

This work must be looked upon to a large extent as an *introduction* to the study of bacteriology. After all, most people who study bacteria are sure to study them for their practical bearing upon various topics, rather than for the scientific relations of the bacteria themselves. In order to understand the relations of bacteria to disease, to agriculture or any other practical subject it is necessary, first, to have a tolerably good knowledge of the bacteria themselves. Such a knowledge is furnished by the work in question and this book will, therefore, serve as a foundation for the study of bacteria to students who are interested in the application of these organisms in any direction. No work has yet appeared which gives in such a brief space an equally clear, concise account of bacteria, their structure, their methods of development, their relations to external conditions, their distribution, their physiological relations to environment, etc., as this work by Schmidt and Weis. It is to be hoped that a translation into English may appear.

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An Analytical Key to some of the Common Flowering Plants of the Rocky Mountain Region. By AVEN NELSON, professor in the University of Wyoming. New York, D. Appleton & Co. Pp. 94.

This little book is intended by the author to serve as an introduction to the study of Rocky Mountain plants. About four hundred species are described. It is expressly stated in the preface that the book should not take the place of a manual, and the teacher is warned not to use it for general field work. Plants should be selected for study which are described in the key. If the teacher will keep this warning in mind the work will, without doubt, be found very useful.

Hitherto it has been quite impossible to use modern nomenclature in school work in this region, because there was no work of reference containing the correct names of even our most common plants. Here is a work which, so far as it goes, is entirely modern.

It is a familiar fact, which was known even to Aristotle, that parents think most of their

own children, that poets think most of their own poems. It seems now that botanists think most of their own species of plants. At least there are a good many plants in the key credited to 'Aven Nelson.' This apparent nepotism is explained when we examine the work carefully. Many of these favored species are really species quite common, but generally confused with similar species of the eastern states.

The key to the families in the front of the book seems admirably arranged to show the diagnostic characters. The plants selected to represent the different families are well selected. An important feature of the descriptions is the reference to ecological points in connection with the various species and genera. The habits and habitats are given as only one who knows the plants in the field could give them. Professor Nelson's long experience in the Rocky Mountain region has given him a mastery of the subject which no one from the eastern states could possibly have.

It is very much to be desired that in future editions of the work it may be found possible to include a few of the more common species of grasses, since they form such an important part of the earth covering. The reviewer believes that a knowledge of the morphology of the grass flower and fruit is not beyond the grasp of beginners. Species of *Agropyron* and *Stipa*, which are abundant in the region, can well be used with such students.

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SCIENTIFIC JOURNALS AND ARTICLES.

THE *Popular Science Monthly* for July has for its frontispiece a portrait of Asaph Hall, President of the American Association, which has just met at Pittsburgh. Cloudsley Rutter presents some 'Studies in the Natural History of the Sacramento Salmon,' giving many details in the life history of the fish, and showing the movements of the young from the time they are hatched until they reach the sea. Under the title 'A Modern Street,' S. F. Peckham describes the methods and materials employed in laying an asphalt pavement. An abstract is given of the 'Views of Dr.

Rizal, the Filipino scholar, upon Race Differences,' in which he shows how difficult it is to get an unprejudiced estimate of the Filipino character. 'Gold Mining in the Klondike' is described by Henry A. Meiers, and Edwin G. Dexter has 'A Study of Twentieth Century Success,' showing the elements of success as based upon an analysis of the information given in 'Who's Who in America.' William H. Burr discusses 'The Panama Route for a Ship Canal,' and Woodrow Wilson tells of 'Princeton in the Nation's Service.' Finally, W J McGee has a timely article on 'The Antillean Volcanoes,' and there are sundry interesting items in 'The Progress of Science.'

IN *The American Naturalist* for June, J. F. McClenden gives 'The Life History of *Ulula hyalina* Latreille' and Wesley R. Coe discusses 'The Nemertean Parasites of Crabs,' concluding that all of the species show great similarity of structure, that they are true parasites and that some species are widely distributed. H. V. Wilson, in an article 'On the Asexual Origin of the Ciliated Sponge Larva,' shows that Ojima's recent observations seem to bear out his own conclusions as to this method of propagation in *Esperella fibrezilis*. J. E. Duerden, in a paper on 'Aggregated Colonies in Madreporarian Corals,' shows that these are probably due to the coalescence of larvæ or young forms and not to fission. Under the title 'Utah Chilopods of the Geophilidæ,' Ralph V. Chamberlain describes six new species and gives keys showing the position of the new forms in their genera, as well as for the identification of those already known from the West. In considering 'Color Variations of the Common Garter Snake' Edwin C. Eckel comes to the conclusion that the two subspecies of *Eutania sirtalis*, *obscura* and *pallidula*, are of doubtful value, while in 'Notes on the Dispersal of *Sagartia Luciae* Verrill' G. H. Parker presents evidence that the species is spreading northwards and eastwards. Under 'Correspondence' Dr. C. R. Eastman criticises Patten's recent paper on the Ostracoderms and particularly the conclusion that they are nearly related to the Arthropods.

