

## Current Topics and Events.

THE centenary of the birth of Pasteur occurs this year, and the University and town of Strassburg, the scene of so much of Pasteur's early work, propose to celebrate the event by organising an exhibition of hygiene and bacteriology from May to October 1923, and by setting up a statue of Pasteur before the University. The exhibition will be designed to illustrate the advances in science made as a result of Pasteur's discoveries, and a congress for the discussion of questions relating to the prevention of disease will also take place. In this country a committee, consisting of Sir Charles Sherrington (chairman), Mr. A. Chaston Chapman (treasurer), Mr. H. E. Field, Prof. P. F. Franklin, Sir John M'Fadyean, Prof. C. J. Martin, Sir W. J. Pope, Sir James Walker, and Sir Almroth Wright, has been formed to forward the project and an appeal for support has been issued. Contributions to the memorial fund, which will be closed at the end of June, should be sent to Mr. Chaston Chapman, The Institute of Chemistry, 30 Russell Square, W.C.1, or to the general secretary and treasurer of the fund, M. T. Hering, 6 rue des Veaux, Strassburg. Prof. Borrel, 3 rue Koeberlé, Strassburg, is in charge of the arrangements for the exhibition and would be glad to hear from British firms who are interested. The Académie de Médecine has decided to celebrate the centenary on December 26 next, but representatives of the academy will be present at the celebrations to be held at the Institut Pasteur on December 27 next and at Strassburg on June 1 of next year.

THE centenary of the birth of Gregor Mendel is to be celebrated in Brünn (Czecho-Slovakia) on September 22-24 of this year, and subsequently, on September 25-27, a congress of geneticists is to be held in Vienna. The circular of invitation recalls the erection of a statue to Mendel there in 1910. Since that date the significance of his discovery and the extraordinary importance of his work in its bearing on the fundamental conceptions of biology and the practice of breeding have been so widely recognised that international support on the present occasion is confidently invited. Those who are disposed to take part are asked to communicate with Dr. H. Iltis, Bäckergasse 10, Brünn.

WE have received from the authorities a preliminary circular announcing the celebration this spring of the seventh centenary of the University of Padua, one of the oldest and most famous of the Italian universities, immortalised by Galileo and his successors. In connection with the celebrations a very interesting historical account of the University is published in the February number of *L'Emporium*, the leading art journal of Italy, showing the bearing of the University upon education in the Italy of past centuries, and the vicissitudes through which the institution passed down the ages. In spite of its associations with the great names of the past, Padua

is a very modern university in so far as concerns present-day needs, ample proof of this being the large and well-equipped school of electrotechnics.

SINCE the School of Hygiene and Public Health of Johns Hopkins University, Baltimore, was opened in 1918, the Rockefeller Foundation has furnished funds for its maintenance from year to year. Now the Foundation has presented a sum of 1,200,000l., and the trustees of the University are to assume full responsibility for the future needs of the School. In this new type of institution emphasis is laid upon the development of preventive medicine and the training of health officers. Instruction is provided in bacteriology and immunology, sanitary engineering, chemical and physiological hygiene, medical zoology, epidemiology, vital statistics and public health administration, and the regular courses of study lead to the degrees of doctor of public health and doctor and bachelor of science in hygiene. The present gift, in addition to providing endowment, will make possible the erection of the new building for the School on a site adjacent to the Johns Hopkins Medical School and Hospital.

PROF. A. WOLF, of the University of London, delivered a lecture on the Humanism of Spinoza at a special session of the Spinoza Society held at the Hague on Tuesday, March 28. The Spinoza Society ("Societas Spinozana") is the offspring of an older society founded more than forty years ago when the Spinoza monument was erected in the Hague as an international tribute to the great philosopher. Among the leading spirits of both societies are Sir Frederick Pollock, of London, Prof. L. Brunschvieg, of Paris, Prof. H. Hoeffding, of Copenhagen, Dr. C. Gebhardt, of Frankfurt, Dr. W. Meyer and Mr. H. G. van der Tak, of the Hague. The Spinoza Society has now in the press the first number of an Annual to be called "Chronicon Spinozanum," to which all the above-mentioned Spinoza scholars and others have contributed important essays. The promoters of the new society and its annual are prompted by the feeling that a wider knowledge of the philosophy and personality of Spinoza may be of special help in these difficult times, and they hope that the society may become a rallying point for those thinkers who still share Spinoza's faith in the ultimate unity and rationality of mankind.

IN appointing an advisory Committee in Seismology, the Carnegie Institution of Washington has taken an important step in the promotion of the study of earthquakes in the United States. The preliminary report of the committee recognises that, as compared with England, Germany or Japan, the country has not yet taken a sufficiently active part in seismological research. At the same time, in the State of California, it possesses almost unexampled opportunities for the study of crustal movements, while several public

bodies are prepared to co-operate in such a study. The committee make several useful suggestions. Detailed surveys, it is urged, should be made of the San Andreas rift and other Californian faults. The Coast and Geodetic Survey should be invited to undertake a system of primary triangulation and precise levels in the regions most subject to movement, and to connect them with an appropriate zone of no movement east of the mountains, and also to erect new lines of columns at right angles to the San Andreas and San Jacinto faults, a time like the present being more suitable for the measurement of crustal drift than the months immediately following a great earthquake, such as that of 1906. Southern California, especially, is a region of intricate faulting, in which many of the faults are still active, and it is also one in which no primary triangulation has yet been made. The committee also indicates the value of gravity observations in connexion with the measurement of displacements along the great faults.

