

as precipitous chasms.—Observations on the eucalypts of New South Wales, Part 8, by Henry Deane and J. H. Maiden.—Bacteria and the disintegration of cement, by R. Greig Smith. Stutzer and Hartleb considered that the disintegration of the cement work of water reservoirs might be caused by the action of the nitrifying organisms. The author has investigated a case where the cement work of a water canal was disintegrating. Nitrifying organisms were found in the surface mud, but not deeper into the cement where disintegration was in active progress. The nitrifying bacteria appear when disintegration is complete. Other bacteria were separated by selective methods. One of these, *Bact. croceum*, can grow in bouillon with 5 per cent. sodium carbonate, but neither it nor the others separated had any action upon experimental cement blocks. Since the disintegrated cement contained alkali soluble in water equal to 1.4 per cent. lime, the disintegration is probably purely physical.—Notes on *Vibrio denitrificans*, Sewerin, by R. Greig Smith. This is not a vibron, but an organism morphologically similar to *Rhizobium leguminosarum*. In media containing potassium phosphate, branching and irregular forms are found in young cultures. It appears to be a budding rod, and the variety of forms of the organism is caused by the mother and daughter cells being contained in a branching capsule.

CAPE TOWN.

South African Philosophical Society, April 24.—Mr. L. Péringuey, president, in the chair.—Mr. Garwood Alston showed three photographs of stones standing erect about six miles south of Port Nolloth, near which Mr. R. Colson found certain kitchen-middens, from which a skull and several native pots and grinding stones were obtained. The stones form enclosures of four feet by two, running north and south. Two of the enclosures were dug into, but yielded nothing. The underlying indurated sand seemed to be quite undisturbed. Mr. Alston emphasised the absence of evidence as to the meaning of the enclosures, and said that the small size was against the view that old burial places are indicated.—Prof. J. T. Morrison communicated a paper on some pressure and temperature results for the Great Plateau of South Africa, by Mr. J. R. Sutton. The author discusses the annual run of daily maximum and minimum temperatures, and of daily barometric pressures at Kimberley and Durban, as deduced from observations made during the ten years 1888-97, the pressures at Kimberley being, however, available only for 1890-97. The object was to discover the outstanding features of plateau meteorology. The results suggest to the author that "we might adopt the working theory (not forgetting how easy it is to theorise when facts are few), which, however, is rather a geometrical conception than a mechanical possibility, that there is a certain temperature factor—if we may so call it—travelling round the earth from west to east, while a pressure factor is going the opposite way."

DIARY OF SOCIETIES.

THURSDAY, JUNE 6.

ROYAL SOCIETY, at 4.—Election of Fellows.—At 4.30.—On the Electric Response of Inorganic Substances, Preliminary Notice: Prof. J. C. Bose.—On Skin-Currents. Part I. The Frog's Skin: Dr. Waller, F.R.S.—Vibrations of Rifle Barrels: A. Mallock.—The Measurement of Magnetic Hysteresis: G. F. C. Searle and T. G. Bedford.—A Conjugating Yeast: B. T. P. Barker.—Papers to be read *in title only*: Thermal Adjustment and Respiratory Exchange in Monotremes and Marsupials: a Study in the Development of Homo-thermism: Prof. C. J. Martin.—On the Elastic Equilibrium of Circular Cylinders under Certain Practical Systems of Load: L. N. G. Filon.—The Measurement of Ionic Velocities in Aqueous Solution, and the Existence of Complex Ions: B. D. Steele.

ROYAL INSTITUTION, at 3.—The Chemistry of Carbon: Prof. J. Dewar, F.R.S.

LINNEAN SOCIETY, at 8.—On the Necessity for a Provisional Nomenclature for those Forms of Life which cannot be at once arranged in a Natural System (Adjourned Discussion): H. M. Bernard.

CHEMICAL SOCIETY, at 8.—A Laboratory Method for the Preparation of Ethylene: G. S. Newth.—Oroxylin: W. A. H. Naylor and C. S. Dyer.—Some Relations between Physical Constants and Constitution in Benzoid Amines, II.: P. Gordon and L. Limpach.—The Constitution of the Acids obtained from  $\alpha$ -Dibromocamphor: A. Lapworth and W. H. Lenton.—The Decomposition of Chlorates. IV. The Supposed Mechanical Facilitation of the Decomposition of Potassium Chlorate: W. H. Sodeau.—Condensation of Phenols with Esters of the Acetylene Series. V. Homologues of Benzo- $\gamma$ -pyrone: S. Ruhemann.—On the

Action of Sodium Methoxide and its Homologues on Benzophenone Chloride and Benzal Chloride: J. E. Mackenzie.—Preliminary Note on Cycles of Boron: W. Ramsay and H. S. Hatfield.—Gum Tragacanth: C. O'Sullivan.

RÖNTGEN SOCIETY, at 8.30.—X-Ray Diagnosis of Aneurism: Dr. Hugh Walsham.

FRIDAY, JUNE 7.

ROYAL INSTITUTION, at 9.—Mimetic Insects: Prof. Raphael Meldola, F.R.S.

GEOLOGISTS' ASSOCIATION, at 8.—The Geysers of the Yellowstone: John Parkins, Jr.

SATURDAY, JUNE 8.

ROYAL INSTITUTION, at 3.—The Biological Characters of Epiphytic Plants: Prof. J. B. Farmer, F.R.S.

MONDAY, JUNE 10.

ROYAL GEOGRAPHICAL SOCIETY, at 8.30.—Travels in Search of Waves in 1900: Vaughan Cornish.

VICTORIA INSTITUTE, at 4.30.—Annual Meeting.—Address by Sir Robert Ball, F.R.S.

TUESDAY, JUNE 11.

ROYAL PHOTOGRAPHIC SOCIETY, at 8.—Notes from Five Years' Work with X-Rays: W. Webster.

THURSDAY, JUNE 13.

ROYAL SOCIETY, at 4.30.—Bakerian Lecture: Prof. James Dewar, F.R.S.—The Nadir of Temperature and Allied Problems. (1) Physical Properties of Liquid and Solid Hydrogen; (2) Separation of Free Hydrogen and other Gases from Air; (3) Electric Resistance Thermometry at the Boiling Point of Hydrogen; (4) Experiments on the Liquefaction of Helium at the Melting Point of Hydrogen; (5) Pyro-Electricity, Phosphorescence, &c.

MATHEMATICAL SOCIETY, at 5.30.—Remarks on the Quartic Curve  $2a^3\beta + m\beta^2\gamma + n\gamma^3a = 0$ : A. B. Basset, F.R.S.—The Theory of Cauchy's Principal Values, II.: G. H. Hardy.—The Rational Solutions of the Equation  $x^3 + y^3 + z^3 + \beta = 0$ : Prof. Steggall.

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