

Idaho. Forty genera have been recognised, of which eighteen no longer exist in the north-western United States. Maples, oaks, beeches, and similar trees form the largest genera, giving evidence of well-distributed rainfall and mild conditions, which were presumably altered by post-Tertiary uplift of mountain ranges.—**Linus Pauling**: Interatomic distances in covalent molecules and resonance between two or more Lewis electronic structures.—**Matilda Moldenhauer Brooks**: The penetration of 1-naphthol-2-sulphonate indophenol, *o*-chloro phenol indophenol and *o*-cresol indophenol into species of *Valonia* from the South Seas. As with other species of *Valonia*, the first dye does not penetrate, and the other two enter in a colourless (reduced) form.—**James S. Potter and Maurice N. Richter**: Studies on mouse leukemia. (6) The predominating cell type in line 1. The chromosome number is forty, which is normal for somatic cells of the mouse, and none of the cytological methods used was able to differentiate these cells from similar cells in normal mouse tissue.—**R. J. Seeger**: A critique of recent quantum theories (2). A mathematical discussion directed towards the view that an incomplete interpretation of laws of physics would be preferable to the present principle of indeterminacy.—**Otto Beec**: The ionisation of argon and neon by neutral argon beams. Argon ions formed by electron impact are accelerated and pass through argon gas, where they encounter atoms of argon and are neutralised; the neutral beam passes into an ionisation chamber containing argon or neon. In both cases, at 50-120 volts equivalent velocity of the neutral argon atoms, the intensity of ionisation produced is practically constant. The results indicate that ionisation by neutral beams is very efficient, and suggest that the neutral atom may play the rôle assigned to the positive ion in discharge through gases.—**F. Zwicky**: Ionisation in gases by ions and atoms. A theoretical discussion on which the experimental work of the preceding paper was based.—**William Duane**: (1) The mass of the electron. Using (a) Bragg's formula for reflection of X-rays by calcite, (b) Bohr's formula for the Rydberg constant, and (c) Einstein's quantum equation and the results of earlier X-ray reflection experiments, the rest mass (m_0) is found to be 9.054×10^{-28} ; hence $e = 4.773 \times 10^{-10}$ e.s.u. and $h = 6.557 \times 10^{-27}$.—(2) An instrument for the photomentering of the new X-ray lines. The negative of the spectrum is illuminated and a horizontal image of the lines to be examined is projected on to a horizontal slit before a photoelectric cell, through which there is a complete circuit including cell, battery, and galvanometer enclosed within metal boxes. The galvanometer deflexion is observed by a beam of light going to a horizontal slit behind which is a photographic plate. This plate and the photoelectric cell and slit are joined mechanically and move vertically. Thus a curve is traced out the points of which correspond directly to points on the negative of the spectrum under examination.—**Frederick G. Keyes and Samuel C. Collins**: The pressure variation of the heat function as a direct measure of the Van der Waals forces. A theoretical discussion and experimental observations. The gas is allowed to escape under a measured pressure through a platinum capillary to a lower pressure, while the capillary is heated electrically to maintain the system at a constant temperature. Experimental values for carbon dioxide and ammonia are in agreement with calculated values. The method is particularly suitable for low pressure and low temperature work.—**Eberhard Hopf**: Proof of Gibbs' hypothesis on the tendency toward statistical equilibrium.—**Hassler Whitney**: Regular families of curves (2).

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Forthcoming Events

Congress

AUG. 28-SEPT. 3

INTERNATIONAL PHYSIOLOGICAL CONGRESS (Fourteenth Congress). To be held at Rome.

Official Publications Received

BRITISH

Proceedings of the Royal Irish Academy. Vol. 41, Section A, No. 3: On the Determination of Hamilton's Principal Function. By Prof. A. W. Conway and Prof. A. J. M'Connell. Pp. 17-25. (Dublin: Hodges, Figgis and Co.; London: Williams and Norgate, Ltd.) 6d.

Joint Board of Research for Mental Diseases: City and University of Birmingham. Annual Report of the Laboratory for the Year ending March 14th, 1932. Pp. 10. (Birmingham.)