SIR ARTHUR NEWSHOLME delivered a course of three Chadwick lectures at Birmingham on March 27-29. The subject of the first lecture was "Values in Preventive Medicine historically considered: General and Specific Sanitation." The lecturer dealt with the value of various measures against disease in their historical development. He deprecated strongly the indiscriminating call for retrenchment in public health expenditure, though urging a careful survey of the cost of all measures in vogue. The epidemiology of typhoid fever, cholera, typhus fever, and others was considered, and the lessons taught by the methods of control were surveyed. In the second lecture on "Current Values in Preventive Medicine: Relation between Prevention and Treatment," Sir Arthur Newsholme reviewed the possibilities of preventing the chief infectious diseases. The acute notifiable diseases cause only 3.1 per cent. of the total mortality, though the greater part of administrative care is devoted to them. In childhood more than half the deaths are due to infections, and in a large measure adult health is determined by disease or absence of disease in childhood. The chief object of preventive medicine is to postpone death, and this would be greatly aided if every adult submitted himself to periodical medical examination. In the third lecture, methods of evaluating public health activities were considered. Empiricism in analysis of social conditions was deprecated, as, for instance, in statements on malnutrition of school children, without further attempt to ascertain the cause. The amount spent on public health in large English and American towns averaged 5s. per head per annum, or, in England, from 4 to 8 per cent. of the total rates collected per head. The importance of minimum standards was emphasised, each town to receive a government grant only when it fulfilled certain minimum conditions. The lecturer concluded that the greatest return in health for money expended—apart from the ordinary sanitation of a city—was to be had in respect of maternity and child welfare, and on the prevention and treatment of tuberculosis and venereal diseases.

THE *Times* reports the opening on April 5 of a lock and weir at Blanchetown, South Australia, the first of a series of such structures which will ultimately number 26, and directs attention to the very important scheme of navigation and irrigation, of which they form part, entered upon by the States of New South Wales, Victoria, and South Australia, with the sanction of the Federal Government. The rivers Murray and Murrumbidgee are to be regulated by a lockage system which will make it possible to navigate their waters for a distance of 1066 miles above the mouth of the former, and at the same time will increase greatly the area of irrigable land. Of the total number of locks, nine will be constructed by the New South Wales Government on the Murrumbidgee, eight by the Victorian Government on the Murray, and nine by the South Australian Government on the same river. The Blanchetown lock, which has been named after Mr. W. R. Randell, one of the pioneer navigators of the river, is situated 170 miles from the sea, and marks the limit of free deep water, for which reason it was chosen as the initial feature of the undertaking. The work, which was begun seven years ago, has been much impeded by floods and industrial troubles, so that the lock was only completed in September last.

LECTURES at the Royal Institution after Easter will be resumed on Tuesday, April 25, when Sir Arthur Keith will begin a course of three further lectures on "Anthropological Problems of the British Empire," Series II.: "Racial Problems of Africa." The Tyndall Lectures will be delivered this year by Prof. W. Bulloch on "Tyndall's Biological Researches and the Foundations of Bacteriology," and Sir Percy Sykes will give two lectures on Persia. On Thursday afternoons there will be two lectures by Prof. E. H. Barton on "Audition and Colour Vision"; two by Prof. F. Keeble on "Plant Sensitiveness." On Wednesday, April 26, Prof. D. H. MacGregor gives the first of two lectures on "Industrial Relationship," and on Wednesday, May 24, Dean Inge begins a course of three lectures on "Theocracy." On Saturday afternoons there will be two lectures by Prof. O. W. Richardson on "The Disappearing Gap between the X-ray and Ultra-violet Spectra"; and three by Sir Hugh Allen on "Early Keyboard Music," with musical illustrations by Mr. Harold Samuel. The Friday evening discourses will be resumed on April 28, when Dr. Arthur Harden will deliver a discourse on "Vitamin Problems." Succeding discourses will probably be given by Dr. M. Grabham, Dr. H. H. Dale, Sir William Bragg, Prof. W. E. Dalby, the Hon. Maurice Baring, Mr. J. Barcroft, and other gentlemen.

At the anniversary meeting of the Royal Irish Academy held last month Prof. T. H. Morgan (New York) and Prof. Jules Bordet (Brussels) were elected honorary members in the section of science.

It is stated in the *Chemiker Zeitung* of March 23 that Prof. W. Nernst will take over on April 1 the duties of Director of the Physikalisch-Technische Reichsanstalt, but will continue to act as Rector of the University of Berlin until October 15.

ACCORDING to a brief despatch from Valdivia published in the *Times* of April 6, great volcanic eruptions occurred in southern Chile, to the south-east of Puerto Montt, and close to the Argentine border. They were accompanied by violent earthquakes. Much damage was caused to grazing lands on the Argentine side of the frontier, which for thirty leagues was covered with volcanic ashes.

