

Mlle. Choucroun: The hypothesis of mitogenetic radiation acting on the multiplication of bacteria. An account of experiments tending to negative the hypothesis of a mitogenetic radiation or of any action through the walls of the tube containing the bacteria; if the latter vessel is corked, the action ceases.—Edouard Ducloux and Mlle. Georgette Cordier: The study of certain humoral modifications arising in the course of experimental bovine marginal anaplasmosis.—Denis Bach: The mechanism of the antiseptic action of lactic acid on *Bacterium coli*.—Georges Blanc and J. Caminopetros: The virus of exanthematic fever is hereditary in the tick *Rhipicephalus sanguineus*.

## CAPE TOWN.

Royal Society of South Africa, June 17.—Gunnar Nygaard: Freshwater Algae and phytoplankton from the Transvaal. The phytoplankton was found to be in general a typical pond plankton, with *Microcystis aeruginosa* and *Botryococcus Braunii* sometimes becoming dominant. That of the larger river-dams was often dominated by the diatom *Melosira*, which West found to be the chief form in Lake Nyassa. Both lakes and pans appear to be rather poor in species of Algae, only 98 species and varieties being found in the samples, of which six species and five varieties are new. Two noteworthy finds were *Draparnaldia Ravenelii*, a species not found since 1887, when it was described from North America, and a new *Coscinodiscus*, *C. incomptus*, a freshwater species of this otherwise typically marine genus.—F. Rick: Phytoplankton from South African pans and vleis. 262 species and varieties were found, among which were nine species and eight new varieties, as well as several new forms. The occurrence of *Pleodorina californica* is interesting, for this genus had not been recorded for South Africa. The marked differences found in the plankton from various bodies of water is noteworthy, suggesting that an interesting correlation of this with the chemical and physical characters of the water could be made by collectors in South Africa.

## SYDNEY.

Royal Society of New South Wales, June 3.—Daphne L. Coulston: (1) A new colorimetric method for measuring the hydrogen ion concentration of natural waters. This method consists of comparing the intensity of colour produced when the indicator, para nitro phenol, is added to the solution of unknown hydrogen ion concentration with a standard depth of colour in a Dubosq colorimeter. The results have been checked by comparing buffer solutions of known hydrogen ion concentration with the standard.—(2) The splenectomy of tadpoles. The object of the investigation has been to ascertain whether the absence of the spleen influenced the metamorphosis of the larval frog. Frogs used in the experiments belonged to various species of *Limnodystastes*. The tadpoles were about 7.5 cm. in length, and possessed small hind limbs. Urethane was used as an anæsthetic. Six splenectomised and ten normal tadpoles developed similarly over a period of three to four weeks. No deep regeneration had taken place during one month.—(3) Variations of the hydrogen ion concentration of sea water. Of numerous samples taken off the coast at Cronulla, La Perouse, Bondi, Manly, Collaroy, etc., 60 per cent showed a pH of 8.5 and 40 per cent of 8.4. These results were obtained using phenol red as an indicator. As samples were taken in Port Jackson the alkalinity of the water decreased perceptibly within a mile from the Heads. Increase in the tension of carbon dioxide decreased the alkalinity. Sea water is only slightly buffered, since so small an increase as 8 millimetres tension carbon dioxide sufficed to alter pH from 8.5 to 7.0.—(4) On the metabolism of cold-

blooded animals. Experiments have been made to determine the carbon dioxide expired and the oxygen absorbed for resting frogs and to relate the figures obtained to the surface area of the frogs. Surface area was determined from plasticene moulds lined with silk. The silk was then separated from the cast, cut into fragments so as to lie flat, and reproduced on sensitised photographic paper. The affected areas were cut out and weighed and from the weight of paper the surface area calculated. A frog weighing 30 gm. has a surface of approximately 100 sq. cm. The metabolism of the frog was obtained by placing it in a wide-mouthed jar of rather more than 1 litre capacity, the jar being closed with a rubber stopper through which inlet and outlet tubing passed. Metabolism diminished during starvation and increased two to three times by a rise in temperature of 10° C. Resting frogs produced about 20 calories per sq. cm. of body surface per day.—H. F. W. Whitworth: The mineralogy and origin of the natural beach sand concentrate of New South Wales. Attention is directed to the fact that whilst, in the past, the heavy mineral concentrates have been worked intermittently for their gold, platinum, and tin values, their future value probably lies in their zirconium and titanium contents. The composition of the sand concentrates is given in detail, both chemical and mineralogical analyses being quoted, with descriptions and sketches of individual minerals. The heavy minerals of which the concentrates are formed have been derived, in all probability, from the Triassic sandstones which overlie the Coal Basin between Newcastle and Bulli.—J. C. Earl and Miss T. M. Reynolds: The celluloses of two water plants. The cellulose of *Eichornia crassipes* and *Ottelia ovalifolia* were isolated and compared by means of their triacetates with the normal cotton type of cellulose. Although the separation from associated substances was difficult to carry out, the cellulose from each of these plants appeared to be of the normal type.

## Diary of Societies.

SATURDAY, AUGUST 22.

NORTH OF ENGLAND INSTITUTE OF MINING AND MECHANICAL ENGINEERS (Annual General Meeting) (at Newcastle-upon-Tyne), at 2.50.—Open for further discussion:—Interim Report of the Support of Workings in Mines Committee, A. Walker.

TUESDAY, AUGUST 25.

LONDON NATURAL HISTORY SOCIETY (at London School of Hygiene and Tropical Medicine), at 6.30.—Informal Meeting—Ornithology. QUEKETT MICROSCOPICAL CLUB (at 11 Chandos Street, W.1), at 7.

## CONFERENCES.

AUGUST 25 TO 29.

CONFERENCE OF THE INTERNATIONAL INSTITUTE OF BIBLIOGRAPHY (at the Hague).

Aug. 25.—Prof. A. Pollard: Presidential Address.

Aug. 26.—E. Morel: Statistique du livre en France et son aspect bibliographique.

Dr. J. Vorstius: Index Bibliographiens.

Sir Frederic Nathan: International Abstracting and Indexing of Scientific and Technical Literature.

J. M. C. Muller: Rapport sur le Repertorium Technicum.

J. Gérard: Création d'une Fédération Française des Offices de Documentation.

Aug. 27.—Dr. R. Sand: La documentation dans le domaine de la médecine.

Dr. E. Huet: L'Organisation de la Documentation Dentaire par la Fed. Dent. Int.

Dr. J. G. Priestley: Bibliography of Physiology and the Application thereto of the Decimal Classification.

Dr. M. Pfücke: Aufgaben und Organisation eines Referatenorgans.

B. du Rétail: Le Centre d'Information Économique de Paris et son Service de Dossiers de Presse.

B. M. Headicar: The Bibliography of Economic and Social Sciences.

E. de Grolier: Le classement standardisé appliqué dans la librairie.

Aug. 28.—Various Papers.

Aug. 29. Excursions.

AUGUST 31 TO SEPTEMBER 4.

INTERNATIONAL CONGRESS OF NEUROLOGY (at Berne).