

these sulphates form the anhydrous double compound, $\text{Pr}_2(\text{SO}_4)_3, 5(\text{NH}_4)_2\text{SO}_4$, which is stable at 25° in contact with solutions containing from 63 to 56 per cent of ammonium sulphate and from 0.2 to 0.6 per cent of the praseodymium salt. The crystallographic characters of this double salt are described.—S. Franchi: The non-existence of the 'nappe de l'Embrunais' in Italian territory, indicated to the south of Mont Blanc in a geological map by Léon Moret.—F. Zambonini and A. Ferrari: The identity in crystalline structure of the cancrinite of Monte Somma with that of Mias. The recent and most satisfactory analyses of cancrinite indicate the formula, $3(\text{Na}_2, \text{Ca})\text{Al}_2\text{Si}_2\text{O}_8(\text{Na}_2, \text{Ca})\text{CO}_3$, with a slight excess of carbonates and a variable proportion of water.—Giulio Bemporad: The significance of the principle of the arithmetic mean.—R. Caccioppoli: A general theorem on the existence of unit elements in a functional transformation.—M. Brelot: The integrals of $(1)\Delta u = c(M)u(M)$ ($c \geq 0$) in the neighbourhood of a singular point 0 of $c(M)$.—Enrico Volterra: The deformation of an elastic medium due to a small displacement of an immersed rigid sphere.—B. Caldonazzo: Plane irrotational motions of perfect liquids in the presence of a movable disc.—A. Consiglio: A further exception to the Kutta-Joukowski theorem. The case of Joukowski's pisciform obstacle, with a single cuspidal point, is considered.—Luigia Pelosi: A new demonstration of a theorem of Painlevé-Levi-Civita on dynamic equations.—Anna Eredia: The coefficient of persistence of rainy days. The probability of the occurrence of rainy days, singly or in groups, was studied for Hamburg (1876-1900) by Grossmann, who, on the assumption that the various groupings were equally probable, derived formulæ for calculating the mean number of rainy days out of two, three, or more consecutive days. The values so calculated did not, however, agree with observations made over a considerable number of years, a result which was recently confirmed by Besson in the case of Paris, and by Domingo y Quilez in that of Saragossa. For Rome, the author finds that the coefficient of persistence of rain varies throughout the year, the maximum being in March and the minimum in July. The coefficient of probability of rain increases with increase in the preceding number of wet days, up to five in the case of Saragossa and to four in that of Rome.—E. Segrè: Intensity of the lines in the Raman effects of diatomic molecules. The quantum mechanical formula for the intensity of the Raman lines for the molecule O_2 is explained and is found to furnish results in good agreement with the experimental values.—B. Rossi: The action of the counter tube of Geiger and Müller.—G. Racah: An example of the quantistic treatment of an interference phenomenon.—A. Ostrogovich: Investigations on γ -triazines: synthesis of phenylaminohydroxytriazine. This compound may be synthesised by the interaction of benzamidine hydrochloride on guanylcarbamide acetate, and it seems likely that other aminohydroxytriazines may be similarly obtained.—A. Debenedetti: The determination of plagioclases by measurement of the angles of extinction in the zone normal to (010).—Giulio Cotronei and Aldo Spirito: Zoological constitution and grafting (3). New experiments on Anura and Urodeles.—M. Cornel: Studies on parathyreoprive syndrome (2). Preventive action of irradiated ergosterol in excessive doses.

SYDNEY.

Linnean Society of New South Wales, July 30.—J. R. Malloch: Notes on Australian Diptera (25). This paper contains (a) additional notes on Ortalidæ, Sapromyzidæ, Clusioididæ, and Neottiphilidæ, (b) a

No. 3181, VOL. 126]

revision of the Calliphorid subfamily Metopiinæ, and (c) some notes on Empididæ, with a key to the subfamilies. Thirty species are dealt with, fifteen of which are described as new. Three genera of Metopiinæ are also described as new. Keys are given for separation of the genera of Metopiinæ and species of *Tapeigaster*, *Miltogramma*, and *Protomiltogramma*.—Rev. H. M. R. Rupp: Notes on the autumn orchids of the South Maitland coalfields. Notes on nine species of *Pterostylis* and *Acianthus exertus*. One species of *Pterostylis* is described as new.—A. A. Lawson: The origin of endemism in the angiosperm flora of Australia. This paper gives the author's observations on the sterility of various members of the Proteaceæ and Myrtaceæ. The percentage sterility of the pollen is very high in some types, amounting to as much as 95 per cent. The pollen sterility is generally associated with low seed-output. The view is expressed that the sterility of the pollen is the result of natural hybridisation.

Official Publications Received.

BRITISH.

