

of observations, showing (1) the extent of this second motion on different sides of a storm or high area, (2) the relation of the direction of this second motion to that of the storm or high area, (3) the cause of this motion, etc. At the same time, the facts and views here presented show that this subject is of the greatest interest, and may be of the highest importance.

H. A. HAZEN.

Washington, D.C., April 11.

BOOK-REVIEWS.

Die Mutter bei den Völkern des Arischen Stammes. By MICHAEL VON ZMIGRODZKI. Munich, 1886.

La Question de la Femme c'est la Question de la Mère. By MICHAEL VON ZMIGRODZKI. Paris, 1890.

Zur Geschichte der Suastika. By MICHAEL VON ZMIGRODZKI. Munich, 1890.

THE application of the facts drawn from ethnology and archaeology to the practical social questions of the day is one of the new and valuable acquisitions of science. Being new, one may reasonably expect that some time will elapse before it is employed with the best advantage; but meanwhile all honest and earnest efforts in this direction should be respectfully considered.

One such is before us in these works of the Polish writer Zmigrodzki. Appreciating that the position of woman in the social organization is the test of its excellence, he reviews the growth of the Aryan nations, both anthropologically and historically, and seeks to draw from his material the wisest rules for the place of woman in the present and the future of European and general civilization.

Without discussing the mass of learning on which he founds his conclusions, it is worth while stating what these are. He first urges that both sexes have naturally, and should be guaranteed legally, absolutely equal civil rights, equal opportunities for gaining an independent livelihood, equal wages, equal admission to all professions, avocations, and State employments. No marriage should be allowed until the woman is twenty and the man twenty-five years of age. The ceremony of marriage should be religious only, and the bond should be indissoluble, divorce for any ground being inadmissible. Illegitimate children should inherit equally with legitimate, and prostitutes should be condemned to forced labor for two years. During pregnancy, a woman who is earning salary or wages should have her income continued without labor on her part.

It is evident how impracticable and even grotesque are some of these recommendations; but, as they are founded on a supposed logical development of the theory of the equality of the sexes, they are interesting as illustrating the inherent difficulties in the way of this theory. There is also an evident desire on the part of the author to square his conclusions as much as possible with the precepts of the Roman Church, which obviously hampers his freedom.

His pamphlet on the Svastika is an endeavor to prove that this mysterious symbol is strictly Aryan in character, and is connected with the *Mutterrecht*. He seems to forget that his extreme devotion to the Aryan history and culture is often in rather ludicrous contrast to his obeisances to the Semites, Moses, Luke, Peter, etc., whom he frequently quotes, and whose religion he has adopted, as distilled through Roman alembics.

The American Race: A Linguistic Classification and Ethnographic Description of the Native Tribes of North and South America. By DANIEL G. BRINTON, A.M., M.D. New York, N. D. C. Hodges. 8°. \$2.

FOLLOWING close upon his "Races and Peoples," which appeared last year, the present volume is a further evidence, if such were needed, of Dr. Brinton's untiring devotion to linguistic and ethnographical studies. "The American Race" is the first attempt to classify systematically the peoples of the continent of America, who are its aborigines, upon a basis of language, — a basis of classification which would seem to be more safe and more useful in America than in any other quarter of the globe. In his use of language as a classifier of peoples, the author attaches

primary importance to grammatical construction, although he admits that our knowledge of the grammar of some American peoples is very meagre.

In his introductory remarks, Dr. Brinton reviews the general aspects of American anthropology, touching upon the various theories advanced regarding the peopling of the New World, the age of man in America, the glacial epoch, racial traits and characteristics, arts, religion, languages. His conclusions are that there is an "American race," and that primitive American man in all probability migrated by way of the North Atlantic land-bridge from the Eurafian continent.

He divides the American race into five great groups: I. The North Atlantic group; II. The North Pacific group; III. The Central group; IV. The South Pacific group; V. The South Atlantic group.

As regards "temperament, culture, and physical traits," Dr. Brinton considers that there is a "distinct resemblance" between the North Atlantic and the South Atlantic groups, and that there is "an equally distinct contrast" between these and the Pacific groups.