WE learn from *Science* that a meeting to initiate the Gorgas Foundation Memorial, founded in memory of the late Maj.-Gen. W. C. Gorgas, who accomplished noteworthy work in connection with tropical diseases in Panama, was held at Birmingham, Alabama, on March 4 last. Among the speakers was the British ambassador, Sir Auckland Geddes, who said: "The name Gorgas will live long after the peoples of earth have forgotten the heroes of the world's greatest war."

AT the annual general meeting of the Chemical Society held at Burlington House on March 30, the following new members of council were declared elected: Vice-Presidents, who have filled the office of President: Prof. H. B. Dixon and Prof. P. F. Frankland; Vice-Presidents, who have not filled the office of President: Prof. E. C. C. Baly and Prof.

T. M. Lowry; Ordinary Members of Council: Dr. C. Dorée, Dr. J. J. Fox, Prof. I. M. Heilbron Prof. J. W. McBain, Dr. W. H. Mills and Prof. J. R. Partington.

UNDER its new constitution the Association of Assistants in Pathological and Bacteriological Laboratories is now admitting, as associate members, laboratory assistants from laboratories other than those of pathology and bacteriology. The organisation was founded in 1912, its chief object being to improve the status of the laboratory assistant by endeavouring to raise the standard of technical knowledge through the medium of an educational programme, culminating in an examination and the granting of a certificate of proficiency in laboratory technique. An official organ, *The Laboratory Journal*, is issued to members quarterly, and, in addition to Association news, the journal contains original articles and abstracts of technical interest to laboratory workers; there is also an employment bureau. From the first the founders had in mind the inclusion ultimately of all laboratory assistants in one federation, and it is hoped that the present movement will lead to the formation of sections embracing other branches of science. The Honorary Associate Secretary is Mr. F. C. Padley, 2 Eldon Place, Reading, from whom further information may be obtained.

### Our Astronomical Column.

EVENING STARS.—After sunset the sky now presents some interesting planets for observation. At the middle of April Venus will be brilliantly displayed in the western sky, and sets about an hour and a half after the sun has gone down. Jupiter will be visible in the south-east sky and will pass the meridian at an altitude of about  $35^\circ$  soon after 11 P.M. Saturn crosses the meridian 35 minutes before Jupiter, as it is situated  $9^\circ$  westwards.

Mars will not be visible in the early hours, but rises at midnight at the middle of the month, and will remain visible throughout the morning hours. Jupiter and Saturn may now be very successfully observed in telescopes, as they reach a fairly good altitude, but Mars is very low in Scorpio and only  $15^\circ$  above the horizon when due south. The latter planet will continue so far south during the ensuing summer that its markings will scarcely admit of satisfactory investigation by European observers. When the planet is nearest to the earth on June 18 next, it will be only 42 millions of miles distant from us, but its greatest altitude will not exceed  $12^\circ$ . In such circumstances good definition of delicate features is almost impossible when high magnifying powers are employed on telescopes.

THE DISTANCES OF THE SHORT-PERIOD CEPHEID VARIABLES.—Bull. No. 8 of the Astr. Inst. of the Netherlands contains an important research on this subject by J. C. Kapteyn and P. J. van Rhijn. They note that the Cepheids may be divided into two classes with periods greater and less than 16 hours. Excluding those in clusters, there are 39 and 94 stars belonging to these classes respectively; the first class shows no galactic concentration, while the second

shows it strongly, an argument for the relative proximity of the former. Provisional proper motions are deduced for 14 of these stars, chiefly from astrophotographic plates with a time-interval of some 25 years. The mean parallax deduced is  $0.0065''$ , while the mean magnitude is 10.3; the parallax is 7.6 times as great as that given by Shapley's formula. It is pointed out that Schouten reached in 1918 the same factor 7.6 for Shapley's parallaxes of the clusters; he based this on the assumption that the luminosity curve for the stars in the clusters is identical with that found for the stars as a whole. It should be observed that neither method affects the relative distances of the clusters investigated by Shapley; it simply divides all of them by a factor. Further, the Cepheid method was only one of several used by Shapley in deducing his distances; hence it appears somewhat unlikely that they need division by so large a factor as 7.6.

Kapteyn and van Rhijn also reinvestigate the mean parallax of the long-period Cepheids, obtaining  $0.0029''$  from 17 stars, of mean magnitude 5.32, which is in good agreement with Shapley's  $0.0034''$  from 11 stars. They express the hope that trustworthy proper motions for all the 39 short-period Cepheids will be available in a few years, and ask for a suspension of final judgment on the distances of the clusters till that time.

Dr. Shapley gives some evidence on the other side in Harvard Coll. Observ. Bull. No. 765. He states that the light curves of several short-period Cepheids in the Small Magellanic cloud (mean period 0.64 days) give a mean median magnitude 16.1, closely agreeing with the value 16.2 predicted by his curve. He claims that this supports his previous estimate of the absolute magnitude of these stars.