Department of Scientific and Industrial Research. Building Science Abstracts. Vol. 3 (New Series), No. 8-9, August-September 1930. Abstracts Nos. 1496-1853. (London: H.M. Stationery Office.) 1s. 6d. net.

Indian Central Cotton Committee: Technological Laboratory. Technological Bulletin, Series B, No. 7: The Weight per Inch of Fibres of Different Lengths, and the Numbers of Fibres of Different Lengths per Seed, for each of the Standard Indian Cottons. By R. L. N. Iyengar and Dr. A. J. Turner. Pp. ii+24. 8 annas. Technological Bulletin, Series B, No. 8: The Foundations of Yarn-Strength and Yarn-Extension. Part 3: The Clinging Power of Cotton. By Hariras Navkal and Dr. A. James Turner. Pp. ii+13. 8 annas. (Bombay.)

University of London: University Extension and Tutorial Classes Council. University Extension Lecture Courses and University Tutorial Classes, Session 1930-31. Pp. 45. (London.)

Commonwealth of Australia: Council for Scientific and Industrial Research. Bulletin No. 44: Investigations on "Spotted Wilt" of Tomatoes. By Geoffrey Samuel, J. G. Bald and H. A. Pittman. Pp. 64. (Melbourne: H. J. Green.)

Transactions of the Optical Society. Vol. 31, No. 3, 1929-30. Pp. iv+113-168. (London.) 10s.

Western Australia. Annual Progress Report of the Geological Survey for the Year 1929. Pp. 88+45 plates. (Perth: Fred. Wm. Simpson.)

Ceylon. Part 4: Education, Science and Art (D). Administration Report of the Acting Director of Agriculture for 1929. By Dr. W. Small. Pp. D28. (Colombo: Government Record Office.) 55 cents.

Indian Journal of Physics, Vol. 5, Part 2, and Proceedings of the Indian Association for the Cultivation of Science, Vol. 14, Part 2. Conducted by Sir C. V. Raman. Pp. 113-296. (Calcutta.) 2.4 rupees; 3s.

South Australia. Department of Mines: Geological Survey of South Australia. Bulletin No. 14: Geological Structure and other Factors in relation to Underground Water Supply in portions of South Australia. By R. Lockhart Jack. Pp. 48+4 plates. (Adelaide: Harrison Weir.)

FOREIGN.

University of Washington Publications in Anthropology. Vol. 3, No. 2: Mythology of Southern Puget Sound. By Arthur C. Ballard. Pp. 31-150. 1 dollar. Vol. 4, No. 1: The Indians of Puget Sound. By Hermann Haeblerlin and Erna Gunther. Pp. 84+2 plates. 1 dollar. (Seattle, Wash.: University of Washington Press.)

U.S. Department of Commerce: Coast and Geodetic Survey. Special Publication No. 168: Progress of Work in Terrestrial Magnetism of the U.S. Coast and Geodetic Survey, July 1, 1927, to June 30, 1928. By Daniel L. Hazard. Pp. 6. (Washington, D.C.: Government Printing Office.) 5 cents.

Proceedings of the American Academy of Arts and Sciences. Vol. 64, No. 9: The Joule-Thomson Effect in Air. Second Paper. By J. E. Roebuck. Pp. 287-334. 90 cents. Vol. 64, No. 10: Diffuse Matter in Interstellar Space. By J. S. Flaskett. Pp. 335-346. 45 cents. Vol. 64, No. 11: A Photographic Investigation of Twenty-five Southern Cepheid Variable Stars. By Harlow Shapley. Pp. 347-464. 1.70 dollars. (Boston, Mass.)

Koninklijk Magnetisch en Meteorologisch Observatorium te Batavia. Jaarverslag 1929. Pp. 25. (Wetevreden: Landsdrukkerij.)

Journal of the Faculty of Agriculture, Hokkaido Imperial University, Sapporo, Japan. Vol. 27, Part 1: Vergleichende Untersuchungen über die Qualitäten, insbesondere die Elastizität und Festigkeit der Tannen- und Fichtenhölzer Hokkaidos. Von Masayuki Ohsawa. Pp. 225. Vol. 28, Part 2: Ein Beitrag zur Kenntnis der Gattung *Rhizopus*, II. Von Yohiko Yamamoto. Pp. 103-327. (Tokyo: Maruzen Co., Ltd.)

Monographs of the Rockefeller Institute for Medical Research. No. 23: The Treatment of Human Trypanosomiasis with Trypansamide; a Critical Review. By Dr. Louise Pearce. Pp. 339. (New York City.) 2 dollars.

CATALOGUE.

Supplément au Catalogue de Photographies Documentaires. Quatrième édition. Pp. 144+8 planches. (Paris: Jacques Boyer.)