Of the main portion of the book, pp. 59-164 are occupied with the discussion of the peoples of North and Central America; pp. 165-332, with those of South America. The "Linguistic Appendix" (pp. 333-364) is invaluable, containing comparatives, vocabularies (of sixteen words and the numerals from one to five) in no fewer than one hundred and twenty languages and dialects of Mexico, Central and South America. Dr. Brinton's characteristic wealth of suggestion appears throughout the book, particularly in the portions which deal with the peoples of Central and South America, to whom special attention appears to have been given.

In the North Atlantic group are classed (1) the Eskimo, who formerly ranged much farther south, and whose primitive home was in the Hudson Bay region; (2) the isolated Beothuks of Newfoundland, who appear to have no marked affinities, as far as language is concerned, with any other people; (3) the wide-spread Athapascans, who are found over the wide territory from the Arctic Ocean to the frontiers of Mexico, and from Hudson Bay to the shores of the Pacific; (4) the Algonkins, who inhabited the North Atlantic littoral and the lake region of Canada; (5) the Iroquois, an inland people, with whom are affiliated in language the Cherokees; (6) the Chahta-Muskokis; (7) diverse tribes, such as the Catawbas, Yuches, Timucuas, etc., whom the author believes to be the remnants of the peoples who occupied the region before the immigration of the Muskokis from the North and West (it would appear, however, that to these Allophyllian tribes the Catawbas, at least, no longer belong, as they have distinct affinities with the Siouan stock); (8) Pawnees or Caddoes; (9) the important Dakotan or Siouan stock; (10) Kioways.

The North Pacific group comprises the tribes of the North-west coast and California, besides the Yumas and Pueblo peoples. There is room for much research within this group of tribes; and the recent investigations of careful observers like Dr. Boas have cleared up not a few troublesome questions in the ethnology of the Pacific region.

Under the Central group Dr. Brinton classes the Uto-Aztecan (comprising the Shoshonian, Sonorian, and Nahuatl); the various tribes of Mexico and Central America, such as the Otomis, Zapotecs, Chapanec, Chontals, Mayas, Lencas, Musquitos, etc.

Here for the first time we learn the affinities of some of the Central American languages; such as the Rama, for example.

The chapters of the book relating to South America are more detailed, and the reader will find in them an excellent guide with which to thread the mazes of South American tribal nomenclature.

The first great division of this half of the continent is the South Pacific group, which embraces (1) the tribes of the Columbian region, and (2) the tribes of the Peruvian region. The principal Columbian peoples are the Cunas, Changuinas, Chocos, and others of the Isthmus of Panama and the adjacent coast, the well-known Chibchas, the Paniquitas and Paezes (identified as one by Dr. Brinton), and the various tribes of the southern states of Cauca and Antioquia. In this region the author determines the Cayapa and Colorado to be dialects of the same stock.

The Peruvian sub-group comprises the Kéchuas and Aymaras, Puquinas, Yuncas, Atacameños, and Changos. The exact affiliation of these languages has not yet been made out. Dr. Brinton thinks that ultimately the Aymara will be shown to be either a dialect of Kechua, or a jargon made up of Kechua and other stocks.

The South Atlantic group is a very extensive one, including the innumerable tribes of the Amazonian and Pampean regions, who are spread over the territory from the Orinoco to Tierra del Fuego. The principal subdivisions of the Amazonian sub-group are the Tupis (with some forty dialects); the Tapuyas (with nearly as many); the Arawaks (more diverse even than the Tupis); the Caribs (with numerous dialects); the Corvados, Carajas, etc.; the Carib and Arawak tribes of the Orinoco basin; the numerous tribes of the basin of the Upper Amazon (Zaparos, Jivaros, etc.); and the Chiquitos, Mosatenas, Cayubabas, and other tribes of the Bolivian Highlands. The author attaches the Paiconoca and Saraveca to the Arawak stock, and thinks that Carajas have Tapuya affinities, while the Yahuas and Pebas appear to be somewhat related.

