

important a place to the residues of the food stuffs, omitting to state that the fæces consists rather of the residues of the excretions which pour into the intestinal tract.

In the article on the 'Chemistry of Respiration,' written by M. S. Pembrey, the statement is made that in Voit's respiration apparatus the moisture expired by the animal may sometimes be deposited in the conducting tubes before reaching the vessel where it is caught and weighed. With proper manipulation, however, this does not take place, and such a statement should not be too lightly made when it tends to invalidate a large quantity of carefully executed work.

The articles by Schäfer himself are characterized by breadth of thought and a balanced judgment which often causes him to make clear a middle ground between opposing theories. In his article on the 'Mechanism of the Secretion of Milk' he is inclined to doubt that milk is the product of the bodily disintegration of the lactic cells, but that, as in formation of saliva, granules are extruded from the cells, which granules dissolve to form the milk.

J. H. Langley has written a very complete monograph on the subject of the Salivary Glands, which includes his own important work.

The other authors are W. D. Halliburton, Arthur Gramgee, E. Weymouth Reid, E. H. Starling, J. S. Edkins, D. Noël Paton and F. Gowland Hopkins, all familiar names to the working physiologist.

The edition published here is identical in make up to that published in England and is everything that could be desired.

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SCIENTIFIC YEARBOOKS.

THE second volume of *L'Année biologique*, edited by Professor Yves Delage and published at Paris by Schleicher frères, follows the excellent lines laid down in the first volume and represents the best work accomplished hitherto by the various yearbooks recently established in France. The subjects are treated under twenty chapters, each beginning with a critical

survey, usually written by MM. Delage and Poirault, followed by a bibliography and abstracts of most of the papers. The digests are often detailed, *e. g.*, the notice of Cope's Primary Factors of Organic Evolution extends to 14 pp., and the account of the contents of a book or paper is usually clearly separated from such criticism as is given. The subjects treated and the number of titles given are as follows:

The cell, 171.
Sexual products and fertilization, 8.
Parthenogenesis, 6.
Asexual reproduction, 12.
Ontogenesis, 52.
Monstrosities, 71.
Regeneration, 46.
Grafting, 10.
Sex and sexual characters, 28.
Polymorphism, metamorphism and the alternation of generations, 29.
Latent characters, *vacat*.
Correlation, 26.
Death, immortality, the germ plasm, 10.
Morphology and general physiology, 275.
Heredity, 57.
Variation, 78.
The origin of species, 110.
Geographic distribution, 50.
The nervous system and mental functions, 203.
General theories, 48.

It is unfortunate that this recently-issued volume refers to 1896, instead of 1897, but the preparation of these 808 large pages represents a great amount of labor for which all students of the biological sciences should be grateful.

M. BINET'S *L'Année psychologique* (Schleicher, Paris) combines the publication of special papers with a review of the progress of psychology in 1897. MM. Binet and Vaschide contribute separately and in conjunction no less than twenty-two researches to the present volume, and there are in addition two papers by M. Bourdon and one by M. Leclère. The papers, which deserve special review, are chiefly concerned with the individual differences of school children and contain many interesting suggestions, though, as a rule, the work is not carried far enough to secure definite results. The bibliography, compiled in the first instance by Drs. Farrand and Warren for *The Psychological Review*, contains 2,465 titles, and

about 90 of these papers are abstracted and reviewed, chiefly by M. Binet.

L'Année philosophique, of which M. Pillon is the editor and Alcan the publisher, in the issue for 1897 reaches its eighth volume. It contains articles by M. Renouvier on the idea of God, by M. Dauriac on the philosophy of Paul Janet, and by the editor on Bayle and the altruism of Epicurus. The editor also offers a review of French philosophical publications extending to 140 pages. There is no bibliography.

MESSRS. LEMCKE AND BUECHNER, New York, are the American agents of a newly established bibliography of French periodicals, edited by M. Jordell. The example set in America was last year followed in Germany, and we are now glad to welcome a similar enterprise in France. In this first issue 146 periodicals are included, a subject index and an authors' index being provided. Scientific journals are not, as a rule, considered, but it is exactly articles that appear in the general journals that are most likely to escape the attention of scientific men, and the usefulness to them of such an index is evident. It should be accessible in all the larger libraries.

GENERAL.

It is stated that progress has been made with the preparation, for publication, of the extensive scientific material collected during the voyage of the *Fram*, and that there is a likelihood that the first volume of memoirs will be issued during the coming summer or autumn. The collection will be in quarto form, and the separate memoirs will be the work of a number of specialists in the subjects treated, each being paged separately. The total number will probably be about twenty, forming from three to five volumes. The memoirs will be published at the expense of the Nansen Fund for the advancement of science.

A QUARTO memoir upon *Polypterus* is being projected at Columbia University as the result of the Senff Expedition to the Nile. Specialists in the nerves, muscles, blood vessels and visceral anatomy will divide the work, which is designed to be of the most exhaustive character. Mr. Harrington is taking charge of the distribution of the Senff collection

to specialists in all parts of the country and in Europe, with the understanding that the results will be published by the New York Academy of Science, and thus constitute a special and uniform series, which can finally be issued in compact form.

PROFESSOR TITCHENER, of Cornell University, is preparing for publication early in the fall 'A Laboratory Manual of Experimental Psychology,' which will be published by The Macmillan Company. The work will be in two volumes and will detail an elementary course of laboratory work. The first volume will deal with qualitative analysis, the second with the exact measurement of mental processes. Each volume will be published in a student's and a teacher's edition, the former giving instructions as regards the conduct of experiments, control of introspection, etc., and the latter furnishing references, cognate questions and exercises and standard results.

BOOKS RECEIVED.

In the Australian Bush and the Coast of the Coral Sea.

RICHARD SEMON. London and New York, The Macmillan Company. 1899. Pp. xii + 552. \$6.50.

The Principles of Bacteriology. FERDINAND HUEPPE.

Translated by DR. E. O. JORDAN. Chicago, The Open Court Publishing Co. 1899. Pp. viii + 467. \$1.75.

The Dawn of Reason or Mental Traits in the Lower Animals. JAMES WEIR. New York and London, The Macmillan Company. 1899. Pp. xiii + 234. \$1.25.

A Brief Introduction to Modern Philosophy. ARTHUR KENYON ROGERS. New York and London, The Macmillan Company. 1899. Pp. viii + 360.

The Story of the Cotton Plant. F. WILKINSON. New York, D. Appleton & Co. 1899. Pp. 191.

SCIENTIFIC JOURNALS AND ARTICLES.

THE *Journal of Physical Chemistry*, January. 'Pressure temperature Diagrams for Binary Systems,' by Wilder D. Bancroft. 'The Dissociative Power of Solvents,' by Louis Kahlenberg and Azariah T. Lincoln: a study of electrical conductivity of a number of salts in non-aqueous solutions, more fully noticed in 'Notes on Inorganic Chemistry.' 'Boiling-point curves,' by E. F. Thayer: the boiling point curves for mixtures of alcohol and chloroform,