Simon (BECQUEREL and RODIER'S *Pathological Chemistry*, p. 459) obtained the following results from the analysis of the fæcal matters in cholera: —

Water	980.00
Solid matters	20.00
Fat	0.08
Extractive matter	4.80
Albumen and mucus	0.52
Chloride of sodium, lactate and acetate of sodium, and alkaline phosphates	13.40
Phosphate of lime and magnesia	0.60

The blood contains, according to Hammerston, from 2.677 per cent (horse) to 4.436 per cent (rabbit) of serum albumen; and yet, according to Von Ermengen, mercuric chloride in solution of 1 : 800 and 1 : 1,000 sterilizes blood. With these figures before us, can we say that "it is not creditable to a committee of the leading sanitary association of this country" to recommend a solution of mercuric chloride 1 : 500 for the disinfection of cholera stools?

Practically we know that mercuric chloride does efficiently disinfect substances containing a hundred times as much proteid as cholera stools contain. This is done many times every day in bacteriological laboratories. Gelatine plates and tubes, agar tubes, and blood-serum tubes, laden with all the known germs, are disinfected with a solution of mercuric chloride 1 : 1,000. In Koch's laboratory this is the only disinfectant used, and there has been no evidence of its failure. Plates covered with colonies of the anthrax bacillus, the comma bacillus, etc., are immersed in the solution with the certainty that the sterilization will be complete. Old tube cultures are treated in the same way, and with the same result, whether they contain gelatine, agar, or blood-serum. Now, in the gelatine, one litre of beef-tea contains 100 grams of gelatine, 10 grams of peptone, and 5 grams of sodium chloride. We have seen that the albuminate of mercury is made with peptone as well as with albumen, and there is nearly twenty times as much peptone in this mixture as there is albumen in cholera stools, and nearly two hundred times as much gelatine besides. Certainly no one will question the large amount of albumen in blood-serum. Is it not strange, if the albuminate of mercury is so "inert," that the disinfection of these cultures should be so successful? Even the evacuations of infants with green diarrhœa, containing a large amount of undigested food, do not contain as much proteids as do gelatine cultures, as is shown by the following analysis of Golding Bird: —

Water	900.00
Biliverdin, alcoholic extracts, fat, cholesterine	24.50
Ptyalin, watery extract, colored with biliverdin	11.25
Mucus, coagulated albumen, and hematin	56.00
Chloride of sodium, with traces of tribasic phosphate of soda	5.50
Tribasic phosphate of soda	1.75
Peroxide of iron	1.00

In the first report of the committee (1885) a solution of chloride of lime was given the first place for the disinfection of excreta in the sick-room, and a solution of mercuric chloride of the strength of 1 : 500 the second place. In the latest report (1888) carbolic acid has been given the second place, and mercuric chloride has not been recommended for this purpose. This change was made because the carbolic acid was believed to be sufficient, and not because the mercuric chloride was believed to be inefficient. In the light of the most recent experiments in this country and abroad, we believe that mercuric chloride, in the proportion named, would be effective in the disinfection of the liquid discharges of patients suffering from typhoid-fever or cholera, and that the recommendation made in our first report was justified by the experimental data then given, and not yet contradicted by any new evidence.

The committee called attention to the action of mercuric chloride on lead pipes in its first report, and this influenced it in substituting carbolic acid for mercuric chloride for disinfecting the excreta in the sick-room.

To return to our critic, the broad statement is made, that "an examination of the report of this committee fails, however, to bring to light the slightest particle of evidence upon which such a recommendation could have been based;" viz., the disinfection of excreta with mercuric chloride. Dr. Sternberg, chairman of the committee, made extended researches upon the germicide power of this agent several years before (1883) the committee was appointed, and to those experiments reference is made in the first report. It is for this reason that extended experimental researches were not made with this agent in 1885. However, a number of experiments were made, and recorded in our report. These show that even the solid or semi-fluid fæces of a healthy person may be sterilized by the use of the solution recommended by the committee, provided that they are broken up so as to be fairly exposed to the action of the disinfecting agent. Moreover, the fact is recorded that a certain amount of the mercurial salt remained in solution at the end of twenty-four hours, as shown by a deposit of mercury on a copper wire (experiment of Sept. 8). Yet our critic, without recording a single experimental observation of his own, states that there is not the slightest particle of evidence upon which our recommendation could have been based.

One who has given no special attention to chemistry may be pardoned for not being acquainted with the chemical nature of the albuminate of mercury, but certainly any one who had read our report could not have made the sweeping assertion which we find in Dr. Hills's criticism.