In the subdivision of the Pampean region Dr. Brinton has arranged the Guaycurus, Lules, Payaguas, and other peoples of the Grand Chaco; the Pampeans, Araucanians, and Chonos; the Patagonians and Fuegians. The modern Vilela the author is inclined to consider the present representative of the Lules of whom

Father Machoni wrote in 1732. The affinities of the coast tribes of Patagonia are uncertain. The relations of the Patagonians (Chonek) still remain to be settled. Among the Fuegians there appear to be at least three distinct linguistic stocks, — the Alikuluf, the Ona, and the Yaghan.

Taken on the whole, the present volume is beyond doubt the best introduction to American ethnology that we possess, and the reader will learn from it how much American linguistic and ethnographic science has advanced of recent years.

AMONG THE PUBLISHERS.

THE editor of the "Letters of Dorothy Osborne," Mr. Edward Abbott Parry, has written a life of Charles Macklin for Mr. William Archer's series of Eminent Actors, and Longmans, Green, & Co. published it here last week.

— "Miracles and Medicine" is the subject which Dr. Andrew D. White will take up next in his Warfare of Science Papers in *The Popular Science Monthly*. The May number will contain the first part of this chapter, telling how tales of miraculous cures arose and grew in the middle ages, and how the early progress of medical science was hampered by the jealousy of relic-peddlers and theological oracles. The Duke of Argyll's essay, "Professor Huxley on the War-Path," will be concluded in the same number. The duke appeals to geology for evidence of an inundation such

A SYSTEM OF EASY LETTERING.

By J. H. CROMWELL, Ph.B.

Twenty six different forms of Alphabets. The space to be lettered is divided into squares, and with these as a guide the different letters are drawn and inked. Price, 50 cents, postpaid.

E. & F. N. SPON, 12 Cortlandt Street, New York.

POPULAR MANUAL OF VISIBLE SPEECH AND VOCAL PHYSIOLOGY.

For use in Colleges and Normal Schools. Price 50 cents. Sent free by post by

N. D. C. HODGES, 47 Lafayette Pl., N. Y.

PRIZE ESSAYS OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.

Practical Sanitary and Economic Cooking Adapted to Persons of Moderate and Small Means. By MRS. MARY HINMAN ABEL. 12mo, 182 pp. Cloth, 40 cents.

No. 1. Healthy Homes and Foods for the Working-Class. By Professor C. Vaughan, M.D. Ann Arbor, Mich. 8vo, 62 pp. Paper, 10 cents.

No. 2. The Sanitary Conditions and Necessities of School-Houses and School-Life. By D. F. Lincoln, M.D., Boston, Mass. 8vo, 38 pp. 5 cents.

No. 3. Disinfection and Individual Prophylaxis against Infectious Diseases. By George M. Sternberg, M.D., Major and Surgeon U.S.A. 8vo, 40 pp. Paper, 5 cents.

No. 4. The Preventable Causes of Disease, Injury, and Death in American Manufactories and Workshops, and the Best Means and Appliances for Preventing and Avoiding Them. By George H. Ireland, Springfield, Mass. 8vo, 20 pp. Paper, 5 cents.

The four essays (Nos. 1, 2, 3, 4) in one volume of nearly two hundred large octavo pages, thoroughly indexed. Cloth, 50 cents.

N. D. C. HODGES, 47 Lafayette Place, New York.

SCIENCE CLUBBING RATES.

10% DISCOUNT.

We will allow the above discount to any subscriber to *Science* who will send us an order for periodicals exceeding \$10, counting each at its full price.

N. D. C. HODGES, 47 Lafayette Place, N. Y.

Old and Rare Books.

BACK NUMBERS and complete sets of leading Magazines. Rates low. AM. MAG. EXCHANGE, Schobarie N.Y.

"The Week, one of the ablest papers on the continent." — *Descriptive America*.

THE WEEK,

A Canadian Journal of Politics, Literature, Science and Art.

PUBLISHED EVERY FRIDAY.

\$3.00 per Year.

\$1.00 for Four Months.

