

where  $q_2$  and  $q_{12}$  denote the values of probabilities of dying before the age of 2 and 12 months respectively,  $l$  the monthly increase in the number of births, and  $n$  the average monthly number of births. M. BRONSTEIN: The relativistic generalisation of the principle of uncertainty. G. KRUTKOV: Contribution to the theory of Brownian movement. On the function  $f(v, x, t)$  and the equation of the diffusion. V. KUZNETSOV, D. KONVISAROV and V. STROKOPYTOV: The increase in the plasticity of metals during plastic twisting in alternating directions. K. ANDREJEV and J. CHARITON: Some considerations on the mechanism of self-propagating reactions. A certain minimum degree of localisation of the reaction energy is necessary for the self-propagation of the macro-chain. M. KAZNELSON and M. KABACHNIK: Amidation with the help of sodium and potassium amides in the alkaloid series (1). On the  $\alpha$ -aminoanabasin. V. SADIKOV, V. VADOVA and R. KRISTALLINSKAJA: The use of  $H_2SO_4$ ,  $HCl$ ,  $H_3PO_4$ ,  $HNO_3$  and of alkalis in the catalytic splitting of proteins. I. LIASCHENKO: Flowering in the genus *Cucurbita*. Description of hermaphrodite flowers observed in four different species. N. KALABUCHOV: 'Anabiosis' in vertebrates and insects at a temperature below zero. At temperatures of  $-3^\circ$  to  $-10^\circ C.$ , metabolic exchange continues, though very slowly; consequently, the state of prolonged undercooling is only a profound torpor, and not a complete cessation of the vital processes understood by 'anabiosis'. L. VARDANIANC: On the age of the surface relief of Ciscaucasia. The conformation was produced only in the post-Pliocene.

## ROME

Royal National Academy of the Lincei, Jan. 21. S. MINETTI: Riccati's differential equation and certain results in differential geometry. A. MYLLER: The flexion of scored surfaces. L. SOBRERO: A new hypercomplex variable of interest in the theory of elasticity (1). R. CACCIOPOLI: Elliptic equations with partial derivatives, with  $n$  independent variables. Various simple fundamental results concerning linear equations of elliptic type are established. E. BOMPIANI: Determination of the hyperspatial surfaces for a triply infinite system of normal rational curves. R. ZAÏCOFF: Generalised wave mechanics. F. P. MAZZA and L. PANNAIN: Mechanism of the action of histozyme. This enzyme is distinguished from the carboxypeptidases, as it unites, not with the free carboxyl group of the substrate, but with the nitrogen of the  $CO.NH$  bridge. The different activities it shows towards aliphatic and aromatic alacyl derivatives are probably due, not to the existence of two different enzymes, but to varying velocity of the hydrolysis catalysed by the enzyme. F. PIRRONE: (1) Studies on indones. Synthesis of  $\beta$ -phenyl-1:2-naphthoindene-11-one. (2) Investigations in the field of high frequency. Biochemical action of ultra-short electromagnetic waves (1). Exposure of brewers' yeast in aqueous suspension to the oscillations of a Hertzian resonator capable of oscillating on the fundamental wave of  $\lambda = 1.885$  metre reveals a slow accelerating action on the development of the yeast. The effect is slight after 1-2 days, but becomes marked after 6-7 days. G. BINI: Determination of the characteristic nitrogen groupings in the muscular tissue of *Mullus barbatus*, L. The proportions of the total nitrogen of this tissue existing as lysine, histidine, arginine, etc., have been determined by the van Slyke method. C. SIBILLA: Sexuality in certain species of the genus *Chaetomium*.

This genus includes many homothallic species, and experiments are being made to ascertain if such homothallism is absolute or prevalent. A. DE AGAZIO: Action of strychnine and strophantine on the isolated heart of *Bufo vulgaris*. ELENA J. ROLAND: Existence of a large sebaceous gland in the external auditory canal of native *Mus* species.

