

historic interest, but that they give important evidence relating to the structure and mobility of the earth. The spirit of maritime adventure born in the Scandinavian fiords gave the European races the mastery of the sea and a political predominance which is world-wide in its influence. The geological study of fiords leads to geographical problems that are also world-wide in their range, for the view that fiords are due to local superficial agents chiselling out furrows on an impassive earth explains neither their features nor distribution. Fiords teach more significant and far-reaching lessons; they point to deep-seated forces which affect the earth as a whole. However greatly fiords may have been moulded by ice, wind, and water, they are not primarily due to those agencies, which have used the fiords, not made them.

The ultimate cause of fiords is the rupture of certain wide areas of the earth by the pulsation of the crust under the play of titanic forces set at work by the great Miocene disturbances which upheaved the chief existing mountain systems of the world.

SOCIETIES AND ACADEMIES.

LONDON.

Mathematical Society, April 11.—Dr. H. F. Baker, president, and temporarily Prof. A. E. H. Love, vice-president, in the chair.—A. Cunningham: Mersenne's numbers.—G. N. Watson: A modification of Liouville's theorem.—G. H. Hardy and J. E. Littlewood: Contributions to the arithmetic theory of series.—G. B. Mathews: Complex binary arithmetic forms.—H. S. Carslaw: An application of the theory of integral equations to the equation $\nabla^2 u + k^2 u = 0$.—H. F. Baker: (i) Some transformations of Kummer's surface; (ii) the curves which lie on a cubic surface.

PARIS.

Academy of Sciences, April 9.—M. F. Guyon in the chair.—E. H. Amagat: The variations of the pressure coefficient with temperature and on some points which depend on it in the study of the internal pressure of fluids. The pressure coefficients of argon are calculated from experimental data obtained in the laboratory of Prof. Kamerlingh Onnes for temperature ranges, -121.2° to -109.9° , -102.5° to -57.7° , -57.7° to 0.0° , and 0.0° to $+20.4^\circ$; for hydrogen at temperatures -217.4° to -182.8° , -182.8° to -103.6° , -103.6° to 0.0° , and 0.0° to 100.2° ; for helium, at temperatures -258.9° to -182.8° , -182.8° to -103.6° , -103.6° to 0.0° , and 0.0° to 100.3° . All the results point to a small diminution of the pressure coefficient as the temperature increases. The changes observed are much larger than would be expected from the values of the specific heat at constant volume.—E. L. Bouvier: The classification of the genus *Caridina* and the extraordinary variations of a species of this genus, *Caridina brevirostris*. The variations of this species have led the author to reject the existing classification of the Caridinæ based on the rostral structure; suggestions for a new scheme are put forward.—Paul Sabatier and M. Murat: The direct addition of hydrogen by catalysis to the benzoic esters: the preparation of the hexahydrobenzoic esters. The addition of hydrogen to methyl and ethyl benzoates by the catalytic action of reduced nickel requires the temperature of the reaction to be maintained exactly at 180° C. Good yields of ethyl and methyl hexahydrobenzoates are thus obtained.—Kyrille Popoff: The influence of the various methods of photometric measurements on the estimation of stellar magnitudes.—Ch. Jordan and R. Fiedler: Contribution to the geometry of convex curves and of certain curves which are derived from them.—A. Cotton and H. Mouton: New substances showing magnetic double refraction. The straight

chain carbon-compounds and some of their derivatives remain inactive in a strong magnetic field. Substituted paraffins, however, containing the nitro-group or a halogen exhibit magnetic double refraction.—Albert Colson: The singular features of certain proofs in physical chemistry. A reply to a recent note of M. Langevin, dealing especially with the van't Hoff theory of solution.—Ed. Griffon and A. Maublanc: The microsphaera of the oak.—Paul Macquaire: Two combinations formed by iodine and the tyrosine obtained by the tryptic hydrolysis of albuminoid materials. Analyses are given of a definite diiodo-derivative of tyrosine; by the action of boiling water on this substance a new iodine derivative of tyrosine was obtained containing less iodine.—A. Desgrez and Mlle. Bl. Guende: The influence of an excess of sodium chloride on nutrition and on renal elimination. An excess of common salt in food favours auto-intoxication.—Gabriel Bertrand and F. Medigreceanu: The normal manganese in the blood. Traces of manganese were found in blood from the sheep and the horse; negative results were obtained with blood from man, rabbit, chicken, and duck. The amount of manganese present in the blood of man and the higher animals is much less than has hitherto been supposed.—Ed. Bourquelot and M. Bridel: The action of emulsion upon salicin in alcoholic solution. Salicin is hydrolysed by emulsion in solutions containing proportions of alcohol up to 90 per cent. In aqueous solution the hydrolysis is not complete, about 5 per cent. of the salicin remaining unchanged.

BOOKS RECEIVED.

Notes and Answers to Exercises in "A Shorter Geometry." By C. Godfrey and A. W. Siddons. Pp. 16. (Cambridge: University Press.) 6d.

Note sur le Vol des Oiseaux. By E. Delsol. Pp. iv+23. (Paris: Gauthier-Villars.) 1 franc.

The Cause of Cancer. Being Part iii. of "Protozoa and Disease." By J. J. Clarke. Pp. xi+112+viii plates. (London: Baillière, Tindall and Cox.) 7s. 6d. net.

Mikroskopisches Praktikum für systematische Botanik. (I., Angiospermae.) By Prof. M. Möbius. Pp. viii+216. (Berlin: Gebrüder Borntraeger.) 6.80 marks.

Anleitung zur mikroskopischen Untersuchungen von Pflanzenfasern. By Dr. G. Tobler-Wolff and Prof. F. Tobler. Pp. viii+141. (Berlin: Gebrüder Borntraeger.) 3.50 marks.

Handbuch der vergleichenden Physiologie. Edited by H. Winterstein. 20 Lief. Band iv. (Jena: G. Fischer.) 5 marks.

British Association for the Advancement of Science. Portsmouth Meeting, 1911—A Catalogue of Destructive Earthquakes, A.D. 7 to A.D. 1899. By Dr. J. Milne. Pp. 92. (London: The British Association.) 5s.

The Mafulu Mountain People of British New Guinea. By R. W. Williamson. Pp. xxiii+364+plates. (London: Macmillan and Co., Ltd.) 14s. net.

Oxford Gardens. Based upon Daubeny's Popular Guide to the Physick Garden of Oxford: with Notes on the Gardens of the Colleges and on the University Park. By R. T. Günther. Pp. xv+280. (Oxford: Parker and Son; London: Simpkin, Marshall and Co., Ltd.) 6s. net.

Handbook of the Technique of the Teat and Capillary Glass Tube, and its Applications in Medicine and Bacteriology. By Sir A. E. Wright. Pp. xvi+202. (London: Constable and Co., Ltd.) 10s. 6d. net.

On the Backwaters of the Nile. Studies of some