

tions of a new genus and four new species from the coast of New South Wales.—H. J. Carter: Some new *Heteromera* and a new *Stigmodera* (Coleoptera) from Tropical Australia.—Prof. W. N. Benson: The geology and petrology of the Great Serpentine Belt of New South Wales. Appendix to part vi.—Dr. H. S. H. Wardlaw: The variability of cows' milk. Samples of afternoon milk from 109 healthy cows kept under similar conditions, but of various ages, breeds, and stages of lactation, were examined. Certain physical properties, the composition, and quantities secreted in eight hours were determined. The variabilities of the results fall into four distinct groups. The percentages of results lying within five of the mean, and the percentage-deviation from the mean within which practically all the results lay, were:—(1) Freezing point and density, 100, 5; (2) electrical conductivity and concentration of soluble matter (chiefly lactose), 50, 25; (3) concentration of matter not in solution (chiefly fat and protein), 20, 50; (4) quantities secreted in eight hours, 10, 100. Only three samples contained less than 3.2 per cent. of fat, while more than 40 per cent. of the samples contained less than 8.5 per cent. of solids not fat.—Miss E. C. Pinkerton: The composition of expired alveolar air. Estimations of the percentage of oxygen and carbon dioxide in the successive portions of air rapidly expelled from the lungs show that the concentration of carbon dioxide diminishes by not more than 0.22 per cent. in the final 600 c.c. respired, and that the concentration of oxygen increases by not more than 0.36 per cent. in the same portion of the breath. The change in concentration is independent of the depth of respiration, but depends on the speed with which the air is expired; the more slowly the air is breathed out the greater the change in concentration of the gases of the final portion. The results obtained lead to the inference that the alveolar air in the pulmonary atria, at the end of an expiration, contains a lower concentration of oxygen and a higher concentration of carbon dioxide than the air last expelled from the mouth in the rapid expiration.

**BOOKS RECEIVED.**

The Principles and Practice of Pruning. By M. G. Kains. Pp. xxv+420. (New York: Orange Judd Co.) 2 dollars net.  
 Comment Economiser le Chauffage Domestique et Culinaire. By R. Legendre and A. Thevenin. Pp. 123. (Paris: Masson et Cie.) 1.25 francs.  
 The Rural Teacher and his Work in Community Leadership, in School Administration, and in Mastery of the School Subjects. By H. W. Foght. Pp. xii+359. (New York: The Macmillan Co.; London: Macmillan and Co., Ltd.) 7s. 6d. net.  
 Manual of Milk Products. By Prof. W. A. Stocking. Pp. xxvii+578. (New York: The Macmillan Co.; London: Macmillan and Co., Ltd.) 10s. 6d. net.  
 La Statique des Fluides, la Liquéfaction des Gaz et l'Industrie du Froid. By E. H. Armagat and L. Décombe. Première et Deuxième Partie. Pp. vi+265. (Paris and Liège: Ch. Béranger.) 18 francs.

**DIARY OF SOCIETIES.**

**THURSDAY, FEBRUARY 7.**  
 ROYAL SOCIETY, at 4.30.—The Photo-Electric Action of X-rays: Prof. O. W. Richardson.—The Parent of Actinium: Prof. F. Soddy and J. A. Cranston.—Some Problems in the Theory of Radiation: Prof. A. Schuster.—The Absorption of the Radiation Emitted by a Palladium Anticathode in Rhodium, Palladium, and Silver: E. A. Owen.  
 ROYAL INSTITUTION, at 3.—Illusions of the Atmosphere: The Travelling Vortex and the Cyclonic Depression: Sir Napier Shaw.  
 INSTITUTION OF ELECTRICAL ENGINEERS, at 6.—Ninth Kelvin Lecture: Kelvin as a Teacher: Prof. M. Maclean.  
 LINNEAN SOCIETY, at 5.—Two Bibliographical Rarities of the Society's Library: (a) Cupani, F., "Panphyton siculum," 1713; (b) Du Gort, J. and P., "L'Histoire et Pourrait des Plantes," Lyon, 1561: The General Secretary.—Plant Distribution from the Standpoint of an Idealist: H. P. Guppy.

