

Proper motions. Allegheny and McCormick Observatories issue photographic proper motions in Right Ascension with reference to the mean of the comparison stars. The values are compared with meridian circle determinations (Boss), from which it appears probable that a factor of about 1.4 should be applied to the probable errors.—Raymond Pearl: The influence of alcohol on duration of life. Accurate information has been collected for a group of more than 6000 white persons of a working-class population. Exhaustive data were obtained and the material classified in eight groups according to alcohol consumption. Calculation of life-tables and so on shows that at every age from 30 to 100, moderate drinkers of both sexes have a slightly higher expectation of life than abstainers. Male heavy drinkers have a markedly lower expectation of life than moderate drinkers from 30 to 100 and than abstainers from 30 to 60; from 60 onwards the advantage is slightly to the heavy drinkers, possibly due to the selective effect of high mortality among heavy drinkers prior to 60. For females, expectation of life is markedly lower for heavy drinkers than for moderate drinkers or abstainers from 30 to 100.—W. M. Wheeler: Two extraordinary larval Myrmecophiles from Panama. Both were found in ant nests. One is broad, regularly elliptical, 5.7 mm. long, with flattened creeping-sole bordered with minute red papillæ; the integument is smooth, pale blue, and bears regular longitudinal white scales which on pupation were thrown violently off. No imaginal fly was obtained. It has been named *Microdon aolidiformis*. The other form has an anterior portion which can be withdrawn into the carapace-like abdominal region. The latter is covered with a mosaic of regular hexagonal chitinous plates, the dorsal surface bearing regularly arranged sense-organs; there is no creeping-sole. It has been named *Nothomicrodon aztecarum*.—W. B. Cannon and A. Querido: The rôle of adrenal secretion in the chemical control of body temperature. The rate of heart beat in animals with denervated hearts was increased 12 to 64 per cent. by cooling the body. The effect is not obtained if the adrenal glands are made inactive though shivering is still produced. It is argued that increased adrenal secretion can augment metabolism to counteract the effects of cold.—W. B. Cannon and J. R. Pereira: Increase of adrenal secretion in fever. Experiments similar to those of the previous paper show that fever is associated with increased adrenal secretion.—E. W. Brown: An explanation of the gaps in the distribution of the asteroids according to their periods of vibration. Instability of motion is suggested, on a mathematical basis, as the cause of the gaps.—J. H. Oort (1) Note on the difference in velocity between absolutely bright and faint stars. For stars with total velocities less than 65 km. or for stars moving in a direction opposite to the motions of high velocity stars, the average velocities for giants and dwarfs are nearly equal. There is no hint of increase of velocity with decreasing mass. (2) On a possible relation between globular clusters and stars of high velocity. Curves showing the galactic distribution of globular clusters and the antapices of the motions of high velocities alike show marked avoidance of the Milky Way.—W. J. Luyten: Note on some statistical consequences of the luminosity law.—W. C. Rufus: Atmospheric pulsation of the Cepheid variable, η Aquilæ. Line displacements from different elements and at different levels of the atmosphere of a star have been studied. Generally, compression of the atmosphere occurs after maximum compression of the star as a whole, thus accounting for the retardation of the light maximum. The humps of the velocity-difference curves of the various layers are synchronous with the *Stillstand* of the light curve;

the latter appears to be due to a stage of comparative rest in the star's atmosphere.—B. de Kerékjártó: On parametric representations of continuous surfaces.—A. H. Compton and Y. H. Woo: The wave-length of molybdenum $K\alpha$ rays when scattered by light elements. The secondary radiators used were lithium, boron, carbon, water, sodium, magnesium, and aluminium, and in every case, after scattering at about 125° , an addition to the usual $K\alpha$ peak, there was another in the position predicted by Compton's quantum theory of scattering. With sodium and aluminium, there is perhaps some evidence of tertiary scattering in accordance with the theory of Clark, Stifler, and Duane.—E. C. Kemble: Quantisation in space and the relative intensities of the components of infra-red absorption bands. Bohr's correspondence principle applied to the evaluation of the intensities of lines in the infra-red absorption bands of diatomic gases gives values contrary to experiment in the case of the hydrogen chloride band at 3.5μ . Better results are obtained by assuming a slight precession of the orbital plane about the lines of the earth's magnetic field.—L. Thompson: The ballistic (air resistance) function.—W. A. Setchell: *Ruppia* and its environmental factors. Two distinct forms of *Ruppia maritima* L. were found at Richardson Bay, California. At stations subject to tidal conditions, the plants were perennials with long, spirally curved peduncles, and most of the fruits were robust, rounded and only slightly curved without pronounced beak (var. *longipes*). Plants growing in shallow pools were annuals with practically opposite characteristics (var. *rostrata*). Laboratory experiments show that both varieties tolerate a wide range of salinity, P_H and daylight-darkness ratio; temperatures of $15-20^\circ C.$ are necessary for germination, and $20-25^\circ C.$ for growth and reproductive activity.