THE WEEK has entered on its EIGHTH year of publication, greatly improved in every respect, rendering it more worthy the cordial support of every one interested in the maintenance of a first-class literary journal.

The independence in politics and criticism which has characterized THE WEEK ever since its first issue will be rigidly maintained; and unceasing efforts will be made to improve its literary character and increase its attractiveness as a journal for the cultured home. Many new and able writers are now, or have promised to become, contributors to its columns, and the constant aim of the Publisher will be to make THE WEEK fully equal to the best literary journals in Britain and the United States.

As heretofore, PROF. GOLDWIN SMITH will, from time to time, contribute articles. London, Paris, Washington and Montreal letters from accomplished correspondents will appear at regular intervals. Special Ottawa Letters will appear during the sessions of Parliament.

THE WEEK being the same size as "Harper's Weekly," is the largest paper of its class on the continent.

SEND FOR FREE SAMPLE COPY.

C. BLACKETT ROBINSON, Publisher,
5 Jordan St., Toronto, Canada.

THE AMERICAN GEOLOGIST FOR 1891 AND BIEN'S NEW ATLAS OF THE METROPOLITAN DISTRICT,

will be given to New Subscribers to the GEOLOGIST for \$25.00 (which is the regular price of the Atlas alone), if ordered through the GEOLOGIST.

For other premiums see the GEOLOGIST for Nov., Dec., and Jan. Address

THE GEOLOGICAL PUBLISHING COMPANY,
Minneapolis, Minn.

THE BOTANICAL GAZETTE.

A monthly illustrated journal of botany in all its departments.

25 cents a number, \$2.50 a year.

Address PUBLISHERS BOTANICAL GAZETTE,
Crawfordsville, Ind.

Publications of the University of Pennsylvania.

SERIES IN

Philology, Literature and Archæology.

Vol. I. now ready.

1. Poetic and Verse Criticism of the Reign of Elizabeth. By Felix E. Schelling, A.M., Assistant Professor of English Literature. \$1.00.
2. A Fragment of the Babylonian "Dibbarra" Epic. By Morris Jastrow, Jr., Ph.D., Professor of Arabic. 60 cents.
3. a. *Πρός* with the Accusative. b. Note on a Passage in the Antigone. By William A. Lamberton, A.M., Professor of the Greek Language and Literature. 50 cents.
4. The Gambling Games of the Chinese in America. Fán tán and Pák kóp piú. By Stewart Culia, Secretary of the Museum of Archæology and Palæontology. 40 cents.

In preparation.

The Terrace at Persepolis. By Morton W. Easton, Ph.D., Professor of Comparative Philology.
An Aztec Manuscript. By Daniel G. Brinton, M.D., Professor of American Archæology and Linguistics.

A Monograph on the Tempest. By Horace Howard Furness, Ph.D., LL.D.

Recent Archæological Explorations in New Jersey. By Charles C. Abbott, M.D., Curator of the American Collections.

Archæological Notes in Northern Morocco. By Talcott Williams, A.M., Secretary of the Museum of Egyptian Antiquities.

a. On the Aristotelian Dative. b. On a Passage in Aristotle's Rhetoric. By William A. Lamberton, A.M., Professor of the Greek Language and Literature.

A Hebrew Bowl Inscription. By Morris Jastrow, Jr., Ph.D., Professor of Arabic.

The Life and Writings of George Gascoigne. By Felix E. Schelling, A.M., Assistant Professor of English Literature.

The Papers of this Series, prepared by Professors and others connected with the University of Pennsylvania, will take the form of Monographs on the subjects of Philology, Literature, and Archæology, whereof about 200 or 250 pages will form a volume.

The price to subscribers to the Series will be \$1.50 per volume; to others than subscribers, \$2.00 per volume.

Each Monograph, however, is complete in itself, and will be sold separately.

It is the intention of the University to issue these Monographs from time to time as they shall be prepared.

Each author assumes the responsibility of his own contribution.

N. D. C. HODGES,

47 Lafayette Place, New York, N. Y.

BOOKS: How to get them. If there is any book or pamphlet that you want, write to the Science-Book Agency, 47 Lafayette Place, New York.