

best known for his work on the theory of generalized hypergeometric series; much of this was incorporated in his Cambridge 'tract' on this subject, an excellent booklet which makes pleasant reading. To him are due two new methods of obtaining transformations of such series; one is algebraic and the other uses contour integrals of Barnes' type. These methods led to various generalizations in the theory, and applications were made to Bessel functions and Legendre functions. Some of his most important work in this field concerned infinite integrals in which the integrand involved the product of three Bessel functions. The argument used an earlier result of his, that Appell's hypergeometric function of two variables could in a particular case be expressed as a product of two ordinary hypergeometric functions. This case has since been of use to other writers and has led to new researches. His most recent work, which is in process of publication, is on the problem of finding transformations of hypergeometric series of both the ordinary and the basic type. Previously, no general method of obtaining transformations of basic series had been given. His new point of view has led to new transformations of basic series, thrown further light upon them and has also led to numerous identities of the Rogers-Ramanujan type.

Science and Industry at Manchester

THE Manchester Chamber of Commerce has done well to issue in pamphlet form (Pp. 63. 1s. 6d.) the addresses given at the four meetings on "Science and Industry" in March and April last. The pamphlet contains not only the addresses of Lord Riverdale, Dr. A. P. M. Fleming, Dr. Andrew McCance and Sir Edward Appleton, which have already been noted in these columns, but also other addresses given at the meetings, such as those of Sir Raymond Streat, Mr. A. H. S. Hincheliffe, announcing the formation of a Joint Standing Council of the Chamber and of the University of Manchester, Mr. C. C. Renold and Mr. R. H. Dobson. Mr. C. C. Renold, following Dr. Fleming's address on "Research Workers: their Education and their Place in Industry", referred particularly to the traditional industries where the application of science should involve challenging the traditions themselves, not merely tuning them up or their further evolution. The emphasis should be on the application of what is already known rather than the extension of the boundaries of knowledge, and Mr. Renold suggested that for the medium-sized traditional concern the key move is the appointment of a scientific liaison officer with broad and general rather than specialized scientific qualifications. His job should be to recognize the problems and indicate lines worthy of investigation, and to help the practical men to apply the answers. With this fairly high-ranking appointment in the management, a re-casting of management structure might also be necessary to separate those functions of management which lend themselves to contact with the scientific liaison officer and thereby provide a convenient channel for his influence to become effective. Some re-casting of the accepted curricula of teaching may be required to provide men of the necessary breadth of scientific appreciation. Mr. R. H. Dobson, following Dr. McCance's paper on the application of research, referred to the bearing of fundamental research on the export trade of Britain, and to the necessity of creating a liaison and a free interchange of ideas and work between technical assistants and the people on the shop floors.

Looting of Simeis Observatory

A TELEGRAM received at the Royal Observatory, Greenwich, from G. A. Shajn, member of the Academy of Sciences of the U.S.S.R., gives an account of the fate suffered at the hands of the enemy by the Simeis Observatory in the Crimea. A week or two before the Germans occupied the southern part of the Crimea, the staff of the Observatory was evacuated, the workers taking with them the object glasses of the two astrographs and part of the laboratory equipment. In May 1944, after the Crimea had been liberated by the Red Army, the Academy of Sciences sent Dr. Shajn to inspect the remains of the Observatory. He established the following facts. During September and October 1943 German specialists dismantled all the Observatory's instruments and moved them in thirty or more trucks to Simferopol, whence they were dispatched to Germany. The equipment stolen was the 40-in. reflecting telescope, the double astrograph, a new astrograph for zonal observations, a photoheliograph, three stellar spectrographs, a large coelostat, a long-screw measuring machine, a Repsold machine, a microphotometer and two astronomical clocks.

In addition to this, much other laboratory equipment and the whole library collection of more than nine thousand negatives, and the equipment of the power station and workshop were all taken away. The wooden parts of three observatory domes were destroyed, and one of them was used as a stable. The wooden building which housed the spectroheliograph was also destroyed, as were a number of other pavilions. On January 18, 1944, the main building of the Observatory, where a Rumanian army unit was quartered, caught fire. It continued to burn for two days, but the commander of the unit did not call out the fire brigade nor did he take any steps to extinguish the flames. British men of science will sympathize with Russian astronomers in the looting and wanton destruction of this famous Observatory.

Tropical Diseases Investigation in New York

A RECENT article in *Nature* (May 9, 1944, p. 625) referred to the part played by parasitic diseases in war and to the realization by American physicians that these diseases constitute a grave danger to their troops overseas. Prof. H. W. Stunkard (*Ann. New York Acad. Sci.*, 44, Art. 3, 189; 1943) has referred to the absence of adequate instruction in tropical medicine or of any institution devoted primarily to work on parasitic diseases in the United States. Nuttall, Brumpt and Fülleborn, he states, thought that New York should provide the financial support for such an institution, because it is the principal shipping and commercial centre in the United States. In time of war, Prof. Stunkard points out, it is one of the chief ports of embarkation and disembarkation, so that there is acute need there for diagnostic, therapeutic and research work. The Columbia University Department of Public Information now announces that plans are being formulated which will, if they are carried out, make New York City a world centre of teaching and research in tropical medicine. Dr. H. S. Mustard, director of the DeLamar Institute of Public Health, Columbia University School of Medicine, states that a substantial beginning has been made, thanks to a temporary grant from the Macy Foundation. An additional grant from the John and Mary H. Markle

Foundation has been received for research on filariasis. Instruction in tropical medicine for medical students has been increased at the Institute, and its laboratories are now available to officers of the armed services and to others who need to go to the tropics. Intensive courses for graduates are also being provided and it is expected that very soon a full year's course will be available. There is hope that new buildings will be possible soon after the War.

