

intensely academic character; and an adherence to one or another depends upon the bent of one's philosophic allegiance and temper.

JOSEPH JASTROW

*The Value of Pure Water.* By GEORGE C. WHIPPLE. New York: John Wiley & Sons. Pp. 84. Price, \$1.00.

This small publication, which contains much material of both interest and value, is practically a reprint of portions of three earlier papers by the author. One from 'Biological Studies by the Pupils of William Thompson Sedgwick,' another from 'The Pollution of Streams and the Natural Agencies of Purification' and a third on 'The Disadvantages of Hard Water.'

Among the qualities of a public supply which affect the consumer 'temperature' is included. This is well, for that item receives far too little attention from those who forget that the great bulk of the people can not afford the luxury of ice.

As showing the advantages of filtration, a comparison between the typhoid rates in Albany and Troy is striking, but it should be noted that Troy never drew Hudson River water from below the mouth of the polluted Mohawk, and now takes no river water at all. In showing the pecuniary loss to a community due to water-borne typhoid, the author places the 'residual typhoid,' or number of yearly deaths not traceable to water, at a probable value of 20 per 100,000. He adds, however, that this value will doubtless diminish in the future because of a gradual decrease in the number of foci of infection. A good table is given showing the increase in cost to the laundry interests resulting from the use of hard water, and a formula is added whereby may be calculated the depreciation of the money value of a water for soap users because of hardness.

Additional formulæ are given which severally state the depreciation due to 'sanitary quality' to 'temperature' and to 'physical characteristics,' under which latter head are included 'turbidity,' 'color' and 'odor.' Odor is again divided into that due to 'organ-

isms,' to 'decomposition' and to 'vegetable odors.'

This is all well enough, but the resulting complexity of formulæ is somewhat more than the average water purveyor might wish for.

"Habit and association have much to do with a person's views as to the attractiveness of water" is a most true statement, and upon it depends the success with which many an indifferent supply is now offered to the public.

The book is well worth its price and should be found in every water library.

W. P. MASON

*Alcohol—The Sanction for Its Use Scientifically Established and Popularly Expounded by a Physiologist.* Translated from the German of Dr. J. STARKE. New York, G. P. Putnam's Sons. 1907.

This book, written in defense of the use of alcohol, appears at a time when there is a world-wide movement in favor of a stricter temperance. By alcohol the author means the substance as contained in the purer beverages, not such concoctions as absinth which are compared to alcoholic solutions of opium.

The moderate drinker who experiences 'internal mental exaltation with perfectly clear consciousness' has no poisoning of the brain provided it is only occasionally that he gets 'elevated.' The book claims that a medium amount of alcohol is favorable to the performance of muscular work, and a medium allowance is put at 560 c.c. of absolute alcohol or two and three quarter pints of brandy for a man weighing 140 pounds. The author states that caffein constricts the cutaneous blood vessels and enlarges those of the interior, and since alcohol behaves in the opposite manner, therefore rum should be taken in tea and a liqueur after coffee.

While this volume will scarcely meet with unanimous approval, it might still be recommended as an antidote to the attenuated nonsense of the 'scientific temperance' of the school books.

GRAHAM LUSK

#### SCIENTIFIC JOURNALS AND ARTICLES

*The American Museum Journal* for April contains illustrated accounts of the 'Habitat

Groups of Birds,' 'The Museum's New Whales' and 'The Results of the Tjader Expedition.' It also notes that Mrs. Roesler has been appointed as guide to the collections for members visiting the museum. In this connection it may be noted that the Museum of Fine Arts, Boston, has just added to its staff a *Docent* whose office is to take parties, not exceeding ten in number, about the museum and explain the collections.

*The Zoological Society Bulletin* for April is termed the Aquarium Number and is devoted entirely to aquatic animals. It contains articles on 'The Care of Goldfishes' and 'The Care of Turtles and Small Alligators,' 'The Centennial of the Aquarium Building' with a cut showing its appearance in 1852. Other articles are on 'Poisonous Fishes,' 'The Drum Fish,' 'Blind Fishes' and 'The Uses of the Fins of Fishes.' The measurements are given of two unusually large sea turtles, one a loggerhead, weighing 395 pounds, the other a green turtle, weighing 540 pounds.

*Bird-Lore* for March-April has for its principal articles 'The House-Finch from an Office Window,' by W. H. Bergtold; 'Bird Clubs in America, III., The Maine Ornithological Society,' by J. Merton Swain; 'Clay Bird-Houses and Bird-Baths,' by R. W. Hegner, and the second paper on 'The Migration of Thrushes,' by W. W. Cooke. The Educational Leaflet, by Mabel Osgood Wright, is on 'The Red-winged Blackbird.' The report of the Audubon societies gives a résumé of various laws proposed or passed.

*The Museums Journal* of Great Britain for March contains various contributions to the discussion on museum cases which formed a feature of the last meeting, including a description of a 'Rotary Cabinet for Museum Specimens,' by Rev. S. J. Ford. This cabinet contains 22 trays which may be successively brought to the top, which is glazed, in order that their contents may be seen.

