constant is determined at different temperatures and ion-concentrations.

March 28.—Harald **Bohr**: Quasi-periodic functions. General determination of the classes of functions which can be resolved into arbitrarily chosen vibrations (harmonic or otherwise). The inquiry forms a generalisation of the theory of the usual Fourier series. With the help of certain generalisations of the notion of periodicity, it is possible to reach a simple and complete characterisation of the class of functions indicated.

April 11.—P. O. **Pedersen**: On electric sparks. (2) An experimental investigation on time-lag in the electric spark and on spark-formation under various conditions. (3) It is shown that the present theory of the electric spark in some essential points is contradictory to experience and particularly to the experimental results described in (1) and (2). The outline of a new spark theory is sketched.

April 25.—L. Kolderup **Rosenvinge**: The marine Algæ of Denmark, (3): Ceramiales. The Danish species of this order, contributions to their morphology and development, their fructification and occurrence in Danish waters.—Niels **Nielson**: An equation of Lagrange studied by Cayley. The memoir gives a generalisation of the equation studied by Cayley (*Journal de Crelle*, vol. 53). The parameter 4 is replaced by any power of any prime number whatever. The memoir gives the necessary and sufficient conditions for the solution of this generalised equation, also formulæ which allow certain equations corresponding to parameter 4 to be solved at once or proved insoluble.

ROME.

Royal Academy of the Lincei, May 4.—C. **Segre**: Curvilinear elements having tangent and osculatory plane in common.—A. **Angeli**: Analogies in behaviour between certain derivatives of benzene and the corresponding derivatives of the aliphatic series.—G. **Armellini**: Observations on the diameter of the sun made at the Royal Rome Observatory on the Campidoglio. The meridian observations taken at this observatory during the past forty years are used as the basis of calculations of the sun's diameter. The results are independent of any personal factor and are subject only to a very small error due to the inclination to the vertical of the micrometer wires of the transit instrument. The mean value of the radius of the sun at the mean distance, increased by radiation, is found to be $R = 16'1{\cdot}40'' \pm 0{\cdot}02''$, which is almost coincident with that usually accepted, namely, $16'1{\cdot}18''$.—G. **Gherardelli**: Oblique algebraic curves with only autodual branches.—A. **Myller**: Concurrent directions on a surface emerging from the points of a curve.—M. **Picone**: Necessary and sufficient conditions for the existence and calculation of a periodic solution for the most general system of ordinary differential equations.—G. **Charrier**: Oxidation of 2-*N*-phenyl-$a\beta$-naphthatriazole by means of alkaline potassium permanganate solution.—G. R. **Levi** and G. **Natta**: Action of aluminium sulphide on certain organic compounds. At high temperatures, the action of aluminium sulphide on benzene results in the formation of various condensed aromatic hydrocarbons. Under similar conditions, phenols or naphthols are transformed into the corresponding oxides, whereas from alcohols of the aliphatic series, mercaptans may be obtained in good yield and free from organic sulphides.—B. **Oddo** and D. **Curti**: Oximic and iminic compound of the phthalein of phenol.—A. **Desio**: Geological constitution of certain islands in the Ægean Sea.—A. **Clementi**: Osmotic pressure in terrestrial invertebrates. Just as is the case with the vertebrates, so also with the invertebrates, the osmotic pressure of the internal fluids of the organism is less with terrestrial than with marine species, the maximum value in the case of one and the same organism being less in the internal fluids than in the solid tissues.—M. **Sella**: Observations on the development and anatomy of the myotome in the Teleostei.

Official Publications Received.

Bulletin of the American Museum of Natural History. Vol. 50, Art. 1: A Revision of Palæomastodon, dividing it into Two Genera, and with Descriptions of Two New Species. By H. Matsumoto. Pp. 58. (New York City.)

South African Association for the Advancement of Science. Twenty-second Annual Meeting, Cape Town, July 7th to 12th, 1924. Official Programme. Pp. 19. (Cape Town: The University.)

Report of the Department of Industries, Madras, for the Year ended 31st March 1923. Pp. iv+86. (Madras: Government Press.)

Proceedings of the Tenth Indian Science Congress. Pp. xvi+289. (Calcutta: Asiatic Society of Bengal.) 7.8 rupees.

Colony of Southern Rhodesia. Report of the Director, Geological Survey, for the Year 1923. Pp. 9. (Salisbury, South Rhodesia.)

Forestry in the Malay Peninsula: a Statement prepared for the British Empire Forestry Conference, Canada, 1923. By G. E. S. Cubitt. Pp. 24. (Kuala Lumpur: Government Printing Office.)

Ministry of Public Works, Egypt: Physical Department. Some Experiments on the Rating of Current Meters. By P. Phillips. (Physical Department Paper No. 14.) Pp. 17+7 plates+17 graphs. (Cairo: Government Publications Office.) 5 P.T.

Forest Bulletin No. 56: A Report on the Tan Values of Indian Myrobalans and Burma *Terminalias*. By J. A. Pilgrim. Pp. 29. 6 annas. Forest Bulletin No. 57: Tan Investigation of the Burma Hill Pine, *Pinus Khasya*, bark and *Pyinkado*, *Xylia dolabriformis*. By J. A. Pilgrim. Pp. 7. 3 annas. (Delhi: Government Central Press.)