FIFTH ANNUAL REPORT OF THE BUREAU OF ETHNOLOGY.

THE "Report of the Director of the Bureau of Ethnology for the Year 1883–84" has just been issued, bearing the date 1887. The long delay of this report, which is caused by the pressure of work in the Government Printing-Office, must be greatly regretted, as the interest of science demands that scientific publications of the character of those accompanying the report be known as early as possible. The knowledge that certain statements and opinions are about to be published always acts as a drawback upon the progress of the special field of science, as most workers will delay further investigations until these publications are issued. While a few branches of science may not be very adversely affected by these delays, such is not the case in the science of anthropology, in which the most energetic and unceasing field-work is absolutely necessary, as the relics of ancient times, as the natives and their customs, are vanishing with steadily increasing rapidity. Publications of such importance as the one under discussion always prove an incentive to increased activity. The opinions and suggestions expressed in the papers accompanying the report do not fail to influence the progress of investigations. For all these reasons a more rapid publication of the annual reports is very desirable.

Major Powell, in the first part of the report, gives a brief review of the work carried on by the bureau. The scope of the researches is constantly increasing. In the year 1883–84 the mound-explorations were continued. Messrs. Stevenson and Mindeleff carried on archæological researches in the South-west, while Mr. Frank Cushing devoted himself to further studies on the Zuñi. Linguistic work was done among the Iroquois, in California, and among the Navajo. While the final results of the works of the bureau will be published as "Contributions to the Ethnology of the North American Indians," the papers accompanying the reports generally treat certain phenomena of Indian life or art in the form of monographs or reports on peoples on which no material for exhaustive reports is obtainable.

Of the latter class, we notice in the present volume Rev. Clay MacCauley's description of the Seminole Indians of Florida, — an interesting sketch of the life and state of this small tribe living in the most inaccessible portion of the southern half of the peninsula.

The elaborate paper on "The Cherokee Nation of Indians: A Narrative of their Official Relations with the Colonial and Federal Governments," by Charles C. Royce, is an historical document of the greatest importance, the history of this great confederacy in its conflicts with the white settlers encroaching upon their territory being traced fully and exhaustively. The paper is an illustration of a work of wide scope undertaken by the bureau, — an historical atlas of Indian affairs, showing, upon a series of State and territorial maps, the boundaries of the various tracts of country which have from time to time been acquired through the medium of treaty stipulations or act of Congress from the several Indian tribes resident within the present territory of the United States. Accompanying the atlas will be one or more volumes of historical text, wherein will be given with some detail a history of the official

relations between the United States and these tribes. This will treat of the various negotiations for peace and for the acquisition of territory, the causes rendering such negotiations necessary, and the methods observed by the government through its authorized agents in this diplomacy, as well as other matters of public concern growing out of the same. The eminent value of this work to the historian is self-evident, and the laborious care bestowed by Mr. Royce upon the carrying-out of this plan promises that it will be at once an exhaustive and clear treatment of this important part of the history of our Republic.

The first paper of the volume is Professor Cyrus Thomas's treatise on "Burial-Mounds of the Northern Section of the United States." Since this paper was written, much evidence has accumulated which has been outlined in a bulletin of the Bureau of Ethnology. It corroborates the views expressed by Professor Thomas in the present report.

His conclusions, as set forth in this paper, are that different sections of the country were occupied by different mound-building tribes, which, though belonging to much the same stage in the scale of culture, differed in most instances in habits and customs to a sufficient extent to mark, by their modes of burial, construction of their mounds, and their works of art, the boundaries of the respective areas occupied. He furthermore concludes that each tribe adopted several different modes of burial, depending, in all probability, to some extent upon the social condition, position, and occupation of the deceased. The custom of removing the flesh before the final burial apparently prevailed very extensively among the mound-builders of the northern sections; the bones of the common people being often gathered together, and cast in promiscuous heaps, over which mounds were built. Usually some kind of religious ceremony was performed at the burial, in which fire played a prominent part; but, notwithstanding the very common belief, there is no evidence whatever that human sacrifice was practised. The builders of the mounds had not reached a higher culture than that attained by some of the Indian tribes found occupying the country at the time of the first arrival of Europeans. Professor Thomas concludes his treatise by expressing his opinion that the mound-building age cannot have lasted longer than about a thousand years, and that it continued to be practised in several localities in post-Columbian times.

There remain two papers to be noted, both of peculiar interest, — the one by Dr. Washington Matthews, who gives a very detailed description of one of the remarkable religious ceremonies of the Navajo; the other by Mrs. T. E. Stevenson on the religious child-life of the Zuñi.