Dr. Mustard echoes Prof. Stunkard's words when he says that ". . . the very business of war depends upon a successful combating of tropical diseases". Not only is the health of the fighting forces concerned, but also that of local populations in the tropics who are required for getting raw materials, building airfields and general labour. Alliances, treaties and national and trade interests are more than ever taking United States Government officials, business men and others to the tropics by ship and aeroplane, and these men, ships and aeroplanes may bring back tropical diseases and their vectors. "The universities of the United States cannot remain aloof from the realities of this situation," says Dr. Mustard. Only a few United States universities, he states, will be able to offer courses in tropical medicine, the number being limited by their position and resources. A university giving such courses should be in a great city which is a great centre of rail, sea and air transit, especially transit to and from the tropics; and it should be a recognized cultural, educational and medical centre and have international prestige and an outstanding school of medicine. Columbia University in New York City, with its unique relation with the School of Tropical Medicine at Puerto Rico and with the College of Physicians and Surgeons, would certainly seem, as Dr. Mustard suggests, to be well fitted to undertake this vitally important work.

Solar Research in Belgium during 1942

A NOTE on this subject by Swings (*Astrophys. J.*, 99, 118; 1944) reports that the University of Liège still continues its programme of astronomical infrared spectroscopy, and that in June 1942 a new self-recording high-dispersion spectrograph was installed in the constant-temperature basement of the solar tower. This instrument utilizes four plane echelette gratings with 15,000, 3,600, 2,400 and 1,200 lines per inch respectively, the whole spectrum from 1μ to 20μ being covered with a resolving power which will separate lines 1 cm.^{-1} apart. A preliminary paper by Migeotte gives a general account of the results obtained from recordings of the solar spectrum in the region near 1.5μ . Here absorption lines only 1.5 \AA . apart can be separated, and the distinction between solar and telluric lines is relatively simple. A study of the water-vapour spectrum in this region is nearing completion, and the new instrument is now in continuous operation.

Research in the Caribbean

PROF. J. L. SIMONSEN, director of research of the Colonial Products Research Council, Sir Robert Robinson, Waynflete professor of chemistry in the University of Oxford, and a member of the Council, are now on a visit to the Caribbean area, where they are discussing fundamental problems of research on new uses for Colonial raw materials, with specific reference to the co-ordination of the work of the Colonial Products Research Council with that of the Caribbean Research Council.

Biography of the late Lord Cadman, F.R.S.

MR. IVOR EVANS has been entrusted with the writing of the biography of the late Lord Cadman. Readers of *Nature* possessing letters, etc., likely to be of interest are asked to forward them to Mr. Evans, c/o Mr. James Cadman, Walton Hall, Ecclestone, Staffs.

Night Sky in September

FULL moon occurs on Sept. 2d. 20h. 21m. U.T. and new moon on Sept. 17d. 12h. 37m. The following conjunctions with the moon take place: Sept. 11d. 06h., Saturn 0.7° N.; Sept. 16d. 01h., Mercury 5° S.; Sept. 16d. 08h., Jupiter 3° S.; Sept. 19d. 00h., Mars 5° S.; Sept. 19d. 11h., Venus 5° S. In addition to the above, the following planetary conjunctions also take place: Sept. 10d. 02h., Venus in conjunction with Mars, Venus 0.5° N.; Sept. 23d. 16h., Mercury in conjunction with Jupiter, Mercury 0.1° N. Mercury is in inferior conjunction on Sept. 6, stationary on Sept. 15, and attains its greatest western elongation on Sept. 22. The times of rising of the planet at the beginning, middle and end of the month are 6h. 31m., 4h. 15m., and 4h. 32m. respectively. Venus sets at 19h. 29m., 18h. 48m., and 18h. 23m. at the beginning, middle and end of the month, and is not very well placed for observation. Mars and Jupiter are too near the sun for favourable observation. Saturn can be seen late at night or in the early morning hours; at the end of September the planet rises at 22h. The autumn equinox commences on Sept. 23d. 04h.

Announcements

MR. C. T. GIMINGHAM has been promoted to the post of director of the Plant Pathology Laboratory of the Ministry of Agriculture and Fisheries at Harpenden, to succeed Mr. J. C. F. Fryer, who has been appointed secretary to the Agricultural Research Council.

THE Council of the Institution of Electrical Engineers has decided to continue for the present session the scheme for the admission of non-members of the Institution to any technical meeting of the Institution. Anyone who considers that his technical experience and educational attainments do not suffice to admit him to any form of Institution membership, but who nevertheless wishes to attend meetings of the Institution, can obtain from the secretary an application form, on the completion of which and on payment of a fee of 10s. to cover administrative costs, he will receive notices of meetings and an invitation card which will serve as a title of admission.

DR. G. LAPAGE writes: "May I correct an error in my abstract, entitled 'A Flatworm Parasite of Freshwater Trout', of the paper by J. B. Duguid and E. M. Sheppard, printed in *Nature* of Aug. 5 (p. 185). My abstract implied that Duguid and Sheppard concluded from material sent to them by Dr. Peterson, of Yell, that *Diphyllbothrium latum* is endemic in freshwater trout in the Shetlands. What these authors actually say is that 'from material kindly sent to us by Dr. Peterson of Yell, we gather that a species of *Diphyllbothrium* is endemic among freshwater trout in certain of the Shetland Islands'. This is, of course, very different from the statement which I attributed to them and would refer, presumably, to the larval stages".