

twenty pages discussing the enzymes, and the nomenclature of the proteins has been altered to correspond to the system adopted by the American Chemical Society. Otherwise the changes limit themselves to additions of new reactions in order to bring the book up to date. Although the book contains more material, the publishers have decreased the margins and thickness of the paper, so that the book appears smaller. It becomes somewhat difficult to indicate the exact purpose of this volume. At present it is in the transitional stage between a practical manual and a text-book. It is too bulky for a laboratory book; there is too much discussion of theoretical considerations, and many things are introduced which should not under any conception come into a laboratory course in physiological chemistry, *e. g.*, microscopical examination of urine for casts, etc., and counting of red and white blood cells.

Fortunate indeed would be the instructor of physiological chemistry in a medical school who could be allowed enough time in the curriculum to cover one half of the material between the covers. The book serves an excellent purpose as a reference book of test reactions, but in their multiplicity the student or the practitioner who wishes to become acquainted with a few of the most reliable tests would find himself bewildered and require additional advice in the matter. Were it not for its size and the necessity for such a decided picking and choosing of topics adapted for student laboratory work, the book would serve its purpose admirably. The contents are thoroughly reliable and the tests are given with sufficient detail so that the results should be satisfactory. The many figures and colored plates scattered throughout are excellent.

Upon the whole, the author is to be complimented and those interested in the subject congratulated upon the benefit derived by the publication of the revised edition.

H. C. JACKSON

ANTHROPOLOGICAL PUBLICATIONS OF THE UNIVERSITY OF CALIFORNIA IN 1908

THE University of California Publications in American Archeology and Ethnology have

received during 1908 the addition of nine papers. These comprise volume 6, numbers 1, 2 and 3; the completion of the seventh volume, numbers 2 and 3; and volume 8, numbers 1, 2, 3 and 4. These papers embody the further results of the Ethnological and Archeological Survey of California which the university undertook a number of years ago, and which has since been pushed rather steadily towards completion. The weight of work published in the past year has fallen upon the ethnological side of the problem, rather than upon the archeology and linguistics of the state as in previous years.

In this definite field of ethnology a balance has been maintained in some degree between the northern, the southern and the central portions of the state. The two bulkiest papers of the period, Dr. Barrett's "Ethno-geography" and "Basketry" of the Pomo, treat of the peoples of the north-central region. These two are the most exhaustive treatments of their type that have appeared so far. The minuteness of the author's information concerning the region rests on long residence among the Pomo, in addition to extended scientific study. As a counterpoise to this work on the Pomo, four less laborious papers have been devoted to the "Mission" Indians of the extreme southern part of the state. Two of these latter are by Dr. Kroeber and the other two by authors from outside the university. As regards the central portion of the state, the rather varied territory occupied by the Miwok or Moquelumnan tribes offers the problem which is taken up in two of the three remaining papers.

An entirely different aspect of the ethnology of California is invaded by the final paper of the group, by Dr. William J. Sinclair. This paper enters with effect into the question of the geological relation of human remains and artifacts within the state of California. The range covered in the past season's publications is therefore seen to be rather wide. They perhaps contribute more manifoldly than is usual in a brief twelvemonth, to the general information concerning the state on its many sides as an ethnological field.

The Ethno-geography of the Pomo and Neighboring Indians, by S. A. Barrett. Vol. 6, Number 1.¹ Dr. Barrett's method in this, the largest of his three papers, includes the determination of certain dialectic areas in the Pomo territory, with sections of similar provinces among the Wintun, Yuki and Moquelumnan peoples. This is accomplished by means of vocabularies, together with comparison of the different phonetic systems. Of the seventeen areas isolated by Dr. Barrett in the paper, seven are Pomo, five Yuki, two Wintun and three Moquelumnan. A large map accompanying this treatise outlines the dialectic provinces established and makes clear their geographical relations to each other. In addition, the author has entered on his map 500 of the aboriginal village and camp sites of the Pomo, and some of the more important villages of the neighboring stocks. The work as a whole comprises, besides the maps, comparative vocabularies of 282 words in sixteen Pomo, Yuki, Wintun and Moquelumnan dialects, an extended introduction, discussion of phonetic and linguistic relationships, descriptions of village sites, and a full glossary of native words which enter into geographical names.