The Indian Forest Records. Vol. 10, Part 9: Tannin Investigation of some Burmese *Dipterocarps*. By J. A. Pilgrim. Pp. iii+23. (Delhi: Government Central Press.) 7 annas.

Union of South Africa. Department of Mines and Industries: Geological Survey. Memoir No. 22: A Subject Index to the Literature on the Geology and Mineral Resources of South Africa. By A. L. Hall. Pp. 384. (Pretoria: Government Printing and Stationery Office.) 10s.

University of Colorado Bulletin. Vol. 24, No. 4, General Series No. 205: Catalogue, 1923-1924; with Announcements for 1924-1925. Pp. 390. (Boulder, Colo.)

Bulletin of the American Museum of Natural History. Vol. 50, Art. 2: Third Contribution to the Snake Creek Fauna. By W. D. Matthew. Pp. 59-210. Vol. 50, Art. 3: The Marine Ornithology of the Cape Verde Islands; with a List of all the Birds of the Archipelago. By Robert Cushman Murphy. Pp. 211-278. Vol. 50, Art. 4: The House Wrens of the Genus Troglodytes. By Frank M. Chapman and Ludlow Griscom. Pp. 279-304. (New York City.)

Sudan Government: Scientific Research Committee. Report of the Committee for the Year 1923. Pp. 13. (Khartoum.) 2 piastres.

Calendar of the University of Adelaide for the Year 1924. Pp. 410+108+13. (Adelaide.) 2s. 6d.

State of Illinois. Department of Registration and Education: Division of the State Natural History Survey. Exchange and Distribution List of available Publications of the Illinois State Natural History Survey and its predecessors the Illinois State Entomologist's Office and the Illinois State Laboratory of Natural History. Pp. 21. (Urbana, Ill.)

Department of Commerce: Bureau of Standards. Circular of the Bureau of Standards, No. 74: Radio Instruments and Measurements. Second edition. Pp. 345. (Washington: Government Printing Office.) 60 cents.

State of Illinois. Department of Registration and Education: Division of the State Natural History Survey. Bulletin, Vol. 15, Art. 1: The Apple Flea-weevil, *Orchestes pallicornis* Say (Order Coleoptera; Family Curculionidæ). By W. P. Flint, S. C. Chandler and Pressley A. Glenn. Pp. iii+37. Bulletin, Vol. 15, Art. 2: Notes on a Collection of Erythroneura and Hymetta (Eupterygidæ) chiefly from Illinois; with Descriptions of New Forms. By W. L. McAtee. Pp. ii+39-44. (Urbana, Ill.)

Smithsonian Institution: United States National Museum. Bulletin 128: List of North American Recent Mammals, 1923. By Gerrit S. Miller, Jr. Pp. xvi+673. (Washington: Government Printing Office.) 85 cents.

Department of the Interior: Bureau of Education. Bulletin, 1923, No. 46: A Study of Distinguished High-School Pupils in Iowa. By Prof. Charles Deich and Elmer E. Jones. Pp. iii+58. 10 cents. Bulletin, 1924, No. 1: Educational Directory, 1924. Pp. iii+191. 20 cents. (Washington: Government Printing Office.)

Department of the Interior: United States Geological Survey. Bulletin 690-B: Gravel Deposits of the Caddo Gap and De Queen Quadrangles, Arkansas. By Hugh D. Miser and A. H. Purdue. Pp. ii+15-27+3 plates. Bulletin 723: Geology and Ore Deposits of the Manhattan District, Nevada. By Henry G. Ferguson. Pp. ix+163+18 plates. 50 cents. Bulletin 746: Geologic Literature on North America, 1785-1918. By John M. Nickles. Part 1: Bibliography. Pp. ii+1167. 1.25 dollars. Bulletin 752: Coal Resources of the Raton Coal Field, Colfax County, New Mexico. By Willis T. Lee. Pp. vi+254+22 plates. 50 cents. Bulletin 754: The Ruby-Kuskokwim Region, Alaska. By J. B. Mertie, Jr., and G. L. Harrington. Pp. vii+129+9 plates. 50 cents. (Washington: Government Printing Office.)

Department of the Interior: United States Geological Survey. Professional Paper 126: Geology of the Coastal Plain of Texas, West of Brazos River. By Alexander Deusser. Pp. xii+139+36 plates. 40 cents. Professional Paper 132-D: The Evolution and Disintegration of Matter. By Frank Wigglesworth Clarke. Pp. ii+51-86. 10 cents. Professional Paper 132-E: An Early Eocene Florule from Central Texas. By Edward Wilber Berry. Pp. ii+87-92. 5 cents. (Washington: Government Printing Office.)

The Institution of Civil Engineers. Engineering Abstracts prepared from the Current Periodical Literature of Engineering and Applied Science, published outside the United Kingdom. Supplement to the Minutes of Proceedings of the Institution. Edited by W. F. Spear. New Series, No. 20, July. Pp. 214. (London: Great George Street, S.W.1.)