## Forthcoming Events

- ROYAL SANITARY INSTITUTE, July 9-14.—Health Congress to be held at Bristol. Dr. Stanley H. Badock: President.
- INSTITUTION OF NAVAL ARCHITECTS, July 10-13.—Summer meeting and International Conference on Experimental Tank Work. Right Hon. Lord Stonehaven: President.
- SOUTH-EASTERN UNION OF SCIENTIFIC SOCIETIES, July 11-14.—Annual Congress to be held at the University of Reading.
- July 11, Prof. H. L. Hawkins: "Fossils and Men" (Presidential Address).
- July 13, Prof. E. B. Poulton: "The Power of Changing Colour as a Form of Protective Resemblance" (Public Lecture).
- INTERNATIONAL FEDERATION OF EUGENIC ORGANISATIONS, July 18-21.—Biennial Conference to be held at Zurich.
- Prof. Ernst Rüdin: "Racial Psychiatry—a Scheme for Topographical Research in Europe" (Presidential Address).

## Official Publications Received

## GREAT BRITAIN AND IRELAND

- Report of the Astronomer Royal to the Board of Visitors of the Royal Observatory, Greenwich, read at the Annual Visitation of the Royal Observatory, 1934 June 2. Pp. 22. (Greenwich.)
- Report for 1932 (No. 41) on the Lancashire Sea Fisheries Laboratory at the University of Liverpool. Edited by Dr. R. J. Daniel. Pp. 133+2 plates. (Liverpool: University Press of Liverpool; London: Hodder and Stoughton, Ltd.) 5s.
- Imperial Institute. Annual Report 1933, by the Director, Lieut.-General Sir William Furse, to the Board of Governors. Pp. 56. (London.) 2s.
- Committee on Bird Sanctuaries in Royal Parks (England). Report for 1933. Pp. 24. (London: H.M. Stationery Office.) 6d. net.

## OTHER COUNTRIES

- Mémoires du Musée Royal d'Histoire Naturelle de Belgique. Hors Série. Résultats scientifiques du voyage aux Indes orientales Néerlandaises de LL. AA. RR. le Prince et la Princesse Léopold de Belgique. Publiés par V. Van Straelen. Vol. 2, Fasc. 9: Paraperipatus Leopoldi nov. nom. By E. Leloup. Pp. 16+1 plate. Vol. 2, Fasc. 10: Trematodes. By Robert Ph. Dollfus. Pp. 16+2 plates. Vol. 3, Fasc. 8: Rhizocéphales. By H. Boschma. Pp. 8+1 plate. Vol. 3, Fasc. 9: Terrestrial Isopods. By H. Gordon Jackson. Pp. 8+2 plates. Vol. 3, Fasc. 10: Cirripedes (additional part). By Dr. C. A. Nilsson-Cantell. Pp. 8. Vol. 3, Fasc. 11: Ascidies. By H. Harant and Od. Tuzet. Pp. 6. Vol. 4, Fasc. 1: Heterometabola I. Pp. 85. Vol. 4, Fasc. 2: Neuroptera. Pp. 15. Vol. 4, Fasc. 8: Heterometabola III. Pp. 70+3 plates. Vol. 4, Fasc. 9: Coleoptera II. Pp. 57+1 plate. Vol. 5, Fasc. 2: Reptilia. By L.-D. Brongersma. Pp. 39+4 plates. (Bruxelles.)
- Suomen Geodeettisen Laitoksen Julkaisuja. No. 19: The Continental Undulations of the Geoid. By R. A. Hirvonen. Pp. 89. (Helsinki.)
- Reports of the Institute for Science of Labour. No. 19: Studies on the Hardness of Human Muscle, with special reference to its Value for measuring Industrial Fatigue. By Dr. Gitō Teruoka and Dr. Syōzō Eda. Pp. 9. 30 sen. No. 20: An improved "Rōken" Gas Analysis Apparatus. By Dr. Misawo Okuyama. Pp. 9+1 plate. 30 sen. No. 21: Labour Physiological Studies on the Pregnant Women. By Dr. Gitō Teruoka. Pp. 31. 60 sen. No. 22: Variations in the Physico-chemical Nature of Urine of Workers in Day and Night Shifts, by Dr. Takatugu Yagi and Miss F. Matubara; Physico-chemical Study on the Urine of the Working Girls in a Spinning Factory, by Sho Sasaki. Pp. 16. 30 sen. No. 23: Infant Mortality in relation to the Climate of Japan, Part I. By Dr. Tuijwo Iwasaki. Pp. 18. 40 sen. (Kurasiki.)

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