Pomo Indian Basketry. Vol. 7, Number 3. In this companion volume the author takes up with some minuteness the subject of the baskets and basket designs of the same people. The paper treats exhaustively of forms, technique, ornamentation and the native nomenclature of the designs. This people is particularly facile in handling decorative elements and surpassingly excellent in technique. Dr. Barrett's paper covers both aspects of his subject at length, in discussion as well as by photographic and diagrammatic illustrations. The work includes 231 text figures and 30 plates, together with a full glossary of native basketry terms. Like his former paper, it is more full and minute in outline than anything of similar nature which has been elsewhere attempted for California territory.

¹ Cite as: *Univ. of Calif. Publ. in Amer. Arch. and Ethn.*

Geography and Dialects of the Miwok. Vol. 6, Number 2. This paper is somewhat similar in outline to the "Ethno-geography," but is less comprehensive in scope. Like the former paper, it includes brief comparative vocabularies and a map indicating the results determined. Some of the vexed issues of the paper are taken up in a following number by Dr. Kroeber:

On the Evidence of the Occupation of Certain Regions by the Miwok Indians. Vol. 6, Number 3. The subject is an interesting one, in that the people concerned were in former times very important numerically, but were among the first to suffer at the advent of the whites. Since then the western units of the stock have so far disappeared that information is extremely scanty. This article, therefore, while necessarily brief, is most important and fills a place in the series which would otherwise tend to be much neglected from lack of proper material.

A Mission Record of the California Indians, by A. L. Kroeber. Vol. 8, Number 1. An entirely new departure is signaled by this paper from Dr. Kroeber. The material which he presents with editorial comments is drawn from authentic documents of the Mexican government written in Spanish, copies of which are in the possession of the Bancroft Library of the University of California. Material of such nature has double or triple interest in that it concerns the peoples who have been under the direct influence of the missions, and have therefore experienced violent modification of their original native customs and conditions. It antedates, moreover, in most instances, such systematized comments as are elsewhere extant concerning native American life. The original manuscript in the present instance is a "contestacion" or codified answer to a list of queries sent to the missions by the Mexican vice-regal government, and contains much that is in the first degree interesting and suggestive. The record as published includes only those parts of the original which are of direct ethnological interest. The significance of the study can be somewhat realized when it is learned that it embodies shorter

or longer statements concerning the conditions, in 1811, at sixteen of the missions. In this document is contained almost the only information at present available concerning the peoples originally around such places as San Luis Obispo, Monterey, Santa Cruz or San José. It is greatly to be desired that further sources in this field may be made accessible.

The Religion of the Luiseño Indians of Southern California, by Constance Goddard DuBois. Vol. 8, Number 3. The paper just mentioned affords an introduction to the recent studies of the Mission Indian region. Of special interest in connection with it is Miss DuBois's paper on the native religion of one part of the area. As in the case of Dr. Barrett's Pomo work, the problem which this author set herself was a definite one, and the fact that she spent some years in intimate association with the Mission peoples gave her an insight into many details. Many of the matters merely indicated or suggested by the Spanish document just touched upon are by Miss DuBois, fully discussed and described in intimate detail. Her paper covers the beliefs and ceremonies of the Luiseño, a Shoshonean people living about San Luis Rey, and includes some account of their mythology. She devotes 186 pages and four plates to the subject. The comparison of such recent and specialized research with the old Spanish commentaries, so far as they exist or may be brought to light, will always be particularly interesting and fruitful.

Ethnography of the Cahuilla Indians, by A. L. Kroeber. Vol. 8, Number 2. From another standpoint this ethnography of the Cahuilla, a second member of the so-called Mission Indian group, opens a no less stimulating field of inquiry. The Cahuilla are the least known of the three modern mission tribes. Dr. Kroeber outlines their geographical position, discusses their varied environment, and deals in detail with their material culture. His paper points to the necessity of including the Cahuilla with the "southern" cultural group of California. The text is accompanied by fifteen plates.

The Culture of the Luiseño Indians, by Philip Stedman Sparkman. Vol. 8, Number 4. Somewhat similar in general outline to the paper just mentioned is this treatise on the culture of the Luiseño. The author, who lost his life in the field, studied the people through a number of years, especially from the standpoint of their language. The present paper represents only a single aspect of his work among them. In it he takes up the most prominent facts of their culture and habitat, and discusses briefly their arts and crafts, their social institutions, and some of the more important features of their religion. At the close of the paper he catalogues the plants which were of importance to the primitive Luiseño, and designates their various uses. The paper is probably the least important of three excellent studies by the same author, all of which are shortly to be consigned to print.