Official Publications Received.

- Department of Agriculture, Ceylon. Bulletin No. 69: Notes on the Habits and Life-History of the Indian Glow-worm (An Enemy of the African or Kalutara Snail). By Dr. J. C. Hutson and C. Douglas Austin. Pp. 60. (Peradeniya, Ceylon.) 40 cents.
- Canada. Department of Mines: Geological Survey. Bulletin No. 83 (Geological Series No. 43): Contributions to Vertebrate Paleontology. By Charles W. Gilmore. Pp. ii+64+12 plates. Memoir 136 (No. 117 Geological Series): Arnprior-Quyon and Maniwaki Areas, Ontario and Quebec. By M. E. Wilson. Pp. iii+152+12 plates+4 maps. Memoir 137 (No. 118 Geological Series): Paleontology of the Silurian Rocks of Arisaig, Nova Scotia. By F. H. McLearn. Pp. ii+179+30 plates. (Ottawa: F. A. Acland.)
- Department of Commerce: U.S. Coast and Geodetic Survey. Serial No. 258: Effect of Variations in the assumed Figure of the Earth on the Mapping of a large Area. By Walter D. Lambert. (Special Publication. No. 100.) Pp. iii+35. (Washington: Government Printing Office.) 5 cents.
- Department of the Interior: Bureau of Education. Bulletin, 1924. No. 21: Practices and Objectives in Training for Foreign Service; Report of the National Conference on Foreign Service Training, Washington, December 26, 1923. Prepared by Glen Levin Swiggett. Pp. iii+27. (Washington: Government Printing Office.) 5 cents.
- Annuaire de l'Observatoire Royal de Belgique, 1925. Publié sous la direction de G. Lecointe. Pp. vi+294. (Bruxelles: Impr. Van Gompel.)
- Department of Commerce: Bureau of Standards. Circular of the Bureau of Standards, No. 101: Physical Properties of Materials. 1: Strengths and related Properties of Metals and Wood. Second edition. Pp. 204. (Washington: Government Printing Office.) 40 cents.
- Det Kgl. Danske Videnskabernes Selskab. Matematisk-fysiske Meddelelser, V. 3: On the Effect of Magnetic and Electric Fields on the Mercury Spectrum. By H. M. Hansen, T. Takamine, and Sven Werner. Pp. 40+2 plates. (København: A. F. Høst and Son.) 2.25 kr.
- Department of Commerce: Bureau of Standards. Scientific Papers of the Bureau of Standards, No. 487: A Quantitative Study of Regeneration by Inductive Feed Back. By C. B. Jolliffe and Miss J. A. Rodman. Pp. 419-428. 10 cents. Scientific Papers of the Bureau of Standards, No. 483: Thermal Expansion of Molybdenum. By Peter Hidvert and W. B. Gero. Pp. 429-444. 10 cents. Technologic Papers of the Bureau of Standards, No. 258: Strength of Steel Tubing under combined Column and Transverse Loading, including Tests of Columns and Beams. By Tom W. Greene. Pp. 243-276. 15 cents. (Washington: Government Printing Office.)
- Liverpool Astronomical Society. Annual Report 1923-1924. Pp. 8. (Liverpool: H. Norman Edge, Hon. Sec., Central Technical School.)
- Transactions of the Royal Society of Edinburgh. Vol. 54, Part 1, Session 1923-24: The Deep-Sea Deposits of the Atlantic Ocean. Descriptions prepared under the Direction of the late Sir John Murray, and Discussion of the Results by James Chumley. Pp. ix+252. (Edinburgh: R. Grant and Son; London: Williams and Norgate.) 25s.