THE South African Museum has issued Parts VI. to VIII. of the second volume of its *Annals*, the principal paper being by W. F. Purcell, 'On some South African Arachnida belonging to the Orders Scorpiones, Pedipalpi and Solfugæ.' This comprises a revision of the South African species of the genus *Parabuthus*, descriptions of seven new species and three new varieties of scorpions; one new pedipalp, nine new species and one new genus (*Chelypus*) of Solfugæ, together with lists of new localities for various species and notes on local variations. G. A. Boulenger gives a 'Description of a New Silurid Fish of the genus *Gephyroglanic*, from South Africa,' and Walter E. Collinge presents some notes 'On a Further Collection of South African Slugs with a Check List of Known Species.'

The Plant World for May, a little belated, contains a paper by Cora H. Clarke, entitled 'New Missionary Work,' being another plea for the preservation of our wild flowers. Roland M. Harper gives some 'Notes on *Elliottia recemosa*,' giving an account of the rediscovery of this rare shrub after an interval of twenty years. A. H. Curtiss continues 'Among Florida Ferns,' and there are the customary briefer articles, including an account of the aims of the Wild Flower Preservation Society.

IN *The Museums Journal* of Great Britain the most important article is the fifth and last paper on 'Hygiene as a Subject for Museum Illustration.' This completes a careful and detailed outline of the subject with diagrams showing a proposed arrangement of a Museum of Hygiene. With this, June, number the *Journal* completes its first year and Mr. Howarth is to be congratulated on the successful termination of his first year as an editor.

The American Museum Journal for May and June notes the progress in the installation of the series showing the development of the horse and the successful completion of the Saturday afternoon talks on ornithology. The supplement, this time under the modest

title of 'Guide Leaflet,' is an illustrated handbook to the butterflies found within fifty miles of New York City. It comprises 52 pages and 96 figures and should be in demand by local entomologists.

AN English dealer in minerals was the first to advertise volcanic dust from Mt. Pelée, and the British Museum is the first, and only one, to make a special exhibit illustrating the recent volcanic eruptions in the West Indies. This, as described in *The Museums Journal*, comprised a series of maps and diagrams showing the geography of the Lesser Antilles and the relations of their volcanoes to the general structure of the globe, and particularly to the disturbed area in Central America. Pictures and photographs give an idea of the scenery, buildings, vegetation and human inhabitants of the ruined islands. The poverty of the fauna and flora, due perhaps to previous eruptions, is likewise illustrated by specimens and drawings. Various products of the present and previous eruptions are exhibited and explained, while near by is an exhibit of typical volcanic products from various sources, all carefully labeled. Pictures and photographs illustrate the eruptive phenomena of other volcanoes, and extinct or possibly dormant volcanoes of other parts of the world.

SOCIETIES AND ACADEMIES.

THE ANTHROPOLOGICAL SOCIETY OF WASHINGTON.

THE 331st meeting was held April 22. Dr. Emily Brainerd Ryder gave a talk on the Parsees of Bombay, and exhibited costumes, religious objects and a model of a Tower of Silence.

Dr. Ryder spent a great many years in India, and is thoroughly familiar with the customs and religion of the followers of Zoroaster. In describing their religion she stated that before they were driven from Persia, their native country, by the Mohammedan invaders, their temples, in which the sacred and eternal fire was kept burning, were in the form of round towers, seven stories in height, seven being a sacred number in their religion. When they fled into India they de-

cided, in order to live in peace with the Hindoos, that they would build fire temples small in size and in out-of-the-way places, so as to attract as little attention as possible. Hence, all over India their places of worship are small and obscure, in comparison with the temples and mosques of other religious bodies, notwithstanding the fact that they are the wealthiest and most progressive people in India.

In these temples the sacred fire, the symbol of Ahriman, the sun or god, burns on an altar of white stone. Three priests relieve each other at the end of every eight hours, and every time the fire is replenished with sandal wood, a gong is struck to notify outsiders that the sacred fire is being promptly tended and watched. In the opening of a new temple the fire of its altar has to be obtained from heaven; in other words, it must be a part of the divine or electric spark, and frequently it is months before this can be obtained.

According to the Zoroastrian faith, the human body, after the soul has departed, must not be allowed to pollute the air, the water, or the earth, and for that reason the Parsees have what they call their Towers of Silence, a large, round, roofless building, in which the remains of their dead are exposed to be devoured by vultures. The body is carried to its last resting place on a bier, the priest following leading a white dog of a peculiar breed with a yellow spot over either eye. Just before reaching the gate of the tower the face of the dead is uncovered, to let the sun shine upon it for the last time, after which the priest holds the dog's nose toward the face of the dead four times, and from all four quarters. The animal is called the 'four-eyed dog,' and this curious custom is so old that, in Mrs. Ryder's opinion, the Parsees have lost its meaning and significance.

'The Vinter's Bush' was the title of a paper read by Dr. H. Carrington Bolton, on the ancient custom of using a bush as a wineshop sign in the same manner that three balls are used as a sign by pawnbrokers, and a striped pole by barbers. He was followed by Mr. G. H. Matthes, who has lately returned from Sumatra, who read a paper on the Malays of