Recent Investigations Bearing on the Question of the Occurrence of Neocene Man in the Auriferous Gravels of the Sierra Nevada, by William J. Sinclair. Vol. 7, Number 2. For upwards of forty years the vexed question of the appearance of man in Tertiary strata of California has called forth a great deal of testimony, pro and con. The question has centered to some degree around a small number of specimens, physical and cultural, found originally in the region of Tuolumne, Calaveras and El Dorado counties on the western slope of the Sierra Nevada. This testimony has been collated and reviewed by Mr. Sinclair in the present paper. The outcome of this latest study on the question quite possibly lays the whole matter at rest. Mr. Sinclair holds that in the face of all that has been said and written, no competent evidence of Tertiary man in California has ever to the present time been adduced. His work lies along both original and critical lines of study, and deals with first-hand evidence obtained by personal research on the ground.

In general interest, therefore, the papers of the twelvemonth just passed may be seen to cover a wide field, both geographically and in

range of subject matter. They indicate that the work now being done by the university is thoroughly specialized, and is organized on the broadest possible basis. The number of contributors is larger than in any previous year, and includes authors of a wide range of training and interest. In total bulk, the contributions of the period just passed (782 pages, 38 plates, 235 text figures and 3 maps) are larger than ever before in the history of anthropological work in California.

THOMAS WATERMAN

BOTANICAL NOTES

ANOTHER KEY TO SACCARDO

A COUPLE of years ago a brief notice was made in SCIENCE of a typewritten English key to Saccardo's "Sylloge Fungorum" prepared for the use of the mycological students in the University of Nebraska, and the statement was made that a few extra copies might be obtained on application. The results of the announcement were surprising. At once requests for the key came from all parts of the country, and within a week the small stock of the books was all sold out, and it became evident that a reissue or a new edition must be prepared. This has now been done by Professor Dr. Clements, of the University of Minnesota, and proof is now being read upon the new edition, which is to be printed and brought out as a small book. It will contain keys to "spore sections," to orders and families, and to the genera, besides some handy indexes, glossaries, etc. As it has been announced to be "ready by September 20" further notice may be deferred until the appearance of the completed work. In the meantime those who are especially interested in it may communicate with the author, as above, at Minneapolis.

A NEW COLORADO BOOK

PROFESSOR RAMALEY, of the University of Colorado, has given us in his "Wild Flowers and Trees of Colorado" a charming little book intended to serve as an introduction to Colorado plants. In less than a hundred pages he leads the beginner far on the road to

a knowledge of the vegetation of this state. He first discusses the general aspects of Colorado vegetation (ecology we often have called it in these later years) and then takes up the forests and forest trees of the state. He recognizes five zones or belts of vegetation, namely, the plains zone, foothill zone, montane zone, sub-alpine zone and alpine zone. These are admirably illustrated by many half-tone reproductions of well-selected photographs. The forest trees are briefly described by means of convenient keys, and the text is helped greatly by many illustrations. A bibliography including thirty-one titles completes this very useful book.

THE MINNESOTA BOTANICAL STUDIES

THE resumption of publication of the widely-known "Minnesota Botanical Studies" is a matter of more than ordinary interest to botanists. The "Studies" were begun fifteen years ago by Professor MacMillan, under whom two fine volumes were completed, and parts 1, 2 and 3 of the third volume were issued, publication ceasing five years ago. Now under Professor Clements, part 1 of volume IV. makes its appearance with the same style of cover, paper and typography. In the present part, which covers 132 pages, there are six papers, viz: "Embryo-sac Development and Embryology of *Symplocarpus foetidus*," by C. O. Rosendahl; "The Seeds and Seedlings of *Caulophyllum thalictroides*," by F. K. Butters; "Influence of Physical Factors on Transpiration," by A. W. Sampson and L. M. Allen; "Two Basidiomycetes New to Minnesota" and "The Pezizales, Phacidiales and Tuberales of Minnesota," by D. S. Hone; "A New Genus of Blue-green Algae," by F. E. Clements and H. L. Shantz. The promise is made, also, that an index and title page "will be furnished at an early date" for the three preceding parts which are to constitute volume III.

RECENT SYSTEMATIC PAPERS

WE may briefly notice the following contributions from the United States National Herbarium: Henry Pittier's "New or Note-