

stations each having a capacity greater than 100,000 kw. The capacity has increased more rapidly than the output owing to the necessity of keeping a large reserve of power to meet sudden fluctuations in the consumption. In Paris, for example, the rate of consumption varies between 50,000 kw. at 3 a.m. and 340,000 kw. at 5 p.m. The rate of consumption of hydro-electric power is now greater than that of thermal power. It is noteworthy that the total length of the distributing lines is increasing more rapidly than the consumption of power. This is due to the increasing number of small consumers and to the fact that, as the supply service is extended to the more remote regions, longer lines are needed to reach new users. At present it is necessary to lay 46 metres of low tension line, on the average, to supply each new consumer, whereas in 1923 the length of line required was 13 metres. The large industries consume 7,100 million kwh. per annum and electrochemistry and electrometallurgy together take 2,200. Lighting and domestic supply take 1,800, small industries 1,000 and traction 900. There are now 35,369 communes supplied with electricity, and only about 2,600 not so provided.

Protection against Gas Attacks

THE Socialist Medical Association has issued a booklet entitled "Gas Attacks: Is there any Protection?" (London: Lawrence and Wishart, Ltd. 6d.). It is maintained that air-raiders are certain to penetrate our defences, and will not hesitate to employ a combination of high explosives, fire and gas in their attacks, against which the only efficient protections are respirators and gas- and bomb-proof self-contained dug-outs. The booklet issued by the Home Office, "Anti-Gas Precautions and First Aid for Air-Raid Casualties", is criticized, and is considered to give an incorrect impression of the dangers of war gases and possibilities of protection, and that the defences proposed, even if they could be generally adopted, would be inadequate. Dr. Sommerville Hastings contributes an introduction, the nature of the gases employed and their effects are described, and the available means of protection and the treatment of gas casualties are discussed.

Bulletin of the Metchnikoff Institute of the Ukraine

THE Metchnikoff Institute of the Ukraine has commenced the issue of a monthly bulletin (*Bulletin de l'Institut Metchnikoff*) devoted in the main to bacteriological and immunological papers from the Institute, written in French, English and German. In an editorial note to the first number (April 1936), it is remarked that until 1917 bacteriology had made slow progress in Russia, but that since that time many new institutes have been established and the active roll of bacteriologists and epidemiological experts has very greatly expanded. The nineteen extremely brief papers published in the first number are written in summary fashion without bibliographies, but any efforts that facilitate the introduction of Russian work to non-Russian readers are to be heartily welcomed.

The Aquarist and Pond-Keeper

THE *Aquarist and Pond-Keeper*, incorporating the *Reptilian Review*, in the March-April number, 1936, has various improvements, including a new cover design. Specially striking is a collection of photographs occupying two pages, which with the illustrations to the article on reptile hunting in Britain by A. E. H., depict the whole of our native species of reptiles and batrachians. Mr. E. Bridgstock-Choat, honorary curator of the Erith Museum, contributes an article entitled "The Pond Hunter", which will be continued, and papers from various other workers deal with fishes, fish-breeding, ponds and water gardening and various allied subjects.

Official Statistics

ATTENTION may be directed to the publication of the Guide to Current Official Statistics for 1935 (London: H.M. Stationery Office. Price 1s.). The arrangement is the same as in previous years. The greater part of the volume is occupied by an alphabetical range of subjects with reference to the appropriate publication. This is followed by a list of publications arranged under departments. The volume is invaluable for quick reference, and reveals the great range of matters on which statistical and other official information is available.

Post-graduate Medical Research

THE Medical Research Council has decided to institute a series of studentships and fellowships to encourage young British medical graduates towards becoming investigators in those branches of medical science which are concerned directly with disease as it occurs in human beings. Six post-graduate studentships are therefore offered for medical graduates who have already held house appointments and are strongly inclined to a career in clinical science or experimental pathology. Each selected student will receive an inclusive grant at the rate of £200 per annum, during a period not exceeding twelve months, while undertaking approved courses of study in Great Britain such as may be regarded as best calculated to advance the student's training in methods of research. Four research fellowships are also offered for candidates of similar qualifications who have already had some experience in research methods. Each fellowship will be tenable for one year at the value of £250 per annum, and will be renewable in approved instances at the rate of £300 per annum for a second year. Further information can be obtained from the Secretary, Medical Research Council, 38 Old Queen Street, London, S.W.1.

Fireball over Yorkshire

THE occurrence on August 18 at about 22^h 23^m (Summer Time) of a brilliant object, evidently a fireball or particularly bright meteor, has been referred to by several correspondents in the *Yorkshire Post*. The accurate observation of the apparent path of a meteor requires a trained observer, and it is to be expected that accounts supplied by casual eye-

witnesses are often vague, conflicting, and quite unreliable for the data required to fix the real path above the earth. It seems, however, very probable that the fireball which lit up the countryside from which it was seen (including North Yorkshire, Derbyshire and Westmorland) was associated with the Perseid shower of meteors. This shower, which provides a high maximum frequency of meteors between August 10 and 12, is really operative from about mid-July until after mid-August; during this period the radiant point moves progressively from a position at about R.A. 1^{h} : Dec. $+50^{\circ}$ to R.A. 4^{h} : Dec. 65° , or from a position in the constellation Andromeda, through Perseus (which gives the shower its name) to Camelopardus.