Biological Reviews and Biological Proceedings of the Cambridge Philosophical Society. Edited by Prof. H. Munro Fox. Vol. 7, No. 3, July. Pp. 181-273. (Cambridge: At the University Press.) 12s. 6d. net.

Birmingham Bureau of Research on Russian Economic Conditions. Memorandum No. 6: Wages of Industrial Workers in the U.S.S.R. Pp. 24. (Birmingham.)

Commonwealth of Australia: Council for Scientific and Industrial Research. Pamphlet No. 25: Termites (White Ants) in South-eastern Australia; a Simple Method of Identification and a Discussion of their Damage in Timber and Forest Trees. By Gerald F. Hill. Pp. 28. (Melbourne: H. J. Green.)

Forestry Commission. Twelfth Annual Report of the Forestry Commissioners for the Year ending September 30th, 1931. Pp. 48. (London: H.M. Stationery Office.) 9d. net.

Proceedings of the Royal Society. Series A, Vol. 137, No. A831, July 1. Pp. iii+242. (London: Harrison and Sons, Ltd.) 12s.

Journal of the British Wood Preserving Association. Vol. 2. Pp. viii+104+xvi. (London.) 7s. 6d.

Index to the Proceedings of the Royal Society of London (1905-1930), and to the Philosophical Transactions of the Royal Society of London (1901-1930). Pp. ii+281. (London: Harrison and Sons, Ltd.) 10s.

Medical Research Council. Twelfth Annual Report of the Industrial Health Research Board to 30th June 1932. Pp. ii+48. (London: H.M. Stationery Office.) 1s. net.

FOREIGN

The Genetical Factor in Endemic Goiter. By Charles B. Davenport. (Publication No. 428.) Pp. iv+56+4 plates. (Washington, D.C.: Carnegie Institution.)

U.S. Department of the Interior: Geological Survey. Bulletin 829: Geology and Coal, Oil and Gas Resources of the New Kensington Quadrangle, Pennsylvania. By G. B. Richardson. Pp. viii+102+9 plates. Professional Paper 172: Gold Quartz Veins of the Alleghany District, California. By Henry G. Ferguson and Roger W. Gannett. Pp. vi+139+58 plates. 2 dollars. Water-Supply Paper 638-B: Water-Power Resources of the Rogue River Drainage Basin, Oregon. By Benjamin E. Jones, Warren Oakey and Harold T. Stearns. (Contributions to the Hydrology of the United States, 1931.) Pp. vi+35-97+plates 3-25. Water-Supply Paper 708: Surface Water Supply of the United States, 1930. Part 12: North Pacific Slope Drainage Basins. B: Snake River Basin. Pp. vi+191. (Washington, D.C.: Government Printing Office.)

Nyasaland Protectorate. Annual Report of the Geological Survey Department for the Year 1931. Pp. 12+2 plates. (Zomba.)

Ministry of Finance, Egypt: Coastguards and Fisheries Service. Report on the Fisheries of Egypt for the Year 1930. By R. S. Wimpenny. Pp. iii+113. (Cairo: Government Press.)

Bulletin of the National Research Council. No. 85: Physics of the Earth, 5: Oceanography. Prepared under the auspices of the Subsidiary Committee on Oceanography. Pp. v+581. (Washington, D.C.: National Academy of Sciences.) 5 dollars.

Records of Oceanographic Work in Japan. Vol. 4, No. 1, June. Pp. ii+244. (Tokyo: National Research Council of Japan.)

Proceedings of the United States National Museum. Vol. 81, Art. 3: A New Species of Cestode, *Crepidobothrium Amphiumae*, from *Amphiuma tridactylum*. By Clarke Courson Zeff. (No. 2926.) Pp. 3+1 plate. Vol. 81, Art. 10: A Cache of Basket Maker Baskets from New Mexico. By Walter Hough. (No. 2933.) Pp. 3+3 plates. (Washington, D.C.: Government Printing Office.)

U.S. National Museum. Bulletin 100: Contributions to the Biology of the Philippine Archipelago and adjacent Regions. The Philippine Land Mollusks of the Genus *Opisthoporus*. By Paul Bartsch. Pp. 323-327+2 plates. (Washington, D.C.: Government Printing Office.)

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