Dr. Matthews describes the long ceremonies of the Mountain-Chant, and gives the long myth which is the foundation of these ceremonies. His paper concludes with the original texts of the songs, and translations of the same. It is impossible to give an account of the interesting contents of this essay, which is full of new facts of the greatest importance to the student of anthropology.

Mrs. Stevenson's paper is of a somewhat similar character, treating of the connection between certain customs and myths. This field of study, so ably taken up by Dr. Matthews and Mrs. Stevenson, has so far received comparatively little attention; and yet it is one of the most important for the study of the human mind and of the growth of institutions.

The publications of the Bureau of Ethnology mark every one a long step forward in our knowledge of man in America, and are therefore anxiously awaited by all students. We hope that the following volumes may be issued at shorter intervals, that the important material contained in them may soon become public property.

BOOK-REVIEWS.

The Birds of the West Indies. By CHARLES B. CORY. Boston, Estes & Lauriat. 8°.

IN preparing the present work, Mr. Cory examined a large series of birds from nearly all the islands of the West Indies, the combined collections representing many thousands of specimens. He made five trips to different parts of these islands, besides which a number of collectors were sent out, for the purpose of obtaining as complete a series as possible. Several of these collectors were engaged upon their task from six to eighteen months, and it is fair to assume that their collections contained nearly all of the resident species of the islands which they visited. Some of these collections proved especially interesting, being very rich in novelties, the collections of one person containing no less than seventeen species new to science.

Most of the matter contained in the present work appeared originally in the *Auk* during the years 1886, 1887, and 1888; but since that time a large number of species have been added to the West Indian avifauna which were either new to science or had not been previously recorded from that locality. Descriptions of these are given in an appendix, unless included in their proper order in the body of the work. A number of alterations and corrections have been made in the original plates, and several new illustrations have been added. No descriptions are given of well-known North American birds, and the references to such are mainly restricted to the citation of works and papers on West Indian ornithology.

The excellent mechanical make-up of the book admirably supplements the painstaking and thorough work done by Mr. Cory in its preparation.

Louis Lambert. By HONORÉ DE BALZAC. Tr. by Katherine P. Wormeley, with introduction by George F. Parsons. Boston, Roberts Bros. 12°. $1.50.

BALZAC seems to have written this story for the express purpose of making known what he would call his philosophy, which is a curious compound of mysticism and nonsense. The hero of the tale, Lambert, is introduced when a boy, and considerable space is given to his experience and reflections while at school. At a later time, after a season in Paris, he falls in love with a titled lady, and marries her. Unfortunately, however, he becomes insane just before his marriage, and remains so ever after, and dies while still a young man. The "philosophy" of the book is contained partly in his conversations and letters, but chiefly in some papers composed after he became insane; and these latter seem to be the dearest to the soul of Balzac. The doctrine expressed in them is of the occult kind, as will be seen from the following specimens: "Here below all is the product of an ethereal substance, the common base of several phenomena. . . . Will is a fluid, the attribute of every being endowed with motion. . . . Facts are nought; they do not exist; ideas alone exist. . . . All things here below exist only by motion and by number. . . . There is a number which impurity cannot transcend — the number wherein creation is finished. . . . Three and seven are the two great spiritual numbers" (pp. 138–148). Besides the story that gives name to the book, there are two others in the volume; but there is little connection between them and Louis Lambert; and the second of them, Gambara, we have found intensely disagreeable. The introduction to the book, which is as long as the leading story, is partly a summary of Balzac's ideas, and partly an attempt to reconcile them with the teachings of physical science, — an attempt which, as may be supposed, is not very successful.

AMONG THE PUBLISHERS.

GINN & CO. announce "An Introduction to the Poetry of Robert Browning," by William John Alexander, Munro professor of English language and literature, Dalhousie College and University, Halifax, N. S., and formerly fellow of Johns Hopkins University, to be published in February. The book opens with an account of Browning's most striking peculiarities in method and style, and attempts to find an explanation of these in the conditions amidst which the poet has worked, and in the nature of the themes which he treats. In the next place, an exposition is given of those general ideas pervading his work, which can only be gathered from the study of many of his poems, and yet are needful for the full understanding of almost any one of them. This exposition is contained in a series of chapters on "Browning's Philosophy," "Christianity as presented in Browning's Works," and "Browning's Theory of Art." These chapters are followed by a brief chronological review of his writings, and characterization of his development. The various points treated throughout the introduction are illustrated