The Night Sky in September

THE night sky of September offers a rich variety of objects for observation with slight optical aid. Some of the most attractive of the constellations are visible; there are star fields of the Milky Way, the Andromeda Nebula, the variable star, Algol, the Pleiades, some of the best known double stars and the largest two major planets. Between the first and last days of the month, the days shorten in the latitude of London by nearly two hours. On Sept. 23^d 5^h the sun enters, at the autumnal equinox, the sign Libra. Full moon occurs on Sept. 1^d 12^h and again, as the Harvest Moon, on Sept. 30^d 21^h. Of the planets to be observed, Venus still sets in the early twilight, but Jupiter is a bright object low in the south-west during the early evening. There is yet time, though very limited, for observing some interesting phenomena—transits, occultations and eclipses—associated with the four inner satellites. Particulars will be found on p. 615 of the *Nautical Almanac* for 1936. Saturn is above the horizon all night; on September 12 it is in opposition at a least distance from the earth of about 800 million miles. The rings appear nearly closed, the minor axis subtending an angle of only $1\frac{1}{2}$ seconds of arc. Mars is a morning star, and will be in conjunction with the bright star Regulus on September 24, when the angular distance between planet and star is less than 1° . Uranus is in Aries, and can be found near the 6th magnitude star ω Arietis, which the planet resembles when viewed with binoculars; but a 2- or 3-inch telescope will show the planet's disk of $3\frac{1}{2}$ " in diameter. The light variation of Algol (β Persei) may be observed near the following times of minima: Sept. 3^d 3^h, 6^d 0^h, 26^d 2^h, 28^d 23^h, Oct. 1^d 19^h (add 1^h to convert to Summer Time). The following double stars are suitably placed for observation during September: α Herculis (separation of components $4\frac{1}{2}$ "), ϵ Lyrae (3' separation for the wide components each of which is a double of $2\frac{1}{2}$ " and 3" separation respectively), β Cygni ($3\frac{1}{4}$ ") and γ Delphini (11").

Announcements

PROF. MAX PLANCK, president of the Kaiser Wilhelm Society for the Advancement of Science, has been nominated doctor *honoris causa* by the Faculty of Philosophy of the University of Graz.

THE 1936 American Physical Education honorary award for achievement has been divided between the twin brothers, Dr. Edgar and Dr. Edwin Fauver, directors of physical education at Wesleyan University and Rochester University, respectively.

ON the occasion of the recent celebration of the twenty-fifth anniversary of the German Statistical Society the following were nominated honorary members: Prof. Sigmund Schott, director of the Mannheim Statistical Office; Dr. Friedrich Prinzing, of Ulm; Dr. Kovacs, president of the Hungarian Central Statistical Office, Budapest; and Dr. Savorgnan, president of the Italian Central Statistical Office, Rome.

DR. WILLIBALD SCHOLZ, professor of neurology and psychiatry at Munich, has succeeded the late Prof. Spielmeyer as director of the Department of Cerebral Pathology of the German Research Institute of Psychiatry, Kaiser Wilhelm Institute, Munich.

A NUMBER of public health courses have been instituted in Holland for training civilians in protecting themselves against attacks from enemy aeroplanes.

A SIX-year study of the role of diet in the last half of adult life will be undertaken at the New York State College of Agriculture at Cornell University. The Rockefeller Foundation has contributed 42,500 dollars to the support of the study.

THE second Italian Congress of Radiology will be held at Modena on September 20–21 under the presidency of Prof. Ruggero Balli, director of the Institute of Radiology. Further information can be obtained from the general secretary, Dr. Marco Lenzi, Istituto di Radiologia, Modena.

PROF. PAVLOV'S widow has presented the first batch of papers formerly belonging to her husband to the archives of the Academy of Sciences of Soviet Russia. They consist of about 2,500 letters from Russian and foreign men of science. Most of them relate to the years following the Revolution, while among the earlier ones are several from Metchnikoff and other famous men of science who corresponded regularly with Pavlov.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:

An assistant (III) at the Ditton Laboratory, East Malling, Kent (refrigeration)—The Superintendent, Ditton Laboratory, East Malling, Kent (August 31).

Three inspectors (agricultural and live-stock) in the Department of Agriculture for Scotland—The Secretary (Establishment Branch), Department of Agriculture for Scotland, York Buildings, Queen Street, Edinburgh, 2 (September 1).

A civilian education officer in the Royal Air Force Educational Service—The Secretary (A.E.), Air Ministry, Adastral House, Kingsway, London, W.C.2 (September 14).

A visiting tutor for educational psychology in the Catholic Training College for Women, Cavendish Square, London, W.1—The Principal.