CHEMICAL SOCIETY, at 8.—Atomic and Molecular Numbers: H. S. Allen—Studies of the Carbonates. IV. The Hydrolysis of Sodium Bicarbonate and the Ionisation Constants of Phenolphthalein: C. A. Seyler and E. H. Tripp.—Some Inorganic Stannichlorides: J. G. F. Druce.—A Re-investigation of the Cellulose-dextrose Relationship: Miss M. Cunningham.—Esparto-cellulose and the Problem of Constitution: C. F. Cross and E. J. Bevan.  
**FRIDAY, FEBRUARY 8.**  
 ROYAL INSTITUTION, at 5.30.—Science and Ethics: Principal E. H. Griffiths.  
 ROYAL ASTRONOMICAL SOCIETY, at 5.—Anniversary Meeting.  
**SATURDAY, FEBRUARY 9.**  
 ROYAL INSTITUTION, at 3.—The Ethics of the War: P. H. Loyson.  
**MONDAY, FEBRUARY 11.**  
 ROYAL GEOGRAPHICAL SOCIETY, at 8.30.—The London Society's Map with its Proposals for the Improvement of London: Sir Aston Webb.  
 SOCIETY OF ENGINEERS, at 5.30.—Presidential Address: W. B. Esson.  
**TUESDAY, FEBRUARY 12.**  
 ROYAL INSTITUTION, at 3.—The Problems of British Anthropology: Prof. A. Keith.  
**WEDNESDAY, FEBRUARY 13.**  
 BRITISH ASSOCIATION GEOPHYSICAL DISCUSSIONS (Royal Astronomical Society), at 5.—The Influence of Barometric Pressure on Mean Sea-level: Sir C. F. Close.—Precise Levelling: Major Henrici.  
 ROYAL SOCIETY OF ARTS, at 4.30.—The Relations between Capital and Labour—Reasonable Hours, Co-partnership, and Efficiency: Lord Leverhulme.  
**THURSDAY, FEBRUARY 14.**  
 ROYAL SOCIETY, at 4.30.—*Probable Papers*: The Artificial Production of Echinoderm Larvæ with Two Water-vascular Systems, and also of Larvæ Devoid of a Water-vascular System: Prof. E. W. MacBride.—The Quantitative Differences in the Water-conductivity of the Wood in Trees and Shrubs: Prof. J. B. Farmer.—The Efficiency of Muscular Work: Capt. M. Greenwood.  
 ROYAL SOCIETY OF ARTS, at 4.30.—The Hide Trade and Tanning Industry of India: Sir Henry Leggard.  
**FRIDAY, FEBRUARY 15.**  
 ROYAL INSTITUTION, at 5.30.—The Mechanism of the Heart: Prof. E. H. Starling.  
 INSTITUTION OF MECHANICAL ENGINEERS, at 6.—Annual General Meeting.—Traction on Bad Roads or Land: L. A. Legros.—Utility of Motor Tractors for Tillage Purposes: A. Amos.  
**SATURDAY, FEBRUARY 16.**  
 ROYAL INSTITUTION, at 3.—Problems in Atomic Structure: Sir J. J. Thomson.

**CONTENTS.**

	PAGE
Biology from America. By J. A. T. . . . .	441
School-life in the Seventeenth Century. By A. H. . . . .	442
Organic Chemical Analysis. By C. S. . . . .	443
Our Bookshelf . . . . .	444
Letters to the Editor:—	
The British Scientific Instrument-making Trade.—	
E. S. Hodgson . . . . .	444
The National Food Policy . . . . .	445
The Investigation of Industrial Fatigue. By Prof.	
W. M. Bayliss, F.R.S. . . . .	446
Germany and Iron-ore Supplies. By H. L. . . . .	447
Notes . . . . .	447
Our Astronomical Column:—	
Luminosities and Parallaxes of 500 Stars . . . . .	451
Solar Hydrogen Bombs . . . . .	451
"Annuaire du Bureau des Longitudes" . . . . .	452
Third Melbourne Star Catalogue . . . . .	452
The Endowment of University and Technical	
Education . . . . .	452
Magnetic Survey of New Zealand. By Dr. C.	
Chree, F.R.S. . . . .	453
Parasites of Crops and Cattle . . . . .	454
Light and Vision. By A. P. Trotter . . . . .	454
Science and the Cold-storage Industry. By Prof.	
J. Wemyss Anderson . . . . .	455
University and Educational Intelligence . . . . .	456
Societies and Academies . . . . .	457
Books Received . . . . .	460
Diary of Societies . . . . .	460

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