology, Miscellanea.

THE new list of announcements of Messrs. Longmans and Co. contains the titles of many books of scientific interest, among which are vol. 5 of Dr. J. W. Mellor's "A Comprehensive Treatise on Inorganic and Theoretical Chemistry"; "Gluco-proteins," Prof. P. A. Levene, and "The Action and Uses of Digitalis and its Allies in Medicine," Prof. A. R. Cushny ("Monographs on Biochemistry"); and "Elements of Mechanism," Profs. F. S. Carey and J. Proudman.

MESSRS. C. Baker, of 244 High Holborn, London, W.C.1, have sent us a copy of their classified list (No. 82) of second-hand scientific apparatus. This differs slightly from the well-known quarterly lists previously issued by the firm in that the section dealing with photographic apparatus has been omitted. This is now issued separately. The catalogue still contains plenty of material, however, which is well worthy of consideration by scientific workers. Section I., dealing with microscopes and accessories, is particularly full, while there are also long lists of surveying instruments, telescopes, spectroscopes, and other physical apparatus. Surveying instruments are let out on hire for various periods by the firm.

Our Astronomical Column.

PLANET OR COMET?—A very interesting object, which was evidently stellar in aspect, but the motion of which is suggestive of a comet, was discovered by Dr. Baade at Bergedorf on October 23. The following positions have been telegraphed from the I.A.U. Bureau at Copenhagen.

	G.M.T.	R.A.	N. Decl.	Mag.
Oct. 23	7 ^h 25 ^m 5 ^s	21 ^h 5 ^m 16 ^s	15° 28' 0"	10.5
	25 8 59.0	21 15 31.0	14 7 9	9.5

Deduced daily motion, +4^m 57.8^s, S. 39'.15.

If the object is a planet, it would seem to belong to the Eros type, with a perihelion far inside the orbit of Mars, so that it is of importance to obtain observations. Photography offers the readiest means of identifying it by its trail. The increase of a magnitude in brightness in two days should not be stressed, as it is difficult to estimate the magnitude of a trail.

On November 1 the estimated position is R.A. 21^h 50^m, N. Decl. 9½°, some 3° east of ε Pegasi. The object souths about 7 P.M., and is thus in a favourable position for observation.

TELESCOPES IN THE SOUTHERN HEMISPHERE.—An extract received from the *New Zealand Evening Post* contains an account of the inauguration of a 9-inch telescope at Kelburn, Wellington, under the auspices of the Wellington City Council. It is at present housed in a temporary wooden shed, in order to allow work on Mars to be undertaken, but a more suitable building is promised in the near future. The object glass is a photo-visual one, and it may be presumed that the mounting is equatorial, though details are not to hand. This interest of a City Council in pure science deserves grateful recognition.

From the *Observatory* for October we learn that Yale Observatory is accepting the invitation of Dr. Innes to set up a 26-inch photographic telescope in the grounds of the Union Observatory, Johannesburg, so as to continue the parallax studies of the American observatory in the Southern Hemisphere.

Dr. Innes has also organised a scheme of interchange of observers between Leyden and Johannesburg, under which Dr. Hertzsprung is at present at Johannesburg on a 15 months' visit; he will be followed by Mr. Van den Bos.

Dr. Innes makes a suggestion that every observatory should send annually to the International Astronomical Union a report on its work. Such reports would make it easier to decide on a programme of work without needless overlapping, and would help to keep observatories in touch with each other.

FINSLER'S AND ENCKE'S COMETS.—Finsler's Comet was followed at Heidelberg until October 6, but was then lost from its proximity to the sun. Dr. Kobold gives the following orbit in *Astr. Nachr.* 5326, using observations on September 20, 26, 30.

$$\left. \begin{aligned} T &= 1924 \text{ Sept. } 4.3370 \text{ G.M.T.} \\ \omega &= 66^\circ 31'.18 \\ \Omega &= 80^\circ 2'.54 \\ i &= 120^\circ 9'.36 \end{aligned} \right\} 1924.0$$

$$\log q = 9.60855.$$

Encke's Comet was followed until October 22, being then of at least the fifth magnitude and visible in considerable twilight. The observations indicate October 31.437 G.M.T. for the time of perihelion passage.