ANNOUNCEMENTS have been sent out from Bologna, Italy, of the publication there in the immediate future of a new scientific review, to be called *Rivista di Scienza*, which is de-

scribed by the editors as 'an international review of scientific synthesis.' This new publication is not intended to present the results of special investigation in narrow fields, but rather to take a wide look over all the lines of scientific activity and to review in each in as clear and simple a way as possible the work which is being done and the problems which are coming up. Biology, chemistry, physics, mathematics, geology, sociology, political economy, psychology and pedagogy are all represented in the list of articles which are to appear in the first numbers. Subjects of general interest in all branches of scientific work will be presented, and treated in a manner as little technical as possible in order that they may be intelligible to a wide circle of readers. The correlation and connection between different groups of sciences are to be particularly developed. It is to be cosmopolitan in its outlook and almost every country in which scientific work is being done is already well represented in the list of contributors. "It is born," say the editors, "from the desire to coordinate the work carried on in different fields of knowledge and to make the task of synthesis easier" and "it invites such studious persons as are desirous (without sacrificing time employed by them in the certain way of analytical research) of discussing in its columns the general questions regarding their special branch of science, to set forth in a widely accessible form the results obtained from it. It hopes especially to have the collaboration of those who desire to study the relationship, ever new and ever closer, which exists between the different branches of study, and it counts on the favor of all those who recognize the danger of excessive specialization and would be glad to promote a wider appreciation of the problems of science." It is to be issued quarterly and each number will contain from 150 to 200 pages, forming an annual volume of from 600 to 800 pages. Two editions are to be issued: one, an international edition in which each article will appear in the language of its author, and another intended for circulation in Italy in which all articles in any foreign language other than

French will be translated into Italian. The committee of management is made up of G. Bruni, A. Dionisi, F. Enriques, A. Giardina and E. Rignano. Among those who have already undertaken to contribute articles are: Bredig, Ciamician, Ostwald and Wegschneider in chemistry; Borel, Larmor and Thomson in physics; Boutroux, Fano, Picard and Severi in mathematics; Delage, Giard, Grassi, Hartog, Raffaele, Roux (W.) and Sedgwick in zoology and anatomy; Abegg, Burian and Dastre in physiology; Darwin, Haberlandt and Wiesner in botany; Benini, Bortkiewicz, Carver, Mosca, Pareto, Sombart and Supino in sociology and political economy; Brugi, Gropali and Scialoia in law; DeMarchi, Love and Wallerant in geology; Binet, Janet and Lugaro in psychology; Cunningham and Salvemini in history, and Credaro and Tannery in pedagogy.

#### SOCIETIES AND ACADEMIES

##### AMERICAN MATHEMATICAL SOCIETY

At the regular meeting of the society, held at Columbia University on Saturday, April 27, an especially attractive feature of the program was Professor W. F. Osgood's presidential address on 'The Calculus in our Colleges and Technical Schools.' The address will appear in the June number of the *Bulletin* of the society. The attendance at the April meeting, always ranking next to that of the annual and summer meetings, exceeded on this occasion all previous records, amounting to about seventy, including sixty-one members.

President H. S. White occupied the chair at the two sessions. The council announced the election of the following new members: Dr. Alfred Ackermann-Teubner, Leipzig, Germany; Dr. J. W. Bradshaw, University of Michigan; Professor H. E. Cobb, Lewis Institute, Chicago, Ill.; Mr. S. A. Corey, Hiteman, Ia.; Professor Floyd Field, Georgia School of Technology; Mr. G. W. Hartwell, Columbia University; Chancellor C. C. Jones, University of New Brunswick; Mr. Joseph Lipke, Columbia University; Professor Francis Regis, Christian Brothers College, St. Louis, Mo.;

Mr. H. P. Stillwagen, Yeatman High School, St. Louis, Mo. Seven applications for admission were received. The total membership of the society on May 1 was 560.

Following the plan recently adopted, abstracts of the papers so far as available had been printed and issued to the members in advance of the meeting. In this way it is hoped to secure a more intelligent interest in the papers and to promote criticism and discussion.

The date of the summer meeting, to be held at Cornell University, was fixed for Thursday and Friday, September 5 and 6.

By no means the least enjoyable feature of the meeting was the usual dinner in the evening, attended on this occasion by over twenty of the members.

The following papers were read at this meeting:

G. A. BLISS: 'A new form of the simplest problem of the calculus of variations.'

R. D. CARMICHAEL: 'Multiply perfect even numbers of five different primes' (preliminary communication).

L. P. EISENHART: 'Transformations of surfaces whose lines of curvature are represented on the sphere by an isothermal system.'

F. L. GRIFFIN: 'The variation of the apsidal angle in certain families of central orbits.'

F. L. GRIFFIN: 'The solutions of central force problems as functions of the constant of areas.'

F. L. GRIFFIN: 'Note on a simple example of a central orbit with more than two apsidal distances.'

G. A. MILLER: 'Note on the commutator of two operators.'

J. E. WRIGHT: 'Arrangement of ovals of a plane sextic curve.'

W. F. OSGOOD: Presidential address—'The calculus in colleges and technical schools.'

IDA M. SCHOTTENFELS: 'Group matrices.'

C. E. STROMQUIST: 'An inverse problem of the calculus of variations.'

R. G. D. RICHARDSON: 'On the integration of a series term by term.'

A. L. UNDERHILL: 'Invariants of the function  $F(x, y, x', y')$  under point and parameter transformations connected with the calculus of variations.'

EDWARD KASNER: 'The motion of particles under conservative forces.'